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Attention: Document Control Desk
Washington D C 20555-0001

References: 1) Fermi 2
NRC Docket No. 50-341
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2) Appendix A, Facility Operating License No. NPF-43, Technical Specifications 5.6.2 and 5.6.3

Subject: Annual Radioactive Effluent Release and Radiological Environmental Operating Reports

The 2006 Annual Radiological Effluent Release and Radiological Environmental Operating Reports for Fermi 2 are enclosed. This combined report is being transmitted in accordance with Reference 2 and Regulatory Guide 1.21,.Revision 1. The enclosed report covers the period from January 1 through December 31, 2006.

Should you have any questions regarding this report, please contact Mr. John Oetken, General Supervisor, Radiological Engineering at (734) 586-1158.

Sincerely,

Donald K. Cobb

Enclosure

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IE48
IE25

FERMI 2 NUCLEAR POWER PLANT

DETROIT EDISON COMPANY

OPERATING LICENSE NO. NPF - 43

Fermi 2 - 2006 Annual
Radioactive Effluent Release and
Radiological Environmental Operating Report

for the period of
January 1, 2006 through December 31, 2006

Prepared by:

Fermi 2
Radiological Engineering

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Executive Summary

This report is published to provide information regarding radioactive effluent and environmental monitoring at the Fermi 2 Nuclear Power Plant. The 2006 Annual Radioactive Effluent Release and Radiological Environmental Operating Report covers the period from January 1, 2006 through December 31, 2006.

The Radioactive Effluent Release and Radiological Environmental Operating Report is produced annually, as required by the Nuclear Regulatory Commission, to present detailed results of extensive monitoring of plant releases and measuring of radiation in the environment around the plant. This report also includes details of the independent oversight incorporated into the Radiological Effluent and Environmental Monitoring Programs to ensure program accuracy.

This report describes both the continual environmental radiation monitoring and effluent monitoring of plant systems. Both types of monitoring indicate that the operation of Fermi 2 does not result in significant radiation exposure of people or the environment surrounding Fermi 2 and is well below the applicable levels set by the Nuclear Regulatory Commission (NRC) and the Environmental Protection Agency (EPA).

There were no releases of liquid radioactive effluents from Fermi 2 in 2006. In fact, there has not been a liquid radioactive discharge from Fermi 2 since 1994.

The highest potential single organ dose to a person living offsite due to iodines, particulates, and tritium released from the plant was calculated to be 0.09 mrem, which is 0.6% of the applicable limit found in 10 CFR 50, Appendix I.

Also during 2006, there was no measurable direct radiation dose due to Fermi 2 beyond the site boundary as shown by offsite thermoluminescent dosimeters (TLD) readings. The offsite dose due to effluents is an extremely small fraction of the 40 CFR 190 limits. Therefore, the combined direct radiation and effluent dose due to Fermi 2 was in compliance with 40 CFR 190 in 2006.

Environmental samples collected in 2006 showed no radioactivity attributable to the operation of Fermi 2. The results of environmental sampling show that radioactivity levels have not increased from the background radioactivity detected prior to the operation of Fermi 2. The operation of Fermi 2 continues to have no measurable radiological impact upon the environment.

Introduction

During the normal operation of a nuclear power plant, most of the fission products are retained within the fuel and fuel cladding. However, small amounts of radioactive fission products and trace amounts of the component and structure surfaces which have been activated are present in the primary coolant water. The four types of radioactive material released are noble gases, iodine, particulates, and tritium.

Noble Gases

Some of the fission products released in airborne effluents are radioactive radionuclides of noble gases, such as xenon and krypton. These noble gases are released continuously at low levels while the reactor is operating, and releases may be increased when the reactor is depressurized or when there are leaks in the fuel cladding. Noble gas releases to the environment are reduced by plant systems which delay release of these gases from the plant, which allows a portion of the noble gas activity to decay within plant systems after it is released from the fuel.

Noble gases are biologically and chemically nonreactive. They do not concentrate in humans or other organisms. They contribute to human radiation dose by being an external source of radiation exposure to the body. They are readily dispersed in the atmosphere.

Iodines and Particulates

Fermi 2 is required to calculate offsite dose due to releases of iodine-131 and iodine-133, which are radioisotopes of iodine with half lives of 8 days and 1 day, respectively, and particulates with half-lives greater than 8 days in gaseous and liquid effluents, and tritium. The principal radioactive particulates released are fission products (e.g., yttrium-91m and barium-139) and activation products (e.g., cobalt-58 and cobalt-60). Annual releases of these radionuclides are small. Factors such as their high chemical reactivity and solubility in water, combined with the high efficiency of gaseous and liquid processing and radwaste systems, minimize their discharge.

The main contribution of radioactive iodine to human radiation dose is to the thyroid gland, where the body concentrates iodine. This exposure results from inhalation or ingestion of these iodines. Radioactive cesiums and cobalts, when ingested or inhaled, contribute to radiation exposure of tissues such as the muscle, liver, and intestines. These iodines and particulates are also a source of external radiation exposure if deposited on the ground.

Tritium

Tritium, a radioactive isotope of hydrogen, is the predominant radionuclide in radioactive liquid effluents. Fermi 2 has not conducted liquid radiological waste discharges since 1994. It is also present in gaseous effluents, and is detected at Fermi 2 in ventilation exhaust samples. Plant personnel are also alert for evidence of unmonitored tritium releases, but no such releases have been detected. Tritium is produced in the reactor coolant as a result of neutron interaction with deuterium (also a hydrogen isotope) present in the water, and it is also a fission product.

Plant Effluent Monitoring

Effluents are strictly monitored to ensure that radioactivity released to the environment is as low as reasonably achievable and does not exceed regulatory limits. Effluent control includes the operation of monitoring systems, in-plant and environmental sampling and analyses programs, quality assurance programs for effluent and environmental programs, and procedures covering all aspects of effluent and environmental monitoring.

The radioactive waste treatment systems at Fermi 2 are designed to collect, process, and/or delay the release of liquid and gaseous wastes which contain radioactivity. For example, the 2.0 and 2.2 minute holdup pipes delay the release of radioactive gases so that radioactive decay can occur prior to release. The offgas system provides additional delay for such gases.

Radioactivity monitoring systems are used to ensure that all releases are below regulatory limits. These instruments provide a continuous indication of the radioactivity present at the release points. Each instrument is equipped with alarms and indicators in the control room. The alarm setpoints are low enough to ensure that applicable limits will not be exceeded. In some cases, these alarms restrict the release. For example, if the liquid radwaste effluent monitor alarms, a release in progress is automatically stopped. Also, several alarms cause building ventilation systems to be shut down and/or gaseous releases to be diverted to the standby gas treatment system.

All wastes are evaluated to identify the specific concentrations of radionuclides being released. Sampling and analysis provide a more sensitive and precise method of determining effluent composition than monitoring instruments.

A meteorological tower is located on the Fermi 2 site. It is linked to computers which record the meteorological data. This data is used in calculating dispersion and deposition factors, which are essentially dilution factors between plant release points and points offsite. Coupled with the effluent release data, these factors are used to calculate dose to the public.

Beyond the plant, devices maintained in conjunction with the Radiological Environmental Monitoring Program constantly sample the air in the surrounding environment. Frequent samples of other environmental media, such as water and vegetation, are also taken to determine if buildup of deposited radioactive material has occurred in the area.

Exposure Pathways to People

Radiological exposure pathways define the methods by which people may become exposed to radioactive material. The major pathways of concern are those which could cause the highest calculated radiation dose. These projected pathways are determined from the type and amount of radioactive material released, the environmental transport mechanism, and the use of the environment. The environmental transport mechanism includes consideration of physical factors, such as the hydrological (water) and meteorological (weather) characteristics of the area.

An important factor in evaluating the exposure pathways is the use of the environment. This is evaluated in the annual Land Use Census. Many factors are considered, such as the locations of homes, gardens, and milk or meat animals in the area.

The release of radioactive gaseous effluents involves pathways such as external whole body exposure, deposition of radioactive material on plants, deposition on soil, inhalation and ingestion by animals raised for human consumption, and inhalation by humans. The release of radioactive material in liquid effluents involves pathways such as drinking water and fish consumption.

Although radionuclides can reach humans by many different pathways, some result in greater dose than others. The most significant pathway is the exposure pathway which will provide the greatest dose to a population, or to a specific individual. Identification of the most significant pathway depends on the radionuclides involved, the age and diet of the individual, and the location of the individual's residence. The doses calculated may be delivered to the whole body or to a specific organ. The organ receiving the greatest fraction of the dose is important in determining compliance with dose limits.

Dose Assessment

Dose is energy deposited by radiation in an exposed individual. Whole body exposure to radiation involves the exposure of all organs. Most exposures due to external sources of radiation are of this type. Both non-radioactive and radioactive elements can enter the body through inhalation or ingestion. When they do, they are usually not distributed evenly. For example, iodine concentrates in the thyroid gland, cesium collects in muscle and liver tissue, and strontium collects in bone tissue.

The total dose to organs from a given radionuclide depends on the amount of radioactive material present in the organ and the amount of time that the radionuclide remains in the organ. Some radionuclides remain for very short times due to their rapid radioactive decay and/or elimination rate from the body, while other radionuclides may remain in the body for longer periods of time. Also the form of the radionuclide (soluble vs. insoluble) and the method of uptake also influence residence times in the body.

The dose to the general public in the area surrounding Fermi 2 is calculated for periods of gaseous release and for each liquid release. The dose due to radioactive material released in gaseous effluents is calculated using factors such as the amount of radioactive material released, the concentration beyond the site boundary, the locations of exposure pathways (cow milk, goat milk, vegetable gardens and residences), and usage factors (inhalation and food consumption). The dose due to radioactive material released in liquid effluents is calculated using factors such as the total volume of liquid, the total volume of dilution water, near field dilution, and usage factors (water and fish consumption). These calculations produce a conservative estimation of the dose.

The **Radiological Environmental Monitoring Program (REMP)** was established at Fermi 2 for several reasons: to provide a supplementary check on the effluent controls, to assess the radiological impact of the plant's operation on the surrounding area, and to determine compliance with applicable radiation protection guides and standards. The REMP was established in 1978, seven years before the plant became operational. This **preoperational surveillance program** was established to describe and quantify the

radioactivity, and its variability, in the area prior to the operation of Fermi 2. After Fermi 2 became operational in 1985, the **operational surveillance program** continued to measure radiation and radioactivity in the surrounding areas.

A variety of environmental samples are collected as part of the REMP at Fermi 2. The selection of sample types is based on the established pathways for the transfer of radionuclides through the environment to humans. The selection of sampling locations is based on sample availability, local meteorological and hydrological characteristics, local population characteristics, and land usage in the area of interest. The selection of sampling frequencies for the various environmental media is based on the radionuclides of interest, their respective half-lives, and their behavior in both the biological and physical environment.

Preoperational Surveillance Program

The federal government requires nuclear facilities to conduct radiological environmental monitoring prior to constructing the facility. This preoperational surveillance program is aimed at collecting the data needed to identify pathways, including selection of the radioisotope and sample media combinations to be included in the environmental surveillance program conducted after facility operation begins. Radiochemical analyses performed on the environmental samples should include not only those nuclides expected to be released during facility operation, but should also include typical radionuclides from nuclear weapons testing and natural background radioactivity. All environmental media with a potential to be affected by facility operation, as well as those media directly in the major pathways, should be sampled on at least an annual basis during the preoperational phase of the environmental surveillance program.

The preoperational surveillance design, including nuclide/media combinations, sampling frequencies and locations, collection techniques, and radioanalyses performed, should be carefully considered and incorporated in the design of the operational surveillance program. In this manner, data can be compared in a variety of ways (for example, from year to year, location to location, etc.) in order to detect any radiological impact the facility has on the surrounding environment. Data collection during the preoperational phase should be planned to provide a comprehensive database for evaluating any future changes in the environment surrounding the nuclear facility.

Fermi 2 began its preoperational environmental surveillance program seven years before the plant began operating in 1985. Data accumulated during those early years provide an extensive database from which environmental monitoring personnel are able to identify trends in the radiological characteristics of the local environment. The environmental surveillance program at Fermi 2 will continue after the plant has reached the end of its economically useful life and decommissioning has begun.

Operational Surveillance Program Objectives

The operational phase of the environmental surveillance program at Fermi 2 was designed with the following objectives in mind:

- to determine whether any significant increase occurs in the concentration of radionuclides in major pathways;
- to identify and evaluate the buildup, if any, of radionuclides in the local environment, or any changes in normal background radiation levels;
- to verify the adequacy of the plant's controls for the release of radioactive materials;
- to fulfill the obligations of the radiological surveillance sections of Fermi 2's Offsite Dose Calculation Manual.

Program Overview

The Radiological Environmental Monitoring Program (REMP) at Fermi 2 is conducted in accordance with Title 10, Code of Federal Regulations, Part 50; NRC Regulatory Guide 4.8; the Fermi 2 Offsite Dose Calculation Manual (ODCM); and plant operating procedures. Samples are collected either weekly, monthly, quarterly, semiannually, or annually, depending upon the sample type and nature of the radionuclides of interest. Environmental samples collected by Fermi 2 personnel are divided into four general types:

- **direct radiation** -- measured by thermoluminescent dosimeters (TLDs).

- **atmospheric** -- including samples of airborne particulates and airborne radioiodine.

- **terrestrial** -- including samples of milk, groundwater, and broad leaf vegetation.

- **aquatic** -- including samples of drinking water, surface water, fish, and shoreline and bottom sediments.

REMP samples are collected onsite and offsite up to 20 miles away from the plant. Sampling locations are divided into two general categories: **indicator** and **control**. Indicator locations are those which would be most likely to display the effects caused by the operation of Fermi 2. Generally, they are located within ten miles of the plant. Control locations are those which should be unaffected by plant operations. Typically, these are more than ten miles away from the plant. Data obtained from the indicator locations are compared with data from the control locations. This comparison allows REMP personnel to take into account naturally occurring background radiation or fallout from weapons testing in evaluating any radiological impact Fermi 2 has on the surrounding environment. Data from indicator and control locations are also compared with preoperational data to determine whether significant variations or trends exist.

Sample Analysis

When environmental samples are analyzed, several types of measurements may be performed to provide information about the radionuclides present. The major analyses that are performed on environmental samples collected for the Fermi 2 REMP include:

Gross beta analysis measures the total amount of beta emitting radioactive material present in a sample. Beta radiation may be released by many different radionuclides. Since beta decay gives a continuous energy spectrum rather than the discrete lines or "peaks" associated with gamma radiation, identification of specific beta emitting nuclides is much more difficult. Therefore, gross beta analysis only indicates whether the sample contains normal or abnormal concentrations of beta emitting radionuclides; it does not identify specific radionuclides. Gross beta analysis merely acts as a tool to identify samples that may require further analysis.

Gamma spectral analysis provides more specific information than does gross beta analysis. Gamma spectral analysis identifies each gamma emitting radionuclide present in the sample, and the amount of each nuclide present. Each radionuclide has a very specific "fingerprint" that allows for swift and accurate identification. For example, gamma spectral analysis can be used to identify the presence and amount of iodine-131 in a sample. Iodine-131 is a man-made radioactive isotope of iodine that may be present in the environment as a result of fallout from nuclear weapons testing, routine medical, or routine releases from nuclear power stations.

Tritium analysis indicates whether a sample contains the radionuclide tritium (H-3) and the amount present. Tritium is an isotope of hydrogen that emits low energy beta particles.

Strontium analysis identifies the presence and amount of strontium-89 and strontium-90 in a sample. These man-made radionuclides are found in the environment mainly as a result of fallout from nuclear weapons testing. Strontium is usually incorporated into the calcium pool of the biosphere. In other words, strontium tends to replace calcium in living organisms and becomes incorporated in bone tissue. The principle strontium exposure pathway is via milk produced by cattle grazed on pastures exposed to deposition from airborne releases.

Gamma Doses measured by thermoluminescent dosimeters while in the field are determined by a special laboratory procedure.

Often samples will contain little radioactivity, and may be below the lower limit of detection for the particular type of analysis used. The lower limit of detection (LLD) is the smallest amount of sample activity which can be detected with a reasonable degree of confidence, at a predetermined level. When a measurement of radioactivity is reported as less than LLD (<LLD), it means that the radioactivity is so low that it cannot be accurately measured with any degree of confidence by that particular method for an individual analysis.

Many radionuclides are present in the environment due to sources such as cosmic radiation and fallout from nuclear weapons testing. Some of the radionuclides present are:

- **tritium,** present as a result of the interaction of cosmic radiation with the upper atmosphere, as a result of routine release from nuclear facilities, and due to fallout from past atmospheric nuclear weapons testing.

- **beryllium-7,** present as a result of the interaction of cosmic radiation with the upper atmosphere.

- **cesium-137,** a man-made radionuclide which has been deposited in the environment, (for example, in surface soils) as a result of fallout from nuclear weapons testing and routine releases from nuclear facilities.

- **potassium-40,** a naturally occurring radionuclide normally found throughout the environment (including humans).

- **fallout radionuclides** from nuclear weapons testing, including strontium-89, strontium-90, cesium-137, cerium-141, cerium-144, and ruthenium-106. These radionuclides may also be released in minute amounts from nuclear facilities.

The radionuclides listed above are expected to be present in many of the environmental samples collected in the vicinity of the Fermi 2. The contribution of radionuclides from the operation of Fermi 2 is assessed by comparing sample results with preoperational data, operational data from previous years, control location data, and the types and amounts of radioactivity normally released from the Fermi 2 in liquid and gaseous effluents.

Quality Assurance

An important part of the environmental monitoring program at Fermi 2 is the **Quality Assurance** (QA) program. It is conducted in accordance with the guidelines specified in NRC Regulatory Guide 4.15, "Quality Assurance for Radiological Monitoring Programs." The QA program is designed to identify possible deficiencies in the REMP so that corrective actions can be initiated promptly. Fermi 2's Quality Assurance program also provides confidence in the results of the REMP through:

- performing regular audits of the REMP, including a careful examination of sample collection techniques and record keeping;

- performing audits of the vendor laboratory which analyzes the environmental samples;

- requiring the analytical vendor laboratory to participate in an approved Cross-Check Program;

- splitting samples prior to analysis by an independent laboratory and then comparing the results for agreement, and finally;

- requiring the analytical laboratory to perform in-house spiked sample analyses.

Radioactive Effluent Monitoring Results

This section summarizes the results of effluent monitoring and offsite dose calculation for the year 2006, as well as a listing of radioactivity contained in Fermi 2 waste shipped for burial. Calculated offsite doses are compared with Nuclear Regulatory Commission limits, and these limits are summarized in Appendix E. Appendix E also contains a detailed discussion of the methods used to determine quantities of radioactivity released in effluents, the types of solid radwaste, as well as tables of individual radionuclides released in effluents and shipped as solid radwaste.

There were no releases of liquid radioactive effluents from Fermi 2 in 2006. In fact, there has not been a liquid radioactive discharge from Fermi 2 since 1994. The 2006 gaseous effluent releases are summarized in the following tables. There were no abnormal releases of radioactive material, i.e., releases not performed in accordance with the Fermi 2 license and implementing procedures, in 2006.

The data in the following tables represent continuous and batch releases. In 2006, there were 3 containment purges in which radioactivity was detected. The total time for these purges was 3230 minutes. Based on recorded start and stop times, the shortest of these purges lasted 135 minutes, the longest lasted 2,139 minutes, and the average purge length was 1,077 minutes.

Note that some values in the following summary tables are preceded by the "less than" symbol. For noble gases, these values represent the sum of the lower limit of detection (LLD) values for 6 common noble gases isotopes listed in Appendix E in units of microcuries per cubic centimeter (µCi/cc). For gross alpha radioactivity releases, the "less than" value is in units of microcuries per cubic centimeter (µCi/cc) and represents the LLD value for a single sample.

Table 1 - Fission and Activation Gases (Noble Gases) Summary

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Release (curies)	<5.1E-07	2.04E-03	<5.1E-07	<5.1E-07
Average Release Rate for Period (µCi/sec)	NA	2.59E-04	NA	NA

Table 2 - Radioiodines Summary

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Total I-131 (curies)	6.00E-04	2.39E-03	9.83E-04	4.67E-04
Average Release Rate for Period (µCi/sec)	7.72E-05	3.04E-04	1.24E-04	5.87E-05

Table 3 - Particulates Summary

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Particulates with half lives > 8 days (curies)	7.42E-04	3.75E-04	1.29E-04	1.72E-04
Average Release Rate for Period (µCi/sec)	9.54E-05	4.77E-05	1.62E-05	2.16E-05
Gross Alpha Radioactivity (curies)	<1.6E-15	1.63E-07	6.33E-09	<1.6E-15

Table 4 - Tritium Summary

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Total Release (curies)	2.61E+01	1.51E+01	3.87E+01	3.14E+01
Average Release Rate for Period (µCi/sec)	3.36E+00	1.92E+00	4.87E+00	3.95E+00

The offsite dose impact of the above releases was evaluated by calculating organ doses to the most highly exposed individual living near the plant due to I-131, I-133, tritium, and particulates with half lives greater than 8 days. This exposure is assumed to be occurring via the pathways of inhalation, vegetation ingestion, and direct radiation from material deposited on the ground. The results of this calculation are shown in the following table:

Table 5

Organ	2006 Gaseous Effluent Dose to Receptor with Highest Single Organ Dose
Bone	5.25E-03 mrem
Liver	1.59E-02 mrem
Thyroid	8.52E-02 mrem
Kidney	1.59E-02 mrem
Lung	1.57E-02 mrem
GI-LLI	1.60E-02 mrem
Total body	1.58E-02 mrem

The highest single organ dose is 8.52E-02 mrem to the thyroid. This is 0.6% of the federal limit of 15 mrem specified in 10 CFR 50, Appendix I.

Another dose calculation performed on the above release data is that for gamma and beta air dose at the site boundary due to noble gases. In 2006, the calculated gamma air dose was 2.85E-08 mrad, and the beta air dose was 8.48E-08 mrad. These doses are 3E-07% and 4E-07% of the 10 CFR 50, Appendix I, annual limits of 10 mrad and 20 mrad, respectively.

Title 40, Part 190 of the Code of Federal Regulations requires that dose to an individual in the unrestricted area from the uranium fuel cycle, including direct radiation dose, be limited to 25 mrem/year to the total body and 75 mrem/year to the thyroid. During 2006, there was no measurable direct radiation dose beyond the site boundary as shown by offsite TLD readings. Also, offsite dose due to effluents is an extremely small fraction of the 40 CFR 190 limits. Therefore, Fermi 2 was in compliance with 40 CFR 190 in 2006.

Potential dose to visitors at Fermi 2 due to all radioactive effluents, including noble gases, was also calculated. The Offsite Dose Calculation Manual (ODCM) considers persons visiting the Fermi 2 Visitors Center (4 hours/year), and persons ice fishing on Lake Erie near the plant (240 hours/year), to be visitors. Using ODCM assumptions about these categories of visitors, the maximum potential dose to a visitor to Fermi 2 in 2006 was 0.0027 mrem to the maximally exposed organ (thyroid) and 0.0018 mrem to the total body.

Also, the dose to the entire population within a fifty mile radius of Fermi 2 (about 6 million people) was calculated. This dose was estimated to be less than one person-rem for 2006. This dose is insignificant compared to the background radiation dose to this population of approximately 1.8 million person-rem (based on an annual average individual background dose of 300 mrem).

The radioactivity and volume of Fermi 2 solid waste received at the Barnwell, SC, burial facility, or at the Envirocare, UT, facility in 2006 is summarized in the following table:

Table 6 - Solid Waste Received At Burial Sites

Type of waste	Unit	12 month period	Est. total activity error, %
Spent resins, sludges, etc.	m^3 curies	1.51E+01 1.15E+02	± 25
Dry compressible waste, contaminated equipment, etc.	m^3 curies	1.11E+03 5.71E+00	± 25
Irradiated components, control rods, etc.	m^3 curies	0 0	NA
Other	m^3 curies	0 0	NA

Radioactive solid waste shipments from Fermi 2 in 2006 (to either disposal or to intermediate processors) are summarized in the following table:

Table 7 - Solid Waste Shipments

Type of shipment/ solidification process	Number of shipments	Mode of transportation	Destination
Spent resin, sludges, etc.	3	tractor trailer with cask	Chem Nuclear, Barnwell, SC Duratek, Oak Ridge, TN
Dry compressible waste, contaminated equipment, etc.	24	tractor trailer and rail	Duratek, Oak Ridge, TN Envirocare, Clive, UT
Used oil	0	NA	NA
Mixed waste	0	NA	NA

The ODCM was not revised in 2006.

In 2006, no liquid or gaseous effluent monitoring instrumentation was out of service longer than the time limits specified in the ODCM. Also, no outside temporary tank exceeded the 10 curie content limit (excluding tritium and dissolved or entrained noble gases), and there were no major changes to radioactive waste systems in 2006.

Radiological Environmental Monitoring Program Results

Direct Radiation Monitoring

Radiation is a normal component of the environment resulting primarily from natural sources, such as cosmic radiation and naturally occurring radionuclides; and to a lesser extent, from manmade sources such as fallout from past nuclear weapons testing. The earth is constantly bombarded by cosmic radiation in the form of high energy gamma rays and particulates. The earth's crust also contains natural radioactive material, such as uranium and potassium-40, which contributes to the background radiation. Direct radiation monitoring primarily measures ionizing radiation from cosmic and terrestrial sources.

Thermoluminescent Dosimeters

Detroit Edison uses thermoluminescent dosimeters (TLDs) to measure direct gamma radiation in the environs of Fermi 2. In this process, ionizing radiation interacts with a phosphor which is the sensitive material in the TLD. Energy is trapped in the TLD material and can be stored for several months or years. This provides an excellent method to measure the dose received over long periods of time. The energy that was stored in the TLD as a result of interaction with radiation is released and measured by a controlled heating process in a calibrated reading system. As the TLD is heated, the phosphor releases the stored energy in the form of light. The amount of light detected is directly proportional to the amount of radiation to which the TLD was exposed. This reading process then rezeros the TLD and prepares it for reuse.

Fermi 2 has 67 TLD locations within a fifteen mile radius of the plant. Of the 67 TLD locations, 16 are located on-site and are not used for comparison with the control locations. These 16 TLDs are affected by Hydrogen Water Chemistry's sky shine and are not representative of off-site dose. 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. Indicator TLDs are located within a ten mile radius of the plant and control TLDs are located at a distance that is outside the influence of the plant. While in the field, 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. The TLDs' data are reported in terms of milliroentgen per standard quarter (mR/std qtr), with a standard quarter being 91 days. Regardless of the duration of TLD exposure in the field, the data have been normalized to a standard quarter to allow convenient intercomparisons with the net value.

In 2006, the average exposure for TLDs at all off-site indicator locations was 14.8 mR/std qtr and for all control locations was 13.7 mR/std qtr. These exposures are consistent with preoperational and past operational measurements as shown in Figure 1.

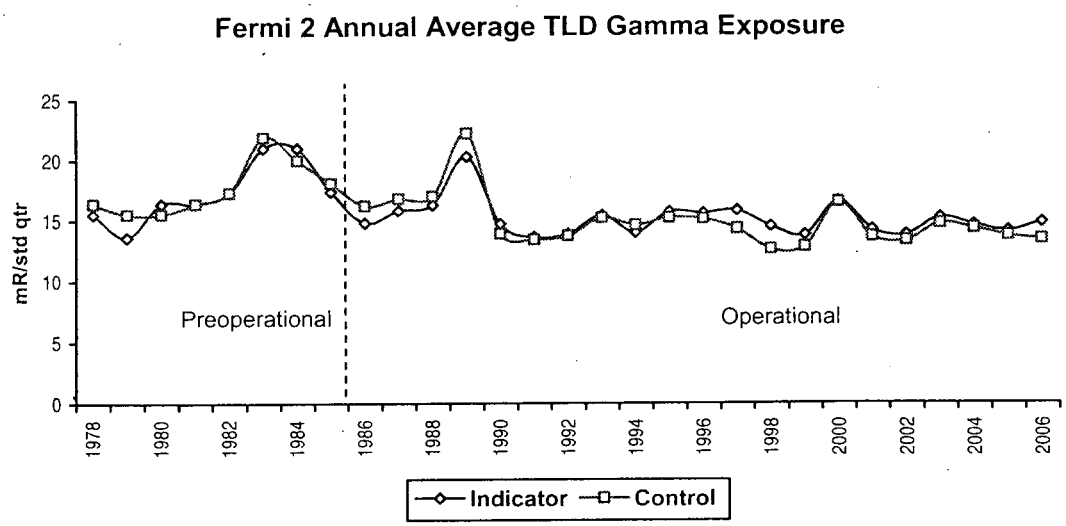


Figure 1 - Fermi 2 Annual Average TLD Gamma Exposure: The similarity between indicator and control results demonstrates that the operation of Fermi 2 has not caused any abnormal gamma exposure.

Atmospheric Monitoring

A potential exposure pathway to people is inhalation of airborne radioactive materials. Detroit Edison continuously samples the ambient air 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 radiation and iodine-131 gamma radiation. The particulate filters for each sampling location are combined on a quarterly basis to form a "composite sample" and are analyzed for gamma emitting radionuclides. There are four indicator sampling locations which were selected based on an evaluation of the predominant wind directions. A fifth sampling location is approximately fourteen miles west of the plant and is considered to be in a location unaffected by the operation of the plant. This is used as the control location.

Air Sampling

On October 16, 1980, the People's Republic of China conducted an atmospheric nuclear weapon test. The fallout from this test was detected in Fermi 2 preoperational environmental air samples in 1981 (see Figure 2). The average gross beta for 1981 was 1.60E-1 pCi/cubic meter for indicator samples and 2.40E-1 pCi/cubic meter for control samples which was a factor of ten times greater than background gross beta. Gamma spectroscopic analyses of the particulate filters indicated cesium-137, cerium-141, cerium-144, ruthenium-103, ruthenium-106, zirconium-95, niobium-95, manganese-54, and antimony-125 in the atmosphere as a result of this test. In 1986, as shown in Figure 2, there was a slight increase in gross beta activity and a 2.70E-1 pCi/cubic meter "spike" in the iodine-131 activity. These elevated levels in 1986 are attributed to the nuclear accident at Chernobyl on April 26, 1986. For all other years, the iodine-131 activity was below the lower limit of detection (LLD) of 7.0E-2 pCi/cubic meter.

During 2006, two hundred and fifty-five (255) particulate air filters and charcoal cartridges were collected and analyzed for gross beta activity and iodine-131 respectively. The average gross beta for indicator samples was 2.13E-2 pCi/cubic meter and 2.44E-2 pCi/cubic meter for control samples. Four consecutive control samples, collected in August and September, had gross beta activity that was greater than the corresponding indicating samples. This was due to work being performed on an adjacent natural gas pipe line during the sampling period. Natural gas can contain significant levels of radon gas. None of the charcoal filters collected showed detectable levels of iodine-131. The following table contains the annual average gross beta results of all five sample locations for 2006.

2006 Average Gross Beta Concentrations in Air Particulates (pCi/m^3)

Table 8

Station	Description (sector/distance)	Annual Average
API-1 (I)	Estral Beach (NE/1.4 mi.)	2.18E-2
API-2 (I)	Site Boundary (NNW/0.6 mi.)	2.21E-2
API-3 (I)	Site Boundary (NW/0.6 mi.)	2.05E-2
API-4 (C)	North Custer Rd. (W/14 mi.)	2.44E-2
API-5 (I)	Site Boundary (S/1.2 mi.)	2.07E-2

(I) = Indicator Station (C) = Control Station

Twenty (20) quarterly particulate filter composites were prepared and analyzed for gamma emitting radionuclides. Naturally occurring beryllium-7 was detected in both indicator and control samples.

In conclusion, the atmospheric monitoring data are consistent with preoperational and prior operational data and show no adverse long-term trends in the environment attributable to operation of Fermi 2 as illustrated in Figures 2 and 3.

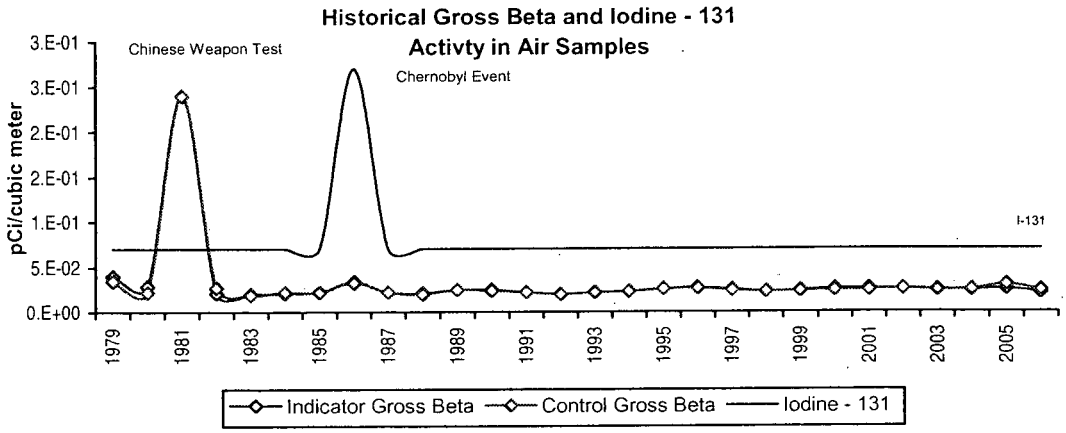


Figure 2 - Historical Gross Beta and Iodine-131 Activity in Air Samples; The similarity between indicator and control gross beta results demonstrates that the operation of Fermi 2 has had no adverse long-term trends in the environment. The lower limit of detection (LLD) for iodine-131 is 0.07 pCi/cubic meter.

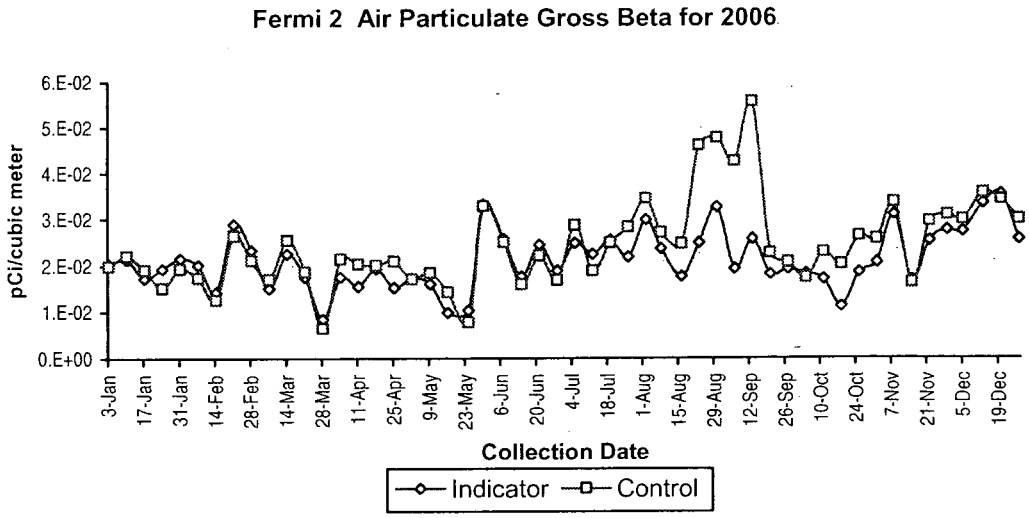


Figure 3 - Fermi 2 Air Particulate Gross Beta for 2006; The concentration of beta emitting radionuclides in airborne particulates samples was essentially identical at indicator and control locations. Gross beta activity varies throughout the year and is primarily an effect of seasonal precipitation.

Terrestrial Monitoring

Radionuclides released to the atmosphere may deposit on soil and vegetation, and therefore, may eventually be incorporated into the human food chain. To assess the impact of Fermi 2 operations to humans from the ingestion pathway, samples of milk, green leafy vegetables, and groundwater are collected and analyzed for radioactivity. The following sections discuss the type and frequency of terrestrial sampling, analyses performed, and a comparison of 2006 data to previous operational and preoperational data.

Milk Sampling

The milk sampling portion of the REMP is perhaps one of the most important aspects of the program. This is because a major pathway in the human food chain is the consumption of milk from grazing animals (dairy cows or goats) due to biological concentration and the short turn around time in this pathway. Milk is collected from one indicator location and one control location semimonthly when animals are in the pasture, and monthly when the animals are on stored feed. The milk is analyzed for iodine-131, gamma emitting radionuclides, and strontium-89/90. At times when milk samples are not available, grass samples are collected at both the control milk sample location and the location where milk is not available. Grass samples are analyzed for iodine-131 and other gamma emitting radionuclides.

Milk sampling began in 1979 during the preoperational program. During this time period, milk samples were analyzed for iodine-131 and other gamma emitting radionuclides. Cesium-137 and naturally occurring potassium-40 were the only radionuclides detected in milk samples during the preoperational program. The cesium-137 concentration averaged 3.60E+0 pCi/liter and is due to past atmospheric nuclear weapons testing. In 1986, after the nuclear accident at Chernobyl, iodine-131 and cesium-137 were detected in both indicator and control milk samples. The average concentration for iodine-131 was 3.70E+0 pCi/liter and 6.60E+0 pCi/liter for cesium-137.

The analysis for strontium-89/90 began in 1988, and strontium-90 is routinely detected in both indicator and control milk samples because of past atmospheric nuclear weapons testing.

During 2006, thirty six (36) milk samples were collected and analyzed for iodine-131, gamma emitting radionuclides, and strontium-89/90. No iodine-131 was detected in any of the samples. Strontium-90 was detected in both indicator and control milk samples and is due to fallout from past atmospheric weapons testing (see Figure 4). The indicator

sample had a strontium-90 concentration of 1.43E+0 pCi/liter and the control sample had a concentration of 1.70E+0 pCi/liter. Naturally occurring potassium-40 was detected in both indicator and control samples. During 2006, no grass samples were scheduled or collected for the REMP program.

In 1970, the concentration of strontium-90 in Monroe County milk was 6.00E+0 pCi/liter according to the Michigan Department of Health's "Milk Surveillance," Radiation Data and Reports, Vol. 11-15, 1970-1974. Figure 4 shows the calculated radiological decay curve for the 1970 concentration of strontium-90 and the average concentrations since 1988. This graph illustrates that the inventory of strontium-90 in the local environment is decreasing with time and closely follows the calculated decay curve. This supports the fact that the inventory of strontium-90 in the environment is due to fallout from past atmospheric nuclear weapons testing and not the operation of Fermi 2.

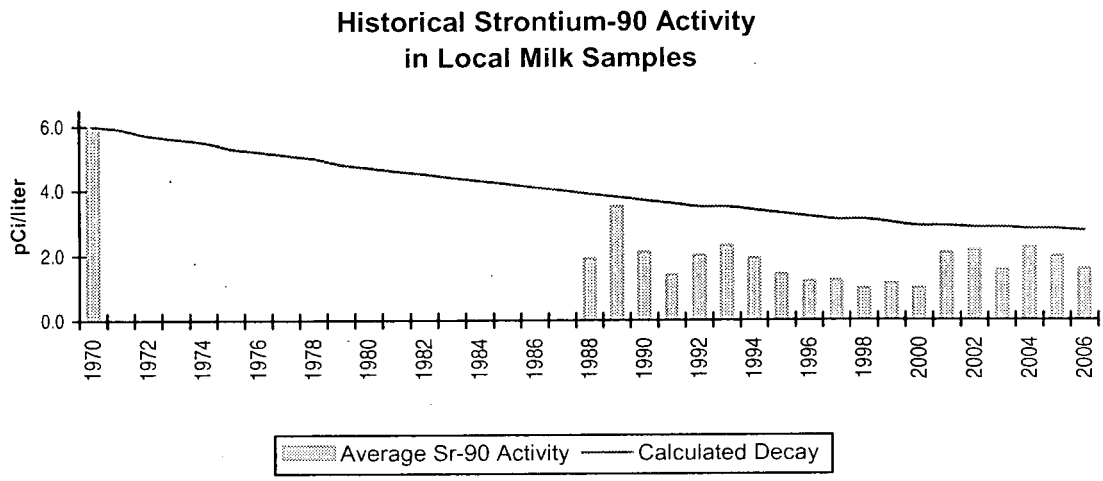


Figure 4 - Historical Strontium-90 Activity in Local Milk Samples; The concentration of strontium-90 in local milk samples is decreasing with time and is below the calculated decay curve. This supports the fact that strontium-90 in local milk is due to fallout from past atmospheric nuclear weapons testing and not the operation of Fermi 2.

Groundwater Sampling

In areas not served by municipal water systems, water supplies for domestic use are generally obtained from private wells. The network of private wells presently in use forms the source of water for domestic and livestock purposes in farms and homes west and north of the site. However, with the construction of new water plants and distribution systems, the water use trend in the area is from groundwater to surface water.

Groundwater is collected on a quarterly basis from four wells surrounding Fermi 2. The groundwater is analyzed for gamma emitting radionuclides and tritium. Sampling location GW-4, which is located approximately 0.6 miles west northwest, is designated as the control location because it is up-gradient and is least likely to be affected by the operation of the plant. The other three sampling locations are down-gradient from Fermi 2 and designated as indicator locations.

Groundwater sampling began in 1987, during the operational period of the REMP program. From 1987 to 1996, naturally occurring potassium-40, cesium-137, and tritium were detected in both indicator and control samples. The average concentration was 7.71E+0 pCi/liter for cesium-137 and 1.50E+2 pCi/liter for tritium. The presence of cesium-137 and tritium in groundwater samples is due to fallout from past atmospheric nuclear weapons testing leaching into the soil and becoming incorporated into the groundwater. From 1997 to 2004, no activity was detected in groundwater samples.

In 2006, sixteen (16) groundwater samples were collected and analyzed for gamma emitting radionuclides and tritium. No activity was detected in any of these groundwater samples.

Garden Sampling

Fermi 2 collects samples of broad leaf 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 iodine-131 and other gamma emitting radionuclides.

Vegetable sampling started in 1982. During the preoperational period from 1982 to 1985, only naturally occurring potassium-40 was detected in both indicator and control vegetable samples. During the operational period from 1985 to 1990 and 1994 to 1995, only naturally occurring potassium-40 was detected in both indicator and control vegetable samples. However, in 1991, 1992, and 1993, cesium-137 was detected in one indicator sample each year and had an average concentration of 1.2E+1 pCi/kilogram.

Cesium-137 may become incorporated into plants by either uptake from the soil or direct deposition on foliar surfaces. Since cesium-137 is normally not detected in gaseous effluent samples from Fermi 2, and there have been no recent atmospheric weapons testing or nuclear accidents, the incorporation of cesium-137 by direct deposition is highly unlikely. The most probable source of cesium-137 in vegetable samples is the uptake of previously deposited cesium-137, which has leached into the soil. This cesium activity is attributed to fallout from past atmospheric weapons testing and to the nuclear accident at Chernobyl.

During 2006, fourteen (14) vegetable samples were collected and analyzed for iodine-131 and other gamma emitting radionuclides. No iodine-131 was detected in vegetable samples during 2006. The only gamma emitting radionuclide detected was naturally occurring potassium-40.

Terrestrial monitoring results for 2006 of milk, groundwater and leafy garden vegetable samples, showed only naturally occurring radioactivity and radioactivity associated with fallout from past atmospheric nuclear weapons testing. The radioactivity levels detected were consistent with levels measured prior to the operation of Fermi 2 and no radioactivity attributable to activities at Fermi 2 was detected in any terrestrial samples. In conclusion, the terrestrial monitoring data show no adverse long-term trends in the terrestrial environment.

Aquatic Monitoring

Lake Erie, on which Fermi 2 borders, is used as a source for drinking water, as well as for recreational activities such as fishing, swimming, sunbathing, and boating. For this reason, Lake Erie and its tributaries are routinely monitored for radioactivity.

The aquatic monitoring portion of the REMP consists of sampling raw municipal drinking water, surface water, lake sediments, and fish for the presence of radioactivity. The following sections discuss the type and frequency of aquatic sampling, analyses performed, and a comparison of 2006 data to previous operational and preoperational data.

Drinking Water Sampling

Detroit Edison monitors drinking water at one control location and one indicator location using automatic samplers. The automatic samplers collect samples, known as aliquots, at time intervals that are very short (hourly) relative to the sample collection period (monthly) in order to assure that a representative sample is obtained. 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 is 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 radionuclides. The monthly samples for each location are combined on a quarterly basis and analyzed for tritium activity.

In late 1980, as shown in Figure 5, an atmospheric nuclear weapon test was conducted by the People's Republic of China. As a result of this test, the average gross beta for 1981 was 9.80E+0 pCi/liter for water samples. Figure 5 also shows that, except for the Chinese weapons testing, the historic drinking water sample data are below or slightly above the lower limit of detection (4.00E+0 pCi/liter) required by US Environmental Protection Agency (USEPA) National Interim Primary Drinking Water regulations. Even during the Chinese weapons testing, the drinking water samples did not exceed the USEPA maximum allowable criteria of 5.00E+1 pCi/liter gross beta. In 1980 and 1983, cesium-137 was detected in drinking water samples at levels ranging from 5.40E+0 pCi/liter to 1.90E+1 pCi/liter. Tritium was also detected during the preoperational program and had an average of 3.25E+2 pCi/liter. The presence of cesium-137 and detectable levels of tritium in these water samples is due to fallout from past atmospheric nuclear weapons testing and naturally occurring tritium.

From 1985 to 2005, the average annual gross beta activity for indicator samples was 3.42E+0 pCi/liter and 2.87E+0 pCi/liter for control samples. The analysis for strontium-89/90 began in 1988, and strontium-90 has been detected in both indicator and control samples. The average strontium-90 activity for indicator samples was 7.25E-1 pCi/liter and 7.56E-1 pCi/liter for control samples during this time period. Tritium was also detected in both indicator and control drinking water samples during this time period. The average tritium activity for indicator samples was 2.52E+2 pCi/liter and 2.60E+2 pCi/liter for control samples. The presence of strontium-90 and detectable levels of tritium in these water samples is due to fallout from past atmospheric nuclear weapons testing and naturally occurring tritium.

In 2006, twenty-five (25) drinking water samples were collected and analyzed for gross beta, gamma emitting radionuclides, strontium-89/90, and tritium. The average gross beta for indicator samples was 4.72E+0 and 4.03E+0 pCi/liter for control samples. No gamma emitting radionuclides or strontium-89/90 activity was detected in drinking water samples during 2006. Eight (8) quarterly composite drinking water samples were prepared and analyzed for tritium. No tritium activity was detected in drinking water samples during 2006.

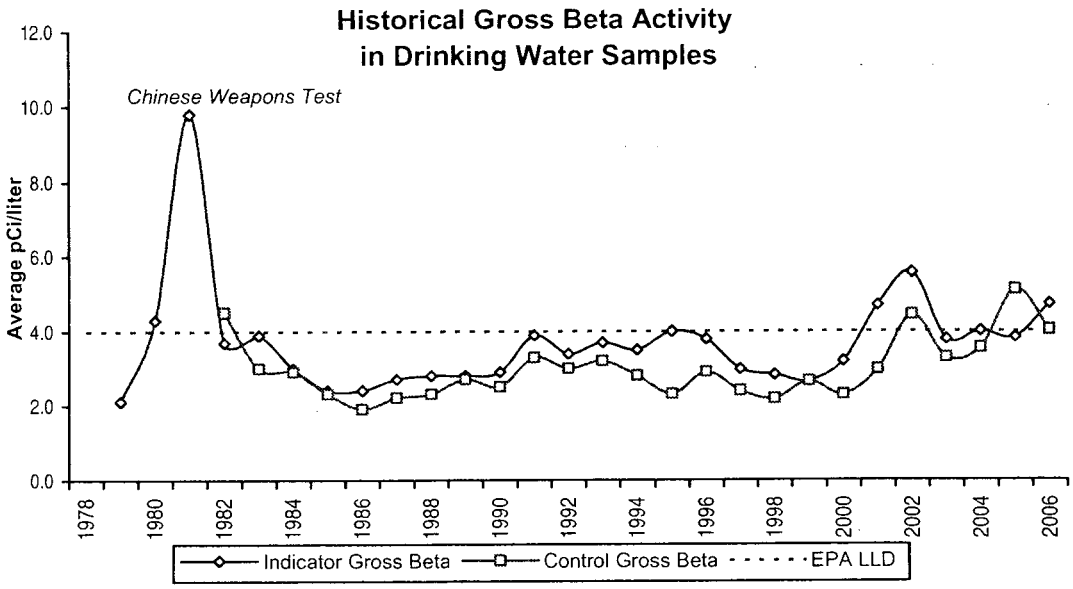


Figure 5 - Historical Gross Beta Activity in Drinking Water Samples; Since 1982, the annual concentrations of beta emitting radionuclides in drinking water samples collected from indicator locations have been consistent with those from control locations. This shows that Fermi 2 has had no measurable radiological impact on local drinking water.

Surface Water Sampling

Detroit Edison monitors surface water at two locations using automatic samplers. As with drinking water, surface water samples are collected at time intervals that are very short (hourly) relative to the sample collection period (monthly) in order to assure obtaining a representative sample. Indicator surface water samples are obtained at the Fermi 2 General Service Water building, located approximately 0.3 miles south southeast 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 northeast of Fermi 2. Surface water samples are collected on a monthly basis and analyzed for strontium-89/90 and gamma emitting radionuclides. 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 analyzed for gamma emitting radionuclides and tritium. During this preoperational program, no gamma emitting radionuclides, except for naturally occurring potassium-40, were detected. Tritium was detected in both indicator and control samples during this time period and had an average concentration of 3.15E+2 pCi/liter. This tritium activity represents the background concentration due to naturally occurring tritium and tritium produced during past atmospheric nuclear weapons testing.

From 1985 to 2005, as part of the operational program, surface water samples were analyzed for gamma emitting radionuclides and tritium. The analysis for strontium-89/90 did not begin until 1988, and strontium-90 was detected in both indicator and control samples. The average strontium-90 concentration for this time period was 1.13E+0 pCi/liter. In 1990, two indicator samples showed detectable activity for cesium-137 at an average concentration of 1.20E+1 pCi/liter. The presence of cesium-137 and strontium-90 in these water samples is due to fallout from past atmospheric nuclear weapons testing. Tritium was detected in both indicator and control surface water samples during this time period at a concentration of 2.31E+2 pCi/liter. This tritium activity is consistent with background levels measured during the preoperational program.

In 2006, twenty-four (24) surface water samples were collected and analyzed for gamma emitting radionuclides and strontium-89/90. From these samples, eight (8) quarterly composite samples were prepared and analyzed for tritium. During 2006, no gamma emitting radionuclides, strontium-89/90 or tritium was detected in surface water samples.

Sediment Sampling

Sediments often act as a sink (temporary or permanent) for radionuclides, but they may also become a source, as when they are resuspended during periods of increased turbulence or are dredged and deposited elsewhere. Sediment, in the vicinity of the liquid discharge point, represents the most likely site for accumulation of radionuclides in the aquatic environment, and with long-lived radionuclides, a gradual increase in radioactivity concentration would be expected over time if discharges occur. Sediment, therefore, provides a long-term indication of change that may appear in other sample media (i.e., water and fish samples).

Lake Erie shoreline and bottom sediments from five locations are collected on a semiannual basis (Spring and Fall) and are analyzed for gamma emitting radionuclides 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 2 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 indicator samples were analyzed for gamma emitting radionuclides. During the preoperational program, except for naturally occurring radionuclides, only cesium-137 was detected in sediment samples. For this time period, the average cesium-137 concentration was 3.27E+2 pCi/kilogram. The presence of cesium-137 in these sediment samples is due to fallout from past atmospheric nuclear weapons testing.

From 1985 to 2005, cesium-137, strontium-90, and naturally occurring radionuclides were detected in sediment samples. The average cesium-137 concentration was 1.32E+2 pCi/kilogram for all samples. The analysis for strontium-89/90 began in 1988, and strontium-90 has been routinely detected at similar concentrations in both indicator and control samples. The average strontium-90 activity for indicator samples was 1.80E+2 pCi/kilogram and 1.98E+2 pCi/kilogram for control samples. The presence of cesium-137 and strontium-90 in these sediment samples is due to fallout from past atmospheric nuclear weapons testing.

In 1990 and 1991, the Spring samples taken at the Fermi 2 liquid discharge line (Location S-2) showed activity for plant related radionuclides (manganese-54, cobalt-58, cobalt-60, and zinc-65) and was determined to be a result of liquid effluent from Fermi 2. The sample results were well below any regulatory reporting limits and were consistent with the activity released from the plant in liquid effluents and the dose impact was negligible.

In 2006, ten (10) sediment samples were collected and analyzed for gamma emitting radionuclides and strontium 89/90. Cesium-137 was detected in two control samples with an average concentration of 7.20E+1 pCi/kilogram. Cesium-137 was not detected in any indicating sediment samples. The presence of cesium-137 in sediment samples is due to fallout from past atmospheric nuclear weapons testing. Naturally occurring radionuclide potassium-40 was also detected in sediment samples for this sampling period.

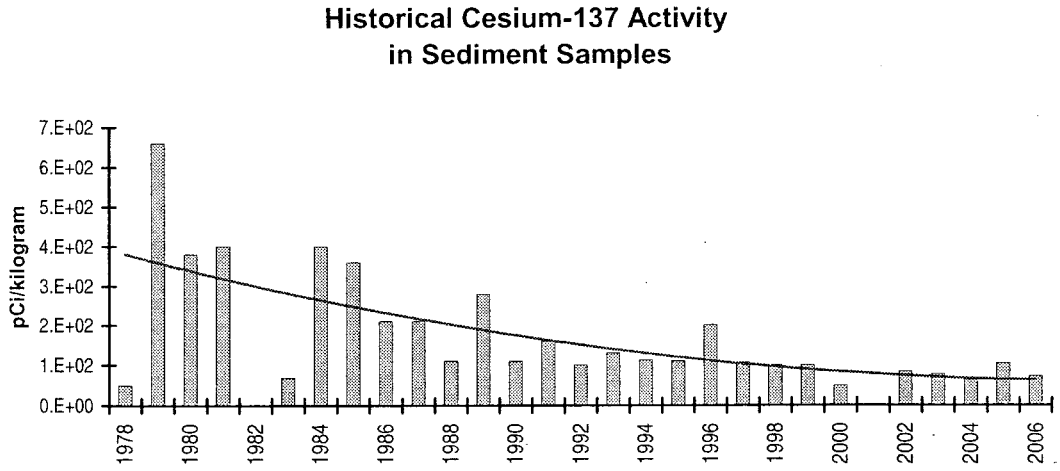


Figure 6 - Historical Cesium-137 Activity in Sediment Samples; As the calculated trend shows, the concentration of cesium-137 in Lake Erie sediments is decreasing with time. This supports the fact that cesium-137 in Lake Erie sediments is due to fallout from past atmospheric nuclear weapons testing and not the operation of Fermi 2.

Figure 6 shows the historical concentration of cesium-137 in sediment samples from 1978 to 2006. Using the data from these years, and the statistical method of least squares, an exponential curve can be calculated that represents the cesium-137 concentration in sediment. This curve has a negative slope which indicates the overall concentration of cesium-137 in the environment is decreasing with time. This supports the fact that the inventory of cesium-137 in the environment is due to fallout from past atmospheric nuclear weapons testing and not from the operation of Fermi 2.

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 in Brest Bay. The indicator location is approximately 1200 feet offshore of the Fermi 2 liquid effluent discharge. Edible portions of the fish are analyzed for gamma emitting radionuclides and strontium-89/90.

During the preoperational program, fish samples were analyzed for gamma emitting radionuclides. Only cesium-137 and naturally occurring potassium-40 were detected during this time period. The average concentration of cesium-137 for indicator samples was 3.53E+1 pCi/kilogram and 4.20E+1 pCi/kilogram for control samples. The presence of cesium-137 in these fish samples is due to fallout from past atmospheric nuclear weapons testing.

From 1985 to 2005, cesium-137 and naturally occurring potassium-40 were detected in fish samples. The average cesium-137 concentration for indicator samples was 3.82E+1 pCi/kilogram and 3.92E+1 pCi/kilogram for control samples. The analysis for strontium-89/90 began in 1990, and strontium-90 has been routinely detected at similar concentrations in both indicator and control samples. The average strontium-90 concentration for indicator samples was 3.84E+1 pCi/kilogram and 3.15E+1 pCi/kilogram for control samples. The presence of cesium-137 and strontium-90 in these fish samples is due to fallout from past atmospheric nuclear weapons testing.

In 2006, nineteen (19) fish samples were collected and analyzed for gamma emitting radionuclides and strontium-89/90. Only naturally occurring potassium-40 was detected in fish samples for 2006.

Aquatic monitoring results for 2006 of water, sediment, and fish showed only naturally occurring radioactivity and radioactivity associated with fallout from past atmospheric nuclear weapons testing and were consistent with levels measured prior to the operation of Fermi 2. In conclusion, no radioactivity attributable to activities at Fermi 2 was detected in any aquatic samples during 2006 and no adverse long-term trends are shown in the aquatic monitoring data.

Land Use Census

The Land Use Census is conducted in accordance with the Fermi 2 Offsite Dose Calculation Manual (ODCM), control 3.12.2, and satisfies the requirements of Section IV.B.3 of Appendix I to 10 CFR Part 50. This census identifies changes in the use of unrestricted areas to permit modifications to monitoring programs for evaluating doses to individuals from principal pathways of exposure. The pathways of concern are listed below:

- **Inhalation Pathway** - Internal exposure as a result of breathing radionuclides carried in the air.
- **Ground Exposure Pathway** - External exposure from radionuclides deposited on the ground.
- **Plume Exposure Pathway** - External exposure directly from a plume or cloud of radioactive material.
- **Vegetation Pathway** - Internal exposure as a result of eating vegetables which have absorbed deposited radioactive material or which have absorbed radionuclides through the soil.
- **Milk Pathway** - Internal exposure as a result of drinking milk which may contain radioactive material as a result of dairy animals grazing on a pasture contaminated by radionuclides.

The Land Use Census is conducted during the growing season and is used to identify, within a radius of 5 miles, the location of the nearest residences, milk animals, meat animals, and gardens (greater than 50 square meters and containing broad leaf vegetation) in each of 16 meteorological sectors surrounding Fermi 2. Gardens greater than 50 square meters are the minimum size required to produce the quantity (26 kg/year) of leafy vegetables assumed in NRC Regulatory Guide 1.109 for 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.

2006 Land Use Census Results

The Land Use Census is conducted in accordance with ODCM control 3.12.2 and satisfies the requirements of Section IV.B.3 of Appendix I to 10 CFR Part 50. This census identifies changes in the use of unrestricted areas to permit modifications to monitoring programs for evaluating doses to individuals from principal pathways of exposure. The annual Land Use Census is conducted during the growing season and is used to identify, within a radius of 5 miles, the location of the closest residences, milk animals, meat animals, and gardens in each of the 16 meteorological sectors surrounding Fermi 2.

The 2006 Land Use Census was performed during the month of August. The 2006 census data were obtained with the use of a hand-held Global Positioning System (GPS) unit and satellite imaging. These data were compared to the 2005 data to determine any significant changes in the use of the land. The results of the census are tabulated in Tables 9 – 12 of this report.

No significant changes in the land use between 2005 and 2006 were found that would require changing the location of the "maximum exposed individual". There were no changes in the actual locations of closest residences. Better coordinates were obtained for three residences using satellite imaging. There were slight changes in three meteorological sectors in the category of closest gardens. See Table 10 for these changes. The "maximum exposed individual" is located in the West-North-West sector and no longer participates in the REMP program. However, the location still maintains a potential for a garden. In the category of closest milk locations, there were no changes. All milk locations identified are not used for human consumption. The changes for the category of closest meat locations were one beef location was not identified and two other locations were identified, one beef and one sheep. As with past surveys, this census identified new residential housing construction that shows a continuing trend of converting agricultural land to other uses in the area surrounding Fermi 2.

As stated above, there were no significant changes in the 2006 land use that would require changing the location of the "maximum exposed individual". For that reason, the location of "maximum exposed individual" remains the same and is described as follows:

Pathway	Sector	Azimuth (degrees)	Distance (meters)	Age Group	Maximum Organ
Ingestion (vegetation)	WNW	303.5	1103	Child	Thyroid

2006 LAND USE CENSUS

Closest Residences

Table 9

Year	Sector	Azimuth (degrees)	Distance (miles)	Change (miles)
2005	NE	34.7	1.10	
2006	NE	34.7	1.10	0
2005	NNE	16.6	1.08	
2006	NNE	16.6	1.08	0
2005	N	8.9	1.11	
2006	N	8.9	1.11	0
2005	NNW	333.6	1.09	
2006	NNW	333.6	1.09	0
2005	NW	309.7	1.07	
2006	NW	309.7	1.07	0
2005 (a)	WNW	301.9	0.69	
2006	WNW	301.9	0.69	0
2005	W	261.3	1.60	
2006	W	259.2	1.19	-0.41(b)
2005	WSW	240.2	1.55	
2006	WSW	236.4	1.39	-0.16(b)
2005	SW	229.3	1.26	
2006	SW	229.3	1.26	0
2005	SSW	200.1	1.12	
2006	SSW	200.1	1.12	0
2005	S	170.1	1.02	
2006	S	169.6	1.03	+0.01(b)
	ESE-SSE	Lake Erie		N/A

(a) Location of "maximum exposed individual."
(b) Same location, better data.

2006 LAND USE CENSUS

Closest Gardens

Table 10

Year	Sector	Azimuth (degrees)	Distance (miles)	Change (miles)
2005	NE	38.9	1.98	
2006	NE	38.9	1.98	0
2005	NNE	33.0	1.74	
2006	NNE	33.0	1.74	0
2005	N	0.6	1.64	
2006	N	0.6	1.64	0
2005	NNW	326.7	1.40	
2006	NNW	326.7	1.40	0
2005	NW	310.3	1.98	
2006	NW	313.5	1.08	-0.90
2005	WNW	300.2	1.78	
2006	WNW	300.2	1.78	0
2005	W	266.7	1.70	
2006	W	266.7	1.70	0
2005	WSW	258.2	1.15	
2006	WSW	250.5	2.38	+1.23
2005	SW	233.7	4.38	
2006	SW	None		N/A
2005	SSW	195.9	1.50	
2006	SSW	195.9	1.50	0
2005	S	None		
2006	S	None		N/A
	ESE - SSE	Lake Erie		N/A

2006 LAND USE CENSUS

Milk Locations

Table 11

Year	Sector	Azimuth (degrees)	Distance (miles)	Type/Change (miles)
2005	NE	None		
2006	NE	None		N/A
2005	NNE	None		
2006	NNE	None		N/A
2005	N	1.2	1.80	Goat
2006	N	1.2	1.80	0
2005	NNW	329.4	3.02	Goat
2006	NNW	329.4	3.02	0
2005	NW	321.4	3.02	Cow/Goat
2006	NW	321.4	3.02	0
2005	WNW	297.7	2.25	Goat
2006	WNW	297.4	2.38	+0.13(a)
2005	W	None		
2006	W	None		N/A
2005	WSW	None		
2006	WSW	None		N/A
2005	SW	None		
2006	SW	None		N/A
2005	SSW	None		
2006	SSW	None		N/A
2005	S	None		
2006	S	None		N/A
	ESE - SSE	Lake Erie		N/A

(a) Same location, better data.

2006 LAND USE CENSUS

Closest Meat Locations

Table 12

Year	Sector	Azimuth (degrees)	Distance (miles)	Type/Change (miles)
2005	NE	None		
2006	NE	None		N/A
2005	NNE	None		
2006	NNE	None		N/A
2005	N	None		
2006	N	None		N/A
2005	NNW	None		Sheep
2006	NNW	338.4	4.39	N/A
2005	NW	None		Beef
2006	NW	321.4	3.02	N/A
2005	WNW	287.4	1.60	Beef
2006	WNW	None		N/A
2005	W	None		
2006	W	None		N/A
2005	WSW	251.1	2.96	Beef
2006	WSW	251.1	2.96	0
2005	SW	None		
2006	SW	None		N/A
2005	SSW	None		
2006	SSW	None		N/A
2005	S	None		
2006	S	None		N/A
	ESE - SSE	Lake Erie		N/A

Appendix A

Sampling Locations

Direct Radiation Sample Locations

Table A-1

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
T1	NE/38°	1.3 mi.	Estral Beach, Pole on Lakeshore 23 Poles S of Lakeview. (Special Area)	Q	I
T2	NNE/22°	1.2 mi.	Pole at termination of Brancheau St. (Special Area)	Q	I
T3	N/9°	1.1 mi.	Pole, NW corner of Swan Boat Club fence. (Special Area)	Q	I
T4	NNW/337°	0.6 mi.	Site boundary and Toll Rd. on Site fence by API #2.	Q	I
T5	NW/313°	0.6 mi.	Site boundary and Toll Rd. on Site fence by API #3.	Q	I
T6	WNW/294°	0.6 mi.	On Site fence at south end of N. Bullet Rd.	Q	I
T7	W/270°	14.0 mi.	Pole, at Michigan Gas substation on N. Custer Rd., 0.66 miles west of Doty Rd.	Q	C
T8	NW/305°	1.9 mi.	Pole on Post Rd. near NE corner of Dixie Hwy. and Post Rd.	Q	I
T9	NNW/334°	1.5 mi.	Pole, NW corner of Trombley and Swan View Rd.	Q	I
T10	N/6°	2.1 mi.	Pole, S side of Massarant- 2 poles W of Chinavare.	Q	I

I = Indicator *C = Control* *O = On-site* *Q = Quarterly*

Direct Radiation Sample Locations (Table A-1 continued)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
T11	NNE/23°	6.2 mi.	Pole, NE corner of Milliman and Jefferson.	Q	I
T12	NNE/29°	6.3 mi.	Pointe Mouille Game Area Field Office, Pole near tree, N area of parking lot.	Q	I
T13	N/356°	4.1 mi.	Labo and Dixie Hwy. Pole on SW corner with light.	Q	I
T14	NNW/337°	4.4 mi.	Labo and Brandon Pole on SE corner near RR.	Q	I
T15	NW/315°	3.9 mi.	Pole, behind building at the corner of Swan Creek and Mill St.	Q	I
T16	WNW/283°	4.9 mi.	Pole, SE corner of War and Post Rd.	Q	I
T17	W/271°	4.9 mi.	Pole, NE corner of Nadeau and Laprad near mobile home park.	Q	I
T18	WSW/247°	4.8 mi.	Pole, NE corner of Mentel and Hurd Rd.	Q	I
T19	SW/236°	5.2 mi.	Fermi siren pole on Waterworks Rd. NE corner of intersection - Sterling State Park Rd. Entrance Drive/Waterworks.	Q	I
T20	WSW/257°	2.7 mi.	Pole, S side of Williams Rd, 9 poles W of Dixie Hwy. (Special Area)	Q	I
T21	WSW/239°	2.7 mi.	Pole, N side of Pearl at Parkview Woodland Beach. (Special Area)	Q	I

I = Indicator *C = Control* *O = On-site* *Q = Quarterly*

Direct Radiation Sample Locations (Table A-1 continued)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
T22	S/172°	1.2 mi.	Pole, N side of Pointe Aux Peaux 2 poles W of Long - Site Boundary.	Q	I
T23	SSW/195°	1.1 mi.	Pole, S side of Pointe Aux Peaux 1 pole W of Huron next to Vent Pipe - Site Boundary.	Q	I
T24	SW/225°	1.2 mi.	Fermi Gate along Pointe Aux Peaux Rd. on fence wire W of gate Site Boundary.	Q	I
T25	WSW/252°	1.4 mi.	Pole, Toll Rd. - 12 poles S of Fermi Drive.	Q	I
T26	WSW/259°	1.1 mi.	Pole, Toll Rd. - 6 poles S of Fermi Drive.	Q	I
T27	SW/225°	6.8 mi.	Pole, NE corner of McMillan and East Front St. (Special Area)	Q	I
T28	SW/229°	10.7 mi.	Pole, SE corner of Mortar Creek and LaPlaisance.	Q	C
T29	WSW/237°	10.3 mi.	Pole, NE corner of S Dixie and Albain.	Q	C
T30	WSW/247°	7.8 mi.	E side S end of foot bridge, St. Mary's Park corner of Elm and Monroe St. (Special Area)	Q	I
T31	WSW/255°	9.6 mi.	1st pole W of entrance drive Milton "Pat" Munson Recreational Reserve on North Custer Rd.	Q	C

I = Indicator *C = Control* *O = On-site* *Q = Quarterly*

Direct Radiation Sample Locations (Table A-1 continued)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
T32	WNW/295°	10.3 mi.	Pole, corner of Stony Creek and Finzel Rd.	Q	I
T33	NW/317°	9.2 mi.	Pole, W side of Grafton Rd. 1 pole N of Ash and Grafton intersection.	Q	I
T34	NNW/338°	9.8 mi.	Pole, SW corner of Port Creek and Will-Carleton Rd.	Q	I
T35	N/359°	6.9 mi.	Pole, S Side of S Huron River Dr. across from Race St. (Special Area)	Q	I
T36	N/358°	9.1 mi.	Pole, NE corner of Gibraltar and Cahill Rd.	Q	I
T37	NNE/21°	9.8 mi.	Pole, S corner of Adams and Gibraltar across from Humbug Marina.	Q	I
T38	WNW/294°	1.7 mi.	Residence - 6594 N. Dixie Hwy.	Q	I
T39*	S/176°	0.3 mi.	SE corner of Protected Area Fence (PAF).	Q	O
T40*	S/170°	0.3 mi.	Midway along OBA - PAF.	Q	O
T41*	SSE/161°	0.2 mi.	Midway between OBA and Shield Wall on PAF.	Q	O
T42*	SSE/149°	0.2 mi.	Midway along Shield Wall on PAF.	Q	O
T43*	SE/131°	0.1 mi.	Midway between Shield Wall and Aux Boilers on PAF.	Q	O
T44*	ESE/109°	0.1 mi.	Opposite OSSF door on PAF.	Q	O

* = *Onsite TLD*

I = Indicator *C = Control* *O = On-site* *Q = Quarterly*

Direct Radiation Sample Locations (Table A-1 continued)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
T45*	E/86°	0.1 mi.	NE Corner of PAF.	Q	O
T46*	ENE/67°	0.2 mi.	NE side of barge slip on fence.	Q	O
T47*	S/185°	0.1 mi.	South of Turbine Bldg. rollup door on PAF.	Q	O
T48*	SW/235°	0.2 mi.	30 ft. from corner of AAP on PAF.	Q	O
T49	WSW/251°	1.1 mi.	Corner of Site Boundary fence north of NOC along Critical Path Rd.	Q	I
T50	W/270°	0.9 mi.	Site Boundary fence near main gate by the south Bullet Street sign.	Q	I
T51	N/3°	0.4 mi.	Site Boundary fence north of north Cooling Tower.	Q	O
T52	NNE/20°	0.4 mi.	Site Boundary fence at the corner of Arson and Tower.	Q	O
T53*	NE/55°	0.2 mi.	Site Boundary fence east of South Cooling Tower.	Q	O
T54*	S/189°	0.3 mi.	Pole next to Fermi 2 Visitors Center.	Q	O
T55	WSW/251°	3.3 mi.	Pole, north side of Nadeau Rd. across from Sodt Elementary School Marquee.	Q	I
T56	WSW/256°	2.9 mi.	Pole, entrance to Jefferson Middle School on Stony Creek Rd.	Q	I

* = *Onsite TLD*

I = Indicator *C = Control* *O = On-site* *Q = Quarterly*

Direct Radiation Sample Locations (Table A-1 continued)

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
T57	W/260°	2.7 mi.	Pole, north side of Williams Rd. across from Jefferson High School entrance.	Q	I
T58	WSW/249°	4.9 mi.	Pole west of Hurd Elementary School Marquee.	Q	I
T59	NW/325°	2.6 mi.	Pole north of St. Charles Church entrance on Dixie Hwy.	Q	I
T60	NNW/341°	2.5 mi.	1st pole north of North Elementary School entrance on Dixie Hwy.	Q	I
T61	W/268°	10.1 mi.	Pole, SW corner of Stewart and Raisinville Rd.	Q	I
T62	SW/232°	9.7 mi.	Pole, NE corner of Albain and Hull Rd.	Q	I
T63	WSW/245°	9.6 mi.	Pole, NE corner of Dunbar and Telegraph Rd.	Q	I
T64*	WNW/286°	0.2 mi.	West of switchgear yard on PAF.	Q	O
T65*	NW/322°	0.1 mi.	PAF switchgear yard area NW of RHR complex.	Q	O
T66*	NE/50°	0.1 mi.	Behind Bldg. 42 on PAF.	Q	O
T67*	NNW/338°	0.2 mi.	Site Boundary fence West of South Cooling Tower.	Q	O

* = *Onsite TLD*

I = Indicator *C = Control* *O = On-site* *Q = Quarterly*

Air Particulate and Air Iodine Sample Locations

Table A-2

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
API-1	NE/39°	1.4 mi.	Estral Beach Pole on Lakeshore, 18 Poles S of Lakeview (Nearest Community with highest X/Q).	W	I
API-2	NNW/337°	0.6 mi.	Site Boundary and Toll Road, on Site Fence by T-4.	W	I
API-3	NW/313°	0.6 mi.	Site Boundary and Toll Road, on Site Fence by T-5.	W	I
API-4	W/270°	14.0 mi.	Pole, at Michigan Gas substation on N. Custer Rd., 0.66 miles west of Doty Rd.	W	C
API-5	S/188°	1.2 mi.	Pole, N corner of Pointe Aux Peaux and Dewey Rd.	W	I

I = Indicator *C = Control* *W = Weekly*

Milk Sample Locations

Table A-3

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
M-2	NW/319°	5.4 mi.	Reaume Farm - 2705 E Labo.	M-SM	I
M-8	WNW/289°	9.9 mi.	Calder Dairy - 9334 Finzel Rd.	M-SM	C

I = Indicator *C = Control* *M = Monthly* *SM = Semimonthly*

Garden Sample Locations

Table A-4

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
FP-1	NNE/21°	3.8 mi.	9501 Turnpike Highway.	M	I
FP-9	W/261°	10.9 mi.	4074 North Custer Road.	M	C

I = Indicator *C = Control* *M = Monthly (when available)*

Drinking Water Sample Locations

Table A-5

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
DW-1	S/174°	1.1 mi.	Monroe Water Station N Side of Pointe Aux Peaux 1/2 Block W of Long Rd.	M	I
DW-2	N/8°	18.5 mi.	Detroit Water Station 14700 Moran Rd, Allen Park.	M	C

I = Indicator *C = Control* *M = Monthly*

Surface Water Sample Locations

Table A-6

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
SW-2	NNE/20°	11.7 mi.	DECo's Trenton Channel Power Plant Intake Structure (Screenhouse #1).	M	C
SW-3	SSE/160°	0.2 mi.	DECO's Fermi 2 General Service Water Intake Structure.	M	I

I = Indicator *C = Control* *M = Monthly*

Groundwater Sample Locations

Table A-7

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
GW-1	S/175°	0.4 mi.	Approx. 100 ft W of Lake Erie, EF-1 Parking lot near gas fired peakers.	Q	I
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.	Q	I
GW-3	SW/226°	1.0 mi.	143 ft W of PAP Rd. Gate, 62 ft N of PAP Rd. Fence.	Q	I
GW-4	WNW/299°	0.6 mi.	42 ft S of Langton Rd, 8 ft E of Toll Rd. Fence.	Q	C

I = Indicator *C = Control* *Q = Quarterly*

Sediment Sample Locations

Table A-8

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
S-1	SSE/165°	0.9 mi.	Pointe Aux Peaux, Shoreline to 500 ft offshore sighting directly to Land Base Water Tower.	SA	I
S-2	E/81°	0.2 mi.	Fermi 2 Discharge, approx. 200 ft offshore.	SA	I
S-3	NE/39°	1.1 mi.	Estral Beach, approx. 200 ft offshore, off North shoreline where Swan Creek and Lake Erie meet.	SA	I
S-4	WSW/241°	3.0 mi.	Indian Trails Community Beach.	SA	I
S-5	NNE/20°	11.7 mi.	DECo's Trenton Channel Power Plant intake area.	SA	C

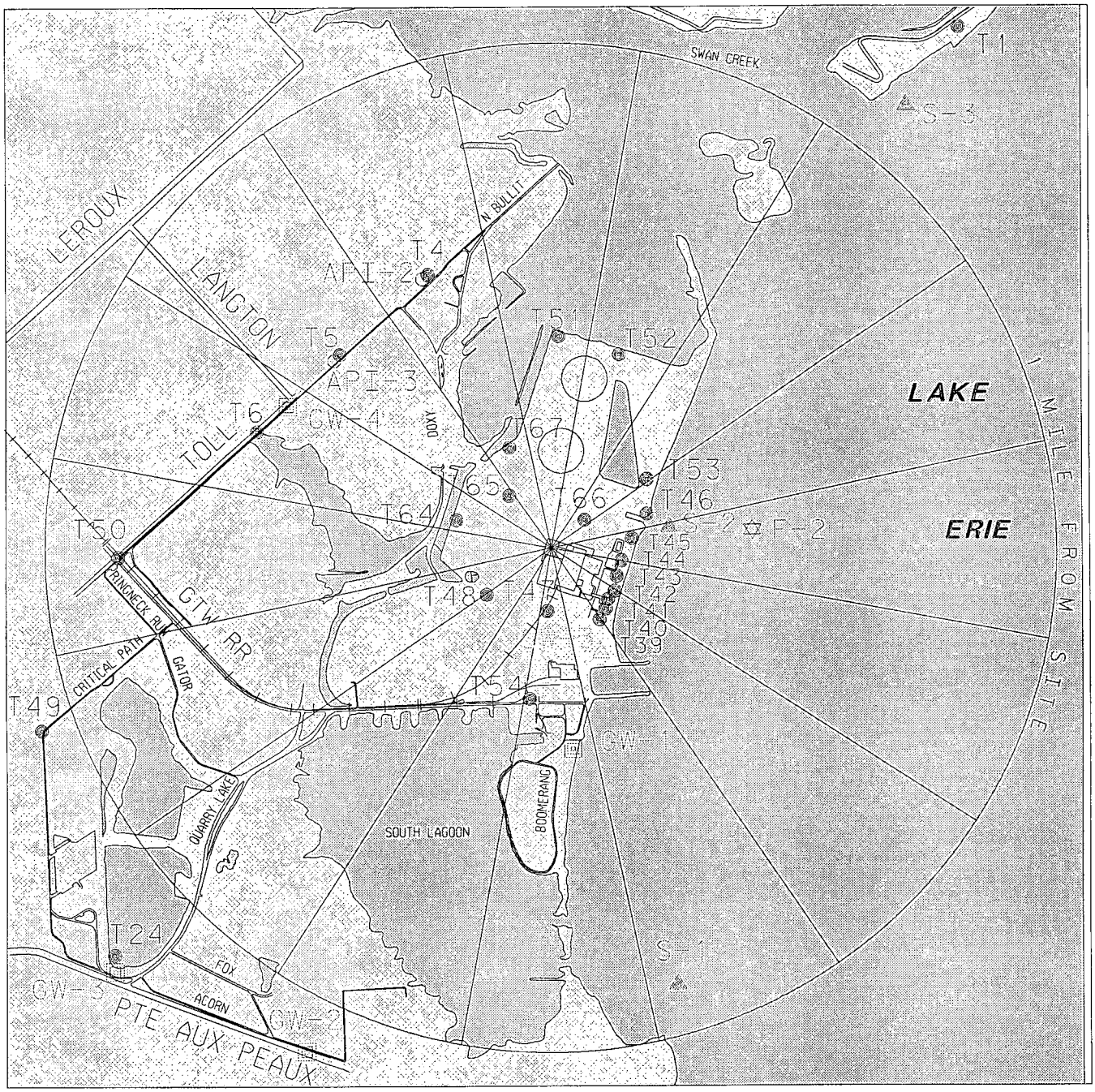
I = Indicator *C = Control* *SA = Semiannually*

Fish Sample Locations

Table A-9

Station Number	Meteorological Sector/Azimuth (Degrees)	Distance from Reactor (Approx.)	Description	Collection Frequency	Type
F-1	NNE/31°	9.5 mi.	Near Celeron Island.	SA	C
F-2	E/86°	0.4 mi.	Fermi 2 Discharge (approx. 1200 ft offshore).	SA	I
F-3	SW/227°	3.5 mi.	Brest Bay.	SA	C

I = Indicator *C = Control* *SA = Semiannually*



MAP - 1
SAMPLING LOCATIONS
BY STATION NUMBER
WITHIN 1 MILE

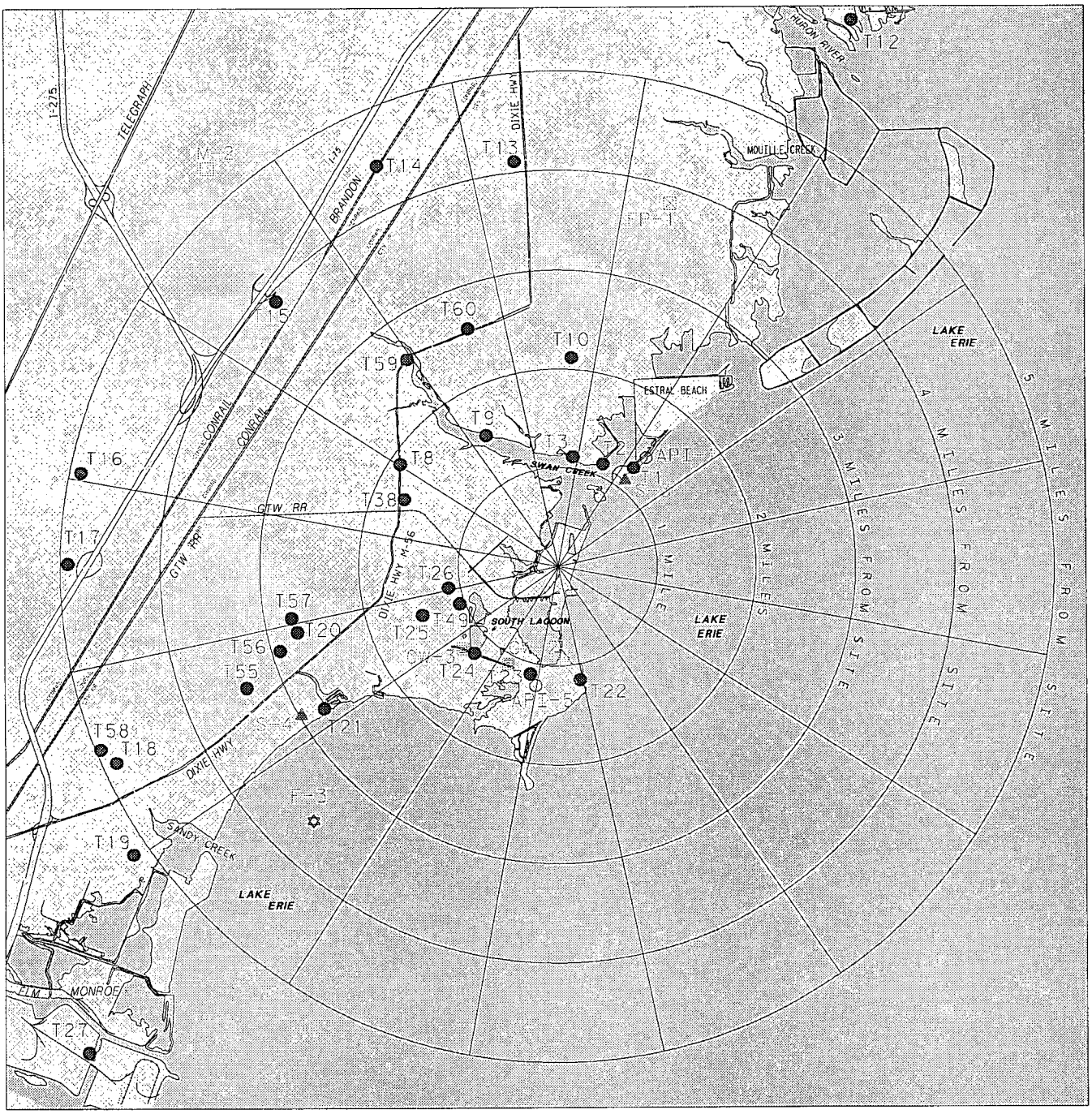
LEGEND

- 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

N

0 0.5

SCALE IN MILES



MAP - 2
SAMPLING LOCATIONS
BY STATION NUMBER
(1 To 5 MILES)

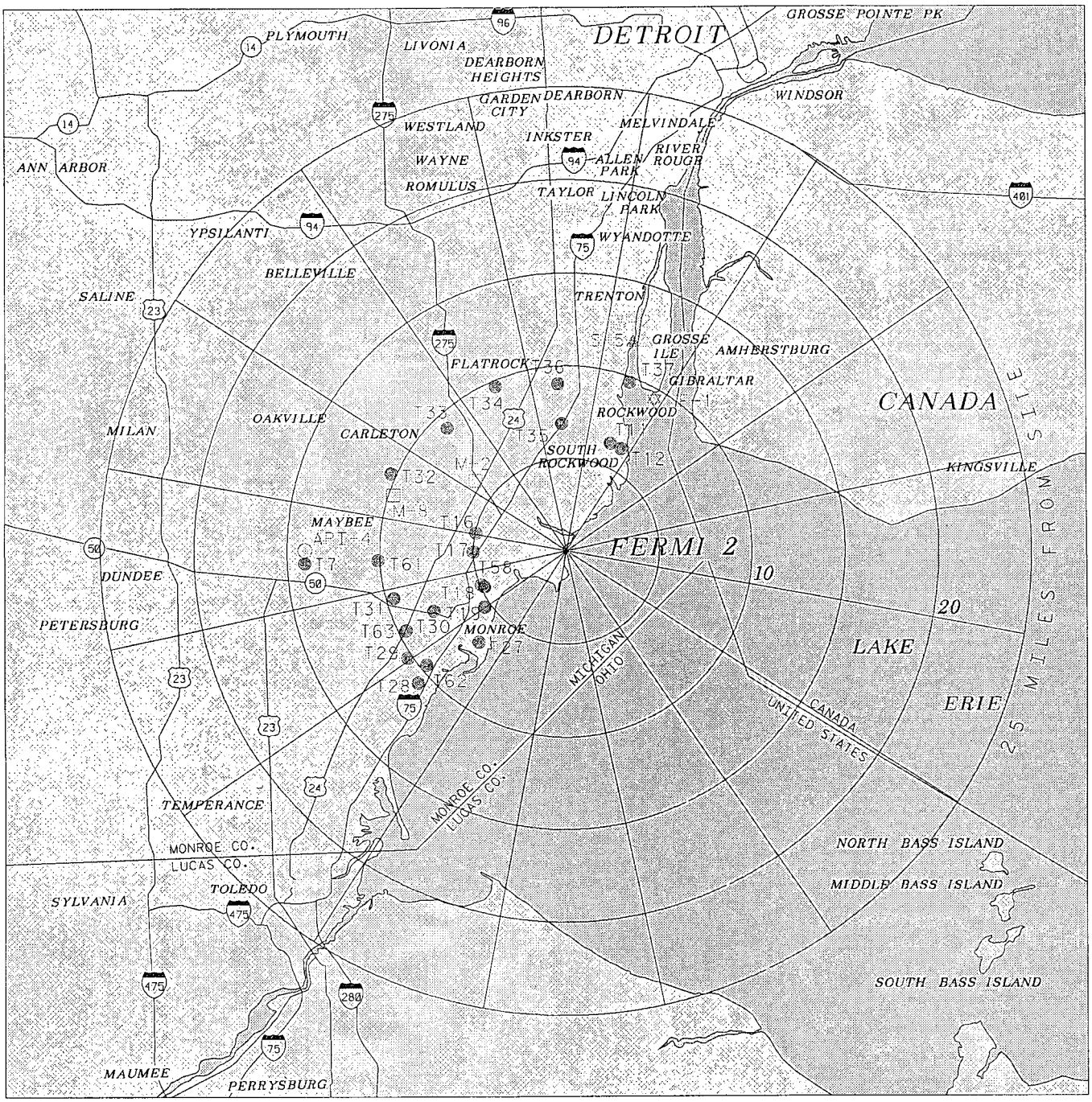
LEGEND

- 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

N

0 1

SCALE IN MILES



MAP - 3
SAMPLING LOCATIONS
BY STATION NUMBER
(GREATER THAN 5 MILES)

N

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

5 0 5 10

SCALE IN MILES

Appendix B

Environmental Data Summary

Table B-1 Radiological Environmental Monitoring Program Summary

Name of Facility: Enrico Fermi Unit 2 Docket No.: 50-341 Reporting Period: January - December 2006
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		
Direct Radiation *mR/std qtr*	Gamma (TLD) 191	1.0	14.8 (175/175) 10.8 to 20.3	T-49 (Indicator)	19.3 (4/4) 18.2 to 20.3	13.7 (16/16) 12.5 to 14.9	None
Airborne Particulates *pCi/cu. m.*	Gross Beta 255	1.00E-2	2.13E-2 (203/203) 1.97E-6 to 3.96E-2	API-4 (Control)	2.44E-2 (52/52) 6.40E-3 to 5.56E-2	2.44E-2 (52/52) 6.40E-3 to 5.56E-2	None
	Gamma Spec. 20						
	Be-7	N/A	1.06E-1 (16/16) 5.60E-2 to 1.64E-1	API-4 (Control)	1.27E-1 (4/4) 9.00E-2 to 1.50E-1	1.27E-1 (4/4) 9.00E-2 to 1.50E-1	None
	K-40	N/A	<MDA			<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-95	N/A	<MDA			<MDA	None
	Ru-103	N/A	<MDA			<MDA	None
	Ru-106	N/A	<MDA			<MDA	None
	Cs-134	5.00E-2	<MDA			<MDA	None
	Cs-137	6.00E-2	<MDA			<MDA	None
	Ba-140	N/A	<MDA			<MDA	None
	La-140	N/A	<MDA			<MDA	None
	Ce-141	N/A	<MDA			<MDA	None
	Ce-144	N/A	<MDA			<MDA	None
Airborne Iodine *pCi/cu. m.*	I-131 257	7.00E-2	<MDA			<MDA	None

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

Name of Facility: Enrico Fermi Unit 2 Docket No.: 50-341 Reporting Period: January - December 2006
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	I-131 36	1.00E+0	<MDA			<MDA	None
pCi/l	Sr-89 36	N/A	<MDA			<MDA	None
	Sr-90	N/A	1.43E+0 (1/18)	M-8 (Control)	1.70E+0 (1/18)	1.70E+0 (1/18)	None
	Gamma Spec. 36						
	Be-7	N/A	<MDA			<MDA	None
	K-40	N/A	1.41E+3 (18/18) 1.27E+3 to 1.50E+3	M-8 (Control)	1.42E+3 (18/18) 1.30E+3 to 1.53E+3	1.42E+3 (18/18) 1.30E+3 to 1.53E+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-95	N/A	<MDA			<MDA	None
	Ru-103	N/A	<MDA			<MDA	None
	Ru-106	N/A	<MDA			<MDA	None
	Cs-134	1.50E+1	<MDA			<MDA	None
	Cs-137	1.80E+1	<MDA			<MDA	None
	Ba-140	1.50E+1	<MDA			<MDA	None
	La-140	1.50E+1	<MDA			<MDA	None
	Ce-141	N/A	<MDA			<MDA	None
	Ce-144	N/A	<MDA			<MDA	None
Vegetation	I-131 14	6.00E+1	<MDA			<MDA	None
pCi/kg wet	Gamma Spec. 14						
	Be-7	N/A	<MDA			<MDA	None
	K-40	N/A	2.85E+3 (7/7) 1.60E+3 to 4.00E+3	FP-9 (Control)	3.45E+3 (7/7) 1.99E+3 to 4.71E+3	3.45E+3 (7/7) 1.99E+3 to 4.71E+3	None

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

Name of Facility: Enrico Fermi Unit 2 Docket No.: 50-341 Reporting Period: January - December 2006
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		
Vegetation (cont.) *pCi/kg wet*	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-95	N/A	<MDA			<MDA	None
	Ru-103	N/A	<MDA			<MDA	None
	Ru-106	N/A	<MDA			<MDA	None
	Cs-134	6.00E+1	<MDA			<MDA	None
	Cs-137	8.00E+1	<MDA			<MDA	None
	Ba-140	N/A	<MDA			<MDA	None
	La-140	N/A	<MDA			<MDA	None
	Ce-141	N/A	<MDA			<MDA	None
	Ce-144	N/A	<MDA			<MDA	None
Drinking Water *pCi/l*	Gross Beta 25	4.00E+0	4.72E+0 (10/13) 4.10E+0 to 6.10E+0	DW-1 (Indicator)	4.72E+0 (10/13) 4.10E+0 to 6.10E+0	4.03E+0 (6/12) 2.30E+0 to 5.90E+0	None
	Sr-89 25	N/A	<MDA			<MDA	None
	Sr-90	N/A	<MDA			<MDA	None
	Gamma Spec. 25						
	Be-7	N/A	<MDA			<MDA	None
	K-40	N/A	<MDA			<MDA	None
	Cr-51	N/A	<MDA			<MDA	None
	Mn-54	1.50E+1	<MDA			<MDA	None
	Co-58	1.50E+1	<MDA			<MDA	None
	Fe-59	3.00E+1	<MDA			<MDA	None
	Co-60	1.50E+1	<MDA			<MDA	None
	Zn-65	3.00E+1	<MDA			<MDA	None
	Zr-95	1.50E+1	<MDA			<MDA	None

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

Name of Facility: Enrico Fermi Unit 2 Docket No.: 50-341 Reporting Period: January - December 2006
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		
Drinking Water (cont.) *pCi/l*	Ru-103	N/A	<MDA			<MDA	None
	Ru-106	N/A	<MDA			<MDA	None
	Cs-134	1.50E+1	<MDA			<MDA	None
	Cs-137	1.80E+1	<MDA			<MDA	None
	Ba-140	1.50E+1	<MDA			<MDA	None
	La-140	1.50E+1	<MDA			<MDA	None
	Ce-141	N/A	<MDA			<MDA	None
	Ce-144	N/A	<MDA			<MDA	None
	H-3 8	2.00E+3	<MDA			<MDA	None
Surface Water *pCi/l*	Sr-89 24	N/A	<MDA			<MDA	None
	Sr-90	N/A	<MDA			<MDA	None
	Gamma Spec. 24						
	Be-7	N/A	<MDA			<MDA	None
	K-40	N/A	<MDA			<MDA	None
	Cr-51	N/A	<MDA			<MDA	None
	Mn-54	1.50E+1	<MDA			<MDA	None
	Co-58	1.50E+1	<MDA			<MDA	None
	Fe-59	3.00E+1	<MDA			<MDA	None
	Co-60	1.50E+1	<MDA			<MDA	None
	Zn-65	3.00E+1	<MDA			<MDA	None
	Zr-95	1.50E+1	<MDA			<MDA	None
	Ru-103	N/A	<MDA			<MDA	None
	Ru-106	N/A	<MDA			<MDA	None
	Cs-134	1.50E+1	<MDA			<MDA	None
	Cs-137	1.80E+1	<MDA			<MDA	None
	Ba-140	1.50E+1	<MDA			<MDA	None
	La-140	1.50E+1	<MDA			<MDA	None
	Ce-141	N/A	<MDA			<MDA	None

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

Name of Facility: Enrico Fermi Unit 2 Docket No.: 50-341 Reporting Period: January - December 2006
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 (cont.) *pCi/l*	Ce-144	N/A	<MDA			<MDA	None
	H-3 8	2.00E+3	<MDA			<MDA	None
Groundwater *pCi/l*	Gamma Spec. 16						
	Be-7	N/A	<MDA			<MDA	None
	K-40	N/A	<MDA			<MDA	None
	Cr-51	N/A	<MDA			<MDA	None
	Mn-54	1.50E+1	<MDA			<MDA	None
	Co-58	1.50E+1	<MDA			<MDA	None
	Fe-59	3.00E+1	<MDA			<MDA	None
	Co-60	1.50E+1	<MDA			<MDA	None
	Zn-65	3.00E+1	<MDA			<MDA	None
	Zr-95	1.50E+1	<MDA			<MDA	None
	Ru-103	N/A	<MDA			<MDA	None
	Ru-106	N/A	<MDA			<MDA	None
	Cs-134	1.50E+1	<MDA			<MDA	None
	Cs-137	1.80E+1	<MDA			<MDA	None
	Ba-140	1.50E+1	<MDA			<MDA	None
	La-140	1.50E+1	<MDA			<MDA	None
	Ce-141	N/A	<MDA			<MDA	None
	Ce-144	N/A	<MDA			<MDA	None
	H-3 16	2.00E+3	<MDA			<MDA	None
Sediment *pCi/kg dry*	Sr-89 10	N/A	<MDA			<MDA	
	Sr-90	N/A	<MDA			<MDA	None
	Gamma Spec. 10						
	Be-7	N/A	<MDA			<MDA	None
	K-40	N/A	9.62E+3 (8/8) 6.64E+3 to 1.24E+4	S-1 (Indicator)	1.21E+4 (2/2) 1.17E+4 to 1.24E+4	1.16E+4 (2/2) 1.13E+4 to 1.18E+4	None

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

Name of Facility: Enrico Fermi Unit 2 Docket No.: 50-341 Reporting Period: January - December 2006
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*	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-95	N/A	<MDA			<MDA	None
	Ru-103	N/A	<MDA			<MDA	None
	Ru-106	N/A	<MDA			<MDA	None
	Cs-134	1.50E+2	<MDA			<MDA	None
	Cs-137	1.80E+2	<MDA	S-5 (Control)	7.20E+1 (2/2) 5.10E+1 to 9.30E+1	7.20E+1 (2/2) 5.10E+1 to 9.30E+1	None
	Ba-140	N/A	<MDA			<MDA	None
	La-140	N/A	<MDA			<MDA	None
	Ce-141	N/A	<MDA			<MDA	None
	Ce-144	N/A	<MDA			<MDA	None
Fish *pCi/kg wet*	Sr-89 19	N/A	<MDA			<MDA	None
	Sr-90	N/A	<MDA			<MDA	None
	Gamma Spec. 19						
	Be-7	N/A	<MDA			<MDA	None
	K-40	N/A	3.15E+3 (6/6) 2.25E+3 to 4.25E+3	F-2 (Indicator)	3.15E+3 (6/6) 2.25E+3 to 4.25E+3	2.83E+3 (13/13) 2.30E+3 to 3.59E+3	None
	Mn-54	1.30E+2	<MDA			<MDA	None
	Co-58	1.30E+2	<MDA			<MDA	None
	Fe-59	2.60E+2	<MDA			<MDA	None
	Co-60	1.30E+2	<MDA			<MDA	None
	Zn-65	2.60E+2	<MDA			<MDA	None

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

Name of Facility: Enrico Fermi Unit 2 Docket No.: 50-341 Reporting Period: January - December 2006
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		
Fish (cont.)	Zr-95	N/A	<MDA			<MDA	None
pCi/kg wet	Ru-103	N/A	<MDA			<MDA	None
	Ru-106	N/A	<MDA			<MDA	None
	Cs-134	1.30E+2	<MDA			<MDA	None
	Cs-137	1.50E+2	<MDA	F-3 (Control)	3.80E+1 (1/8)	3.80E+1 (1/8)	None
	Ba-140	N/A	<MDA			<MDA	None
	La-140	N/A	<MDA			<MDA	None
	Ce-141	N/A	<MDA			<MDA	None
	Ce-144	N/A	<MDA			<MDA	None

Direct Radiation mean and range values are based on off-site TLDs
LLD = Fermi 2 ODCM 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 Appendix A Sampling Locations.
Non-routine results are those which are reportable according to Fermi 2 ODCM control 3.12.1.

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

Appendix C

Environmental Data Tables

FERMI 2
TLD ANALYSIS
(mR/Std Qtr)

STATION NUMBER	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
T-1	13.52	(a)	14.58	13.12
T-2	12.48	14.15	14.23	12.98
T-3	10.76	11.73	12.35	11.33
T-4	14.33	14.83	15.00	14.22
T-5	14.95	15.59	14.82	15.48
T-6	14.52	14.47	15.23	14.61
T-7	13.15	13.55	13.81	13.20
T-8	15.69	16.08	16.18	15.48
T-9	14.60	14.48	15.75	(a)
T-10	15.29	15.66	15.78	14.82
T-11	13.90	14.20	14.03	13.57
T-12	13.55	13.21	(a)	13.21
T-13	16.02	15.59	16.50	16.49
T-14	15.86	16.14	16.44	15.93
T-15	13.09	14.14	13.38	13.07
T-16	17.45	17.75	17.50	17.61
T-17	13.59	13.77	13.38	19.30
T-18	13.97	13.91	13.38	13.83
T-19	15.90	15.78	14.84	15.86
T-20	16.11	15.78	16.50	15.98
T-21	13.83	13.48	13.34	13.42
T-22	14.50	15.57	14.69	14.42
T-23	13.97	14.34	13.52	14.28
T-24	13.01	13.36	12.48	13.21
T-25	17.26	17.11	16.30	17.68
T-26	16.81	17.39	17.04	17.91
T-27	11.90	11.43	11.50	12.15
T-28	14.58	14.85	12.51	12.88
T-29	14.87	13.15	12.64	14.22
T-30	(a)	(a)	14.16	14.15
T-31	13.76	14.23	13.82	14.67
T-32	15.42	16.01	14.44	15.51
T-33	13.05	13.17	13.29	12.68
T-34	13.35	14.18	14.99	14.39
T-35	13.15	13.98	13.65	13.15
T-36	14.17	13.81	13.38	14.44
T-37	13.46	14.51	15.11	14.63
T-38	15.35	15.57	15.30	16.26
T-39	46.77	26.83	57.13	66.84
T-40	41.20	23.32	49.26	47.06
T-41	73.62	38.45	91.21	98.56
T-42	73.14	36.95	86.42	86.31
T-43	78.00	40.69	89.57	105.16
T-44	73.40	38.54	87.41	91.72
T-45	41.13	27.38	52.78	58.60
T-46	35.46	23.05	41.73	42.81
T-47	77.09	38.74	80.95	96.52

(a) TLD missing, see Appendix D - Program Execution.

FERMI 2
TLD ANALYSIS (CONT.)
(mR/Std Qtr)

STATION NUMBER	FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
T-48	36.25	38.74	41.76	44.63
T-49	20.32	22.94	19.34	18.18
T-50	15.30	19.18	15.30	14.89
T-51	11.25	15.15	11.77	11.46
T-52	14.72	11.53	15.31	14.90
T-53	23.44	13.92	32.52	26.66
T-54	16.48	18.39	17.23	16.88
T-55	15.51	14.68	15.58	15.28
T-56	14.49	16.28	14.59	14.07
T-57	17.41	14.76	17.37	17.00
T-58	13.68	18.43	15.03	13.04
T-59	13.07	14.17	13.37	13.41
T-60	13.67	13.69	16.60	15.07
T-61	14.06	15.46	15.85	15.34
T-62	13.93	16.41	15.80	15.05
T-63	13.89	18.94	12.68	12.96
T-64	20.17	12.90	24.02	25.51
T-65	22.49	14.89	25.26	26.73
T-66	108.77	15.30	129.10	138.05
T-67	17.50	51.62	18.18	19.03

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-1 FIRST QUARTER

Date	Activity		
1/3/2006	2.02E-02	+/-	2.40E-03
1/10/2006	(a)		
1/17/2006	1.46E-02	+/-	2.30E-03
1/24/2006	1.52E-02	+/-	2.30E-03
1/31/2006	2.18E-02	+/-	2.60E-03
2/7/2006	2.06E-02	+/-	2.30E-03
2/14/2006	1.30E-02	+/-	2.30E-03
2/21/2006	3.06E-02	+/-	2.50E-03
2/28/2006	2.31E-02	+/-	2.40E-03
3/7/2006	1.09E-02	+/-	2.10E-03
3/14/2006	2.43E-02	+/-	2.40E-03
3/21/2006	1.70E-02	+/-	2.30E-03
3/28/2006	1.03E-02	+/-	2.10E-03

API-1 SECOND QUARTER

Date	Activity		
4/4/2006	1.86E-02	+/-	2.20E-03
4/11/2006	1.54E-02	+/-	2.30E-03
4/18/2006	1.75E-02	+/-	2.20E-03
4/25/2006	1.87E-02	+/-	2.30E-03
5/2/2006	1.74E-02	+/-	2.20E-03
5/9/2006	1.57E-02	+/-	2.40E-03
5/16/2006	1.09E-02	+/-	2.40E-03
5/24/2006	1.09E-02	+/-	2.30E-03
5/30/2006	3.54E-02	+/-	2.70E-03
6/7/2006	3.05E-02	+/-	2.70E-03
6/14/2006	1.91E-02	+/-	2.80E-03
6/21/2006	2.94E-02	+/-	3.10E-03
6/28/2006	2.13E-02	+/-	2.50E-03

(a) Sample not collected; see Appendix D, Program Execution.

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-1 THIRD QUARTER

Date	Activity		
7/5/2006	2.45E-02	+/-	2.40E-03
7/12/2006	2.27E-02	+/-	2.20E-03
7/19/2006	2.44E-02	+/-	2.40E-03
7/26/2006	2.32E-02	+/-	2.30E-03
8/2/2006	3.28E-02	+/-	2.40E-03
8/8/2006	(a)		
8/16/2006	2.06E-02	+/-	2.60E-03
8/23/2006	2.49E-02	+/-	2.40E-03
8/30/2006	3.64E-02	+/-	2.60E-03
9/6/2006	2.13E-02	+/-	2.20E-03
9/13/2006	2.45E-02	+/-	2.30E-03
9/20/2006	1.98E-02	+/-	2.30E-03
9/27/2006	1.94E-02	+/-	2.30E-03

API-1 FOURTH QUARTER

Date	Activity		
10/4/2006	2.07E-02	+/-	2.30E-03
10/11/2006	1.68E-02	+/-	2.10E-03
10/18/2006	1.54E-02	+/-	2.50E-03
10/25/2006	1.61E-02	+/-	2.10E-03
11/1/2006	2.09E-02	+/-	2.20E-03
11/8/2006	2.96E-02	+/-	2.40E-03
11/15/2006	1.99E-02	+/-	2.50E-03
11/22/2006	2.60E-02	+/-	2.50E-03
11/29/2006	2.23E-02	+/-	2.50E-03
12/5/2006	2.75E-02	+/-	2.70E-03
12/13/2006	3.23E-02	+/-	2.70E-03
12/20/2006	3.96E-02	+/-	2.70E-03
12/27/2006	2.60E-02	+/-	2.40E-03

(a) Sample not collected; see Appendix D, Program Execution.

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-2 FIRST QUARTER

Date	Activity		
1/3/2006	2.21E-02	+/-	2.40E-03
1/10/2006	2.12E-02	+/-	2.20E-03
1/17/2006	1.85E-02	+/-	2.30E-03
1/24/2006	2.21E-02	+/-	2.40E-03
1/31/2006	1.96E-02	+/-	2.60E-03
2/7/2006	2.05E-02	+/-	2.30E-03
2/14/2006	1.54E-02	+/-	2.30E-03
2/21/2006	3.11E-02	+/-	2.50E-03
2/28/2006	2.25E-02	+/-	2.40E-03
3/7/2006	1.55E-02	+/-	2.30E-03
3/14/2006	2.22E-02	+/-	2.30E-03
3/21/2006	1.80E-02	+/-	2.40E-03
3/28/2006	7.70E-03	+/-	2.10E-03

API-2 SECOND QUARTER

Date	Activity		
4/4/2006	1.73E-02	+/-	2.20E-03
4/11/2006	1.29E-02	+/-	2.20E-03
4/18/2006	2.01E-02	+/-	2.30E-03
4/25/2006	1.55E-02	+/-	2.20E-03
5/2/2006	1.70E-02	+/-	2.20E-03
5/9/2006	1.60E-02	+/-	2.40E-03
5/16/2006	8.60E-03	+/-	2.30E-03
5/24/2006	9.80E-03	+/-	2.30E-03
5/30/2006	3.10E-02	+/-	2.70E-03
6/7/2006	2.60E-02	+/-	2.60E-03
6/14/2006	1.82E-02	+/-	2.70E-03
6/21/2006	2.43E-02	+/-	2.30E-03
6/28/2006	1.89E-02	+/-	2.20E-03

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-2 THIRD QUARTER

Date	Activity		
7/5/2006	2.64E-02	+/-	2.30E-03
7/12/2006	2.13E-02	+/-	2.30E-03
7/19/2006	2.66E-02	+/-	2.40E-03
7/26/2006	2.31E-02	+/-	2.30E-03
8/2/2006	3.09E-02	+/-	2.60E-03
8/8/2006	2.84E-02	+/-	2.70E-03
8/16/2006	1.75E-02	+/-	2.40E-03
8/23/2006	2.65E-02	+/-	2.40E-03
8/30/2006	2.91E-02	+/-	2.40E-03
9/6/2006	1.73E-02	+/-	2.10E-03
9/13/2006	2.61E-02	+/-	2.40E-03
9/20/2006	1.88E-02	+/-	2.30E-03
9/27/2006	1.76E-02	+/-	2.20E-03

API-2 FOURTH QUARTER

Date	Activity		
10/4/2006	1.45E-02	+/-	2.20E-03
10/11/2006	1.82E-02	+/-	2.20E-03
10/18/2006	1.67E-02	+/-	2.50E-03
10/25/2006	2.15E-02	+/-	2.20E-03
11/1/2006	2.24E-02	+/-	2.20E-03
11/8/2006	3.50E-02	+/-	2.50E-03
11/15/2006	1.69E-02	+/-	2.50E-03
11/21/2006	3.26E-02	+/-	2.90E-03
11/29/2006	3.13E-02	+/-	2.40E-03
12/5/2006	3.05E-02	+/-	2.70E-03
12/13/2006	3.79E-02	+/-	2.80E-03
12/20/2006	3.95E-02	+/-	2.60E-03
12/27/2006	3.00E-02	+/-	2.40E-03

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-3 FIRST QUARTER

Date	Activity		
1/3/2006	1.95E-02	+/-	2.30E-03
1/10/2006	2.07E-02	+/-	2.20E-03
1/17/2006	1.71E-02	+/-	2.30E-03
1/24/2006	2.21E-02	+/-	2.40E-03
1/31/2006	2.29E-02	+/-	2.60E-03
2/7/2006	1.89E-02	+/-	2.20E-03
2/14/2006	1.63E-02	+/-	2.40E-03
2/21/2006	2.64E-02	+/-	2.40E-03
2/28/2006	2.45E-02	+/-	2.40E-03
3/7/2006	1.75E-02	+/-	2.30E-03
3/14/2006	2.21E-02	+/-	2.30E-03
3/21/2006	1.91E-02	+/-	2.40E-03
3/28/2006	8.50E-03	+/-	2.10E-03

API-3 SECOND QUARTER

Date	Activity		
4/4/2006	1.56E-02	+/-	2.20E-03
4/11/2006	1.47E-02	+/-	2.30E-03
4/18/2006	1.91E-02	+/-	2.20E-03
4/25/2006	1.31E-02	+/-	2.20E-03
5/2/2006	1.49E-02	+/-	2.20E-03
5/9/2006	1.68E-02	+/-	2.40E-03
5/16/2006	9.60E-03	+/-	2.40E-03
5/24/2006	1.14E-02	+/-	2.40E-03
5/30/2006	3.40E-02	+/-	2.70E-03
6/7/2006	2.64E-02	+/-	2.60E-03
6/14/2006	1.71E-02	+/-	2.70E-03
6/21/2006	2.16E-02	+/-	2.30E-03
6/28/2006	(a)		

(a) Sample not collected; see Appendix D, Program Execution.

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-3 THIRD QUARTER

Date	Activity		
7/5/2006	(a)		
7/12/2006	2.50E-02	+/-	3.20E-03
7/19/2006	2.65E-02	+/-	2.40E-03
7/26/2006	(a)		
8/2/2006	2.58E-02	+/-	2.60E-03
8/8/2006	2.00E-02	+/-	2.50E-03
8/16/2006	1.47E-02	+/-	2.40E-03
8/23/2006	2.21E-02	+/-	2.30E-03
8/30/2006	3.22E-02	+/-	2.50E-03
9/6/2006	1.98E-02	+/-	2.20E-03
9/13/2006	2.79E-02	+/-	2.40E-03
9/20/2006	1.78E-02	+/-	2.30E-03
9/27/2006	2.04E-02	+/-	2.30E-03

API-3 FOURTH QUARTER

Date	Activity		
10/4/2006	2.01E-02	+/-	2.30E-03
10/11/2006	1.72E-02	+/-	2.10E-03
10/18/2006	1.97E-06	+/-	2.50E-03
10/25/2006	1.76E-02	+/-	2.20E-03
11/1/2006	2.14E-02	+/-	2.20E-03
11/8/2006	3.01E-02	+/-	2.50E-03
11/15/2006	1.47E-02	+/-	2.40E-03
11/21/2006	2.19E-02	+/-	2.80E-03
11/29/2006	3.13E-02	+/-	2.40E-03
12/5/2006	2.41E-02	+/-	2.60E-03
12/13/2006	2.94E-02	+/-	2.60E-03
12/20/2006	3.31E-02	+/-	2.50E-03
12/27/2006	2.27E-02	+/-	2.30E-03

(a) Sample not collected; see Appendix D, Program Execution.

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-4 FIRST QUARTER

Date	Activity		
1/3/2006	1.99E-02	+/-	2.40E-03
1/10/2006	2.21E-02	+/-	2.20E-03
1/17/2006	1.91E-02	+/-	2.40E-03
1/24/2006	1.52E-02	+/-	2.30E-03
1/31/2006	1.93E-02	+/-	2.50E-03
2/7/2006	1.74E-02	+/-	2.20E-03
2/14/2006	1.26E-02	+/-	2.30E-03
2/21/2006	2.65E-02	+/-	2.40E-03
2/28/2006	2.12E-02	+/-	2.40E-03
3/7/2006	1.71E-02	+/-	2.30E-03
3/14/2006	2.55E-02	+/-	2.40E-03
3/21/2006	1.87E-02	+/-	2.30E-03
3/28/2006		<	6.40E-03

API-4 SECOND QUARTER

Date	Activity		
4/4/2006	2.15E-02	+/-	2.60E-03
4/11/2006	2.04E-02	+/-	2.30E-03
4/18/2006	2.01E-02	+/-	2.20E-03
4/25/2006	2.10E-02	+/-	2.30E-03
5/2/2006	1.71E-02	+/-	2.20E-03
5/9/2006	1.85E-02	+/-	2.40E-03
5/16/2006	1.43E-02	+/-	2.50E-03
5/24/2006	7.70E-03	+/-	2.30E-03
5/30/2006	3.28E-02	+/-	2.60E-03
6/7/2006	2.51E-02	+/-	2.60E-03
6/14/2006	1.60E-02	+/-	2.70E-03
6/21/2006	2.22E-02	+/-	2.30E-03
6/28/2006	1.69E-02	+/-	2.20E-03

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-4 THIRD QUARTER

Date	Activity		
7/5/2006	2.87E-02	+/-	2.30E-03
7/12/2006	1.89E-02	+/-	2.20E-03
7/19/2006	2.50E-02	+/-	2.30E-03
7/26/2006	2.83E-02	+/-	2.50E-03
8/2/2006	3.45E-02	+/-	2.80E-03
8/8/2006	2.71E-02	+/-	2.70E-03
8/16/2006	2.48E-02	+/-	2.80E-03
8/23/2006	4.61E-02	+/-	3.80E-03
8/30/2006	4.77E-02	+/-	3.40E-03
9/6/2006	4.26E-02	+/-	4.20E-03
9/13/2006	5.56E-02	+/-	5.20E-03
9/20/2006	2.27E-02	+/-	2.40E-03
9/27/2006	2.07E-02	+/-	2.30E-03

API-4 FOURTH QUARTER

Date	Activity		
10/4/2006	1.74E-02	+/-	2.30E-03
10/11/2006	2.29E-02	+/-	2.30E-03
10/18/2006	2.03E-02	+/-	2.50E-03
10/25/2006	2.64E-02	+/-	2.30E-03
11/1/2006	2.57E-02	+/-	2.30E-03
11/8/2006	3.36E-02	+/-	2.50E-03
11/15/2006	1.63E-02	+/-	2.50E-03
11/21/2006	2.95E-02	+/-	2.90E-03
11/29/2006	3.09E-02	+/-	2.40E-03
12/5/2006	2.99E-02	+/-	2.80E-03
12/13/2006	3.57E-02	+/-	2.70E-03
12/20/2006	3.42E-02	+/-	2.60E-03
12/27/2006	3.00E-02	+/-	2.40E-03

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-5 FIRST QUARTER

Date	Activity		
1/3/2006	1.97E-02	+/-	2.40E-03
1/10/2006	2.23E-02	+/-	2.20E-03
1/17/2006	1.90E-02	+/-	2.40E-03
1/24/2006	1.81E-02	+/-	2.30E-03
1/31/2006	2.20E-02	+/-	2.60E-03
2/7/2006	2.08E-02	+/-	2.30E-03
2/14/2006	1.26E-02	+/-	2.30E-03
2/21/2006	2.77E-02	+/-	2.40E-03
2/28/2006	2.34E-02	+/-	2.40E-03
3/7/2006	1.68E-02	+/-	2.30E-03
3/14/2006	2.16E-02	+/-	2.30E-03
3/21/2006	1.61E-02	+/-	2.30E-03
3/28/2006	7.30E-03	+/-	2.00E-03

API-5 SECOND QUARTER

Date	Activity		
4/4/2006	1.90E-02	+/-	2.20E-03
4/11/2006	1.94E-02	+/-	2.30E-03
4/18/2006	2.07E-02	+/-	2.30E-03
4/25/2006	1.39E-02	+/-	2.20E-03
5/2/2006	1.98E-02	+/-	2.30E-03
5/9/2006	1.59E-02	+/-	2.40E-03
5/16/2006	1.03E-02	+/-	2.40E-03
5/24/2006	9.00E-03	+/-	2.30E-03
5/30/2006	3.23E-02	+/-	2.70E-03
6/7/2006	2.03E-02	+/-	2.50E-03
6/14/2006	1.62E-02	+/-	2.70E-03
6/21/2006	2.32E-02	+/-	2.30E-03
6/28/2006	1.67E-02	+/-	2.20E-03

FERMI 2
AIR PARTICULATE GROSS BETA
(pCi/cubic meter)

API-5 THIRD QUARTER

Date	Activity		
7/5/2006	2.38E-02	+/-	2.20E-03
7/12/2006	2.08E-02	+/-	2.30E-03
7/19/2006	2.43E-02	+/-	2.30E-03
7/26/2006	1.93E-02	+/-	2.30E-03
8/2/2006	3.01E-02	+/-	2.60E-03
8/8/2006	2.28E-02	+/-	2.60E-03
8/16/2006	1.79E-02	+/-	2.40E-03
8/23/2006	2.66E-02	+/-	2.40E-03
8/30/2006	3.25E-02	+/-	2.80E-03
9/6/2006	1.91E-02	+/-	2.20E-03
9/13/2006	2.46E-02	+/-	2.30E-03
9/20/2006	1.63E-02	+/-	2.20E-03
9/27/2006	1.96E-02	+/-	2.20E-03

API-5 FOURTH QUARTER

Date	Activity		
10/4/2006	1.80E-02	+/-	2.30E-03
10/11/2006	1.63E-02	+/-	2.10E-03
10/18/2006	1.27E-02	+/-	2.40E-03
10/25/2006	1.91E-02	+/-	2.20E-03
11/1/2006	1.82E-02	+/-	2.10E-03
11/8/2006	2.93E-02	+/-	2.40E-03
11/15/2006	1.61E-02	+/-	2.40E-03
11/21/2006	2.12E-02	+/-	2.80E-03
11/29/2006	2.60E-02	+/-	2.30E-03
12/5/2006	2.76E-02	+/-	2.70E-03
12/13/2006	3.38E-02	+/-	2.70E-03
12/20/2006	2.97E-02	+/-	2.50E-03
12/27/2006	2.40E-02	+/-	2.30E-03

FERMI 2
AIR IODINE – 131
(pCi/cubic meter)

API-1 FIRST QUARTER

Date	Activity
1/3/2006	< 5.20E-02
1/10/2006	(a)
1/17/2006	< 4.20E-02
1/24/2006	< 4.60E-02
1/31/2006	< 3.40E-02
2/7/2006	< 4.10E-02
2/14/2006	< 4.30E-02
2/21/2006	< 5.10E-02
2/28/2006	< 5.20E-02
3/7/2006	< 5.40E-02
3/14/2006	< 4.90E-02
3/21/2006	< 3.40E-02
3/28/2006	< 3.50E-02

API-1 SECOND QUARTER

Date	Activity
4/4/2006	< 3.00E-02
4/11/2006	< 4.90E-02
4/18/2006	< 4.20E-02
4/25/2006	< 3.60E-02
5/2/2006	< 3.90E-02
5/9/2006	< 4.60E-02
5/16/2006	< 4.00E-02
5/24/2006	< 4.80E-02
5/30/2006	< 5.70E-02
6/7/2006	< 4.10E-02
6/14/2006	< 3.60E-02
6/21/2006	< 3.40E-02
6/28/2006	< 3.10E-02

(a) Sample not collected; see Appendix D, Program Execution.

FERMI 2
AIR IODINE – 131
(pCi/cubic meter)

API-1 THIRD QUARTER

Date	Activity
7/5/2006	< 3.60E-02
7/12/2006	< 4.70E-02
7/19/2006	< 2.60E-02
7/26/2006	< 5.20E-02
8/2/2006	< 6.20E-02
8/8/2006	(a)
8/16/2006	< 3.70E-02
8/23/2006	< 3.60E-02
8/30/2006	< 3.60E-02
9/6/2006	< 3.90E-02
9/13/2006	< 2.70E-02
9/20/2006	< 5.40E-02
9/27/2006	< 3.80E-02

API-1 FOURTH QUARTER

Date	Activity
10/4/2006	< 5.70E-02
10/11/2006	< 3.50E-02
10/18/2006	< 5.10E-02
10/25/2006	< 6.80E-02
11/1/2006	< 3.50E-02
11/8/2006	< 5.30E-02
11/15/2006	< 5.00E-02
11/22/2006	< 6.80E-02
11/29/2006	< 3.40E-02
12/5/2006	< 4.80E-02
12/13/2006	< 3.20E-02
12/20/2006	< 4.80E-02
12/27/2006	< 3.10E-02

(a) Sample not collected; see Appendix D, Program Execution.

FERMI 2
AIR IODINE – 131
(pCi/cubic meter)

API-2 FIRST QUARTER

Date	Activity
1/3/2006	< 4.20E-02
1/10/2006	< 4.30E-02
1/17/2006	< 3.60E-02
1/24/2006	< 5.30E-02
1/31/2006	< 4.00E-02
2/7/2006	< 3.70E-02
2/14/2006	< 3.60E-02
2/21/2006	< 5.00E-02
2/28/2006	< 4.30E-02
3/7/2006	< 4.60E-02
3/14/2006	< 4.30E-02
3/21/2006	< 4.30E-02
3/28/2006	< 3.70E-02

API-2 SECOND QUARTER

Date	Activity
4/4/2006	< 3.70E-02
4/11/2006	< 3.50E-02
4/18/2006	< 3.80E-02
4/25/2006	< 4.20E-02
5/2/2006	< 4.50E-02
5/9/2006	< 4.10E-02
5/16/2006	< 4.10E-02
5/24/2006	< 3.60E-02
5/30/2006	< 5.10E-02
6/7/2006	< 5.10E-02
6/14/2006	< 3.90E-02
6/21/2006	< 4.50E-02
6/28/2006	< 3.20E-02

FERMI 2
AIR IODINE – 131
(pCi/cubic meter)

API-2 THIRD QUARTER

Date	Activity
7/5/2006	< 3.90E-02
7/12/2006	< 4.50E-02
7/19/2006	< 3.50E-02
7/26/2006	< 6.00E-02
8/2/2006	< 5.90E-02
8/8/2006	< 3.80E-02
8/16/2006	< 4.00E-02
8/23/2006	< 3.80E-02
8/30/2006	< 3.00E-02
9/6/2006	< 3.50E-02
9/13/2006	< 3.70E-02
9/20/2006	< 5.70E-02
9/27/2006	< 4.60E-02

API-2 FOURTH QUARTER

Date	Activity
10/4/2006	< 4.20E-02
10/11/2006	< 3.20E-02
10/18/2006	< 5.20E-02
10/25/2006	< 5.50E-02
11/1/2006	< 3.90E-02
11/8/2006	< 5.40E-02
11/15/2006	< 3.90E-02
11/21/2006	< 4.80E-02
11/29/2006	< 2.50E-02
12/5/2006	< 4.30E-02
12/13/2006	< 2.60E-02
12/20/2006	< 3.00E-02
12/27/2006	< 3.30E-02

FERMI 2
AIR IODINE - 131
(pCi/cubic meter)

API-3 FIRST QUARTER

Date	Activity
1/3/2006	< 4.00E-02
1/10/2006	< 3.90E-02
1/17/2006	< 3.90E-02
1/24/2006	< 4.70E-02
1/31/2006	< 3.90E-02
2/7/2006	< 4.50E-02
2/14/2006	< 3.70E-02
2/21/2006	< 4.80E-02
2/28/2006	< 4.90E-02
3/7/2006	< 5.00E-02
3/14/2006	< 3.60E-02
3/21/2006	< 4.00E-02
3/28/2006	< 3.70E-02

API-3 SECOND QUARTER

Date	Activity
4/4/2006	< 4.10E-02
4/11/2006	< 3.70E-02
4/18/2006	< 3.00E-02
4/25/2006	< 3.10E-02
5/2/2006	< 4.70E-02
5/9/2006	< 4.40E-02
5/16/2006	< 3.60E-02
5/24/2006	< 4.20E-02
5/30/2006	< 5.20E-02
6/7/2006	< 4.60E-02
6/14/2006	< 3.90E-02
6/21/2006	< 4.10E-02
6/28/2006	(a)

(a) Sample not collected; see Appendix D, Program Execution.

FERMI 2
AIR IODINE - 131
(pCi/cubic meter)

API-3 THIRD QUARTER

Date	Activity	
7/5/2006		(a)
7/12/2006	<	4.20E-02
7/19/2006	<	3.40E-02
7/26/2006		(a)
8/2/2006	<	5.70E-02
8/8/2006	<	5.40E-02
8/16/2006	<	4.00E-02
8/23/2006	<	3.80E-02
8/30/2006	<	2.70E-02
9/6/2006	<	3.80E-02
9/13/2006	<	3.40E-02
9/20/2006	<	5.10E-02
9/27/2006	<	4.30E-02

API-3 FOURTH QUARTER

Date	Activity	
10/4/2006	<	5.40E-02
10/11/2006	<	4.60E-02
10/18/2006	<	5.40E-02
10/25/2006	<	4.90E-02
11/1/2006	<	4.50E-02
11/8/2006	<	6.70E-02
11/15/2006	<	4.80E-02
11/21/2006	<	4.80E-02
11/29/2006	<	2.40E-02
12/5/2006	<	5.80E-02
12/13/2006	<	3.30E-02
12/20/2006	<	4.30E-02
12/27/2006	<	3.70E-02

(a) Sample not collected; see Appendix D, Program Execution.

FERMI 2
AIR IODINE - 131
(pCi/cubic meter)

API-4 FIRST QUARTER

Date	Activity
1/3/2006	< 3.90E-02
1/10/2006	< 3.30E-02
1/17/2006	< 3.50E-02
1/24/2006	< 4.50E-02
1/31/2006	< 3.40E-02
2/7/2006	< 3.80E-02
2/14/2006	< 3.60E-02
2/21/2006	< 5.00E-02
2/28/2006	< 4.90E-02
3/7/2006	< 4.60E-02
3/14/2006	< 4.40E-02
3/21/2006	< 3.80E-02
3/28/2006	< 2.70E-02

API-4 SECOND QUARTER

Date	Activity
4/4/2006	< 4.20E-02
4/11/2006	< 2.90E-02
4/18/2006	< 3.60E-02
4/25/2006	< 3.70E-02
5/2/2006	< 4.50E-02
5/9/2006	< 4.40E-02
5/16/2006	< 3.70E-02
5/24/2006	< 3.90E-02
5/30/2006	< 4.80E-02
6/7/2006	< 5.20E-02
6/14/2006	< 3.70E-02
6/21/2006	< 3.50E-02
6/28/2006	< 3.40E-02

FERMI 2
AIR IODINE - 131
(pCi/cubic meter)

API-4 THIRD QUARTER

Date	Activity
7/5/2006	< 3.30E-02
7/12/2006	< 4.00E-02
7/19/2006	< 3.50E-02
7/26/2006	< 6.50E-02
8/2/2006	< 3.70E-02
8/8/2006	< 3.90E-02
8/16/2006	< 3.70E-02
8/23/2006	< 2.70E-02
8/30/2006	< 3.30E-02
9/6/2006	< 5.40E-02
9/13/2006	< 3.40E-02
9/20/2006	< 4.90E-02
9/27/2006	< 4.70E-02

API-4 FOURTH QUARTER

Date	Activity
10/4/2006	< 4.40E-02
10/11/2006	< 3.60E-02
10/18/2006	< 4.80E-02
10/25/2006	< 5.20E-02
11/1/2006	< 4.60E-02
11/8/2006	< 5.70E-02
11/15/2006	< 5.00E-02
11/21/2006	< 4.50E-02
11/29/2006	< 3.50E-02
12/5/2006	< 3.90E-02
12/13/2006	< 2.90E-02
12/20/2006	< 3.70E-02
12/27/2006	< 2.50E-02

FERMI 2
AIR IODINE – 131
(pCi/cubic meter)

API-5 FIRST QUARTER

Date	Activity
1/3/2006	< 4.60E-02
1/10/2006	< 4.10E-02
1/17/2006	< 3.80E-02
1/24/2006	< 5.20E-02
1/31/2006	< 3.60E-02
2/7/2006	< 3.80E-02
2/14/2006	< 3.60E-02
2/21/2006	< 4.60E-02
2/28/2006	< 5.00E-02
3/7/2006	< 4.60E-02
3/14/2006	< 5.00E-02
3/21/2006	< 3.80E-02
3/28/2006	< 2.70E-02

API-5 SECOND QUARTER

Date	Activity
4/4/2006	< 3.30E-02
4/11/2006	< 4.40E-02
4/18/2006	< 4.00E-02
4/25/2006	< 4.00E-02
5/2/2006	< 3.20E-02
5/9/2006	< 4.30E-02
5/16/2006	< 4.10E-02
5/24/2006	< 3.60E-02
5/30/2006	< 5.80E-02
6/7/2006	< 4.40E-02
6/14/2006	< 4.40E-02
6/21/2006	< 4.10E-02
6/28/2006	< 3.00E-02

FERMI 2
AIR IODINE – 131
(pCi/cubic meter)

API-5 THIRD QUARTER

Date	Activity
7/5/2006	< 3.70E-02
7/12/2006	< 3.70E-02
7/19/2006	< 4.10E-02
7/26/2006	< 7.00E-02
8/2/2006	< 6.30E-02
8/8/2006	< 4.40E-02
8/16/2006	< 3.60E-02
8/23/2006	< 5.10E-02
8/30/2006	< 3.80E-02
9/6/2006	< 3.20E-02
9/13/2006	< 3.70E-02
9/20/2006	< 4.40E-02
9/27/2006	< 4.00E-02

API-5 FOURTH QUARTER

Date	Activity
10/4/2006	< 5.80E-02
10/11/2006	< 3.40E-02
10/18/2006	< 4.90E-02
10/25/2006	< 5.70E-02
11/1/2006	< 3.60E-02
11/8/2006	< 6.10E-02
11/15/2006	< 3.80E-02
11/21/2006	< 7.00E-02
11/29/2006	< 2.60E-02
12/5/2006	< 4.40E-02
12/13/2006	< 3.20E-02
12/20/2006	< 3.80E-02
12/27/2006	< 2.00E-02

FERMI 2
AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API-1 (indicator)
(pCi/cubic meter)

Nuclide	First Quarter (a)				Second Quarter			
Be-7		8.20E-02	+/-	1.60E-02		1.51E-01	+/-	2.50E-02
K-40	<	2.70E-02			<	4.30E-02		
Mn-54	<	3.30E-03			<	3.70E-03		
Co-58	<	3.60E-03			<	4.90E-03		
Fe-59	<	1.30E-02			<	1.50E-02		
Co-60	<	2.90E-03			<	3.80E-03		
Zn-65	<	4.60E-03			<	6.30E-03		
Zr-95	<	7.70E-03			<	8.40E-03		
Ru-103	<	4.90E-03			<	5.90E-03		
Ru-106	<	2.10E-02			<	2.50E-02		
Cs-134	<	2.30E-03			<	3.00E-03		
Cs-137	<	1.80E-03			<	3.40E-03		
Ba-140	<	3.40E-02			<	5.00E-02		
La-140	<	3.90E-02			<	5.70E-02		
Ce-141	<	6.00E-03			<	1.10E-02		
Ce-144	<	7.60E-03			<	1.40E-02		

API-1 (indicator)
(pCi/cubic meter)

Nuclide	Third Quarter (a)				Fourth Quarter			
Be-7		1.07E-01	+/-	2.00E-02		8.40E-02	+/-	2.60E-02
K-40	<	3.60E-02			<	3.50E-02		
Mn-54	<	2.20E-03			<	3.10E-03		
Co-58	<	3.60E-03			<	6.70E-03		
Fe-59	<	1.10E-02			<	2.10E-02		
Co-60	<	3.10E-03			<	2.30E-03		
Zn-65	<	6.90E-03			<	9.50E-03		
Zr-95	<	5.80E-03			<	1.20E-02		
Ru-103	<	4.80E-03			<	8.90E-03		
Ru-106	<	2.40E-02			<	2.10E-02		
Cs-134	<	2.60E-03			<	3.20E-03		
Cs-137	<	2.10E-03			<	1.80E-03		
Ba-140	<	1.40E-02			<	3.60E-01		
La-140	<	1.60E-02			<	4.10E-01		
Ce-141	<	9.30E-03			<	1.80E-02		
Ce-144	<	1.20E-02			<	1.50E-02		

(a) See Appendix D, Program Execution.

FERMI 2
AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API-2 (indicator)
(pCi/cubic meter)

Nuclide	First Quarter				Second Quarter			
Be-7		8.40E-02	+/-	1.30E-02		1.29E-01	+/-	2.10E-02
K-40	<	2.40E-02			<	3.50E-02		
Mn-54	<	2.90E-03			<	3.40E-03		
Co-58	<	3.40E-03			<	4.80E-03		
Fe-59	<	1.20E-02			<	8.20E-03		
Co-60	<	2.10E-03			<	4.60E-03		
Zn-65	<	4.70E-03			<	7.40E-03		
Zr-95	<	5.30E-03			<	7.60E-03		
Ru-103	<	4.40E-03			<	6.80E-03		
Ru-106	<	1.50E-02			<	2.60E-02		
Cs-134	<	2.50E-03			<	2.20E-03		
Cs-137	<	1.60E-03			<	3.30E-03		
Ba-140	<	3.60E-02			<	1.40E-02		
La-140	<	4.10E-02			<	1.60E-02		
Ce-141	<	4.20E-03			<	9.70E-03		
Ce-144	<	5.70E-03			<	1.20E-02		

API-2 (indicator)
(pCi/cubic meter)

Nuclide	Third Quarter				Fourth Quarter			
Be-7		1.43E-01	+/-	2.10E-02		9.60E-02	+/-	2.90E-02
K-40	<	2.70E-02			<	3.20E-02		
Mn-54	<	2.40E-03			<	3.10E-03		
Co-58	<	3.40E-03			<	4.90E-03		
Fe-59	<	8.80E-03			<	1.80E-02		
Co-60	<	2.90E-03			<	2.90E-03		
Zn-65	<	5.80E-03			<	8.90E-03		
Zr-95	<	6.20E-03			<	1.10E-02		
Ru-103	<	4.70E-03			<	1.30E-02		
Ru-106	<	2.00E-02			<	2.80E-02		
Cs-134	<	1.80E-03			<	3.40E-03		
Cs-137	<	2.10E-03			<	1.80E-03		
Ba-140	<	4.30E-02			<	3.10E-01		
La-140	<	5.00E-02			<	3.50E-01		
Ce-141	<	8.90E-03			<	2.00E-02		
Ce-144	<	9.60E-03			<	1.50E-02		

FERMI 2
AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API-3 (indicator)
(pCi/cubic meter)

Nuclide	First Quarter				Second Quarter (a)			
Be-7		6.60E-02	+/-	2.00E-02		1.08E-01	+/-	2.40E-02
K-40	<	3.10E-02			<	3.80E-02		
Mn-54	<	2.80E-03			<	4.10E-03		
Co-58	<	4.20E-03			<	5.10E-03		
Fe-59	<	1.20E-02			<	1.60E-02		
Co-60	<	2.80E-03			<	2.40E-03		
Zn-65	<	7.50E-03			<	9.80E-03		
Zr-95	<	6.20E-03			<	9.20E-03		
Ru-103	<	7.10E-03			<	6.70E-03		
Ru-106	<	2.40E-02			<	2.80E-02		
Cs-134	<	2.50E-03			<	3.30E-03		
Cs-137	<	2.40E-03			<	3.40E-03		
Ba-140	<	6.60E-02			<	7.10E-02		
La-140	<	7.60E-02			<	8.20E-02		
Ce-141	<	1.10E-02			<	9.60E-03		
Ce-144	<	1.40E-02			<	1.30E-02		

API-3 (indicator)
(pCi/cubic meter)

Nuclide	Third Quarter (a)				Fourth Quarter			
Be-7		1.64E-01	+/-	2.00E-02	<	5.60E-02		
K-40	<	3.60E-02			<	2.80E-02		
Mn-54	<	2.70E-03			<	3.70E-03		
Co-58	<	2.90E-03			<	4.90E-03		
Fe-59	<	1.00E-02			<	1.80E-02		
Co-60	<	3.30E-03			<	2.90E-03		
Zn-65	<	6.10E-03			<	6.80E-03		
Zr-95	<	6.80E-03			<	1.30E-02		
Ru-103	<	7.30E-03			<	1.50E-02		
Ru-106	<	2.50E-02			<	3.00E-02		
Cs-134	<	3.30E-03			<	3.70E-03		
Cs-137	<	2.70E-03			<	2.40E-03		
Ba-140	<	5.50E-02			<	3.60E-01		
La-140	<	6.40E-02			<	4.10E-01		
Ce-141	<	9.50E-03			<	2.00E-02		
Ce-144	<	1.20E-02			<	1.70E-02		

(a) See Appendix D, Program Execution.

FERMI 2
AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API-4 (control)
(pCi/cubic meter)

Nuclide	First Quarter				Second Quarter			
Be-7		9.00E-02	+/-	1.20E-02		1.50E-01	+/-	2.40E-02
K-40	<	2.50E-02			<	3.80E-02		
Mn-54	<	1.60E-03			<	4.00E-03		
Co-58	<	3.00E-03			<	4.60E-03		
Fe-59	<	9.70E-03			<	1.20E-02		
Co-60	<	1.80E-03			<	3.70E-03		
Zn-65	<	3.30E-03			<	8.10E-03		
Zr-95	<	5.70E-03			<	7.70E-03		
Ru-103	<	4.00E-03			<	6.80E-03		
Ru-106	<	1.10E-02			<	2.20E-02		
Cs-134	<	1.20E-03			<	3.30E-03		
Cs-137	<	6.30E-04			<	2.80E-03		
Ba-140	<	4.50E-02			<	3.90E-02		
La-140	<	5.10E-02			<	4.50E-02		
Ce-141	<	4.80E-03			<	1.10E-02		
Ce-144	<	4.90E-03			<	1.30E-02		

API-4 (control)
(pCi/cubic meter)

Nuclide	Third Quarter				Fourth Quarter			
Be-7		1.33E-01	+/-	2.20E-02		1.33E-01	+/-	2.00E-02
K-40	<	3.90E-02			<	2.00E-02		
Mn-54	<	2.90E-03			<	2.20E-03		
Co-58	<	4.60E-03			<	2.70E-03		
Fe-59	<	1.20E-02			<	1.20E-02		
Co-60	<	2.90E-03			<	2.00E-03		
Zn-65	<	7.20E-03			<	5.10E-03		
Zr-95	<	9.00E-03			<	6.70E-03		
Ru-103	<	6.60E-03			<	7.00E-03		
Ru-106	<	2.30E-02			<	1.70E-02		
Cs-134	<	2.30E-03			<	1.30E-03		
Cs-137	<	2.20E-03			<	1.50E-03		
Ba-140	<	5.80E-02			<	1.80E-01		
La-140	<	6.70E-02			<	2.00E-01		
Ce-141	<	1.10E-02			<	1.40E-02		
Ce-144	<	1.20E-02			<	8.50E-03		

FERMI 2
AIR PARTICULATE QUARTERLY COMPOSITE ANALYSIS

API-5 (Indicator)
(pCi/cubic meter)

Nuclide	First Quarter				Second Quarter			
Be-7		7.50E-02	+/-	1.50E-02		1.25E-01	+/-	2.20E-02
K-40	<	2.00E-02			<	3.20E-02		
Mn-54	<	3.50E-04			<	2.80E-03		
Co-58	<	2.90E-03			<	3.90E-03		
Fe-59	<	1.40E-02			<	1.30E-02		
Co-60	<	1.70E-03			<	2.80E-03		
Zn-65	<	4.30E-03			<	9.90E-03		
Zr-95	<	6.20E-03			<	6.30E-03		
Ru-103	<	3.90E-03			<	7.10E-03		
Ru-106	<	1.70E-02			<	2.60E-02		
Cs-134	<	1.40E-03			<	3.40E-03		
Cs-137	<	1.40E-03			<	2.80E-03		
Ba-140	<	6.00E-02			<	1.40E-02		
La-140	<	6.90E-02			<	1.60E-02		
Ce-141	<	5.10E-03			<	9.70E-03		
Ce-144	<	5.30E-03			<	1.30E-02		

API-5 (Indicator)
(pCi/cubic meter)

Nuclide	Third Quarter				Fourth Quarter			
Be-7		1.28E-01	+/-	1.80E-02	<	9.80E-02		
K-40	<	2.70E-02			<	4.00E-02		
Mn-54	<	2.30E-03			<	1.70E-03		
Co-58	<	3.60E-03			<	4.90E-03		
Fe-59	<	1.10E-02			<	2.10E-02		
Co-60	<	1.50E-03			<	3.70E-03		
Zn-65	<	4.70E-03			<	9.50E-03		
Zr-95	<	6.20E-03			<	1.00E-02		
Ru-103	<	4.50E-03			<	1.20E-02		
Ru-106	<	2.00E-02			<	2.80E-02		
Cs-134	<	2.20E-03			<	3.50E-03		
Cs-137	<	2.10E-03			<	2.80E-03		
Ba-140	<	5.00E-02			<	4.00E-01		
La-140	<	5.80E-02			<	4.60E-01		
Ce-141	<	1.00E-02			<	1.90E-02		
Ce-144	<	1.00E-02			<	1.10E-02		

FERMI 2
MILK ANALYSIS

M-2 (Indicator)
(pCi/liter)

Nuclide	19-JAN			23-FEB			23-MAR		
I-131	< 6.10E-01			< 9.00E-01			< 6.00E-01		
Sr-89	< 5.60E+00			< 7.70E+00			< 6.10E+00		
Sr-90	< 1.60E+00			< 1.40E+00			< 1.50E+00		
Be-7	< 4.80E+01			< 4.60E+01			< 4.20E+01		
K-40	1.43E+03	+/-	7.30E+01	1.43E+03	+/-	6.30E+01	1.39E+03	+/-	6.10E+01
Mn-54	< 6.10E+00			< 5.70E+00			< 5.20E+00		
Co-58	< 7.50E+00			< 5.70E+00			< 5.90E+00		
Fe-59	< 1.70E+01			< 1.50E+01			< 1.20E+01		
Co-60	< 8.90E+00			< 7.90E+00			< 7.40E+00		
Zn-65	< 1.70E+01			< 1.50E+01			< 1.30E+01		
Zr-95	< 1.20E+01			< 1.00E+01			< 8.90E+00		
Ru-103	< 6.60E+00			< 5.60E+00			< 5.40E+00		
Ru-106	< 4.70E+01			< 5.50E+01			< 5.10E+01		
Cs-134	< 7.40E+00			< 5.90E+00			< 6.20E+00		
Cs-137	< 5.80E+00			< 6.20E+00			< 5.90E+00		
Ba-140	< 1.30E+01			< 1.10E+01			< 8.50E+00		
La-140	< 1.50E+01			< 1.30E+01			< 9.80E+00		
Ce-141	< 6.80E+00			< 8.70E+00			< 6.90E+00		
Ce-144	< 2.50E+01			< 2.80E+01			< 2.50E+01		

Nuclide	20-APR			11-MAY			25-MAY		
I-131	< 8.00E-01			< 9.20E-01			< 8.20E-01		
Sr-89	< 8.30E+00			< 2.60E+00			< 7.50E+00		
Sr-90	< 1.60E+00			< 1.70E+00			1.43E+00	+/-	3.60E-01
Be-7	< 4.20E+01			< 2.50E+01			< 4.60E+01		
K-40	1.50E+03	+/-	6.20E+01	1.39E+03	+/-	3.40E+01	1.37E+03	+/-	6.00E+01
Mn-54	< 4.70E+00			< 3.00E+00			< 5.20E+00		
Co-58	< 5.50E+00			< 3.00E+00			< 5.10E+00		
Fe-59	< 1.30E+01			< 7.50E+00			< 1.50E+01		
Co-60	< 7.60E+00			< 3.50E+00			< 8.90E+00		
Zn-65	< 1.40E+01			< 7.20E+00			< 1.40E+01		
Zr-95	< 9.80E+00			< 5.50E+00			< 8.30E+00		
Ru-103	< 5.00E+00			< 3.30E+00			< 5.30E+00		
Ru-106	< 4.80E+01			< 2.70E+01			< 5.10E+01		
Cs-134	< 5.90E+00			< 3.40E+00			< 5.80E+00		
Cs-137	< 5.80E+00			< 3.50E+00			< 6.10E+00		
Ba-140	< 8.40E+00			< 5.80E+00			< 1.00E+01		
La-140	< 9.60E+00			< 6.60E+00			< 1.20E+01		
Ce-141	< 4.30E+00			< 7.00E+00			< 7.30E+00		
Ce-144	< 2.40E+01			< 1.70E+01			< 2.50E+01		

FERMI 2
MILK ANALYSIS

M-2 (Indicator)
(pCi/liter)

Nuclide	8-JUN			22-JUN			13-JUL		
I-131	< 6.60E-01			< 7.80E-01			< 9.00E-01		
Sr-89	< 4.50E+00			< 7.60E+00			< 4.20E+00		
Sr-90	< 1.30E+00			< 1.60E+00			< 1.70E+00		
Be-7	< 5.60E+01			< 4.90E+01			< 5.00E+01		
K-40	1.43E+03	+/-	8.00E+01	1.27E+03	+/-	7.00E+01	1.44E+03	+/-	7.80E+01
Mn-54	< 7.70E+00			< 7.50E+00			< 6.20E+00		
Co-58	< 8.00E+00			< 6.90E+00			< 6.20E+00		
Fe-59	< 1.80E+01			< 1.70E+01			< 1.70E+01		
Co-60	< 9.10E+00			< 9.20E+00			< 8.50E+00		
Zn-65	< 2.10E+01			< 1.60E+01			< 1.70E+01		
Zr-95	< 1.20E+01			< 1.10E+01			< 1.40E+01		
Ru-103	< 7.60E+00			< 6.30E+00			< 7.60E+00		
Ru-106	< 7.30E+01			< 6.70E+01			< 5.00E+01		
Cs-134	< 8.30E+00			< 7.20E+00			< 6.40E+00		
Cs-137	< 7.40E+00			< 7.60E+00			< 6.20E+00		
Ba-140	< 1.30E+01			< 1.10E+01			< 1.10E+01		
La-140	< 1.50E+01			< 1.20E+01			< 1.30E+01		
Ce-141	< 9.90E+00			< 8.90E+00			< 7.90E+00		
Ce-144	< 3.70E+01			< 3.50E+01			< 3.00E+01		

Nuclide	27-JUL			10-AUG			24-AUG		
I-131	< 6.10E-01			< 7.50E-01			< 9.10E-01		
Sr-89	< 5.90E+00			< 8.80E+00			< 3.60E+00		
Sr-90	< 1.60E+00			< 1.30E+00			< 1.60E+00		
Be-7	< 5.70E+01			< 2.10E+01			< 4.20E+01		
K-40	1.39E+03	+/-	7.30E+01	1.42E+03	+/-	2.50E+01	1.35E+03	+/-	5.50E+01
Mn-54	< 7.20E+00			< 2.40E+00			< 4.90E+00		
Co-58	< 7.70E+00			< 2.40E+00			< 4.90E+00		
Fe-59	< 1.40E+01			< 6.50E+00			< 1.30E+01		
Co-60	< 1.10E+01			< 2.90E+00			< 7.20E+00		
Zn-65	< 1.70E+01			< 1.10E+01			< 1.30E+01		
Zr-95	< 1.20E+01			< 4.60E+00			< 9.20E+00		
Ru-103	< 6.50E+00			< 3.00E+00			< 5.40E+00		
Ru-106	< 6.20E+01			< 2.20E+01			< 4.90E+01		
Cs-134	< 6.20E+00			< 2.50E+00			< 5.10E+00		
Cs-137	< 7.70E+00			< 2.30E+00			< 5.60E+00		
Ba-140	< 9.80E+00			< 5.90E+00			< 1.00E+01		
La-140	< 1.10E+01			< 6.80E+00			< 1.10E+01		
Ce-141	< 9.00E+00			< 5.10E+00			< 6.50E+00		
Ce-144	< 3.20E+01			< 1.30E+01			< 2.40E+01		

FERMI 2
MILK ANALYSIS

M-2 (Indicator)
(pCi/liter)

Nuclide	7-SEP			21-SEP			12-OCT		
I-131	< 7.10E-01			< 7.30E-01			< 7.40E-01		
Sr-89	< 7.40E+00			< 4.00E+00			< 3.00E+00		
Sr-90	< 1.30E+00			< 1.20E+00			< 1.80E+00		
Be-7	< 4.00E+01			< 4.60E+01			< 6.40E+01		
K-40	1.34E+03	+/-	5.20E+01	1.45E+03	+/-	7.00E+01	1.39E+03	+/-	7.00E+01
Mn-54	< 4.80E+00			< 7.00E+00			< 6.90E+00		
Co-58	< 4.30E+00			< 6.10E+00			< 6.70E+00		
Fe-59	< 1.20E+01			< 1.50E+01			< 1.70E+01		
Co-60	< 7.00E+00			< 7.80E+00			< 8.10E+00		
Zn-65	< 1.20E+01			< 1.70E+01			< 1.90E+01		
Zr-95	< 8.20E+00			< 1.00E+01			< 1.20E+01		
Ru-103	< 4.80E+00			< 6.10E+00			< 8.40E+00		
Ru-106	< 4.80E+01			< 5.80E+01			< 6.50E+01		
Cs-134	< 5.00E+00			< 6.00E+00			< 8.20E+00		
Cs-137	< 5.20E+00			< 6.80E+00			< 7.50E+00		
Ba-140	< 9.60E+00			< 1.00E+01			< 1.10E+01		
La-140	< 1.10E+01			< 1.20E+01			< 1.20E+01		
Ce-141	< 6.40E+00			< 8.70E+00			< 1.00E+01		
Ce-144	< 2.40E+01			< 3.10E+01			< 3.60E+01		

Nuclide	26-OCT			20-NOV			14-DEC		
I-131	< 8.80E-01			< 8.70E-01			< 6.30E-01		
Sr-89	< 8.50E+00			< 8.80E+00			< 7.70E+00		
Sr-90	< 1.60E+00			< 1.60E+00			< 1.50E+00		
Be-7	< 4.40E+01			< 4.30E+01			< 5.60E+01		
K-40	1.49E+03	+/-	6.20E+01	1.42E+03	+/-	5.00E+01	1.49E+03	+/-	8.20E+01
Mn-54	< 5.70E+00			< 5.10E+00			< 7.90E+00		
Co-58	< 6.10E+00			< 4.80E+00			< 7.90E+00		
Fe-59	< 1.60E+01			< 1.10E+01			< 1.90E+01		
Co-60	< 6.40E+00			< 5.00E+00			< 8.80E+00		
Zn-65	< 1.30E+01			< 1.60E+01			< 1.80E+01		
Zr-95	< 9.90E+00			< 9.10E+00			< 1.20E+01		
Ru-103	< 5.40E+00			< 5.40E+00			< 7.40E+00		
Ru-106	< 5.30E+01			< 4.80E+01			< 7.40E+01		
Cs-134	< 5.30E+00			< 5.90E+00			< 8.30E+00		
Cs-137	< 6.20E+00			< 4.30E+00			< 7.50E+00		
Ba-140	< 1.10E+01			< 6.40E+00			< 1.20E+01		
La-140	< 1.30E+01			< 7.30E+00			< 1.40E+01		
Ce-141	< 7.80E+00			< 7.50E+00			< 9.40E+00		
Ce-144	< 2.50E+01			< 2.40E+01			< 3.40E+01		

FERMI 2
MILK ANALYSIS

M-8 (Control)
(pCi/liter)

Nuclide	19-JAN			23-FEB			23-MAR		
I-131	< 6.70E-01			< 8.40E-01			< 7.00E-01		
Sr-89	< 5.20E+00			< 8.50E+00			< 7.00E+00		
Sr-90	< 1.50E+00			< 1.50E+00			< 1.70E+00		
Be-7	< 5.60E+01			< 4.50E+01			< 4.20E+01		
K-40	1.43E+03	+/-	7.40E+01	1.50E+03	+/-	6.20E+01	1.40E+03	+/-	5.70E+01
Mn-54	< 7.90E+00			< 5.60E+00			< 5.10E+00		
Co-58	< 8.40E+00			< 6.20E+00			< 5.30E+00		
Fe-59	< 1.70E+01			< 1.40E+01			< 1.30E+01		
Co-60	< 9.90E+00			< 7.90E+00			< 7.20E+00		
Zn-65	< 1.80E+01			< 1.40E+01			< 1.30E+01		
Zr-95	< 1.40E+01			< 1.00E+01			< 9.30E+00		
Ru-103	< 7.30E+00			< 5.90E+00			< 6.20E+00		
Ru-106	< 6.00E+01			< 5.50E+01			< 5.30E+01		
Cs-134	< 7.50E+00			< 6.20E+00			< 5.60E+00		
Cs-137	< 6.40E+00			< 5.80E+00			< 5.20E+00		
Ba-140	< 1.20E+01			< 1.20E+01			< 8.70E+00		
La-140	< 1.40E+01			< 1.30E+01			< 1.00E+01		
Ce-141	< 9.30E+00			< 7.40E+00			< 7.00E+00		
Ce-144	< 3.30E+01			< 2.70E+01			< 2.70E+01		

Nuclide	20-APR			11-MAY			25-MAY		
I-131	< 7.40E-01			< 7.10E-01			< 8.80E-01		
Sr-89	< 9.50E+00			< 8.40E+00			< 9.00E+00		
Sr-90	< 1.80E+00			< 1.60E+00			1.70E+00	+/-	3.60E-01
Be-7	< 4.40E+01			< 7.00E+01			< 4.00E+01		
K-40	1.45E+03	+/-	5.80E+01	1.52E+03	+/-	7.40E+01	1.43E+03	+/-	5.70E+01
Mn-54	< 4.80E+00			< 6.80E+00			< 5.70E+00		
Co-58	< 5.30E+00			< 7.20E+00			< 5.80E+00		
Fe-59	< 1.20E+01			< 1.90E+01			< 1.30E+01		
Co-60	< 6.30E+00			< 8.10E+00			< 6.60E+00		
Zn-65	< 1.30E+01			< 1.90E+01			< 1.50E+01		
Zr-95	< 8.60E+00			< 1.20E+01			< 9.90E+00		
Ru-103	< 6.30E+00			< 9.20E+00			< 6.50E+00		
Ru-106	< 4.70E+01			< 6.70E+01			< 5.20E+01		
Cs-134	< 5.90E+00			< 7.50E+00			< 5.20E+00		
Cs-137	< 5.00E+00			< 6.70E+00			< 4.80E+00		
Ba-140	< 8.10E+00			< 1.00E+01			< 8.30E+00		
La-140	< 9.30E+00			< 1.20E+01			< 9.60E+00		
Ce-141	< 6.90E+00			< 1.20E+01			< 7.30E+00		
Ce-144	< 2.60E+01			< 3.80E+01			< 2.80E+01		

FERMI 2
MILK ANALYSIS

M-8 (Control)
(pCi/liter)

Nuclide	8-JUN			22-JUN			13-JUL		
I-131	< 6.50E-01			< 8.10E-01			< 7.60E-01		
Sr-89	< 5.30E+00			< 6.00E+00			< 7.40E+00		
Sr-90	< 1.50E+00			< 1.20E+00			< 1.70E+00		
Be-7	< 4.40E+01			< 5.30E+01			< 4.80E+01		
K-40	1.40E+03	+/-	6.60E+01	1.40E+03	+/-	8.30E+01	1.42E+03	+/-	8.10E+01
Mn-54	< 6.40E+00			< 7.40E+00			< 6.00E+00		
Co-58	< 5.90E+00			< 8.00E+00			< 7.60E+00		
Fe-59	< 1.60E+01			< 2.20E+01			< 1.60E+01		
Co-60	< 7.40E+00			< 1.10E+01			< 9.70E+00		
Zn-65	< 1.60E+01			< 2.10E+01			< 1.70E+01		
Zr-95	< 1.30E+01			< 1.20E+01			< 1.30E+01		
Ru-103	< 7.40E+00			< 8.00E+00			< 7.10E+00		
Ru-106	< 6.10E+01			< 6.50E+01			< 5.90E+01		
Cs-134	< 7.40E+00			< 8.70E+00			< 8.30E+00		
Cs-137	< 6.70E+00			< 9.10E+00			< 4.70E+00		
Ba-140	< 1.10E+01			< 1.20E+01			< 1.10E+01		
La-140	< 1.20E+01			< 1.40E+01			< 1.30E+01		
Ce-141	< 9.60E+00			< 9.70E+00			< 9.30E+00		
Ce-144	< 3.30E+01			< 3.50E+01			< 3.60E+01		

Nuclide	27-JUL			10-AUG			24-AUG		
I-131	< 7.80E-01			< 8.90E-01			< 8.20E-01		
Sr-89	< 5.40E+00			< 8.30E+00			< 3.40E+00		
Sr-90	< 1.40E+00			< 1.60E+00			< 1.50E+00		
Be-7	< 6.60E+01			< 3.90E+01			< 4.20E+01		
K-40	1.53E+03	+/-	7.20E+01	1.47E+03	+/-	5.80E+01	1.48E+03	+/-	5.80E+01
Mn-54	< 7.40E+00			< 4.60E+00			< 5.20E+00		
Co-58	< 7.40E+00			< 5.60E+00			< 5.70E+00		
Fe-59	< 1.80E+01			< 1.20E+01			< 1.30E+01		
Co-60	< 8.10E+00			< 6.60E+00			< 6.60E+00		
Zn-65	< 1.70E+01			< 1.30E+01			< 1.40E+01		
Zr-95	< 1.40E+01			< 1.00E+01			< 1.00E+01		
Ru-103	< 8.20E+00			< 6.10E+00			< 6.30E+00		
Ru-106	< 6.80E+01			< 4.80E+01			< 5.00E+01		
Cs-134	< 7.00E+00			< 6.10E+00			< 6.00E+00		
Cs-137	< 7.00E+00			< 5.00E+00			< 5.30E+00		
Ba-140	< 1.10E+01			< 9.10E+00			< 8.80E+00		
La-140	< 1.30E+01			< 1.10E+01			< 1.00E+01		
Ce-141	< 1.10E+01			< 6.40E+00			< 1.30E+01		
Ce-144	< 3.50E+01			< 2.80E+01			< 2.80E+01		

FERMI 2
MILK ANALYSIS

M-8 (Control)
(pCi/liter)

Nuclide	7-SEP			21-SEP			12-OCT		
I-131	< 6.80E-01			< 8.80E-01			< 7.70E-01		
Sr-89	< 7.20E+00			< 4.30E+00			< 7.40E+00		
Sr-90	< 1.40E+00			< 1.10E+00			< 1.70E+00		
Be-7	< 5.10E+01			< 6.00E+01			< 5.20E+01		
K-40	1.40E+03	+/-	5.80E+01	1.49E+03	+/-	8.00E+01	1.32E+03	+/-	6.60E+01
Mn-54	< 5.60E+00			< 6.90E+00			< 6.90E+00		
Co-58	< 5.70E+00			< 8.40E+00			< 6.80E+00		
Fe-59	< 1.40E+01			< 1.90E+01			< 1.50E+01		
Co-60	< 7.00E+00			< 1.00E+01			< 7.60E+00		
Zn-65	< 1.40E+01			< 2.00E+01			< 1.70E+01		
Zr-95	< 9.60E+00			< 1.20E+01			< 1.20E+01		
Ru-103	< 6.50E+00			< 7.80E+00			< 6.30E+00		
Ru-106	< 5.20E+01			< 7.60E+01			< 6.00E+01		
Cs-134	< 6.30E+00			< 7.20E+00			< 6.90E+00		
Cs-137	< 5.70E+00			< 7.50E+00			< 6.60E+00		
Ba-140	< 1.10E+01			< 1.20E+01			< 1.20E+01		
La-140	< 1.20E+01			< 1.40E+01			< 1.40E+01		
Ce-141	< 9.00E+00			< 9.40E+00			< 9.30E+00		
Ce-144	< 2.80E+01			< 3.20E+01			< 3.70E+01		

Nuclide	26-OCT			22-NOV			14-DEC		
I-131	< 8.80E-01			< 8.70E-01			< 6.40E-01		
Sr-89	< 7.30E+00			< 6.70E+00			< 7.30E+00		
Sr-90	< 1.50E+00			< 1.40E+00			< 1.40E+00		
Be-7	< 4.20E+01			< 5.10E+01			< 4.00E+01		
K-40	1.34E+03	+/-	6.10E+01	1.35E+03	+/-	6.40E+01	1.30E+03	+/-	5.60E+01
Mn-54	< 6.10E+00			< 5.90E+00			< 5.60E+00		
Co-58	< 6.10E+00			< 7.40E+00			< 5.80E+00		
Fe-59	< 1.50E+01			< 1.40E+01			< 1.30E+01		
Co-60	< 7.60E+00			< 6.30E+00			< 6.50E+00		
Zn-65	< 1.40E+01			< 1.50E+01			< 2.20E+01		
Zr-95	< 1.00E+01			< 1.10E+01			< 9.40E+00		
Ru-103	< 5.80E+00			< 7.10E+00			< 5.90E+00		
Ru-106	< 4.30E+01			< 6.10E+01			< 5.10E+01		
Cs-134	< 5.90E+00			< 6.80E+00			< 5.70E+00		
Cs-137	< 5.50E+00			< 6.00E+00			< 5.90E+00		
Ba-140	< 1.20E+01			< 9.00E+00			< 7.50E+00		
La-140	< 1.40E+01			< 1.00E+01			< 8.60E+00		
Ce-141	< 7.30E+00			< 9.60E+00			< 9.90E+00		
Ce-144	< 2.50E+01			< 3.20E+01			< 2.90E+01		

FERMI 2
VEGETABLE ANALYSIS

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

Nuclide	27-JUL Cabbage			27-JUL Collards			27-JUL Kohlrabi		
I-131	< 4.20E+01			< 4.20E+01			< 4.00E+01		
Be-7	< 3.30E+02			< 4.10E+02			< 2.80E+02		
K-40	3.56E+03	+/-	4.20E+02	2.77E+03	+/-	4.00E+02	3.63E+03	+/-	3.60E+02
Mn-54	< 4.30E+01			< 4.20E+01			< 4.30E+01		
Co-58	< 4.00E+01			< 3.70E+01			< 3.70E+01		
Fe-59	< 1.00E+02			< 1.10E+02			< 9.60E+01		
Co-60	< 5.60E+01			< 6.90E+01			< 5.80E+01		
Zn-65	< 1.20E+02			< 1.20E+01			< 9.80E+01		
Zr-95	< 9.00E+01			< 1.20E+01			< 6.30E+01		
Ru-103	< 4.00E+01			< 9.70E+01			< 3.70E+01		
Ru-106	< 4.00E+02			< 5.50E+01			< 3.80E+02		
Cs-134	< 5.10E+01			< 4.40E+02			< 4.40E+01		
Cs-137	< 4.40E+01			< 4.70E+01			< 4.30E+01		
Ba-140	< 8.70E+01			< 8.20E+00			< 6.20E+01		
La-140	< 1.00E+02			< 8.60E+01			< 7.10E+01		
Ce-141	< 4.30E+01			< 9.80E+01			< 5.20E+01		
Ce-144	< 1.50E+02			< 5.90E+01			< 1.70E+02		

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

Nuclide	27-JUL Red Cabbage			31-AUG Cabbage			31-AUG Kohlrabi		
I-131	< 3.90E+01			< 5.00E+01			< 5.00E+01		
Be-7	< 3.20E+02			< 2.80E+02			< 2.40E+02		
K-40	1.60E+03	+/-	2.80E+02	1.60E+03	+/-	2.20E+02	4.00E+03	+/-	2.20E+02
Mn-54	< 4.30E+01			< 2.90E+01			< 2.30E+01		
Co-58	< 4.60E+01			< 3.60E+01			< 2.60E+01		
Fe-59	< 8.60E+01			< 7.50E+01			< 5.50E+01		
Co-60	< 3.90E+01			< 4.00E+01			< 2.80E+01		
Zn-65	< 8.50E+01			< 7.20E+01			< 5.20E+01		
Zr-95	< 7.30E+01			< 6.00E+01			< 4.60E+01		
Ru-103	< 3.90E+01			< 2.90E+01			< 2.50E+01		
Ru-106	< 3.70E+02			< 2.70E+02			< 2.30E+02		
Cs-134	< 3.80E+01			< 3.70E+01			< 2.60E+01		
Cs-137	< 4.40E+01			< 3.10E+01			< 2.40E+01		
Ba-140	< 4.90E+01			< 7.40E+01			< 4.50E+01		
La-140	< 5.70E+01			< 8.50E+01			< 5.10E+01		
Ce-141	< 5.00E+01			< 4.30E+01			< 3.40E+01		
Ce-144	< 1.80E+02			< 1.50E+02			< 1.10E+02		

FERMI 2
VEGETABLE ANALYSIS

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

Nuclide	31-AUG Swiss Chard		
I-131	< 5.30E+01		
Be-7	< 2.80E+02		
K-40	2.77E+03	+/-	2.70E+02
Mn-54	< 2.80E+01		
Co-58	< 3.20E+01		
Fe-59	< 7.20E+01		
Co-60	< 3.70E+01		
Zn-65	< 7.80E+01		
Zr-95	< 6.10E+01		
Ru-103	< 3.30E+01		
Ru-106	< 2.60E+02		
Cs-134	< 3.90E+01		
Cs-137	< 3.30E+01		
Ba-140	< 5.60E+01		
La-140	< 6.40E+01		
Ce-141	< 4.10E+01		
Ce-144	< 1.50E+02		

FERMI 2
VEGETABLE ANALYSIS

FP-9 (Control)
(pCi/kg wet)

Nuclide	27-JUL Cabbage			27-JUL Collards			27-JUL Lettuce		
I-131	< 4.50E+01			< 4.40E+01			< 5.10E+01		
Be-7	< 3.40E+02			< 3.10E+02			< 3.20E+02		
K-40	2.18E+03	+/-	2.90E+02	3.57E+03	+/-	3.60E+02	3.35E+03	+/-	4.20E+02
Mn-54	< 3.70E+01			< 4.50E+01			< 5.20E+01		
Co-58	< 3.50E+01			< 4.80E+01			< 6.20E+01		
Fe-59	< 6.80E+01			< 5.90E+01			< 1.20E+02		
Co-60	< 4.10E+01			< 4.50E+01			< 5.70E+01		
Zn-65	< 9.50E+01			< 8.10E+01			< 1.30E+02		
Zr-95	< 5.80E+01			< 5.50E+01			< 1.10E+02		
Ru-103	< 3.60E+01			< 4.60E+01			< 3.90E+01		
Ru-106	< 4.40E+02			< 4.50E+02			< 4.10E+02		
Cs-134	< 3.50E+01			< 3.90E+01			< 5.50E+01		
Cs-137	< 3.30E+01			< 3.30E+01			< 3.40E+01		
Ba-140	< 4.70E+01			< 5.80E+01			< 8.80E+01		
La-140	< 5.40E+01			< 6.70E+01			< 1.00E+02		
Ce-141	< 4.90E+01			< 5.20E+01			< 4.60E+01		
Ce-144	< 1.90E+02			< 2.10E+02			< 1.50E+02		

FP-9 (Control)
(pCi/kg wet)

Nuclide	27-JUL Red Cabbage			31-AUG Cabbage			31-AUG Horse Radish		
I-131	< 4.00E+01			< 5.20E+01			< 5.10E+01		
Be-7	< 3.40E+02			< 2.80E+02			< 4.10E+02		
K-40	4.59E+03	+/-	4.00E+02	1.99E+03	+/-	2.80E+02	4.71E+03	+/-	4.40E+02
Mn-54	< 4.20E+01			< 2.70E+01			< 4.30E+01		
Co-58	< 4.00E+01			< 2.80E+01			< 4.40E+01		
Fe-59	< 1.10E+02			< 9.50E+01			< 1.20E+02		
Co-60	< 4.10E+01			< 4.90E+01			< 6.00E+01		
Zn-65	< 1.10E+02			< 9.40E+01			< 1.20E+02		
Zr-95	< 5.30E+01			< 7.20E+01			< 9.60E+01		
Ru-103	< 4.20E+01			< 3.90E+01			< 4.70E+01		
Ru-106	< 3.60E+02			< 2.90E+02			< 3.60E+02		
Cs-134	< 4.00E+01			< 4.20E+01			< 3.90E+01		
Cs-137	< 4.80E+01			< 3.70E+01			< 3.80E+01		
Ba-140	< 5.50E+01			< 6.30E+01			< 1.00E+02		
La-140	< 6.40E+01			< 7.30E+01			< 1.20E+02		
Ce-141	< 4.80E+01			< 4.70E+01			< 5.20E+01		
Ce-144	< 2.20E+02			< 1.40E+02			< 1.50E+02		

FERMI 2
VEGETABLE ANALYSIS

FP-9 (Control)
(pCi/kg wet)

Nuclide	31-AUG Collards		
I-131	< 5.30E+01		
Be-7	< 2.50E+02		
K-40	3.79E+03	+/-	2.50E+02
Mn-54	< 3.10E+01		
Co-58	< 2.20E+01		
Fe-59	< 7.30E+01		
Co-60	< 2.90E+01		
Zn-65	< 7.00E+01		
Zr-95	< 4.60E+01		
Ru-103	< 3.40E+01		
Ru-106	< 2.40E+02		
Cs-134	< 2.60E+01		
Cs-137	< 2.80E+01		
Ba-140	< 4.40E+01		
La-140	< 5.10E+01		
Ce-141	< 3.70E+01		
Ce-144	< 1.30E+02		

FERMI 2
DRINKING WATER ANALYSIS

DW-1 (Indicator)
(pCi/liter)

Nuclide	31-JAN			28-FEB			28-MAR		
GR-B	4.20E+00	+/-	1.10E+00	4.10E+00	+/-	1.10E+00	< 3.00E+00		
Sr-89	< 6.50E+00			< 7.00E+00			< 7.60E+00		
Sr-90	< 1.30E+00			< 1.40E+00			< 1.50E+00		
Be-7	< 4.60E+01			< 5.70E+01			< 4.60E+01		
K-40	< 6.50E+01			< 7.90E+01			< 9.10E+01		
Mn-54	< 5.10E+00			< 6.40E+00			< 5.10E+00		
Co-58	< 5.10E+00			< 7.00E+00			< 6.30E+00		
Fe-59	< 1.00E+01			< 1.20E+01			< 1.40E+01		
Co-60	< 4.80E+00			< 6.20E+00			< 6.70E+00		
Zn-65	< 1.30E+01			< 1.60E+01			< 1.30E+01		
Zr-95	< 9.30E+00			< 1.10E+01			< 9.80E+00		
Ru-103	< 5.60E+00			< 7.40E+00			< 5.80E+00		
Ru-106	< 4.80E+01			< 5.10E+01			< 4.60E+01		
Cs-134	< 5.60E+00			< 5.80E+00			< 5.90E+00		
Cs-137	< 5.00E+00			< 5.30E+00			< 5.50E+00		
Ba-140	< 8.20E+00			< 8.00E+00			< 9.30E+00		
La-140	< 9.40E+00			< 9.20E+00			< 1.10E+01		
Ce-141	< 1.20E+01			< 9.70E+00			< 6.70E+00		
Ce-144	< 2.50E+01			< 3.20E+01			< 2.50E+01		

Nuclide	25-APR			30-MAY			28-JUN		
GR-B	5.30E+00	+/-	1.20E+00	4.10E+00	+/-	1.10E+00	4.60E+00	+/-	1.10E+00
Sr-89	< 7.40E+00			< 6.60E+00			< 6.10E+00		
Sr-90	< 1.60E+00			< 1.40E+00			< 1.70E+00		
Be-7	< 3.80E+01			< 5.40E+01			< 4.50E+01		
K-40	< 8.50E+01			< 8.60E+01			< 6.80E+01		
Mn-54	< 4.30E+00			< 6.80E+00			< 5.80E+00		
Co-58	< 4.40E+00			< 7.00E+00			< 6.30E+00		
Fe-59	< 1.10E+01			< 1.20E+01			< 1.20E+01		
Co-60	< 5.50E+00			< 5.70E+00			< 5.20E+00		
Zn-65	< 9.30E+00			< 1.60E+01			< 1.30E+01		
Zr-95	< 6.90E+00			< 1.10E+01			< 8.40E+00		
Ru-103	< 4.90E+00			< 6.80E+00			< 5.90E+00		
Ru-106	< 4.80E+01			< 5.80E+01			< 4.70E+01		
Cs-134	< 5.20E+00			< 6.50E+00			< 5.70E+00		
Cs-137	< 4.40E+00			< 6.00E+00			< 5.80E+00		
Ba-140	< 7.40E+00			< 1.10E+01			< 1.10E+01		
La-140	< 8.50E+00			< 1.30E+01			< 1.30E+01		
Ce-141	< 7.20E+00			< 9.70E+00			< 8.00E+00		
Ce-144	< 2.20E+01			< 3.70E+01			< 2.80E+01		

FERMI 2
DRINKING WATER ANALYSIS

DW-1 (Indicator)
(pCi/liter)

Nuclide	26-JUL			30-AUG			27-SEP		
GR-B	5.50E+00	+/-	1.10E+00	< 3.00E+00			< 3.00E+00		
Sr-89	< 6.60E+00			< 4.70E+00			< 7.90E+00		
Sr-90	< 1.70E+00			< 1.80E+00			< 1.50E+00		
Be-7	< 3.70E+01			< 4.50E+01			< 4.40E+01		
K-40	< 7.00E+01			< 6.90E+01			< 8.00E+01		
Mn-54	< 4.30E+00			< 4.90E+00			< 5.60E+00		
Co-58	< 4.30E+00			< 4.80E+00			< 5.10E+00		
Fe-59	< 1.20E+01			< 1.10E+01			< 1.20E+01		
Co-60	< 5.50E+00			< 4.40E+00			< 5.80E+00		
Zn-65	< 9.80E+00			< 1.30E+01			< 2.00E+01		
Zr-95	< 7.70E+00			< 9.10E+00			< 1.00E+01		
Ru-103	< 4.50E+00			< 6.00E+00			< 6.40E+00		
Ru-106	< 4.50E+01			< 4.70E+01			< 5.10E+01		
Cs-134	< 5.30E+00			< 5.00E+00			< 6.50E+00		
Cs-137	< 5.40E+00			< 5.30E+00			< 6.50E+00		
Ba-140	< 8.80E+00			< 7.20E+00			< 1.20E+01		
La-140	< 1.00E+01			< 8.30E+00			< 1.40E+01		
Ce-141	< 5.70E+00			< 7.40E+00			< 1.60E+01		
Ce-144	< 2.30E+01			< 2.60E+01			< 3.20E+01		

Nuclide	25-OCT			21-NOV (a)			29-NOV		
GR-B	4.10E+00	+/-	1.10E+00	4.60E+00	+/-	1.00E+00	4.60E+00	+/-	1.10E+00
Sr-89	< 8.50E+00			< 5.30E+00			< 6.80E+00		
Sr-90	< 1.40E+00			< 1.70E+00			< 1.40E+00		
Be-7	< 4.60E+01			< 4.70E+01			< 2.90E+01		
K-40	< 7.00E+01			< 7.10E+01			< 5.30E+01		
Mn-54	< 5.40E+00			< 5.70E+00			< 3.60E+00		
Co-58	< 5.50E+00			< 5.90E+00			< 3.60E+00		
Fe-59	< 1.30E+01			< 1.10E+01			< 6.90E+00		
Co-60	< 6.00E+00			< 6.90E+00			< 3.40E+00		
Zn-65	< 1.40E+01			< 1.30E+01			< 8.50E+00		
Zr-95	< 9.20E+00			< 1.10E+01			< 6.20E+00		
Ru-103	< 6.50E+00			< 6.70E+00			< 4.10E+00		
Ru-106	< 5.40E+01			< 4.60E+01			< 3.50E+01		
Cs-134	< 6.10E+00			< 6.50E+00			< 4.30E+00		
Cs-137	< 4.90E+00			< 5.70E+00			< 3.20E+00		
Ba-140	< 1.10E+01			< 1.10E+01			< 5.00E+00		
La-140	< 1.20E+01			< 1.30E+01			< 5.80E+00		
Ce-141	< 7.10E+00			< 7.60E+00			< 5.30E+00		
Ce-144	< 3.10E+01			< 2.20E+01			< 1.80E+01		

(a) See Appendix D, Program Execution.

FERMI 2
DRINKING WATER ANALYSIS

DW-1 (Indicator)
(pCi/liter)

Nuclide	27-DEC		
GR-B	6.10E+00	+/-	1.20E+00
Sr-89	< 8.20E+00		
Sr-90	< 1.50E+00		
Be-7	< 3.90E+01		
K-40	< 9.50E+01		
Mn-54	< 5.60E+00		
Co-58	< 5.90E+00		
Fe-59	< 1.20E+01		
Co-60	< 5.90E+00		
Zn-65	< 1.20E+01		
Zr-95	< 9.10E+00		
Ru-103	< 5.60E+00		
Ru-106	< 3.80E+01		
Cs-134	< 5.80E+00		
Cs-137	< 4.90E+00		
Ba-140	< 1.10E+01		
La-140	< 1.30E+01		
Ce-141	< 6.70E+00		
Ce-144	< 2.30E+01		

FERMI 2
DRINKING WATER ANALYSIS

DW-2 (Control)
(pCi/liter)

Nuclide	31-JAN			28-FEB			28-MAR		
GR-B	< 3.00E+00			5.40E+00	+/-	1.20E+00	3.60E+00	+/-	1.00E+00
Sr-89	< 6.40E+00			< 6.70E+00			< 7.20E+00		
Sr-90	< 1.30E+00			< 1.30E+00			< 1.40E+00		
Be-7	< 3.40E+01			< 4.50E+01			< 4.50E+01		
K-40	< 6.80E+01			< 9.70E+01			< 6.90E+01		
Mn-54	< 4.30E+00			< 5.30E+00			< 5.20E+00		
Co-58	< 5.30E+00			< 6.90E+00			< 4.20E+00		
Fe-59	< 1.10E+01			< 1.20E+01			< 1.10E+01		
Co-60	< 4.30E+00			< 5.50E+00			< 5.10E+00		
Zn-65	< 1.20E+01			< 1.60E+01			< 1.10E+01		
Zr-95	< 7.60E+00			< 1.00E+01			< 9.30E+00		
Ru-103	< 6.30E+00			< 6.80E+00			< 6.00E+00		
Ru-106	< 4.10E+01			< 4.90E+01			< 4.80E+01		
Cs-134	< 4.80E+00			< 5.60E+00			< 4.80E+00		
Cs-137	< 4.50E+00			< 5.80E+00			< 5.20E+00		
Ba-140	< 7.00E+00			< 9.20E+00			< 7.70E+00		
La-140	< 8.00E+00			< 1.10E+01			< 8.80E+00		
Ce-141	< 7.50E+00			< 8.70E+00			< 8.70E+00		
Ce-144	< 2.50E+01			< 2.90E+01			< 2.70E+01		

Nuclide	25-APR			30-MAY			28-JUN		
GR-B	< 2.80E+00			2.30E+00	+/-	1.10E+00	< 3.40E+00		
Sr-89	< 7.70E+00			< 7.20E+00			< 6.20E+00		
Sr-90	< 1.70E+00			< 1.60E+00			< 1.80E+00		
Be-7	< 5.00E+01			< 6.90E+01			< 3.90E+01		
K-40	< 9.20E+01			< 1.20E+01			< 7.20E+01		
Mn-54	< 5.80E+00			< 7.70E+00			< 4.60E+00		
Co-58	< 6.70E+00			< 8.00E+00			< 4.50E+00		
Fe-59	< 1.40E+01			< 1.60E+01			< 1.20E+01		
Co-60	< 6.60E+00			< 8.80E+00			< 4.70E+00		
Zn-65	< 1.40E+01			< 1.80E+01			< 1.10E+01		
Zr-95	< 1.00E+01			< 1.30E+01			< 9.60E+00		
Ru-103	< 7.90E+00			< 7.80E+00			< 5.50E+00		
Ru-106	< 5.50E+01			< 6.60E+01			< 3.70E+01		
Cs-134	< 6.90E+00			< 8.50E+00			< 6.00E+00		
Cs-137	< 6.30E+00			< 8.40E+00			< 4.40E+00		
Ba-140	< 9.00E+00			< 1.20E+01			< 1.20E+01		
La-140	< 1.00E+01			< 1.40E+01			< 1.40E+01		
Ce-141	< 7.10E+00			< 1.00E+01			< 6.10E+00		
Ce-144	< 3.40E+01			< 3.40E+01			< 1.90E+01		

FERMI 2
DRINKING WATER ANALYSIS

DW-2 (Control)
(pCi/liter)

Nuclide	26-JUL			30-AUG			27-SEP		
GR-B		3.90E+00	+/- 1.10E+00		3.05E+00	+/- 9.80E-01	<	3.30E+00	
Sr-89	<	6.40E+00		<	6.00E+00		<	8.20E+00	
Sr-90	<	1.70E+00		<	1.70E+00		<	1.50E+00	
Be-7	<	4.30E+01		<	3.90E+01		<	5.40E+01	
K-40	<	7.10E+01		<	6.80E+01		<	7.80E+01	
Mn-54	<	5.70E+00		<	4.80E+00		<	5.40E+00	
Co-58	<	5.30E+00		<	4.90E+00		<	6.70E+00	
Fe-59	<	1.30E+01		<	8.40E+00		<	1.50E+01	
Co-60	<	5.70E+00		<	5.30E+00		<	4.90E+00	
Zn-65	<	1.30E+01		<	1.10E+01		<	1.30E+01	
Zr-95	<	1.00E+01		<	8.50E+00		<	1.00E+01	
Ru-103	<	7.10E+00		<	5.30E+00		<	5.90E+00	
Ru-106	<	5.40E+01		<	4.30E+01		<	5.00E+01	
Cs-134	<	5.50E+00		<	5.00E+00		<	6.70E+00	
Cs-137	<	5.20E+00		<	4.80E+00		<	6.10E+00	
Ba-140	<	1.20E+01		<	8.20E+00		<	1.20E+01	
La-140	<	1.40E+01		<	9.40E+00		<	1.40E+01	
Ce-141	<	9.70E+00		<	6.50E+00		<	8.10E+00	
Ce-144	<	3.00E+01		<	2.50E+01		<	3.10E+01	

Nuclide	25-OCT			29-NOV			27-DEC		
GR-B		5.90E+00	+/- 1.10E+00	<	3.00E+00		<	2.90E+00	
Sr-89	<	9.40E+00		<	6.70E+00		<	8.40E+00	
Sr-90	<	1.70E+00		<	1.40E+00		<	1.60E+00	
Be-7	<	5.10E+01		<	3.00E+01		<	3.60E+01	
K-40	<	7.60E+01		<	5.70E+01		<	8.80E+01	
Mn-54	<	4.30E+00		<	3.90E+00		<	5.00E+00	
Co-58	<	5.70E+00		<	3.70E+00		<	5.60E+00	
Fe-59	<	1.10E+01		<	8.60E+00		<	1.10E+01	
Co-60	<	5.90E+00		<	4.70E+00		<	6.60E+00	
Zn-65	<	1.20E+01		<	7.60E+00		<	1.10E+01	
Zr-95	<	8.60E+00		<	6.70E+00		<	9.30E+00	
Ru-103	<	5.70E+00		<	3.90E+00		<	4.90E+00	
Ru-106	<	4.70E+01		<	3.00E+01		<	4.20E+01	
Cs-134	<	5.70E+00		<	3.80E+00		<	5.40E+00	
Cs-137	<	5.10E+00		<	3.60E+00		<	4.90E+00	
Ba-140	<	1.20E+01		<	9.20E+00		<	1.00E+01	
La-140	<	1.40E+01		<	1.10E+01		<	1.20E+01	
Ce-141	<	8.90E+00		<	4.60E+00		<	1.00E+01	
Ce-144	<	2.80E+01		<	1.50E+01		<	2.30E+01	

FERMI 2
SURFACE WATER ANALYSIS

SW-2 (Control)
(pCi/liter)

Nuclide	31-JAN	28-FEB	28-MAR
Sr-89	< 8.90E+00	< 7.70E+00	< 4.20E+00
Sr-90	< 1.80E+00	< 1.60E+00	< 1.30E+00
Be-7	< 5.40E+01	< 4.30E+01	< 3.70E+01
K-40	< 1.00E+02	< 8.40E+01	< 5.00E+01
Mn-54	< 6.40E+00	< 5.40E+00	< 4.60E+00
Co-58	< 5.90E+00	< 5.30E+00	< 4.90E+00
Fe-59	< 1.40E+01	< 1.10E+01	< 1.10E+01
Co-60	< 8.70E+00	< 6.60E+00	< 4.90E+00
Zn-65	< 2.50E+01	< 1.20E+01	< 1.10E+01
Zr-95	< 1.10E+01	< 9.10E+00	< 7.50E+00
Ru-103	< 6.90E+00	< 6.50E+00	< 4.70E+00
Ru-106	< 5.90E+01	< 6.00E+01	< 5.10E+01
Cs-134	< 7.00E+00	< 5.80E+00	< 5.50E+00
Cs-137	< 8.00E+00	< 6.00E+00	< 4.90E+00
Ba-140	< 1.20E+01	< 1.10E+01	< 8.40E+00
La-140	< 1.30E+01	< 1.30E+01	< 9.60E+00
Ce-141	< 9.40E+00	< 7.40E+00	< 7.40E+00
Ce-144	< 3.50E+01	< 2.80E+01	< 2.30E+01

Nuclide	25-APR	30-MAY	28-JUN
Sr-89	< 8.00E+00	< 6.30E+00	< 5.70E+00
Sr-90	< 1.70E+00	< 1.30E+00	< 1.60E+00
Be-7	< 6.70E+01	< 4.80E+01	< 4.80E+01
K-40	< 9.30E+01	< 9.10E+01	< 8.70E+01
Mn-54	< 6.90E+00	< 5.70E+00	< 5.70E+00
Co-58	< 7.20E+00	< 5.80E+00	< 6.60E+00
Fe-59	< 1.20E+01	< 1.40E+01	< 1.40E+01
Co-60	< 7.20E+00	< 6.40E+00	< 5.40E+00
Zn-65	< 2.00E+01	< 1.40E+01	< 1.50E+01
Zr-95	< 1.00E+01	< 1.00E+01	< 1.10E+01
Ru-103	< 6.90E+00	< 6.80E+00	< 7.10E+00
Ru-106	< 6.20E+01	< 6.60E+00	< 5.80E+01
Cs-134	< 7.80E+00	< 6.00E+00	< 6.20E+00
Cs-137	< 6.80E+00	< 6.70E+00	< 6.90E+00
Ba-140	< 9.70E+00	< 1.20E+01	< 1.30E+01
La-140	< 1.10E+01	< 1.30E+01	< 1.50E+01
Ce-141	< 1.10E+01	< 9.20E+00	< 1.00E+01
Ce-144	< 3.80E+01	< 3.00E+01	< 3.20E+01

FERMI 2
SURFACE WATER ANALYSIS

SW-2 (Control)
(pCi/liter)

Nuclide	26-JUL	30-AUG	27-SEP
Sr-89	< 6.50E+00	< 4.20E+00	< 7.30E+00
Sr-90	< 1.70E+00	< 1.50E+00	< 1.30E+00
Be-7	< 6.20E+01	< 5.50E+01	< 5.10E+01
K-40	< 7.40E+01	< 8.10E+01	< 7.20E+01
Mn-54	< 6.70E+00	< 6.80E+00	< 5.20E+00
Co-58	< 6.60E+00	< 7.00E+00	< 6.50E+00
Fe-59	< 1.30E+01	< 1.30E+01	< 1.20E+01
Co-60	< 7.00E+00	< 7.50E+00	< 6.30E+00
Zn-65	< 2.80E+01	< 1.70E+01	< 1.70E+01
Zr-95	< 1.30E+01	< 1.10E+01	< 1.10E+01
Ru-103	< 7.00E+00	< 6.30E+00	< 7.90E+00
Ru-106	< 5.90E+01	< 5.50E+01	< 5.80E+01
Cs-134	< 6.80E+00	< 6.10E+00	< 6.30E+00
Cs-137	< 6.30E+00	< 6.50E+00	< 6.40E+00
Ba-140	< 1.20E+01	< 9.40E+00	< 1.20E+01
La-140	< 1.30E+01	< 1.10E+01	< 1.40E+01
Ce-141	< 1.00E+01	< 7.30E+00	< 1.00E+01
Ce-144	< 3.40E+01	< 2.80E+01	< 3.20E+01

Nuclide	25-OCT	30-NOV	20-DEC
Sr-89	< 8.80E+00	< 5.40E+00	< 8.70E+00
Sr-90	< 1.50E+00	< 1.10E+00	< 1.60E+00
Be-7	< 5.30E+01	< 3.20E+01	< 3.70E+01
K-40	< 9.10E+01	< 5.90E+01	< 8.90E+01
Mn-54	< 5.50E+00	< 3.80E+00	< 5.60E+00
Co-58	< 6.20E+00	< 3.80E+00	< 5.80E+00
Fe-59	< 1.30E+01	< 8.60E+00	< 1.30E+01
Co-60	< 6.50E+00	< 4.20E+00	< 8.00E+00
Zn-65	< 1.30E+01	< 8.30E+00	< 1.10E+01
Zr-95	< 1.10E+01	< 7.00E+00	< 9.90E+00
Ru-103	< 5.80E+00	< 4.00E+00	< 5.70E+00
Ru-106	< 4.70E+01	< 3.90E+01	< 4.60E+01
Cs-134	< 6.00E+00	< 3.80E+00	< 5.70E+00
Cs-137	< 5.50E+00	< 3.80E+00	< 5.20E+00
Ba-140	< 1.20E+01	< 7.70E+00	< 1.00E+01
La-140	< 1.40E+01	< 8.90E+00	< 1.20E+01
Ce-141	< 7.90E+00	< 5.60E+00	< 6.90E+00
Ce-144	< 2.30E+01	< 1.90E+01	< 2.50E+01

FERMI 2
SURFACE WATER ANALYSIS

SW-3 (Indicator)
(pCi/liter)

Nuclide	31-JAN	28-FEB	28-MAR
Sr-89	< 6.90E+00	< 6.70E+00	< 4.20E+00
Sr-90	< 1.30E+00	< 1.40E+00	< 1.30E+00
Be-7	< 4.60E+01	< 4.20E+01	< 3.70E+01
K-40	< 7.60E+01	< 8.20E+01	< 7.20E+01
Mn-54	< 4.90E+00	< 5.20E+00	< 3.90E+00
Co-58	< 4.70E+00	< 5.30E+00	< 5.10E+00
Fe-59	< 1.10E+01	< 1.30E+01	< 9.50E+00
Co-60	< 4.00E+00	< 6.80E+00	< 4.90E+00
Zn-65	< 1.00E+01	< 1.10E+01	< 1.10E+01
Zr-95	< 8.80E+00	< 1.10E+01	< 7.90E+00
Ru-103	< 5.80E+00	< 5.70E+00	< 4.90E+00
Ru-106	< 4.40E+01	< 4.70E+01	< 4.10E+01
Cs-134	< 5.50E+00	< 6.20E+00	< 5.90E+00
Cs-137	< 4.30E+00	< 4.50E+00	< 4.80E+00
Ba-140	< 7.70E+00	< 1.00E+01	< 9.50E+00
La-140	< 8.80E+00	< 1.20E+01	< 1.10E+01
Ce-141	< 8.30E+00	< 6.50E+00	< 6.10E+00
Ce-144	< 2.70E+01	< 2.20E+01	< 1.90E+01

Nuclide	25-APR	30-MAY	28-JUN
Sr-89	< 7.60E+00	< 6.80E+00	< 5.60E+00
Sr-90	< 1.60E+00	< 1.50E+00	< 1.60E+00
Be-7	< 4.00E+01	< 3.10E+01	< 5.30E+01
K-40	< 7.70E+01	< 8.20E+01	< 7.90E+01
Mn-54	< 4.70E+00	< 4.60E+00	< 5.20E+00
Co-58	< 5.00E+00	< 5.40E+00	< 6.00E+00
Fe-59	< 1.20E+01	< 1.00E+01	< 1.20E+01
Co-60	< 4.10E+00	< 5.20E+00	< 5.90E+00
Zn-65	< 1.10E+01	< 1.10E+01	< 1.20E+01
Zr-95	< 6.90E+00	< 7.10E+00	< 1.10E+01
Ru-103	< 5.10E+00	< 5.10E+00	< 7.40E+00
Ru-106	< 4.60E+01	< 3.90E+01	< 4.80E+01
Cs-134	< 4.90E+00	< 5.40E+00	< 6.50E+00
Cs-137	< 5.30E+00	< 4.30E+00	< 5.50E+00
Ba-140	< 9.50E+00	< 8.60E+00	< 1.20E+01
La-140	< 1.10E+01	< 9.90E+00	< 1.40E+01
Ce-141	< 1.00E+01	< 5.00E+00	< 1.00E+01
Ce-144	< 2.40E+01	< 1.90E+01	< 3.20E+01

FERMI 2
SURFACE WATER ANALYSIS

SW-3 (Indicator)
(pCi/liter)

Nuclide	26-JUL	30-AUG	27-SEP
Sr-89	< 8.30E+00	< 4.40E+00	< 7.70E+00
Sr-90	< 1.70E+00	< 1.70E+00	< 1.40E+00
Be-7	< 4.90E+01	< 6.20E+01	< 4.80E+01
K-40	< 8.50E+01	< 9.10E+01	< 9.10E+01
Mn-54	< 6.40E+00	< 5.60E+00	< 5.60E+00
Co-58	< 6.40E+00	< 7.40E+00	< 5.60E+00
Fe-59	< 1.50E+01	< 1.60E+01	< 1.30E+01
Co-60	< 5.70E+00	< 7.20E+00	< 5.60E+00
Zn-65	< 1.70E+01	< 1.20E+01	< 1.90E+01
Zr-95	< 1.00E+01	< 1.20E+01	< 1.10E+01
Ru-103	< 7.70E+00	< 7.30E+00	< 6.30E+00
Ru-106	< 6.40E+01	< 6.10E+01	< 5.20E+01
Cs-134	< 6.60E+00	< 6.90E+00	< 6.90E+00
Cs-137	< 6.10E+00	< 6.60E+00	< 6.00E+00
Ba-140	< 9.80E+00	< 1.10E+01	< 9.90E+00
La-140	< 1.10E+01	< 1.20E+01	< 1.10E+01
Ce-141	< 9.20E+00	< 1.10E+01	< 9.10E+00
Ce-144	< 3.50E+01	< 3.50E+01	< 3.30E+01

Nuclide	25-OCT	29-NOV	20-DEC
Sr-89	< 8.40E+00	< 5.50E+00	< 7.50E+00
Sr-90	< 1.40E+00	< 1.20E+00	< 1.40E+00
Be-7	< 4.70E+01	< 3.10E+01	< 4.30E+01
K-40	< 6.80E+01	< 6.70E+01	< 8.30E+01
Mn-54	< 5.70E+00	< 4.60E+00	< 5.40E+00
Co-58	< 5.70E+00	< 4.50E+00	< 4.60E+00
Fe-59	< 1.30E+01	< 9.60E+00	< 1.20E+01
Co-60	< 6.00E+00	< 4.60E+00	< 6.80E+00
Zn-65	< 1.30E+01	< 9.70E+00	< 1.10E+01
Zr-95	< 1.00E+01	< 6.80E+00	< 9.20E+00
Ru-103	< 5.90E+00	< 4.60E+00	< 5.40E+00
Ru-106	< 5.50E+01	< 3.20E+01	< 3.60E+01
Cs-134	< 5.30E+00	< 5.00E+00	< 5.10E+00
Cs-137	< 5.10E+00	< 3.70E+00	< 5.00E+00
Ba-140	< 1.30E+01	< 8.00E+00	< 1.10E+01
La-140	< 1.50E+01	< 9.30E+00	< 1.20E+01
Ce-141	< 8.20E+00	< 5.30E+00	< 7.10E+00
Ce-144	< 2.50E+01	< 1.70E+01	< 2.00E+01

FERMI 2
DRINKING AND SURFACE WATER
QUARTERLY COMPOSITE SAMPLES

Tritium
(pCi/liter)

Station	First Quarter		Second Quarter	
DW-1	<	1.30E+03	<	1.30E+03
DW-2	<	1.30E+03	<	1.30E+03
SW-2	<	1.30E+03	<	1.30E+03
SW-3	<	1.30E+03	<	1.30E+03

Station	Third Quarter		Fourth Quarter	
DW-1	<	4.30E+02	<	3.80E+02
DW-2	<	4.30E+02	<	3.80E+02
SW-2	<	4.30E+02	<	3.70E+02
SW-3	<	4.30E+02	<	3.80E+02

FERMI 2
GROUNDWATER ANALYSIS

GW-1 (Indicator)
(pCi/liter)

Nuclide	First Quarter		Second Quarter	
Be-7	< 4.30E+01		< 5.20E+01	
K-40	< 6.60E+01		< 8.30E+01	
Mn-54	< 5.50E+00		< 6.30E+00	
Co-58	< 5.20E+00		< 6.80E+00	
Fe-59	< 1.10E+01		< 1.00E+01	
Co-60	< 5.20E+00		< 6.10E+00	
Zn-65	< 1.00E+01		< 1.40E+01	
Zr-95	< 8.70E+00		< 1.10E+01	
Ru-103	< 6.10E+00		< 7.10E+00	
Ru-106	< 5.20E+01		< 4.90E+01	
Cs-134	< 5.00E+00		< 6.80E+00	
Cs-137	< 4.70E+00		< 4.90E+00	
Ba-140	< 7.50E+00		< 1.20E+01	
La-140	< 8.60E+00		< 1.30E+01	
Ce-141	< 8.20E+00		< 9.90E+00	
Ce-144	< 2.60E+01		< 3.30E+01	
H-3	< 1.40E+03		< 1.30E+03	

Nuclide	Third Quarter		Fourth Quarter	
Be-7	< 3.60E+01		< 4.60E+01	
K-40	< 6.10E+01		< 9.30E+01	
Mn-54	< 4.00E+00		< 5.30E+00	
Co-58	< 4.00E+00		< 5.80E+00	
Fe-59	< 8.40E+00		< 1.00E+01	
Co-60	< 4.30E+00		< 6.10E+00	
Zn-65	< 8.70E+00		< 1.40E+01	
Zr-95	< 7.20E+00		< 9.40E+00	
Ru-103	< 4.60E+00		< 6.30E+00	
Ru-106	< 3.40E+01		< 5.20E+01	
Cs-134	< 3.90E+00		< 5.90E+00	
Cs-137	< 3.70E+00		< 6.10E+00	
Ba-140	< 9.30E+00		< 1.30E+01	
La-140	< 1.10E+01		< 1.50E+01	
Ce-141	< 6.70E+00		< 8.50E+00	
Ce-144	< 2.30E+01		< 2.80E+01	
H-3	< 4.40E+02		< 3.80E+02	

FERMI 2
GROUNDWATER ANALYSIS

GW-2 (Indicator)
(pCi/liter)

Nuclide	First Quarter	Second Quarter
Be-7	< 3.90E+01	< 4.40E+01
K-40	< 7.10E+01	< 6.80E+01
Mn-54	< 4.80E+00	< 5.30E+00
Co-58	< 5.40E+00	< 5.10E+00
Fe-59	< 9.90E+00	< 1.50E+01
Co-60	< 5.30E+00	< 5.20E+00
Zn-65	< 1.30E+01	< 1.30E+01
Zr-95	< 9.00E+00	< 7.80E+00
Ru-103	< 5.40E+00	< 5.70E+00
Ru-106	< 4.50E+01	< 5.30E+01
Cs-134	< 4.80E+00	< 6.00E+00
Cs-137	< 5.10E+00	< 5.20E+00
Ba-140	< 8.40E+00	< 8.50E+00
La-140	< 9.60E+00	< 9.80E+00
Ce-141	< 7.40E+00	< 8.90E+00
Ce-144	< 2.60E+01	< 3.20E+01
H-3	< 1.40E+03	< 1.30E+03

Nuclide	Third Quarter	Fourth Quarter
Be-7	< 3.60E+01	< 3.50E+01
K-40	< 5.60E+01	< 6.50E+01
Mn-54	< 5.10E+00	< 4.00E+00
Co-58	< 5.10E+00	< 5.30E+00
Fe-59	< 9.10E+00	< 1.10E+01
Co-60	< 5.10E+00	< 4.60E+00
Zn-65	< 1.00E+01	< 1.20E+01
Zr-95	< 9.00E+00	< 8.10E+00
Ru-103	< 4.90E+00	< 4.50E+00
Ru-106	< 3.70E+01	< 4.00E+01
Cs-134	< 5.40E+00	< 4.90E+00
Cs-137	< 4.40E+00	< 4.30E+00
Ba-140	< 8.90E+00	< 1.10E+01
La-140	< 1.00E+01	< 1.20E+01
Ce-141	< 7.60E+00	< 5.40E+00
Ce-144	< 2.00E+01	< 1.80E+01
H-3	< 4.40E+02	< 3.80E+02

FERMI 2
GROUNDWATER ANALYSIS

GW-3 (Indicator)
(pCi/liter)

Nuclide	First Quarter		Second Quarter	
Be-7	<	4.30E+01	<	4.60E+01
K-40	<	8.20E+01	<	7.60E+01
Mn-54	<	6.00E+00	<	6.30E+00
Co-58	<	5.30E+00	<	6.50E+00
Fe-59	<	1.20E+01	<	1.50E+01
Co-60	<	6.60E+00	<	4.50E+00
Zn-65	<	1.30E+01	<	1.40E+01
Zr-95	<	9.10E+00	<	1.10E+01
Ru-103	<	5.10E+00	<	5.90E+00
Ru-106	<	4.80E+01	<	5.10E+01
Cs-134	<	5.90E+00	<	7.40E+00
Cs-137	<	5.40E+00	<	5.80E+00
Ba-140	<	1.10E+01	<	1.30E+01
La-140	<	1.30E+01	<	1.50E+01
Ce-141	<	7.50E+00	<	9.30E+00
Ce-144	<	2.70E+01	<	3.30E+01
H-3	<	1.40E+03	<	1.30E+03

Nuclide	Third Quarter		Fourth Quarter	
Be-7	<	3.80E+01	<	4.40E+01
K-40	<	5.90E+01	<	8.50E+01
Mn-54	<	4.00E+00	<	5.80E+00
Co-58	<	4.90E+00	<	6.40E+00
Fe-59	<	1.10E+01	<	1.40E+01
Co-60	<	4.50E+00	<	5.80E+00
Zn-65	<	1.00E+01	<	1.30E+01
Zr-95	<	7.10E+00	<	1.10E+01
Ru-103	<	5.50E+00	<	5.60E+00
Ru-106	<	4.00E+01	<	5.40E+01
Cs-134	<	4.80E+00	<	6.20E+00
Cs-137	<	4.10E+00	<	5.70E+00
Ba-140	<	1.10E+01	<	1.20E+01
La-140	<	1.30E+01	<	1.40E+01
Ce-141	<	7.40E+00	<	7.60E+00
Ce-144	<	2.60E+01	<	2.60E+01
H-3	<	4.40E+02	<	3.80E+02

FERMI 2
GROUNDWATER ANALYSIS

GW-4 (Control)
(pCi/liter)

Nuclide	First Quarter		Second Quarter	
Be-7	< 4.70E+01		< 4.80E+01	
K-40	< 9.30E+01		< 7.90E+01	
Mn-54	< 5.70E+00		< 4.60E+00	
Co-58	< 6.20E+00		< 6.30E+00	
Fe-59	< 1.30E+01		< 1.10E+01	
Co-60	< 5.80E+00		< 5.90E+00	
Zn-65	< 1.70E+01		< 1.10E+01	
Zr-95	< 1.10E+01		< 7.00E+00	
Ru-103	< 6.60E+00		< 6.50E+00	
Ru-106	< 5.30E+01		< 4.00E+01	
Cs-134	< 6.60E+00		< 6.70E+00	
Cs-137	< 6.20E+00		< 5.40E+00	
Ba-140	< 1.00E+01		< 1.20E+01	
La-140	< 1.10E+01		< 1.40E+01	
Ce-141	< 7.30E+00		< 8.00E+00	
Ce-144	< 2.40E+01		< 3.00E+01	
H-3	< 1.40E+03		< 1.30E+03	

Nuclide	Third Quarter		Fourth Quarter	
Be-7	< 4.00E+01		< 5.00E+01	
K-40	< 5.20E+01		< 7.00E+01	
Mn-54	< 3.80E+00		< 5.30E+00	
Co-58	< 4.50E+00		< 5.70E+00	
Fe-59	< 9.30E+00		< 1.10E+01	
Co-60	< 4.50E+00		< 4.50E+00	
Zn-65	< 9.70E+00		< 1.20E+01	
Zr-95	< 7.40E+00		< 9.30E+00	
Ru-103	< 5.50E+00		< 6.00E+00	
Ru-106	< 4.00E+01		< 4.80E+01	
Cs-134	< 4.70E+00		< 5.60E+00	
Cs-137	< 3.80E+00		< 4.80E+00	
Ba-140	< 1.00E+01		< 9.20E+00	
La-140	< 1.10E+01		< 1.10E+01	
Ce-141	< 9.00E+00		< 8.40E+00	
Ce-144	< 2.80E+01		< 2.60E+01	
H-3	< 4.40E+02		< 3.80E+02	

FERMI 2
SEDIMENT ANALYSIS

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

Nuclide	10-MAY				8-NOV			
Sr-89	<	3.60E+02			<	1.60E+02		
Sr-90	<	1.80E+02			<	1.70E+02		
Be-7	<	2.70E+02			<	3.50E+02		
K-40		1.24E+04	+/-	4.50E+02		1.17E+04	+/-	3.80E+02
Mn-54	<	3.20E+01			<	2.70E+01		
Co-58	<	4.60E+01			<	3.20E+01		
Fe-59	<	1.20E+02			<	1.40E+02		
Co-60	<	3.60E+01			<	3.10E+01		
Zn-65	<	9.10E+01			<	1.40E+02		
Zr-95	<	6.30E+01			<	7.00E+01		
Ru-103	<	4.90E+01			<	5.60E+01		
Ru-106	<	2.50E+02			<	2.30E+02		
Cs-134	<	2.30E+01			<	2.10E+01		
Cs-137	<	2.80E+01			<	2.40E+01		
Ba-140	<	7.50E+02			<	2.30E+03		
La-140	<	4.30E+02			<	1.00E+03		
Ce-141	<	7.00E+01			<	1.10E+02		
Ce-144	<	1.40E+02			<	1.50E+02		

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

Nuclide	10-MAY				8-NOV			
Sr-89	<	1.70E+03			<	2.70E+02		
Sr-90	<	2.30E+02			<	2.60E+02		
Be-7	<	4.50E+02			<	4.80E+02		
K-40		9.92E+03	+/-	4.30E+02		9.95E+03	+/-	4.40E+02
Mn-54	<	3.20E+01			<	3.40E+01		
Co-58	<	4.80E+01			<	5.80E+01		
Fe-59	<	1.20E+02			<	2.00E+02		
Co-60	<	4.20E+01			<	3.60E+01		
Zn-65	<	2.00E+02			<	2.10E+02		
Zr-95	<	7.60E+01			<	1.10E+02		
Ru-103	<	5.70E+01			<	8.20E+01		
Ru-106	<	3.20E+02			<	3.30E+02		
Cs-134	<	1.50E+02			<	2.10E+01		
Cs-137	<	3.00E+01			<	3.90E+01		
Ba-140	<	8.50E+02			<	2.90E+03		
La-140	<	5.00E+02			<	1.40E+03		
Ce-141	<	9.90E+01			<	1.60E+02		
Ce-144	<	2.00E+02			<	1.90E+02		

FERMI 2
SEDIMENT ANALYSIS

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

Nuclide	10-MAY				8-NOV			
Sr-89	<	2.90E+02			<	2.70E+02		
Sr-90	<	2.60E+02			<	2.30E+02		
Be-7	<	2.80E+02			<	3.10E+02		
K-40		8.25E+03	+/-	3.80E+02		6.64E+03	+/-	3.30E+02
Mn-54	<	2.40E+01			<	2.30E+01		
Co-58	<	3.60E+01			<	4.40E+01		
Fe-59	<	1.10E+02			<	9.10E+01		
Co-60	<	2.30E+01			<	3.20E+01		
Zn-65	<	1.40E+02			<	9.20E+01		
Zr-95	<	5.80E+01			<	7.90E+01		
Ru-103	<	3.30E+01			<	5.30E+01		
Ru-106	<	2.00E+02			<	2.40E+02		
Cs-134	<	1.10E+02			<	1.10E+02		
Cs-137	<	2.40E+01			<	2.40E+01		
Ba-140	<	9.30E+02			<	1.90E+03		
La-140	<	2.80E+02			<	4.10E+03		
Ce-141	<	6.00E+01			<	8.80E+01		
Ce-144	<	1.20E+02			<	1.30E+02		

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

Nuclide	14-JUN				19-OCT			
Sr-89	<	4.70E+02			<	2.70E+02		
Sr-90	<	1.90E+02			<	2.60E+02		
Be-7	<	3.40E+02			<	2.10E+02		
K-40		9.87E+03	+/-	5.40E+02		8.22E+03	+/-	3.10E+02
Mn-54	<	4.10E+01			<	2.40E+01		
Co-58	<	4.70E+01			<	2.80E+01		
Fe-59	<	1.00E+02			<	6.30E+01		
Co-60	<	4.80E+01			<	2.20E+01		
Zn-65	<	1.20E+02			<	1.10E+02		
Zr-95	<	7.60E+01			<	4.30E+01		
Ru-103	<	3.90E+01			<	2.60E+01		
Ru-106	<	3.40E+02			<	2.00E+02		
Cs-134	<	5.60E+01			<	9.70E+01		
Cs-137	<	4.60E+01			<	2.10E+01		
Ba-140	<	1.70E+02			<	2.40E+02		
La-140	<	9.00E+01			<	1.10E+02		
Ce-141	<	6.20E+01			<	4.50E+01		
Ce-144	<	2.30E+02			<	1.40E+02		

FERMI 2
SEDIMENT ANALYSIS

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

Nuclide	9-MAY				8-NOV			
Sr-89	<	7.50E+02			<	2.60E+02		
Sr-90	<	1.90E+02			<	8.70E+01		
Be-7	<	8.80E+02			<	3.20E+02		
K-40		1.18E+04	+/-	6.70E+02		1.13E+04	+/-	3.80E+02
Mn-54	<	5.50E+01			<	3.10E+01		
Co-58	<	8.10E+01			<	6.00E+01		
Fe-59	<	2.50E+02			<	1.60E+02		
Co-60	<	5.80E+01			<	3.00E+01		
Zn-65	<	3.50E+02			<	1.70E+02		
Zr-95	<	1.40E+02			<	1.10E+02		
Ru-103	<	1.20E+02			<	8.10E+01		
Ru-106	<	5.90E+02			<	2.30E+02		
Cs-134	<	5.60E+01			<	2.30E+01		
Cs-137		9.30E+01	+/-	2.50E+01		5.10E+01	+/-	1.20E+01
Ba-140	<	2.20E+03			<	7.50E+03		
La-140	<	9.80E+02			<	3.60E+03		
Ce-141	<	1.80E+02			<	1.90E+02		
Ce-144	<	3.70E+02			<	1.50E+02		

FERMI 2
FISH ANALYSIS

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

Nuclide	9-MAY Rock Bass			9-MAY Walleye			9-MAY White Bass		
Sr-89	< 2.30E+02			< 2.20E+02			< 2.40E+02		
Sr-90	< 2.00E+02			< 1.70E+02			< 1.90E+02		
Be-7	< 8.80E+02			< 5.90E+02			< 1.00E+03		
K-40	2.86E+03	+/-	4.00E+02	2.77E+03	+/-	3.50E+02	2.69E+03	+/-	4.90E+02
Mn-54	< 7.00E+01			< 4.10E+01			< 9.30E+01		
Co-58	< 8.40E+01			< 4.30E+01			< 9.20E+01		
Fe-59	< 2.40E+02			< 1.60E+02			< 2.00E+02		
Co-60	< 6.50E+01			< 5.30E+01			< 8.80E+01		
Zn-65	< 1.70E+02			< 7.90E+01			< 1.40E+02		
Zr-95	< 1.30E+02			< 1.10E+02			< 1.30E+02		
Ru-103	< 1.10E+02			< 7.50E+01			< 1.10E+02		
Ru-106	< 6.20E+02			< 5.10E+02			< 6.30E+02		
Cs-134	< 7.40E+01			< 4.20E+01			< 6.70E+01		
Cs-137	< 7.10E+01			< 4.20E+01			< 4.60E+01		
Ba-140	< 7.00E+02			< 3.30E+02			< 1.50E+02		
La-140	< 8.00E+02			< 3.80E+02			< 1.70E+02		
Ce-141	< 1.70E+02			< 9.50E+01			< 1.70E+02		
Ce-144	< 2.90E+02			< 2.20E+02			< 3.30E+02		

Nuclide	9-MAY White Perch			18-OCT Walleye		
Sr-89	< 2.40E+02			< 2.10E+02		
Sr-90	< 1.90E+02			< 2.00E+02		
Be-7	< 1.00E+03			< 5.50E+02		
K-40	2.69E+03	+/-	4.90E+02	3.03E+03	+/-	2.20E+02
Mn-54	< 9.30E+01			< 3.20E+01		
Co-58	< 9.20E+01			< 6.00E+01		
Fe-59	< 2.00E+02			< 1.80E+02		
Co-60	< 8.80E+01			< 2.30E+01		
Zn-65	< 1.40E+02			< 9.00E+01		
Zr-95	< 1.30E+02			< 1.00E+02		
Ru-103	< 1.10E+02			< 8.70E+01		
Ru-106	< 6.30E+02			< 2.30E+02		
Cs-134	< 6.70E+01			< 2.80E+01		
Cs-137	< 4.60E+01			< 2.40E+01		
Ba-140	< 1.50E+02			< 2.60E+03		
La-140	< 1.70E+02			< 3.00E+03		
Ce-141	< 1.70E+02			< 1.90E+02		
Ce-144	< 3.30E+02			< 1.40E+02		

FERMI 2
FISH ANALYSIS

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

Nuclide	23-MAY Walleye			23-MAY White Bass			23-MAY White Perch		
Sr-89	< 2.20E+02			< 2.10E+02			< 1.60E+02		
Sr-90	< 2.60E+02			< 2.30E+02			< 2.50E+02		
Be-7	< 5.20E+02			< 5.80E+02			< 6.70E+02		
K-40	3.87E+03	+/-	5.70E+02	2.42E+03	+/-	3.40E+02	4.25E+03	+/-	6.20E+02
Mn-54	< 7.60E+01			< 5.70E+01			< 7.80E+01		
Co-58	< 7.30E+01			< 7.60E+01			< 7.30E+01		
Fe-59	< 1.50E+02			< 1.30E+02			< 1.90E+02		
Co-60	< 9.10E+01			< 5.40E+01			< 8.40E+01		
Zn-65	< 1.70E+02			< 2.50E+02			< 1.90E+02		
Zr-95	< 8.50E+01			< 1.30E+02			< 1.50E+02		
Ru-103	< 8.40E+01			< 7.10E+01			< 8.60E+01		
Ru-106	< 4.40E+02			< 5.70E+02			< 5.20E+02		
Cs-134	< 1.00E+02			< 5.80E+01			< 6.20E+01		
Cs-137	< 8.00E+01			< 5.80E+01			< 6.80E+01		
Ba-140	< 4.00E+02			< 2.80E+02			< 3.90E+02		
La-140	< 4.60E+02			< 3.30E+02			< 4.50E+02		
Ce-141	< 6.80E+01			< 1.10E+02			< 9.00E+01		
Ce-144	< 2.10E+02			< 2.50E+02			< 2.50E+02		

Nuclide	26-OCT Garpike			26-OCT Walleye			26-OCT White Bass		
Sr-89	< 2.60E+02			< 2.20E+02			< 2.30E+02		
Sr-90	< 1.20E+02			< 9.30E+01			< 2.50E+02		
Be-7	< 5.20E+02			< 5.50E+02			< 4.90E+02		
K-40	2.25E+03	+/-	2.30E+02	3.04E+03	+/-	2.70E+02	3.04E+03	+/-	2.20E+02
Mn-54	< 3.20E+01			< 3.40E+01			< 3.00E+01		
Co-58	< 5.80E+01			< 5.90E+01			< 5.50E+01		
Fe-59	< 2.20E+02			< 1.90E+02			< 1.70E+02		
Co-60	< 3.40E+01			< 3.90E+01			< 3.10E+01		
Zn-65	< 7.80E+01			< 7.90E+01			< 8.20E+01		
Zr-95	< 1.00E+02			< 1.20E+02			< 1.20E+02		
Ru-103	< 9.70E+01			< 1.00E+02			< 7.90E+01		
Ru-106	< 3.30E+02			< 3.30E+02			< 2.30E+02		
Cs-134	< 3.60E+01			< 2.90E+01			< 3.10E+01		
Cs-137	< 3.20E+01			< 2.70E+01			< 2.60E+01		
Ba-140	< 1.30E+03			< 2.10E+03			< 1.50E+03		
La-140	< 1.50E+03			< 2.40E+03			< 1.70E+03		
Ce-141	< 1.40E+02			< 1.60E+02			< 1.00E+02		
Ce-144	< 1.80E+02			< 1.60E+02			< 9.70E+01		

FERMI 2
FISH ANALYSIS

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

Nuclide	17-MAY Catfish			17-MAY Sucker			17-MAY Walleye		
Sr-89	< 2.30E+02			< 2.30E+02			< 2.00E+02		
Sr-90	< 2.20E+02			< 2.00E+02			< 1.70E+02		
Be-7	< 7.70E+02			< 7.30E+02			< 4.80E+02		
K-40	3.00E+03	+/-	5.00E+02	2.93E+03	+/-	4.00E+02	2.53E+03	+/-	5.60E+02
Mn-54	< 6.50E+01			< 7.00E+01			< 7.60E+01		
Co-58	< 9.70E+01			< 9.50E+01			< 8.80E+01		
Fe-59	< 2.60E+02			< 2.10E+02			< 2.00E+02		
Co-60	< 1.00E+02			< 6.90E+01			< 9.90E+01		
Zn-65	< 1.80E+02			< 2.10E+02			< 2.50E+02		
Zr-95	< 1.80E+02			< 1.60E+02			< 2.00E+02		
Ru-103	< 1.10E+02			< 1.20E+02			< 1.00E+02		
Ru-106	< 7.70E+02			< 6.30E+02			< 6.70E+02		
Cs-134	< 7.50E+01			< 7.40E+01			< 7.20E+01		
Cs-137	< 8.00E+01			< 7.70E+01			< 7.10E+01		
Ba-140	< 6.00E+02			< 5.70E+02			< 3.00E+02		
La-140	< 6.90E+02			< 6.60E+02			< 3.40E+02		
Ce-141	< 1.60E+02			< 1.70E+02			< 1.30E+02		
Ce-144	< 3.20E+02			< 3.40E+02			< 3.10E+02		

Nuclide	17-MAY White Bass			17- MAY White Perch			10-OCT Drum		
Sr-89	< 2.70E+02			< 2.50E+02			< 1.80E+02		
Sr-90	< 2.70E+02			< 2.40E+02			< 1.60E+02		
Be-7	< 6.20E+02			< 3.90E+02			< 5.10E+02		
K-40	3.59E+03	+/-	4.00E+02	2.50E+03	+/-	4.80E+02	2.30E+03	+/-	2.00E+02
Mn-54	< 4.90E+01			< 5.40E+01			< 3.60E+01		
Co-58	< 7.50E+01			< 6.60E+01			< 5.40E+01		
Fe-59	< 1.90E+02			< 2.10E+02			< 1.70E+02		
Co-60	< 7.10E+01			< 7.40E+01			< 3.00E+01		
Zn-65	< 1.40E+02			< 1.30E+02			< 8.40E+01		
Zr-95	< 1.20E+02			< 9.00E+01			< 1.20E+02		
Ru-103	< 8.40E+01			< 1.10E+02			< 9.00E+01		
Ru-106	< 5.70E+02			< 5.80E+02			< 2.90E+02		
Cs-134	< 6.30E+01			< 8.30E+01			< 3.10E+01		
Cs-137	< 6.00E+01			< 7.60E+01			3.80E+01	+/-	1.10E+01
Ba-140	< 3.40E+02			< 1.10E+02			< 2.00E+03		
La-140	< 4.00E+02			< 1.20E+02			< 2.30E+03		
Ce-141	< 1.10E+02			< 9.40E+01			< 1.40E+02		
Ce-144	< 2.50E+02			< 2.50E+02			< 1.40E+02		

FERMI 2
FISH ANALYSIS

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

Nuclide	10-OCT Drum				7-OCT White Perch			
Sr-89	<	3.00E+02			<	3.00E+02		
Sr-90	<	3.00E+02			<	3.00E+02		
Be-7	<	5.20E+02			<	4.40E+02		
K-40		3.22E+03	+/-	3.00E+02		2.70E+03	+/-	2.40E+02
Mn-54	<	3.60E+01			<	3.60E+01		
Co-58	<	5.50E+01			<	5.50E+01		
Fe-59	<	2.40E+02			<	1.90E+02		
Co-60	<	3.40E+01			<	3.80E+01		
Zn-65	<	1.10E+02			<	6.50E+01		
Zr-95	<	1.10E+02			<	9.30E+01		
Ru-103	<	1.10E+02			<	7.90E+01		
Ru-106	<	3.50E+02			<	2.60E+02		
Cs-134	<	4.10E+01			<	3.10E+01		
Cs-137	<	3.00E+01			<	2.80E+01		
Ba-140	<	2.20E+03			<	2.20E+03		
La-140	<	2.50E+03			<	2.50E+03		
Ce-141	<	1.60E+02			<	1.50E+02		
Ce-144	<	1.30E+02			<	1.40E+02		

Appendix D

Environmental Program Execution

Environmental Program Execution

On occasions, samples cannot be collected. This can be due to a variety of events, such as equipment malfunction, loss of electrical power, severe weather conditions, or vandalism. In 2006, missed samples were a result of missing field TLDs and loss of electrical power or malfunction of air sampling equipment. In addition, one drinking water grab sample was collected due to equipment malfunction. The following sections list all missed samples, changes and corrective actions taken during 2006. These missed samples did not have a significant impact on the execution of the REMP.

Direct Radiation Monitoring

All TLDs are placed in the field in inconspicuous locations to minimize the loss of TLDs due to vandalism. During 2006, two hundred sixty-eight (268) TLDs were placed in the field for the REMP program and all but four (4) TLDs were collected and processed. There were no major changes to the Direct Radiation Monitoring program during 2006.

- T-9 was found missing during the forth quarter collection and was replaced with the next quarter's TLD.
- T-12 was found missing during the third quarter collection and was replaced with the next quarter's TLD.
- T-30 was found missing during the first and second quarter collection and was replaced with the next quarter's TLD. T-30 is located in a city park and has been a target for vandalism is the past.

Atmospheric Monitoring

During 2006, two hundred sixty (260) air samples were placed in the field, all but five particulate filters and charcoal filters were collected and processed. There were no changes to the Atmospheric Monitoring program during 2006.

- API-1 filters collected on 1/10/2006 were not counted due to blown fuse. The fuse was replaced and sampling equipment was restored to operation. For this reason, the first quarter composite sample for this location is considered to be less than representative.
- API-1 filters collected on 8/8/2006 were not counted due to blown fuse. The fuse was replaced and sampling equipment was restored to operation. For this reason, the third quarter composite sample for this location is considered to be less than representative.

- API-3 filters collected on 6/28/2006 were not counted due to low volume caused by intermittent power to the sampler. At the time of collection, power was available and sampling equipment was restored to operation. For this reason, the second quarter composite sample for this location is considered to be less than representative.
- API-3 filters collected on 7/5/2006 were not counted due to blown inline bus fuse located twenty feet above sampling equipment on the utility pole. The fuse was replaced by an electrician and sampling equipment was restored to operation. For this reason, the third quarter composite sample for this location is considered to be less than representative.
- API-3 filters collected on 7/26/2006 were not counted due to blown fuse. The sampling equipment was replaced with spare sampler. For this reason, the third quarter composite sample for this location is considered to be less than representative.

Terrestrial Monitoring

During 2006, all scheduled terrestrial monitoring samples were collected. There were no changes to the Terrestrial Monitoring program during 2006.

Milk Sampling

All scheduled milk samples were collected in 2006.

Garden Sampling

All scheduled garden samples were collected in 2006.

Groundwater Sampling

All scheduled groundwater samples were collected in 2006.

Aquatic Monitoring

During 2006, all scheduled aquatic monitoring samples were collected. There were no changes to the Aquatic Monitoring program during 2006.

Drinking Water Sampling

All scheduled drinking water samples were collected in 2006.

- During weekly flow-checks on 11/21/2006, a sample line failure was found at DW-1 and a grab sample was collected. Sample line was repaired and equipment restored to operation. For this reason, the fourth quarter composite sample for this location is considered to be less than representative.

Surface Water Sampling

All scheduled surface water samples were collected in 2006.

Sediment Sampling

All scheduled sediment samples were collected in 2006.

Fish Sampling

All scheduled fish samples were collected in 2006.

Appendix E

Effluent and Radwaste Data

Regulatory Limits for Radioactive Effluents

The Nuclear Regulatory Commission (NRC) limits on liquid and gaseous effluents are incorporated into the Fermi 2 Offsite Dose Calculation Manual. These limits prescribe the maximum doses and dose rates due to radioactive effluents resulting from normal operation of Fermi 2. These limits are described in the following sections.

A. Gaseous Effluents

I. Dose rate due to radioactivity released in gaseous effluents to areas at and beyond the site boundary shall be limited to the following:

a) Noble gases

Less than or equal to 500 mrem/year to the total body.
Less than or equal to 3000 mrem/year to the skin.

b) Iodine-131, iodine-133, tritium, and for all radionuclides in particulate form with half lives greater than 8 days

Less than or equal to 1500 mrem/year to any organ.

II. Air dose due to noble gases to areas at and beyond the site boundary shall be limited to the following:

a) Less than or equal to 5 mrad for gamma radiation
Less than or equal to 10 mrad for beta radiation
- During any calendar quarter

b) Less than or equal to 10 mrad for gamma radiation
Less than or equal to 20 mrad for beta radiation
- During any calendar year

III. Dose to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half lives greater than 8 days in gaseous effluents released to areas at and beyond the site boundary shall be limited to the following:

a) Less than or equal to 7.5 mrem to any organ
- During any calendar quarter

b) Less than or equal to 15 mrem to any organ
- During any calendar year

Note: The calculated site boundary dose rates for Fermi 2 are based on identification of individual isotopes and on use of dose factors specific to each identified isotope or a highly conservative dose factor. Average energy values are not used in these calculations, and therefore, need not be reported.

B. Liquid Effluents

I. The concentration of radioactive material released in liquid effluents to unrestricted areas shall be limited to ten times the concentrations specified in Title 10 of the Code of Federal Regulations (10 CFR) Part 20 (Standards for Protection Against Radiation), Appendix B, Table 2, Column 2 for radionuclides other than dissolved or entrained noble gases, as required by the Fermi 2 Offsite Dose Calculation Manual. For dissolved or entrained noble gases, the concentration shall be limited to 2E-4 (.0002) microcuries/ml total activity. This limit is based on the Xe-135 air submersion dose limit converted to an equivalent concentration in water as discussed in the International Commission on Radiological Protection (ICRP) Publication 2.

II. The dose or dose commitment to a member of the public from radioactive materials in liquid effluents released to unrestricted areas shall be limited to the following:

a) Less than or equal to 1.5 mrem to the total body
Less than or equal to 5 mrem to any organ
- During any calendar quarter

b) Less than or equal to 3 mrem to the total body
Less than or equal to 10 mrem to any organ
- During any calendar year

Measurements and Approximations of Total Activity in Radioactive Effluents

As required by NRC Regulatory Guide 1.21, this section describes the methods used to measure the total radioactivity in effluent releases and to estimate the overall errors associated with these measurements. The effluent monitoring systems are described in Chapter 11.4 of the Fermi 2 Updated Final Safety Analysis Report (UFSAR).

A. Gaseous Effluents

I. Fission and Activation Gases

Samples are obtained from each of the six plant radiation monitors which continuously monitor the five ventilation exhaust points. The fission and activation gases are quantified by gamma spectroscopy analysis of periodic samples.

The summary values reported are the sums of all fission and activation gases quantified at all monitored release points.

II. Radioiodines

Samples are obtained from each of the six plant radiation monitors which continuously monitor the five ventilation exhaust points. The radioiodines are entrained on charcoal and then quantified by gamma spectroscopy analysis. For each sample, the duration of sampling and continuous flow rate through the charcoal are used in determining the concentration of radioiodines. From the flow rate of the ventilation system, a rate of release can be determined.

The summary values reported are the sums of all radioiodines quantified at all continuously monitored release points.

III. Particulates

Samples are obtained from each of the six plant effluent radiation monitors which continuously monitor the five ventilation exhaust points. The particulates are collected on a filter and then quantified by gamma spectroscopy analysis.

For each sample, the duration of sampling and continuous flow rate through the filter are used in determining the concentration of particulates. From the flow rate of the ventilation system, a rate of release can be determined.

Quarterly, the filters from each ventilation release point are composited and then radiochemically separated and analyzed for strontium (Sr)-89/90 using various analytical methods.

The summary values reported are the sums of all particulates quantified at all monitored release points.

IV. Tritium

Samples are obtained from each of the six plant effluent radiation monitors which continuously monitor the five ventilation exhaust points. The sample is passed through a bottle containing water and the tritium is "washed" out to the collecting water. Portions of the collecting water are analyzed for tritium using liquid scintillation counting techniques. For each sample, the duration of sample and sample flow rate is used to determine the concentration. From the flow rate of the ventilation system, a release rate can be determined.

The summary values reported are the sums of all tritium quantified at all monitored release points.

V. Gross Alpha

The gaseous particulate filters from the six plant effluent radiation monitors are stored for one week to allow for decay of naturally occurring alpha emitters. These filters are then analyzed for gross alpha radioactivity by gas proportional counting, and any such radioactivity found is assumed to be plant related. The quantity of alpha emitters released can then be determined from sample flow rate, sample duration, and stack flow rate.

The summary values reported are the sums of all alpha emitters quantified at all monitored release points.

B. Liquid Effluents

The liquid radwaste processing system and the liquid effluent monitoring system are described in the Fermi 2 UFSAR. Fermi 2 released no radioactive liquid effluents in 2006.

C. Statistical Measurement Uncertainties

The statistical uncertainty of the measurements in this section has been calculated and summarized in the following table:

Measurement Type	Sample Type	One Sigma Uncertainty
Fission and Activation Gases	Gaseous	30%
Radioiodines	Gaseous	17%
Particulates	Gaseous	16%
Tritium	Gaseous	25%
Gross Alpha	Gaseous	16%

Gaseous Releases by Individual Nuclide

Values in the following tables which are preceded by the "less than" symbol represent the lower limit of detection (LLD) in units of microcuries per cubic centimeter (μCi/cc) for individual samples, and indicate that the nuclide in question was not detected in gaseous effluent samples in the indicated quarter of 2006. For quantities of gross alpha radioactivity and tritium in gaseous effluents, see Tables 3 and 4 on page 13 of this report.

A. Particulate Radionuclides (Curies)

Nuclide	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Cr-51	4.11E-04	1.64E-04	<4.9E-13	<4.9E-13
Mn-54	4.72E-05	6.62E-05	1.76E-05	1.17E-06
Co-58	4.24E-05	3.54E-05	1.20E-05	6.62E-06
Co-60	1.08E-04	8.03E-05	6.36E-05	7.14E-06
Zn-65	1.89E-05	<2.1E-13	<2.1E-13	<2.1E-13
Fe-59	7.83E-06	<1.9E-13	<1.9E-13	<1.9E-13
Na-24	<7.2E-13	<7.2E-13	4.35E-05	5.68E-05
Zn-69m	1.14E-05	<5.9E-13	9.38E-05	8.39E-05
Tc-99m	2.88E-04	4.31E-05	1.49E-04	4.48E-05
Ba-139	8.96E-02	3.47E-02	6.28E-02	9.90E-02
La-140	1.21E-04	1.68E-05	6.60E-05	1.60E-04
Ba-140	6.69E-05	<3.4E-13	9.86E-06	7.10E-05
Y-91m	7.74E-03	2.81E-03	4.45E-03	7.73E-03
Sr-91	2.57E-04	<5.3E-12	7.35E-05	6.78E-05
Rb-89	8.32E-02	2.81E-02	3.44E-02	1.41E-02
Cs-138	5.91E-02	2.26E-02	3.77E-02	7.63E-02
As-76	2.77E-03	5.46E-03	5.87E-03	1.34E-02
Br-82	2.16E-05	<2.5E-13	7.61E-06	1.13E-05
Sr-89	4.00E-05	2.93E-05	2.56E-05	8.57E-05
Sr-90	<8.0E-15	<8.0E-15	<8.0E-15	<8.0E-15
Cs-134	<7.3E-14	<7.3E-14	<7.3E-14	<7.3E-14
Cs-137	<8.0E-14	<8.0E-14	<8.0E-14	<8.0E-14
Ce-141	<4.5E-14	<4.5E-14	<4.5E-14	<4.5E-14
Ce-143	<2.9E-13	<2.9E-13	<2.9E-13	<2.9E-13
Ce-144	<1.8E-13	<1.8E-13	<1.8E-13	<1.8E-13
Total	**2.44E-01**	**9.41E-02**	**1.46E-01**	**2.11E-01**

B. Noble Gases (Curies)

Nuclide	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Kr-87	<4.6E-08	<4.6E-08	<4.6E-08	<4.6E-08
Kr-88	<7.6E-08	<7.6E-08	<7.6E-08	<7.6E-08
Xe-133	<6.8E-08	2.04E-03	<6.8E-08	<6.8E-08
Xe-135	<5.1E-08	<5.1E-08	<5.1E-08	<5.1E-08
Xe-133m	<1.9E-07	<1.9E-07	<1.9E-07	<1.9E-07
Xe-138	<7.9E-08	<7.9E-08	<7.9E-08	<7.9E-08
Total	**<5.1E-07**	**2.04E-03**	**<5.1E-07**	**<5.1E-07**

C. Radioiodines (Curies)

Nuclide	Quarter 1	Quarter 2	Quarter 3	Quarter 4
I-131	6.00E-04	2.39E-03	9.83E-04	4.67E-04
I-132	5.64E-03	4.03E-04	2.21E-03	1.61E-03
I-133	2.94E-03	2.49E-03	6.00E-03	2.45E-03
I-134	1.33E-03	<5.4E-11	9.10E-04	9.49E-04
I-135	2.53E-03	1.24E-03	2.09E-03	1.55E-03
Total	**1.30E-02**	**6.52E-03**	**1.22E-02**	**7.03E-03**

Shipments of Radwaste

Fermi 2 complies with the extensive federal regulations which govern radioactive waste shipments. Radioactive solid waste shipments from the Fermi 2 site consist of waste generated during water treatment, radioactive trash, irradiated components, etc. Shipment destinations are either licensed burial sites or intermediate processing facilities. Waste shipped to intermediate processing facilities is shipped directly from these facilities to licensed burial sites after processing. The following tables contain estimates of major nuclide composition, by class of waste, of Fermi 2 solid radwaste received at the Barnwell, SC, burial facility or at the Envirocare, UT, facility in 2006.

a. **Spent resins, sludges, etc.** Waste in this category in 2006 was Class A waste and consisted of spent resins and sludges. It was initially shipped in either High Integrity Containers or Polyethylene Liners, within shielded transportation casks, either directly to the Barnwell, SC, burial facility or to an intermediate processor. Waste sent directly to the Barnwell disposal facility was dewatered prior to shipment. Waste sent to the intermediate processor was processed by incineration, after which it was forwarded for disposal to the Envirocare, UT, facility or to the Barnwell Waste Management Facility. All quantities were determined by measurement.

Class A Resin:

Radionuclide	Activity (mCi)	Percent of Total Activity
Am-241	5.22E-02	<0.01
C-14 (LLD)	4.51E+01	0.04
Cm-242	1.96E-04	<0.01
Cm-243	7.97E-02	<0.01
Cm-244	7.44E-02	<0.01
Co-57	1.36E+00	<0.01
Co-58	4.53E+01	0.04
Co-60	7.66E+04	66.57
Cr-51	1.89E-01	<0.01
Cs-137	4.80E+02	0.42
Fe-55	3.22E+04	28.02
Fe-59	9.65E-01	<0.01
H-3	7.14E+01	0.06
I-129 (LLD)	5.75E-01	NA
Mn-54	2.49E+03	2.17
Ni-63	2.18E+03	1.90
Pu-238	5.69E-02	<0.01
Pu-239	5.47E-02	<0.01
Pu-240	5.47E-02	<0.01
Pu-241	1.05E+01	0.01
Sr-89	4.47E+00	<0.01
Sr-90	4.92E+01	0.04
Tc-99 (LLD)	5.78E+01	0.05
Zn-65	8.84E+02	0.77
Total	1.15E+05	100

2. **Class B Resin:** None shipped

3. **Class C Resin:** None shipped

b. **Dry compressible waste, contaminated equipment, etc**. Waste in this category in 2006 was shipped in strong tight containers and durable wraps, and was classified as dry active waste (DAW).. All waste in this category was Class A waste. The DAW was compacted, and sent for direct disposal or incinerated by an intermediate processor. After incineration, some of the residue from this waste was solidified in concrete. All quantities were determined by measurement.

Radionuclide	Activity (mCi)	Percent of Total Activity
C-14 (LLD)	1.27E+02	2.23
Co-58	2.33E+01	0.41
Co-60	9.18E+02	16.08
Cr-51	1.76E+02	3.08
Cs-137	2.51E+01	0.44
Fe-55	3.86E+03	67.66
Fe-59	2.56E+01	0.45
H-3	1.49E+02	2.61
I-129 (LLD)	6.73E+00	0.12
Mn-54	2.28E+02	3.99
Ni-63	3.61E+01	0.63
Tc-99 (LLD)	7.67E+01	1.34
Zn-65	5.49E+01	0.96
Total	5.71E+03	100

c. Irradiated components, control rods, etc. No waste in this category was shipped.

d. Other No waste in this category was shipped to a disposal site.

Appendix F

Interlaboratory Comparison Data
Framatome ANP Environmental Laboratory's
Quality Assurance Programs

Interlaboratory Comparison Program for 2006

In an interlaboratory comparison program, participant laboratories receive from a commerce source, environmental samples of known activity concentration for analysis. After the samples have been analyzed by the laboratory, the manufacturer of the sample reports the known activity concentration of the samples to the laboratory. The laboratory compares its results to the reported concentrations to determine any significant deviations, investigates such deviations if found, and initiates corrective action if necessary. Participation in this program provides assurance that the contract laboratory is capable of meeting accepted criteria for radioactivity analysis.

Included in this Appendix are selected tables from the Semi-Annual Status Reports covering the Framatome ANP Environmental Laboratory's Quality Assurance Programs for the first and second halves of 2006.

For the report covering January – June 2006, the laboratory achieved:

- 99.3% of 290 individual QC analyses evaluated during this semi-annual period met E-LAB acceptance criteria for bias, while
- 99.1% of 234 QC analyses met the Laboratory QC acceptance criteria for precision.

For the report covering July – December 2006, the laboratory achieved:

- 99.3% of 404 individual QC analyses evaluated during this semi-annual period met E-LAB acceptance criteria for bias, while
- 100% of 357 QC analyses met the Laboratory QC acceptance criteria for precision.

TABLE 1

ANALYTICS ENVIRONMENTAL CROSSCHECK PROGRAM RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA, AND MEASUREMENT CATEGORIES
JANUARY-JUNE 2006

	Bias Criteria (1)				Precision Criteria (2)			
	1	2	3	4	1	2	3	4
I. Air Particulate								
Alpha	0	1	2	0	3	0	0	0
Beta	0	3	0	0	3	0	0	0
Gamma	13	13	1	0	25	2	0	0
Sr-89	0	0	2	0	2	0	0	0
Sr-90	1	0	1	0	0	2	0	0
II. Charcoal								
Gamma	1	2	0	0	3	0	0	0
II. Milk								
Gamma	20	9	1	0	24	6	0	0
Iodine (LL)	3	0	0	0	3	0	0	0
III. Water								
H-3	2	1	0	0	3	0	0	0
Sr-89	0	0	3	0	3	0	0	0
Sr-90	2	1	0	0	3	0	0	0
Total Number in Range:	**42**	**30**	**10**	**0**	**72**	**10**	**0**	**0**
Percentage of Total Processed:	**51.2**	**36.6**	**12.2**	**0.0**	**87.8**	**12.2**	**0.0**	**0.0**
Sum of Analyses:	**82**				**82**			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
* Total may not equal 100 due to rounding

TABLE 1

ENVIRONMENTAL PROCESS CONTROL ANALYSIS RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA AND MEASUREMENT CATEGORIES
JANUARY – JUNE 2006
(Continued)

(1) Percent Bias by Deviation Category

1 = >0 and ≤5

2 = >5 and ≤10

3 = >10 and ≤15 (or within 2 sigma of known, see Reference 1)

For Gross Alpha and Beta In water	3 = >10 and ≤25 (or within 2 sigma of known)
For Sr-89/90 mixtures	3 = >10 and ≤25 (or within 2 sigma of known)
For Alpha Spectrometry*,	3 = >10 and ≤20 (or within 2 sigma of known)
For Uranium-Total, Pu-241, Zn-65 on an air filter	3 = >10 and ≤20 (or within 2 sigma of known)

4 = Outside criteria

(2) Percent Precision by Deviation Category

1 = >0 and ≤5

2 = >5 and ≤10

3 = >10 and ≤15 (or within 2 sigma of mean, see Reference 1). Exceptions as above.

4 = Outside criteria

* Isotopic Uranium (U-234, 235, 238)
Isotopic Thorium (Th-230, 232)
Np-237
Am-241/Cm-242, 243/244
Pu-alpha (Pu-238, 239, 240)
Ra-226

** Total may not equal 100 due to rounding.

TABLE 2

AREVA NP ENVIRONMENTAL LABORATORY
ANALYTICS ENVIRONMENTAL CROSS CHECK PROGRAM
PERFORMANCE EVALUATION

Sample Number	Quarter/ Year	Sample Media	Nuclide	Units	Reported Value	Known Value	Ratio E-LAB/ Analytics	Evaluation
E4836-162	4th/2005	Water	H-3	pCi/L	13700	13200	1.04	Agreement
E4837-162	4th/2005	Water	Sr-89	pCi/L	80.3	91.4	0.88	Agreement
E4837-162	4th/2005	Water	Sr-90	pCi/L	7.18	7.4	0.97	Agreement
E4838-162	4th/2005	Filter	Gross Alpha	pCi	22.3	25.0	0.89	Agreement
E4838-162	4th/2005	Filter	Gross Beta	pCi	146	136	1.07	Agreement
E4839-162	4th/2005	Filter	Ce-141	pCi	122	131	0.93	Agreement
E4839-162	4th/2005	Filter	Cr-51	pCi	113	113	1.00	Agreement
E4839-162	4th/2005	Filter	Cs-134	pCi	48.0	51.0	0.94	Agreement
E4839-162	4th/2005	Filter	Cs-137	pCi	111	111	1.00	Agreement
E4839-162	4th/2005	Filter	Co-58	pCi	44.2	45.2	0.98	Agreement
E4839-162	4th/2005	Filter	Mn-54	pCi	93.5	88.9	1.05	Agreement
E4839-162	4th/2005	Filter	Fe-59	pCi	44.6	48.1	0.93	Agreement
E4839-162	4th/2005	Filter	Zn-65	pCi	95.8	89.9	1.07	Agreement
E4839-162	4th/2005	Filter	Co-60	pCi	59.1	64.6	0.91	Agreement
E4840-162	4th/2005	Filter	Sr-89	pCi	103	121	0.85	Agreement
E4840-162	4th/2005	Filter	Sr-90	pCi	9.05	9.70	0.93	Agreement
E4841-162	4th/2005	Milk	I-131LL	pCi/L	72.4	74.6	0.97	Agreement
E4841-162	4th/2005	Milk	I-131	pCi/L	74.1	74.6	0.99	Agreement
E4841-162	4th/2005	Milk	Ce-141	pCi/L	217	224	0.97	Agreement
E4841-162	4th/2005	Milk	Cr-51	pCi/L	190	193	0.98	Agreement
E4841-162	4th/2005	Milk	Cs-134	pCi/L	86.4	87.3	0.99	Agreement
E4841-162	4th/2005	Milk	Cs-137	pCi/L	187	189	0.99	Agreement
E4841-162	4th/2005	Milk	Co-58	pCi/L	78.7	77.5	1.02	Agreement
E4841-162	4th/2005	Milk	Mn-54	pCi/L	153	152	1.01	Agreement
E4841-162	4th/2005	Milk	Fe-59	pCi/L	87.8	82.4	1.07	Agreement
E4841-162	4th/2005	Milk	Zn-65	pCi/L	148	154	0.96	Agreement
E4841-162	4th/2005	Milk	Co-60	pCi/L	106	111	0.95	Agreement
E4879-162	4th/2005	Charcoal	I-131	pCi	68.4	72.0	0.95	Agreement

TABLE 2
(Continued)
AREVA NP ENVIRONMENTAL LABORATORY
ANALYTICS RADIOLOGICAL ENVIRONMENTAL CROSS-CHECK
PERFORMANCE EVALUATION

Sample Number	Quarter/ Year	Sample Media	Nuclide	Units	Reported Value	Known Value	Ratio E-LAB/ Analytics	Evaluation
E4884-162	1st/2006	Water	Gross Alpha	pCi/L	38.7	*		Agreement
E4884-162	1st/2006	Water	Gross Beta	pCi/L	265	*		Agreement
E4885-162	1st/2006	Water	I-131LL	pCi/L	65.8	*		Agreement
E4885-162	1st/2006	Water	I-131	pCi/L	66.3	*		Agreement
E4885-162	1st/2006	Water	Ce-141	pCi/L	83.0	*		Agreement
E4885-162	1st/2006	Water	Cr-51	pCi/L	217	*		Agreement
E4885-162	1st/2006	Water	Cs-134	pCi/L	91.9	*		Agreement
E4885-162	1st/2006	Water	Cs-137	pCi/L	73.3	*		Agreement
E4885-162	1st/2006	Water	Co-58	pCi/L	84.7	*		Agreement
E4885-162	1st/2006	Water	Mn-54	pCi/L	74.7	*		Agreement
E4885-162	1st/2006	Water	Fe-59	pCi/L	73.2	*		Agreement
E4885-162	1st/2006	Water	Zn-65	pCi/L	146.7	*		Agreement
E4885-162	1st/2006	Water	Co-60	pCi/L	102.5	*		Agreement
E4886-162	1st/2006	Water	Sr-89	pCi/L	82.0	*		Agreement
E4886-162	1st/2006	Water	Sr-90	pCi/L	10.2	*		Agreement
E4887-162	1st/2006	Charcoal	I-131	pCi	84.3	*		Agreement
E4888-162	1st/2006	Filter	Gross Alpha	pCi	13.5	*		Agreement
E4888-162	1st/2006	Filter	Gross Beta	pCi	104.5	*		Agreement
E4889-162	1st/2006	Milk	I-131LL	pCi/L	81.8	*		Agreement
E4889-162	1st/2006	Milk	I-131	pCi/L	77.4	*		Agreement
E4889-162	1st/2006	Milk	Ce-141	pCi/L	101	*		Agreement
E4889-162	1st/2006	Milk	Cr-51	pCi/L	277	*		Agreement
E4889-162	1st/2006	Milk	Cs-134	pCi/L	113.8	*		Agreement
E4889-162	1st/2006	Milk	Cs-137	pCi/L	86.7	*		Agreement
E4889-162	1st/2006	Milk	Co-58	pCi/L	100	*		Agreement
E4889-162	1st/2006	Milk	Mn-54	pCi/L	94.6	*		Agreement
E4889-162	1st/2006	Milk	Fe-59	pCi/L	90.7	*		Agreement
E4889-162	1st/2006	Milk	Zn-65	pCi/L	172.2	*		Agreement
E4889-162	1st/2006	Milk	Co-60	pCi/L	125.0	*		Agreement
E4890-162	1st/2006	Milk	Sr-89	pCi/L	79.7	*		Agreement
E4890-162	1st/2006	Milk	Sr-90	pCi/L	10.6	*		Agreement

* - 1st quarter 2006 results submitted to Analytics, pending final report.

TABLE 3

NIST MAP ANALYSIS RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA, AND MEASUREMENT CATEGORIES
JANUARY-JUNE 2006

	Bias Criteria (1)				Precision Criteria (2)			
	1	2	3	4	1	2	3	4
I. Water								
Gamma	6	0	0	0	6	0	0	0
Total Number in Range:	6	0	0	0	6	0	0	0
Percentage of Total Processed:	100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0
Sum of Analyses:	6				6			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
* Total may not equal 100 due to rounding

TABLE 4

SUMMARY OF AREVA NP ENVIRONMENTAL LABORATORY
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)
TRACEABILITY RESULTS
JANUARY-JUNE, 2006

NIST Standard Number	Reference Date of Standard	Radionuclide	Matrix	E-LAB Measurement Technique	Mean Percent Deviation From NIST
1822-07	6-Dec-05	Cr-51	Liquid	Gamma Spectroscopy #2	-0.82
1822-07	6-Dec-05	Cr-51	Liquid	Gamma Spectroscopy #5	1.31
1828-03	17-Jan-06	Fe-55	Liquid	Liquid Scintillation Counter #2	+6.69
1828-03	17-Jan-06	Sr-89	Liquid	Liquid Scintillation Counter #1	-6.29
1828-03	17-Jan-06	Sr-90	Liquid	Liquid Scintillation Counter #1	-7.22

Data on NIST MAP program is repeated in Table 16 for Part 50/61 QC data.

TABLE 5

ENVIRONMENTAL MEASUREMENTS LABORATORY
QUALITY ASSESSMENT PROGRAM

MATRIX/ UNITS	RADIO-NUCLIDE	REPORTED MEAN VALUE Bq/Units	REPORTED ERROR	EML VALUE Bq/Units	EML ERROR	REPORTED TO KNOWN RATIO	EVALUATION

EML has notified the industry that QAP 60 (March 2004) was the final set of samples to be issued. Further information may be found on the EML website, URL http://www.eml.doe.gov/qap/

TABLE 6

DEPARTMENT OF ENERGY MIXED ANALYTE
PERFORMANCE EVALUATION PROGRAM

MATRIX/ UNITS	REFERENCE DATE	RADIO-NUCLIDE	REPORTED MEAN VALUE Bq/Units	MAPEP VALUE Bq/Units	% Bias	EVALUATION
Filter (Bq/filter)	1-Jan-06	Cs-134	3.001	2.934	2.3	Agreement
Filter (Bq/filter)	1-Jan-06	Cs-137	2.498	2.531	-1.3	Agreement
Filter (Bq/filter)	1-Jan-06	Co-57	4.197	4.096	2.5	Agreement
Filter (Bq/filter)	1-Jan-06	Co-60	2.149	2.186	-1.7	Agreement
Filter (Bq/filter)	1-Jan-06	Mn-54	-0.013 +/- 0.019	False Positive Test	N/A	Agreement (1)
Filter (Bq/filter)	1-Jan-06	Sr-90	0.67	0.792	-15.4	Agreement
Filter (Bq/filter)	1-Jan-06	Zn-65	3.547	3.423	3.6	Agreement
Soil (Bq/kg)	1-Jan-06	Cs-134	0.99+/- 0.70	False Positive Test	N/A	Agreement (1)
Soil (Bq/kg)	1-Jan-06	Cs-137	340.4	339.69	0.2	Agreement
Soil (Bq/kg)	1-Jan-06	Co-57	656.7	656.29	0.1	Agreement
Soil (Bq/kg)	1-Jan-06	Co-60	450.6	447.1	0.8	Agreement
Soil (Bq/kg)	1-Jan-06	K-40	621	604	2.8	Agreement
Soil (Bq/kg)	1-Jan-06	Mn-54	352.4	346.77	1.6	Agreement
Soil (Bq/kg)	1-Jan-06	Sr-90	277.5	314.36	-11.7	Agreement
Soil (Bq/kg)	1-Jan-06	Zn-65	679.2	657.36	3.3	Agreement
Vegetation (Bq/sample)	1-Jan-06	Cs-134	0.005 +/- 0.020	False Positive Test	N/A	Agreement (1)
Vegetation (Bq/sample)	1-Jan-06	Cs-137	2.619	3.074	-14.8	Agreement
Vegetation (Bq/sample)	1-Jan-06	Co-57	7.392	8.578	-13.8	Agreement
Vegetation (Bq/sample)	1-Jan-06	Co-60	3.764	4.52	-16.7	Agreement
Vegetation (Bq/sample)	1-Jan-06	Mn-54	5.213	6.247	-16.6	Agreement
Vegetation (Bq/sample)	1-Jan-06	Sr90	1.56	1.561	-0.1	Agreement
Vegetation (Bq/sample)	1-Jan-05	Zn-65	8.63	9.798	-11.9	Agreement
Water (Bq/L)	1-Jan-06	Cs-134	91.4	95.1	-3.9	Agreement
Water (Bq/L)	1-Jan-06	Cs-137	0.097 +/- 0.220	False Positive Test	N/A	Agreement (1)
Water (Bq/L)	1-Jan-06	Co-57	157.47	166.12	-5.2	Agreement
Water (Bq/L)	1-Jan-06	Co-60	147.14	153.5	-4.1	Agreement
Water (Bq/L)	1-Jan-06	H-3	986.4	952.01	3.6	Agreement
Water (Bq/L)	1-Jan-06	Mn-54	306.51	315	-2.7	Agreement
Water (Bq/L)	1-Jan-06	Sr-90	11.41	13.16	-13.3	Agreement
Water (Bq/L)	1-Jan-06	Zn-65	227.7	228.16	-0.2	Agreement

(1) - Nuclide reported as non-positive, acceptable false positive test result.

TABLE 7

ENVIRONMENTAL RESOURCE ASSOCIATES PROFICIENCY TEST RESULTS
AREVA NP ENVIRONMENTAL LABORATORY

ERA LOT #/ REF. DATE	MATRIX/ UNITS	RADIO-NUCLIDE	REPORTED MEAN VALUE pCi/L	ERA VALUE pCi/L	ERA CONTROL LIMITS	ERA WARNING LIMITS	EVALUATION
RAD-65 April 2006	Water pCi/L	Gross Alpha	21.1	21.3	12.1-30.5	15.2-27.4	Agreement
RAD-65 April 2006	Water pCi/L	Gross Beta	22.3	23	14.3-31.7	17.2-28.8	Agreement
RAD-65 April 2006	Water pCi/L	Tritium	6820	8130	6720-9540	7190-9070	Agreement
RAD-65 April 2006	Water pCi/L	Ba-133	9.56	10	1.34-18.7	4.23-15.8	Agreement
RAD-65 April 2006	Water pCi/L	Cs-134	41.1	43.4	34.7-52.1	37.6-49.2	Agreement
RAD-65 April 2006	Water pCi/L	Cs-137	210	214	195-233	202-226	Agreement
RAD-65 April 2006	Water pCi/L	Co-60	116	113	103-123	106-120	Agreement
RAD-65 April 2006	Water pCi/L	Zn-65	156	152	126-178	134-170	Agreement
RAD-65 April 2006	Water pCi/L	I-131	17.7	19.1	13.9-24.3	15.6-22.6	Agreement

TABLE 8

INTRA-LABORATORY ENVIRONMENTAL PROCESS CONTROL RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA, AND MEASUREMENT CATEGORIES
JANUARY-JUNE 2006

	Bias Criteria (1)				Precision Criteria (2), (3)			
	1	2	3	4	1	2	3	4
I. Air Particulate								
Beta	123	0	0	0	-	-	-	-
II. Air Charcoal								
Gamma-Quantitative	13	7	5	2	-	-	-	-
Gamma - Screening	6	11	1	0	-	-	-	-
III. Milk								
Gamma	-	-	-	-	10	0	14	0
Iodine (LL)	3	0	0	0	3	0	0	0
IV. Soil/Sed.								
Gamma	-	-	-	-	8	4	10	0
V. Vegetation/Food								
Gamma	-	-	-	-	10	12	32	2
VI. Water								
C-14	1	0	2	0	0	0	2	0
Gross Alpha	0	3	4	0	0	0	2	0
Gross Beta	11	0	1	0	0	4	0	0
Gamma	-	-	-	-	2	2	14	0
Iodine (LL)	1	1	1	0	1	2	0	0
Pu-241	0	0	3	0	0	0	2	0
Sr-90	0	1	2	0	0	2	0	0
Tritium	-	-	-	-	4	0	4	0
Total Number in Range:	**158**	**23**	**19**	**2**	**38**	**26**	**80**	**2**
Percentage of Total Processed:	**78.2**	**11.4**	**9.4**	**1.0**	**26.0**	**17.8**	**54.8**	**1.4**
Sum of Analyses:	**202**				**146**			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
(3) Most Precision data generated from non-positive client samples for specific contractual evaluation
* Total may not equal 100 due to rounding

TABLE 9

QC CHARCOAL ACTIVITY SCREENING RESULTS

SPIKE NUMBER	LSN	FILTER TYPE	ANALYSIS DATE	ACT. REPORTED	% BIAS
71909162-B	L10333-01	SAIC-1	2-Jan-06	YES	3.52
	L10358-01	SAIC-1	5-Jan-06	YES	4.87
	L10384-01	SAIC-1	11-Jan-06	YES	3.03
	L10406-01	SAIC-1	16-Jan-06	YES	6.03
	L10436-01	SAIC-1	25-Jan-06	YES	5.40
	L10473-01	SAIC-1	30-Jan-06	YES	9.73
71909162-D	L10333-02	SAIC-2	2-Jan-06	YES	3.36
	L10358-02	SAIC-2	5-Jan-06	YES	4.27
	L10384-02	SAIC-2	11-Jan-06	YES	3.68
	L10406-02	SAIC-2	16-Jan-06	YES	9.03
	L10436-02	SAIC-2	25-Jan-06	YES	9.46
	L10473-02	SAIC-2	30-Jan-06	YES	13.43
71909162-C	L10333-03	SA2C	2-Jan-06	YES	-7.10
	L10358-03	SA2C	5-Jan-06	YES	-7.74
	L10384-03	SA2C	11-Jan-06	YES	-8.66
	L10406-03	SA2C	17-Jan-06	YES	-5.42
	L10436-03	SA2C	25-Jan-06	YES	-8.28
	L10473-03	SA2C	31-Jan-06	YES	-6.56

Charcoal screening QC test data was suspended at the end of January 2006. New QC samples using certified quantities of Ba-133 are now in use.

TABLE 10

AREVA NP ENVIRONMENTAL LABORATORY
ENVIRONMENTAL INTRA-LABORATORY AND INTER-LABORATORY
DATA SUMMARY BIAS AND PRECISION BY MEDIA
JANUARY-JUNE 2006

	Bias Criteria (1)				Precision Criteria (2), (3)			
	1	2	3	4	1	2	3	4
I. Air Filter								
Gross Alpha	0	1	2	0	3	0	0	0
Gross Beta	123	3	0	0	3	0	0	0
Gamma	13	13	1	0	25	2	0	0
Sr-89	0	0	2	0	2	0	0	0
Sr-90	1	0	1	0	0	2	0	0
II. Charcoal								
Gamma-Quantitative	14	9	5	2	3	0	0	0
Gamma-Screening	6	11	1	0	0	0	0	0
III. Milk								
Gamma	20	9	1	0	34	6	14	0
Iodine (LL)	6	0	0	0	6	0	0	0
IV. Soil/Sediment								
Gamma	-	-	-	-	8	4	10	0
V. Vegetation/Food								
Gamma	-	-	-	-	10	12	32	2
VI. Water								
C-14	1	0	2	0	0	0	2	0
Gross Alpha	0	3	4	0	0	0	2	0
Gross Beta	11	0	1	0	0	4	0	0
Gamma	6	0	0	0	8	2	14	0
Iodine (LL)	1	1	1	0	1	2	0	0
Pu-241	0	0	3	0	0	0	2	0
Sr-89	0	0	3	0	3	0	0	0
Sr-90	2	2	2	0	3	2	0	0
Tritium	2	1	0	0	7	0	4	0
Total Number in Range:	**206**	**53**	**29**	**2**	**116**	**36**	**80**	**2**
Percentage of Total Processed:	**71.0**	**18.3**	**10.0**	**0.7**	**49.6**	**15.4**	**34.2**	**0.9**
Sum of Analyses:	**290**				**234**			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
(3) Most Precision data generated from non-positive client samples for specific contractual evaluation
* Total may not equal 100 due to rounding.
** Totals summarize Internal PCs, NIST MAP, and Analytics Cross Check programs

TABLE 11

AREVA NP ENVIRONMENTAL LABORATORY
ENVIRONMENTAL INTRA-LABORATORY AND INTER-LABORATORY
DATA SUMMARY BIAS AND PRECISION BY ANALYSIS TYPE
JANUARY-JUNE 2006

	Bias Criteria (1)				Precision Criteria (2), (3)			
	1	2	3	4	1	2	3	4
I. Gross Alpha								
Air Filter	0	1	2	0	3	0	0	0
Water	0	3	4	0	0	0	2	0
II. C-14								
Water	1	0	2	0	0	0	2	0
III. Gross Beta								
Air Filter	123	3	0	0	3	0	0	0
Water	11	0	1	0	0	4	0	0
IV. Gamma								
Air Filter	13	13	1	0	25	2	0	0
Charcoal-Quantitative	14	9	5	2	3	0	0	0
Charcoal-Screening	6	11	1	0	0	0	0	0
Milk	20	9	1	0	34	6	14	0
Soil/Sediment	0	0	0	0	8	4	10	0
Vegetation/Food	0	0	0	0	10	12	32	2
Water	6	0	0	0	8	2	14	0
V. Iodine (LL)								
Milk	6	0	0	0	6	0	0	0
Water	1	1	1	0	1	2	0	0
V. Pu-241								
Water	0	0	3	0	0	0	2	0
VI. Sr-89								
Air Filter	0	0	2	0	2	0	0	0
Milk								
Water	0	0	3	0	3	0	0	0
VII. Sr-90								
Air Filter	1	0	1	0	0	2	0	0
Milk								
Water	2	2	2	0	3	2	0	0
VIII. Tritium								
Water	2	1	0	0	7	0	4	0
Total Number in Range:	**206**	**53**	**29**	**2**	**116**	**36**	**80**	**2**
Percentage of Total Processed:	**71.0**	**18.3**	**10.0**	**0.7**	**49.6**	**15.4**	**34.2**	**0.9**
Sum of Analyses:	**290**				**234**			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
(3) Most Precision data generated from non-positive client samples for specific contractual evaluation
* Total may not equal 100 due to rounding.
** Totals summarize Internal PCs, NIST MAP, and Analytics Cross Check programs

TABLE 12

ENVIRONMENTAL BIAS AND PRECISION BY YEAR

Year	Percent Bias Deviation from Known — Bias Criteria* (1)					Percent Precision Deviation from Mean — Precision Criteria* (2)				
	1	2	3	Outside Criteria 4	% Within Criteria	1	2	3	Outside Criteria 4	% Within Criteria
2006	206	53	29	2	**99.3**	116	36	80	2	**99.1**
2005	710	242	117	3	**99.7**	358	25	124	0	**100.0**
2004	849	273	172	10	**99.2**	440	60	362	2	**99.8**
2003	572	182	74	13	**98.5**	354	55	106	1	**99.8**
2002	619	170	74	7	**99.2**	411	44	16	3	**99.4**
2001	383	115	80	22	**96.3**	330	45	19	2	**99.5**
2000	368	143	63	18	**97.0**	342	70	36	1	**99.8**
1999	323	100	44	13	**97.3**	301	46	10	2	**99.4**
1998	375	100	21	7	**98.6**	355	56	21	4	**99.1**
1997	351	118	46	11	**97.9**	306	46	11	0	**100.0**
1996	616	187	104	24	**97.4**	696	71	33	3	**99.6**
1995	291	75	37	12	**97.1**	200	43	24	0	**100.0**
1994	359	116	54	14	**97.4**	265	61	10	1	**99.7**
1993	262	121	60	29	**93.9**	227	59	26	1	**99.7**
1992	438	206	84	21	**97.2**	656	112	29	1	**99.9**
1991	504	174	92	19	**97.6**	710	82	30	4	**99.5**
1990	519	153	56	34	**95.5**	644	97	20	2	**99.7**
1989	448	171	70	28	**96.1**	599	76	35	4	**99.4**
1988	425	141	66	22	**96.6**	536	76	20	1	**99.8**
1987	450	187	65	27	**96.3**	623	80	15	3	**99.6**
1986	558	185	70	27	**96.8**	700	82	33	0	**100.0**
1985	449	177	92	25	**96.6**	561	93	28	0	**100.0**
1984	479	254	104	31	**96.4**	699	127	24	0	**100.0**
1983	475	211	108	36	**95.7**	639	113	46	4	**99.5**
1982	341	109	135	30	**95.1**	496	112	135	12	**98.4**
1981	175	116	152	29	**93.9**	286	72	46	1	**99.8**
1980	160	115	167	37	**92.3**	335	96	59	1	**99.8**
1979	80	51	68	20	**90.9**	230	73	51	16	**95.7**
1978	112	90	40	20	**92.4**	259	73	29	14	**96.3**
1977	28	18	12	8	**87.9**	75	39	5	7	**94.4**
Total # in Range:	**11,925**	**4,353**	**2,356**	**599**	**96.9**	**12,749**	**2,120**	**1,483**	**92**	**99.4**
% of all Analyses in Range*	**62.0**	**22.6**	**12.2**	**3.1**		**77.5**	**12.9**	**9.0**	**0.6**	
Total Number	**19,233**					**16,444**				

* Total may not equal 100 due to rounding.
(1) Deviation Categories 1-3 as noted in Table 1, Footnote (1)
(2) Deviation Categories 1-3 as noted in Table 1, Footnote (2)

TABLE 13

ANALYTICS RADIOCHEMISTRY CROSSCHECK PROGRAM RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA, AND MEASUREMENT CATEGORIES
JANUARY-JUNE 2006

	Bias Criteria (1)				Precision Criteria (2)			
	1	2	3	4	1	2	3	4
I. Water								
Fe-55	1	5	0	0	6	0	0	0
Sr-89	3	2	1	0	6	0	0	0
Sr-90	1	1	2	2	6	0	0	0
Total Number in Range:	**5**	**8**	**3**	**2**	**18**	**0**	**0**	**0**
Percentage of Total Processed:	**27.8**	**44.4**	**16.7**	**11.1**	**100.0**	**0.0**	**0.0**	**0.0**
Sum of Analyses:	**18**				**18**			

(1) Percent Bias by Deviation Category as noted in Table 12, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 12, Footnote (2)
* Total may not equal 100 due to rounding

TABLE 1

ANALYTICS ENVIRONMENTAL CROSSCHECK PROGRAM RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA, AND MEASUREMENT CATEGORIES
JULY - DECEMBER 2006

	Bias Criteria (1)				Precision Criteria (2)			
	1	2	3	4	1	2	3	4
I. Air Particulate								
Alpha	4	2	3	0	9	0	0	0
Beta	3	6	0	0	9	0	0	0
Gamma	21	6	0	0	27	0	0	0
Sr-89	0	1	1	0	2	0	0	0
Sr-90	0	0	0	2	0	0	2	0
II. Charcoal								
Gamma	5	1	0	0	6	0	0	0
II. Milk								
Gamma	69	20	1	0	79	11	0	0
Iodine (LL)	3	2	2	0	6	0	0	0
Sr-89	2	0	4	0	4	2	0	0
Sr-90	6	0	0	0	6	0	0	0
III. Water								
Alpha	6	0	0	0	6	0	0	0
Beta	5	0	1	0	5	1	0	0
Gamma	38	18	4	0	47	12	1	0
H-3	3	0	0	0	3	0	0	0
I-131 (LL)	3	0	1	0	1	2	0	0
Sr-89	0	0	3	0	2	1	0	0
Sr-90	2	1	0	0	3	0	0	0
Total Number in Range:	**170**	**57**	**20**	**2**	**215**	**29**	**3**	**0**
Percentage of Total Processed:	**68.3**	**22.9**	**8.0**	**0.8**	**87.0**	**11.7**	**1.2**	**0.0**
Sum of Analyses:	**249**				**247**			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
* Total may not equal 100 due to rounding

TABLE 1

ENVIRONMENTAL PROCESS CONTROL ANALYSIS RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA AND MEASUREMENT CATEGORIES
JULY – DECEMBER 2006
(Continued)

(1) Percent Bias by Deviation Category

1 = >0 and ≤5

2 = >5 and ≤10

3 = >10 and ≤15 (or within 2 sigma of known, see Reference 1)

For Gross Alpha and Beta In water	3 = >10 and ≤25 (or within 2 sigma of known)
For Sr-89/90 mixtures	3 = >10 and ≤25 (or within 2 sigma of known)
For Alpha Spectrometry*,	3 = >10 and ≤20 (or within 2 sigma of known)
For Uranium-Total, Pu-241, Zn-65 on an air filter	3 = >10 and ≤20 (or within 2 sigma of known)

4 = Outside criteria

(2) Percent Precision by Deviation Category

1 = >0 and ≤5

2 = >5 and ≤10

3 = >10 and ≤15 (or within 2 sigma of mean, see Reference 1). Exceptions as above.

4 = Outside criteria

* Isotopic Uranium (U-234, 235, 238)
Isotopic Thorium (Th-230, 232)
Np-237
Am-241/Cm-242, 243/244
Pu-alpha (Pu-238, 239, 240)
Ra-226

** Total may not equal 100 due to rounding.

TABLE 2

AREVA NP ENVIRONMENTAL LABORATORY
ANALYTICS ENVIRONMENTAL CROSS CHECK PROGRAM
PERFORMANCE EVALUATION

Sample Number	Quarter/ Year	Sample Media	Nuclide	Units	Reported Value	Known Value	Ratio E-LAB/ Analytics	Evaluation
E4884-162	1st/2006	Water	Gross Alpha	pCi/L	38.7	38.1	1.02	Agreement
E4884-162	1st/2006	Water	Gross Beta	pCi/L	265	262	1.01	Agreement
E4885-162	1st/2006	Water	I-131LL	pCi/L	65.8	67.4	0.98	Agreement
E4885-162	1st/2006	Water	I-131	pCi/L	66.3	67.4	0.98	Agreement
E4885-162	1st/2006	Water	Ce-141	pCi/L	83.0	86.8	0.96	Agreement
E4885-162	1st/2006	Water	Cr-51	pCi/L	217	234	0.93	Agreement
E4885-162	1st/2006	Water	Cs-134	pCi/L	91.9	101	0.91	Agreement
E4885-162	1st/2006	Water	Cs-137	pCi/L	73.3	74.3	0.99	Agreement
E4885-162	1st/2006	Water	Co-58	pCi/L	84.7	87.5	0.97	Agreement
E4885-162	1st/2006	Water	Mn-54	pCi/L	74.7	78.1	0.96	Agreement
E4885-162	1st/2006	Water	Fe-59	pCi/L	73.2	72.4	1.01	Agreement
E4885-162	1st/2006	Water	Zn-65	pCi/L	146.7	148	0.99	Agreement
E4885-162	1st/2006	Water	Co-60	pCi/L	102.5	107	0.96	Agreement
E4886-162	1st/2006	Water	Sr-89	pCi/L	82.0	99.4	0.82	Agreement
E4886-162	1st/2006	Water	Sr-90	pCi/L	10.2	10.8	0.94	Agreement
E4887-162	1st/2006	Charcoal	I-131	pCi	84.3	84.8	0.99	Agreement
E4888-162	1st/2006	Filter	Gross Alpha	pCi	13.5	14.2	0.95	Agreement
E4888-162	1st/2006	Filter	Gross Beta	pCi	104.5	97.3	1.07	Agreement
E4889-162	1st/2006	Milk	I-131LL	pCi/L	81.8	78.0	1.05	Agreement
E4889-162	1st/2006	Milk	I-131	pCi/L	77.4	78.8	0.98	Agreement
E4889-162	1st/2006	Milk	Ce-141	pCi/L	101	104	0.97	Agreement
E4889-162	1st/2006	Milk	Cr-51	pCi/L	277	280	0.99	Agreement
E4889-162	1st/2006	Milk	Cs-134	pCi/L	113.8	121	0.94	Agreement
E4889-162	1st/2006	Milk	Cs-137	pCi/L	86.7	88.8	0.98	Agreement
E4889-162	1st/2006	Milk	Co-58	pCi/L	100	105	0.95	Agreement
E4889-162	1st/2006	Milk	Mn-54	pCi/L	94.6	93.3	1.01	Agreement
E4889-162	1st/2006	Milk	Fe-59	pCi/L	90.7	86.6	1.05	Agreement
E4889-162	1st/2006	Milk	Zn-65	pCi/L	172.2	176	0.98	Agreement
E4889-162	1st/2006	Milk	Co-60	pCi/L	125.0	128	0.98	Agreement
E4890-162	1st/2006	Milk	Sr-89	pCi/L	79.7	99.2	0.80	Agreement
E4890-162	1st/2006	Milk	Sr-90	pCi/L	10.6	10.8	0.98	Agreement

TABLE 2
(continued)
AREVA NP ENVIRONMENTAL LABORATORY
ANALYTICS RADIOLOGICAL ENVIRONMENTAL CROSS-CHECK
PERFORMANCE EVALUATION

Sample Number	Quarter/ Year	Sample Media	Nuclide	Units	Reported Value	Known Value	Ratio E-LAB/ Analytics	Evaluation
E5013-162	2nd/2006	Water	H-3	pCi/L	5830	6000	0.97	Agreement
E5014-162	2nd/2006	Filter	Gross Alpha	pCi	31.8	36.6	0.87	Agreement
E5014-162	2nd/2006	Filter	Gross Beta	pCi	103.8	96.8	1.07	Agreement
E5015-162	2nd/2006	Filter	Ce-141	pCi/L	91.6	92.8	0.99	Agreement
E5015-162	2nd/2006	Filter	Cr-51	pCi/L	131.7	131	1.01	Agreement
E5015-162	2nd/2006	Filter	Cs-134	pCi/L	60.5	63.9	0.95	Agreement
E5015-162	2nd/2006	Filter	Cs-137	pCi/L	62.9	59.3	1.06	Agreement
E5015-162	2nd/2006	Filter	Co-58	pCi/L	52.0	50.6	1.03	Agreement
E5015-162	2nd/2006	Filter	Mn-54	pCi/L	74.5	73.9	1.01	Agreement
E5015-162	2nd/2006	Filter	Fe-59	pCi/L	46.4	47.3	0.98	Agreement
E5015-162	2nd/2006	Filter	Zn-65	pCi/L	93.4	93.6	1.00	Agreement
E5015-162	2nd/2006	Filter	Co-60	pCi/L	63.0	65.0	0.97	Agreement
E5016-162	2nd/2006	Filter	Sr-89	pCi/L	146.6	163	0.90	Agreement
E5016-162	2nd/2006	Filter	Sr-90	pCi/L	7.01	12.3	0.57	Non-Agreement
E5017-162	2nd/2006	Milk	I-131LL	pCi/L	67.0	63.2	1.06	Agreement
E5017-162	2nd/2006	Milk	I-131	pCi/L	62.0	63.2	0.98	Agreement
E5017-162	2nd/2006	Milk	Ce-141	pCi/L	180.8	184	0.98	Agreement
E5017-162	2nd/2006	Milk	Cr-51	pCi/L	248.0	259	0.96	Agreement
E5017-162	2nd/2006	Milk	Cs-134	pCi/L	120.1	127	0.95	Agreement
E5017-162	2nd/2006	Milk	Cs-137	pCi/L	117.3	117	1.00	Agreement
E5017-162	2nd/2006	Milk	Co-58	pCi/L	97.3	100	0.97	Agreement
E5017-162	2nd/2006	Milk	Mn-54	pCi/L	150.5	146	1.03	Agreement
E5017-162	2nd/2006	Milk	Fe-59	pCi/L	95.4	93.6	1.02	Agreement
E5017-162	2nd/2006	Milk	Zn-65	pCi/L	183.9	185	0.99	Agreement
E5017-162	2nd/2006	Milk	Co-60	pCi/L	126.2	129	0.98	Agreement

TABLE 2
(continued)
AREVA NP ENVIRONMENTAL LABORATORY
ANALYTICS RADIOLOGICAL ENVIRONMENTAL CROSS-CHECK
PERFORMANCE EVALUATION

Sample Number	Quarter/ Year	Sample Media	Nuclide	Units	Reported Value	Known Value	Ratio E-LAB/ Analytics	Evaluation
E5090-162	3rd /2006	Water	Gross Alpha	pCi/L	71.5	69.4	1.03	Agreement
E5090-162	3rd /2006	Water	Gross Beta	pCi/L	253	273	0.93	Agreement
E5091-162	3rd /2006	Water	I-131LL	pCi/L	84.4	79.9	1.06	Agreement
E5091-162	3rd /2006	Water	I-131	pCi/L	77.3	79.9	0.97	Agreement
E5091-162	3rd /2006	Water	Ce-141	pCi/L	84.5	88.0	0.96	Agreement
E5091-162	3rd /2006	Water	Cr-51	pCi/L	287	288	1.00	Agreement
E5091-162	3rd /2006	Water	Cs-134	pCi/L	85.6	87.0	0.98	Agreement
E5091-162	3rd /2006	Water	Cs-137	pCi/L	174	179	0.97	Agreement
E5091-162	3rd /2006	Water	Co-58	pCi/L	108	112	0.96	Agreement
E5091-162	3rd /2006	Water	Mn-54	pCi/L	116	115	1.01	Agreement
E5091-162	3rd /2006	Water	Fe-59	pCi/L	47.0	44.7	1.05	Agreement
E5091-162	3rd /2006	Water	Zn-65	pCi/L	146	148	0.99	Agreement
E5091-162	3rd /2006	Water	Co-60	pCi/L	130	137	0.95	Agreement
E5092-162	3rd /2006	Charcoal	I-131	pCi	88.3	91.1	0.97	Agreement
E5093-162	3rd /2006	Filter	Gross Alpha	pCi	36.9	37.3	0.99	Agreement
E5093-162	3rd /2006	Filter	Gross Beta	pCi	142	147	0.97	Agreement
E5094-162	3rd /2006	Milk	I-131LL	pCi/L	79.9	73.8	1.08	Agreement
E5094-162	3rd /2006	Milk	I-131	pCi/L	72.5	73.8	0.98	Agreement
E5094-162	3rd /2006	Milk	Ce-141	pCi/L	85.5	86.0	0.99	Agreement
E5094-162	3rd /2006	Milk	Cr-51	pCi/L	288	282	1.02	Agreement
E5094-162	3rd /2006	Milk	Cs-134	pCi/L	84.8	85.0	1.00	Agreement
E5094-162	3rd /2006	Milk	Cs-137	pCi/L	171	175	0.98	Agreement
E5094-162	3rd /2006	Milk	Co-58	pCi/L	106	109	0.97	Agreement
E5094-162	3rd /2006	Milk	Mn-54	pCi/L	112	113	0.99	Agreement
E5094-162	3rd /2006	Milk	Fe-59	pCi/L	45.3	43.7	1.04	Agreement
E5094-162	3rd /2006	Milk	Zn-65	pCi/L	146	145	1.01	Agreement
E5094-162	3rd /2006	Milk	Co-60	pCi/L	129	134	0.96	Agreement

TABLE 3

NIST MAP ANALYSIS RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA, AND MEASUREMENT CATEGORIES
JULY - DECEMBER 2006

	Bias Criteria (1)				Precision Criteria (2)			
	1	2	3	4	1	2	3	4
I. Water								
Gamma	0	0	0	0	0	0	0	0
Total Number in Range:	0	0	0	0	0	0	0	0
Percentage of Total Processed:	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sum of Analyses:	0				0			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
* Total may not equal 100 due to rounding

TABLE 4

SUMMARY OF AREVA NP ENVIRONMENTAL LABORATORY
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (NIST)
TRACEABILITY RESULTS
JULY - DECEMBER 2006

NIST Standard Number	Reference Date of Standard	Radionuclide	Matrix	E-LAB Measurement Technique	Mean Percent Deviation From NIST
(1)					

(1) - No NIST samples were evaluated during this period. Participation suspended, see Section III.A.1.(b).
Data on NIST MAP program is repeated in Table 16 for Part 50/61 QC data.

TABLE 5

SUMMARY OF AREVA NP ENVIRONMENTAL LABORATORY
INTERNATIONAL PROFICIENCY TEST PROGRAM RESULTS
JULY - DECEMBER, 2006

PROGRAM ID	MATRIX/ UNITS	RADIO-NUCLIDE	REPORTED MEAN VALUE Bq/Units	REPORTED ERROR	KNOWN VALUE Bq/Units	KNOWN ERROR	Bias (%)	EVALUATION
IAEA-CU-2006-03	Soil (Bq/kg)	Mn-54	51.4	1.9	48	0.98	7.08	Acceptable
IAEA-CU-2006-03	Soil (Bq/kg)	Co-60	61.6	1.9	56.1	1.37	9.8	Acceptable
IAEA-CU-2006-03	Soil (Bq/kg)	Zn-65	86.6	2.8	77.6	2.54	11.6	Acceptable
IAEA-CU-2006-03	Soil (Bq/kg)	Cd-109	367	7.3	177.6	8.4	106.64	Not Acceptable (1)
IAEA-CU-2006-03	Soil (Bq/kg)	Cs-134	75	2.3	64.2	1.87	16.82	Not Acceptable (1)
IAEA-CU-2006-03	Soil (Bq/kg)	Cs-137	58.8	1.8	52.6	1.08	11.79	Warning (1)
IAEA-CU-2006-03	Vegetation (Bq/kg)	K-40	802	25	1059	28	-24.27	Not Acceptable (1)
IAEA-CU-2006-03	Vegetation (Bq/kg)	Cs-137	7641	221	11320	185	-32.5	Not Acceptable (1)
IAEA-CU-2006-03	Water (Bq/kg)	Mn-54	5.29	0.35	4.59	0.017	8.18	Acceptable
IAEA-CU-2006-03	Water (Bq/kg)	Co-60	5.86	0.19	5.8	0.04	1.03	Acceptable
IAEA-CU-2006-03	Water (Bq/kg)	Zn-65	7.86	0.35	7.27	0.075	8.12	Acceptable
IAEA-CU-2006-03	Water (Bq/kg)	Cd-109	20.6	1.13	19.62	0.1	4.99	Acceptable
IAEA-CU-2006-03	Water (Bq/kg)	Cs-134	14.2	0.44	13.03	0.1	8.98	Warning (1)
IAEA-CU-2006-03	Water (Bq/kg)	Cs-137	17.64	0.54	16.72	0.08	5.5	Acceptable

(1) - See CR 06-22. Backup aliquots being analyzed to verify original results.

TABLE 6

DEPARTMENT OF ENERGY MIXED ANALYTE
PERFORMANCE EVALUATION PROGRAM

SAMPLE ID	MATRIX/ UNITS	REFERENCE DATE	RADIO-NUCLIDE	REPORTED MEAN VALUE Bq/Units	MAPEP VALUE Bq/Units	% Bias	EVALUATION
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Am-241	0.13	0.142	-8.5	Agreement
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Cs-134	3.266	3.147	3.8	Agreement
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Cs-137	2.015	1.805	11.6	Agreement
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Co-57	2.834	2.582	9.8	Agreement
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Co-60	1.622	1.577	2.9	Agreement
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Mn-54	2.118	1.92	10.3	Agreement
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Pu-238	0.123	0.118	4.2	Agreement
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Pu-239/240	0.0016 +/- 0.0012	False Positive Test	N/A	Agreement
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Sr-90	0.473	0.62	-23.7	Warning (1)
MAPEP-06-RdF16	Filter (Bq/filter)	1-Jul-06	Zn-65	-0.004 +/- 0.044	False Positive Test	N/A	Agreement
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Am-241	96.8	105.47	-8.2	Agreement
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Cs-134	595.7	452.13	31.8	Not Acceptable (2)
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Cs-137	691.3	525.73	31.5	Not Acceptable (2)
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Co-57	913.2	676.33	35.0	Not Acceptable (2)
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Co-60	2.56 +/- 0.53	1.98	N/A	Agreement (3)
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Mn-54	793.3	594.25	33.5	Not Acceptable (2)
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Pu-238	80.9	82	-1.3	Agreement
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Pu-239/240	0.48 +/- 0.4	0.93	N/A	Agreement (3)
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	K-40	790	604	30.8	Not Acceptable (2)
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Tc-99	210	218.01	-3.7	Agreement
MAPEP-06-MaS16	Soil (Bq/kg)	1-Jul-06	Zn-65	1196.7	903.61	32.4	Not Acceptable (2)
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Am-241	0.0052 +/- 0.0028	False Positive Test	N/A	Agreement
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Cs-134	5.747	7.487	-23.2	Warning (4)
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Cs-137	4.303	5.495	-21.7	Warning (4)
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Co-57	0.0009 +/-0.009	False Positive Test	N/A	Agreement
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Co-60	4.317	5.806	-25.6	Warning (4)
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Mn-54	6.344	8.351	-24.0	Warning (4)
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Pu-238	0.144	0.151	-4.6	Agreement
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Pu-239/240	0.0036 +/- 0.0023	False Positive Test	N/A	Agreement
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Sr-90	1.089	1.095	-0.5	Agreement
MAPEP-06-RdV16	Vegetation (Bq/sample)	1-Jul-06	Zn-65	4.738	5.984	-20.8	Warning (4)
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Am-241	2.092	2.31	-9.4	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Cs-134	108.92	112.82	-3.5	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Cs-137	187.44	196.14	-4.4	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Co-57	203.41	213.08	-4.5	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Co-60	45.56	47.5	-4.1	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	H-3	445	428.85	3.8	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Fe-55	169	165.4	2.2	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Mn-54	-0.16 +/- 0.15	False Positive Test	N/A	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Ni-63	95.3	118.62	-19.7	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Pu-238	1.363	1.39	-1.9	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Pu-239/240	1.799	1.94	-7.3	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Tc-99	27	27.15	-0.6	Agreement
MAPEP-06-MaW16	Water (Bq/L)	1-Jul-06	Zn-65	174.89	176.37	-0.8	Agreement

(1) - See CR 06-21. Backup sample requested for re-analysis and evaluation.
(2) - See CR 06-20. Backup sample requested for re-analysis and evaluation.
(3) - Sensitivity evaluations in agreement as result +- 2-sigma cross the known value.
(4) - See CR 06-19. Non-homogeneity of container causing Warnings. Backup sample requested for re-analysis and re-calibration.

TABLE 7

ENVIRONMENTAL RESOURCE ASSOCIATES PROFICIENCY TEST RESULTS
AREVA NP ENVIRONMENTAL LABORATORY

ERA LOT #/ REF. DATE	MATRIX/ UNITS	RADIO-NUCLIDE	REPORTED MEAN VALUE pCi/L	ERA VALUE pCi/L	ERA CONTROL LIMITS	ERA WARNING LIMITS	EVALUATION
RAD-67 October 2006	Water pCi/L	Gross Alpha	34	28.7	16.3-41.1	20.4-37.0	Agreement
RAD-67 October 2006	Water pCi/L	Gross Beta	31.4	20.9	132.2-29.6	15.1-26.7	Not Acceptable (1)
RAD-67 October 2006	Water pCi/L	Tritium	3210	3050	2430-3670	2640-3460	Agreement
RAD-67 October 2006	Water pCi/L	Ba-133	64.7	70.2	58.1-82.3	62.1-78.3	Agreement
RAD-67 October 2006	Water pCi/L	Cs-134	29.8	29.9	21.2-38.6	24.1-35.7	Agreement
RAD-67 October 2006	Water pCi/L	Cs-137	73.5	78.2	69.5-86.9	72.4-84.0	Agreement
RAD-67 October 2006	Water pCi/L	Co-60	61.5	62.3	53.6-71.0	56.5-68.1	Agreement
RAD-67 October 2006	Water pCi/L	Zn-65	282	277	229-325	245-309	Agreement
RAD-67 October 2006	Water pCi/L	I-131	21.3	22.1	16.9-27.3	18.6-25.6	Agreement

(1) - See CR 06-23. Initial result affected by short-lived radon daughters. Subsequent recount provided acceptable results.

TABLE 8

INTRA-LABORATORY ENVIRONMENTAL PROCESS CONTROL RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA, AND MEASUREMENT CATEGORIES
JULY - DECEMBER 2006

	Bias Criteria (1)				Precision Criteria (2), (3)			
	1	2	3	4	1	2	3	4
I. Air Particulate								
Beta	108	17	0	0	-	-	-	-
II. Air Charcoal								
Gamma-Quantitative	21	4	0	0	-	-	-	-
III. Food (Aquatic/Terrestrial)								
Gamma	0	0	0	0	8	2	20	0
IV. Milk								
Gamma	0	0	0	0	4	2	10	0
Iodine (LL)	0	0	0	0	0	0	0	0
V. Soil/Sed.								
Gamma	0	0	0	0	8	2	6	0
VI. Vegetation (Aquatic/Terrestrial)								
Gamma	0	0	0	0	6	4	14	0
VII. Water								
Gross Alpha	0	1	0	1	0	0	0	0
Gross Beta	3	0	0	0	2	0	2	0
Gamma	0	0	0	0	2	0	12	0
Iodine (LL)	0	0	0	0	0	0	0	0
Sr-90	0	0	0	0	0	0	0	0
Tritium	0	0	0	0	2	0	4	0
Total Number in Range:	**132**	**22**	**0**	**1**	**32**	**10**	**68**	**0**
Percentage of Total Processed:	**85.2**	**14.2**	**0.0**	**0.6**	**29.1**	**9.1**	**61.8**	**0.0**
Sum of Analyses:	**155**				**110**			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
(3) Most Precision data generated from non-positive client samples for specific contractual evaluation
* Total may not equal 100 due to rounding

TABLE 9

AREVA NP ENVIRONMENTAL LABORATORY
ENVIRONMENTAL INTRA-LABORATORY AND INTER-LABORATORY
DATA SUMMARY BIAS AND PRECISION BY MEDIA
JULY - DECEMBER 2006

	Bias Criteria (1)				Precision Criteria (2), (3)			
	1	2	3	4	1	2	3	4
I. Air Filter								
Gross Alpha	4	2	3	0	9	0	0	0
Gross Beta	111	23	0	0	9	0	0	0
Gamma	21	6	0	0	27	0	0	0
Sr-89	0	1	1	0	2	0	0	0
Sr-90	0	0	0	2	0	0	2	0
II. Charcoal								
Gamma-Quantitative	26	5	0	0	6	0	0	0
III. Food (Aquatic/Terrestrial)								
Gamma	0	0	0	0	8	2	20	0
IV. Milk								
Gamma	69	20	1	0	83	13	10	0
Iodine (LL)	3	2	2	0	6	0	0	0
Sr-89	2	0	4	0	4	2	0	0
Sr-90	6	0	0	0	6	0	0	0
V. Soil/Sediment								
Gamma	0	0	0	0	8	2	6	0
VI. Vegetation (Aquatic/Terrestrial)								
Gamma	0	0	0	0	6	4	14	0
VII. Water								
Gross Alpha	6	1	0	1	6	0	0	0
Gross Beta	8	0	1	0	7	1	2	0
Gamma	38	18	4	0	49	12	13	0
Iodine (LL)	3	0	1	0	1	2	0	0
Sr-89	0	0	3	0	2	1	0	0
Sr-90	2	1	0	0	3	0	0	0
Tritium	3	0	0	0	5	0	4	0
Total Number in Range:	**302**	**79**	**20**	**3**	**247**	**39**	**71**	**0**
Percentage of Total Processed:	**74.8**	**19.6**	**5.0**	**0.7**	**69.2**	**10.9**	**19.9**	**0.0**
Sum of Analyses:	**404**				**357**			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
(3) Most Precision data generated from non-positive client samples for specific contractual evaluation
* Total may not equal 100 due to rounding.
** Totals summarize Internal PCs, NIST MAP, and Analytics Cross Check programs

TABLE 10

AREVA NP ENVIRONMENTAL LABORATORY
ENVIRONMENTAL INTRA-LABORATORY AND INTER-LABORATORY
DATA SUMMARY BIAS AND PRECISION BY ANALYSIS TYPE
JULY - DECEMBER 2006

	Bias Criteria (1)				Precision Criteria (2), (3)			
	1	2	3	4	1	2	3	4
I. Gross Alpha								
Air Filter	4	2	3	0	9	0	0	0
Water	6	1	0	1	6	0	0	0
II. Gross Beta								
Air Filter	111	23	0	0	9	0	0	0
Water	8	0	1	0	7	1	2	0
III. Gamma								
Air Filter	21	6	0	0	27	0	0	0
Charcoal-Quantitative	26	5	0	0	6	0	0	0
Food	0	0	0	0	8	2	20	0
Milk	69	20	1	0	83	13	10	0
Soil/Sediment	0	0	0	0	8	2	6	0
Vegetation	0	0	0	0	6	4	14	0
Water	38	18	4	0	49	12	13	0
IV. Iodine (LL)								
Milk	3	2	2	0	6	0	0	0
Water	3	0	1	0	1	2	0	0
V. Sr-89								
Air Filter	0	1	1	0	2	0	0	0
Milk	2	0	4	0	4	2	0	0
Water	0	0	3	0	2	1	0	0
VI. Sr-90								
Air Filter	0	0	0	2	0	0	2	0
Milk	6	0	0	0	6	0	0	0
Water	2	1	0	0	3	0	0	0
VII. Tritium								
Water	3	0	0	0	5	0	4	0
Total Number in Range:	**302**	**79**	**20**	**3**	**247**	**39**	**71**	**0**
Percentage of Total Processed:	**74.8**	**19.6**	**5.0**	**0.7**	**69.2**	**10.9**	**19.9**	**0.0**
Sum of Analyses:	**404**				**357**			

(1) Percent Bias by Deviation Category as noted in Table 1, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 1, Footnote (2)
(3) Most Precision data generated from non-positive client samples for specific contractual evaluation
* Total may not equal 100 due to rounding.
** Totals summarize Internal PCs, NIST MAP, and Analytics Cross Check programs

TABLE 11

ENVIRONMENTAL BIAS AND PRECISION BY YEAR

Year	Percent Bias Deviation from Known — Bias Criteria* (1)					Percent Precision Deviation from Mean — Precision Criteria* (2)				
	1	2	3	Outside Criteria 4	% Within Criteria	1	2	3	Outside Criteria 4	% Within Criteria
2006	508	132	49	5	**99.3**	363	75	151	2	**99.7**
2005	710	242	117	3	**99.7**	358	25	124	0	**100.0**
2004	849	273	172	10	**99.2**	440	60	362	2	**99.8**
2003	572	182	74	13	**98.5**	354	55	106	1	**99.8**
2002	619	170	74	7	**99.2**	411	44	16	3	**99.4**
2001	383	115	80	22	**96.3**	330	45	19	2	**99.5**
2000	368	143	63	18	**97.0**	342	70	36	1	**99.8**
1999	323	100	44	13	**97.3**	301	46	10	2	**99.4**
1998	375	100	21	7	**98.6**	355	56	21	4	**99.1**
1997	351	118	46	11	**97.9**	306	46	11	0	**100.0**
1996	616	187	104	24	**97.4**	696	71	33	3	**99.6**
1995	291	75	37	12	**97.1**	200	43	24	0	**100.0**
1994	359	116	54	14	**97.4**	265	61	10	1	**99.7**
1993	262	121	60	29	**93.9**	227	59	26	1	**99.7**
1992	438	206	84	21	**97.2**	656	112	29	1	**99.9**
1991	504	174	92	19	**97.6**	710	82	30	4	**99.5**
1990	519	153	56	34	**95.5**	644	97	20	2	**99.7**
1989	448	171	70	28	**96.1**	599	76	35	4	**99.4**
1988	425	141	66	22	**96.6**	536	76	20	1	**99.8**
1987	450	187	65	27	**96.3**	623	80	15	3	**99.6**
1986	558	185	70	27	**96.8**	700	82	33	0	**100.0**
1985	449	177	92	25	**96.6**	561	93	28	0	**100.0**
1984	479	254	104	31	**96.4**	699	127	24	0	**100.0**
1983	475	211	108	36	**95.7**	639	113	46	4	**99.5**
1982	341	109	135	30	**95.1**	496	112	135	12	**98.4**
1981	175	116	152	29	**93.9**	286	72	46	1	**99.8**
1980	160	115	167	37	**92.3**	335	96	59	1	**99.8**
1979	80	51	68	20	**90.9**	230	73	51	16	**95.7**
1978	112	90	40	20	**92.4**	259	73	29	14	**96.3**
1977	28	18	12	8	**87.9**	75	39	5	7	**94.4**
Total # in Range:	**12,227**	**4,432**	**2,376**	**602**	**96.9**	**12,996**	**2,159**	**1,554**	**92**	**99.5**
% of all Analyses in Range*	**62.3**	**22.6**	**12.1**	**3.1**		**77.4**	**12.9**	**9.2**	**0.5**	
Total Number	**19,637**					**16,801**				

* Total may not equal 100 due to rounding.
(1) Deviation Categories 1-3 as noted in Table 1, Footnote (1)
(2) Deviation Categories 1-3 as noted in Table 1, Footnote (2)

TABLE 12

ANALYTICS RADIOCHEMISTRY CROSSCHECK PROGRAM RESULTS BY
AREVA NP ENVIRONMENTAL LABORATORY
ACCEPTANCE CRITERIA, MEDIA, AND MEASUREMENT CATEGORIES
JULY - DECEMBER 2006

	Bias Criteria (1)				Precision Criteria (2)			
	1	2	3	4	1	2	3	4
I. Water								
Fe-55	0	2	4	0	6	0	0	0
Sr-89	1	2	3	0	4	2	0	0
Sr-90	2	2	2	0	6	0	0	0
Total Number in Range:	**3**	**6**	**9**	**0**	**16**	**2**	**0**	**0**
Percentage of Total Processed:	**16.7**	**33.3**	**50.0**	**0.0**	**88.9**	**11.1**	**0.0**	**0.0**
Sum of Analyses:	**18**				**18**			

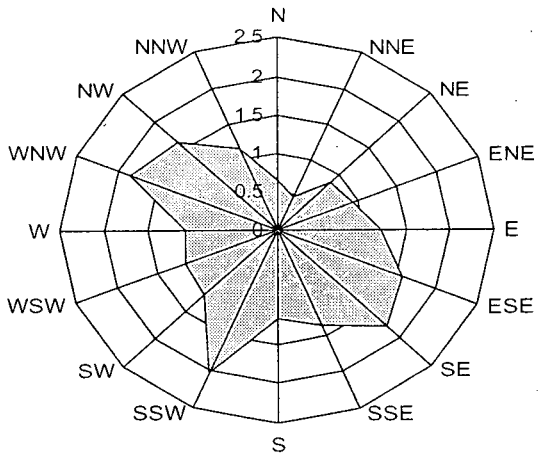
(1) Percent Bias by Deviation Category as noted in Table 12, Footnote (1)
(2) Percent Precision by Deviation Category as noted in Table 12, Footnote (2)
* Total may not equal 100 due to rounding

Appendix G

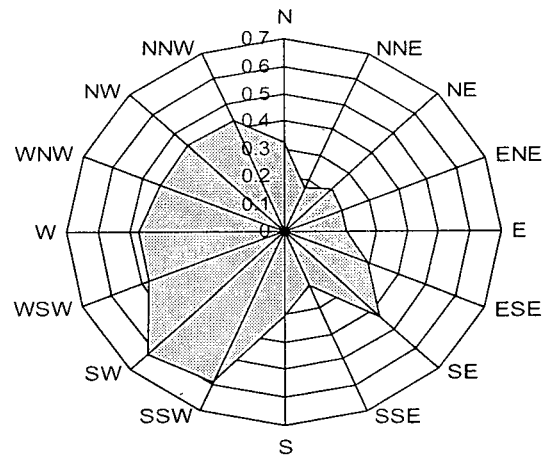
Meteorological Data

Wind direction frequency measured at 10 meters.

Stability Class A

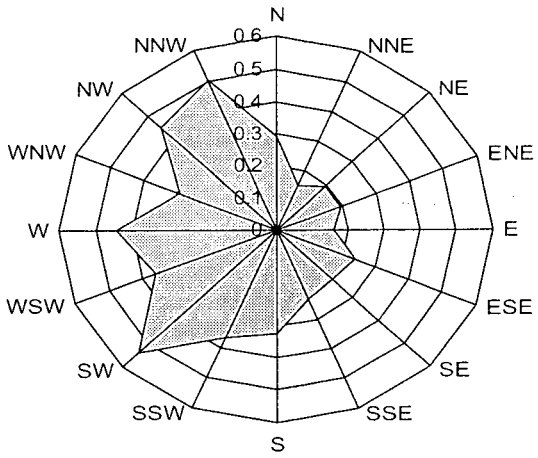


Stability Class B

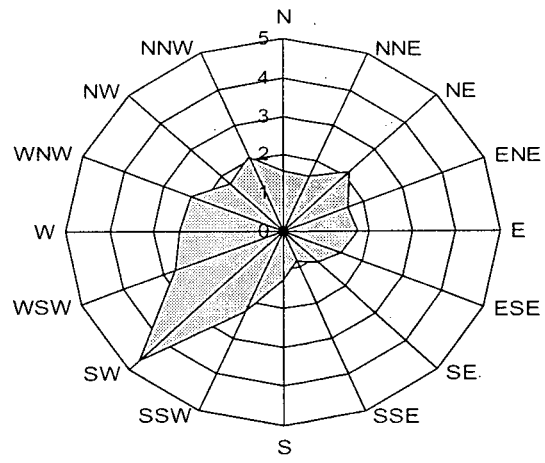


Wind direction frequency measured at 10 meters.

Stability Class C

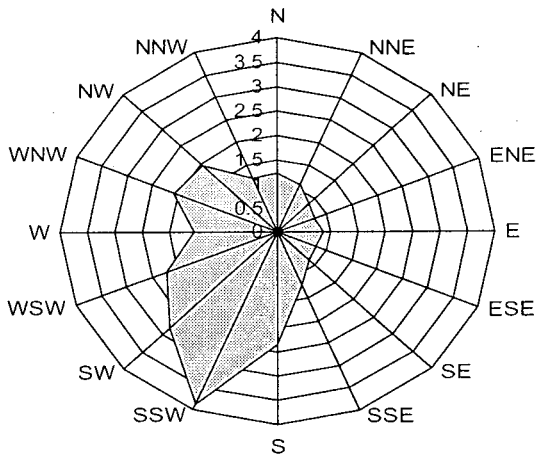


Stability Class D

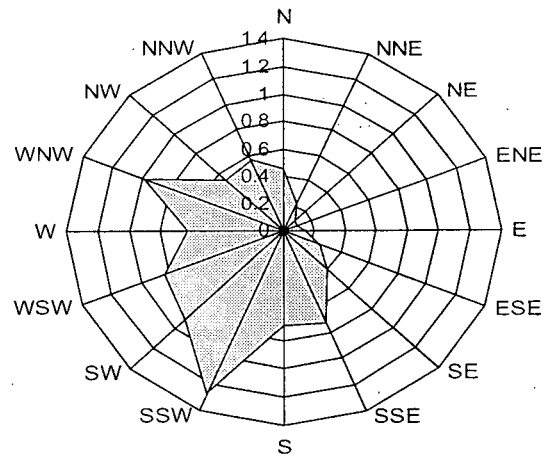


Wind direction frequency measured at 10 meters.

Stability Class E

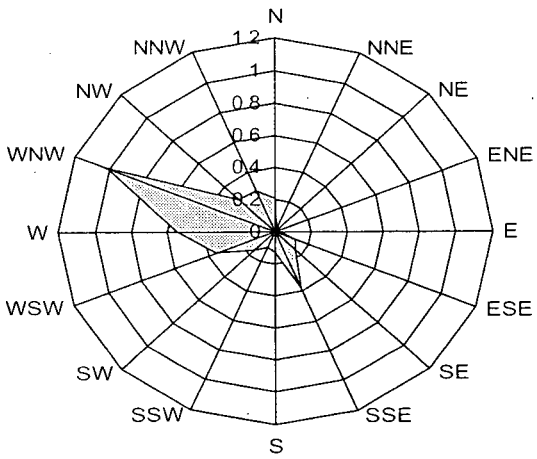


Stability Class F

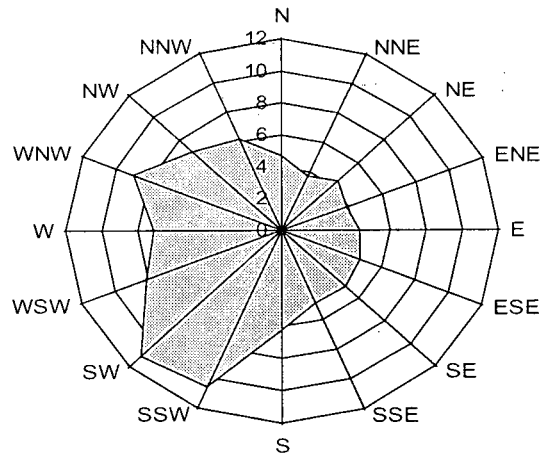


Wind direction frequency measured at 10 meters.

Stability Class G



All Stability Classes



FERMI 2 2006

X/Q and D/Q Tables

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6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  1.000  0.000  0.000
6       3.000 10.000  4.000  6.000  6.000  9.000  6.000 10.000  5.000 10.000  8.000 18.000 17.000 26.000 12.000 10.000
6      13.000 14.000 14.000 16.000 18.000 54.000 53.000 39.000 44.000 31.000 24.000 33.000 21.000 52.000 52.000 38.000
6      25.000  6.000 31.000 28.000 18.000 45.000 69.000 49.000 38.000 72.000 30.000 24.000 26.000 41.000 44.000 35.000
6      13.000 10.000 23.000 24.000 29.000 19.000 24.000 17.000 13.000 53.000 33.000 24.000 16.000 30.000 25.000 12.000
6       2.000  0.000  3.000  7.000 24.000  6.000  1.000  1.000  0.000  8.000  8.000  0.000 12.000  7.000  4.000  4.000
6       0.000  0.000  0.000  1.000  9.000  1.000  0.000  0.000  0.000  0.000  1.000  0.000  0.000  1.000  1.000  0.000
6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  1.000  0.000  0.000  0.000  0.000  0.000  0.000
6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
6       1.000  0.000  0.000  0.000  0.000  0.000  1.000  2.000  0.000  0.000  0.000  1.000  2.000  1.000  2.000  0.000
6       9.000  5.000  1.000  5.000  1.000  6.000  3.000  1.000  4.000  4.000  8.000 12.000  4.000  7.000  7.000  7.000
6      10.000  4.000  7.000  4.000  7.000  3.000 18.000  9.000 13.000 10.000  9.000  5.000 12.000 16.000 13.000 16.000
6       5.000  4.000  7.000  3.000  4.000  6.000 11.000  4.000  4.000 25.000 10.000 15.000 16.000  6.000  8.000  5.000
6       3.000  1.000  4.000  4.000  1.000  5.000  4.000  2.000  5.000 10.000 10.000  7.000  7.000  2.000  4.000  6.000
6       0.000  1.000  0.000  1.000  3.000  5.000  0.000  0.000  0.000  1.000 10.000  1.000  0.000  5.000  4.000  3.000
6       0.000  0.000  0.000  0.000  1.000  0.000  0.000  0.000  0.000  1.000  7.000  0.000  0.000  0.000  0.000  0.000
6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
6       1.000  0.000  2.000  0.000  0.000  0.000  0.000  0.000  1.000  0.000  0.000  1.000  0.000  0.000  0.000  4.000
6       4.000  4.000  0.000  0.000  1.000  0.000  3.000  2.000  7.000  4.000  5.000  8.000  9.000  5.000  7.000  8.000
6      13.000  4.000  7.000  3.000  3.000  8.000  7.000  9.000  9.000  6.000  3.000  8.000 13.000  4.000 12.000 18.000
6       5.000  4.000  4.000  3.000  3.000  7.000  4.000  7.000  6.000 15.000 12.000  9.000 10.000  8.000  6.000  7.000
6       1.000  0.000  3.000  8.000  2.000  4.000  5.000  1.000  5.000  6.000 10.000  3.000  6.000  5.000  6.000  4.000
6       1.000  1.000  0.000  2.000  3.000  1.000  0.000  1.000  0.000  0.000  8.000  2.000  0.000  3.000  6.000  1.000
6       0.000  0.000  0.000  0.000  2.000  1.000  0.000  0.000  0.000  0.000  6.000  0.000  0.000  0.000  2.000  1.000
6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  3.000  0.000  0.000  0.000  0.000  0.000
6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
6      10.000  5.000  1.000  1.000  0.000  0.000  1.000  1.000  2.000  6.000  6.000 10.000 11.000 16.000  6.000  5.000
6      27.000 32.000  8.000 16.000  9.000  9.000  8.000  9.000 12.000 10.000 27.000 45.000 52.000 47.000 47.000 43.000
6      29.000 29.000 29.000 29.000 15.000 31.000 28.000 16.000 34.000 41.000 62.000 85.000 60.000 50.000 42.000 47.000
6      25.000 35.000 71.000 35.000 33.000 25.000 27.000 20.000 34.000 53.000 86.000 46.000 44.000 31.000 33.000 50.000
6      32.000 21.000 62.000 44.000 48.000 33.000 17.000 21.000 21.000 43.000121.000 36.000 24.000 32.000 20.000 29.000
6      10.000 14.000 11.000  9.000 32.000 14.000 10.000  4.000  4.000 30.000 86.000  9.000 10.000 18.000  4.000  4.000
6       0.000  0.000  3.000  3.000 12.000 11.000  5.000  0.000  1.000 10.000 14.000  1.000  4.000  6.000  1.000  2.000
6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  3.000  0.000  0.000  0.000  0.000  0.000
6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
6      18.000  8.000  5.000  1.000  0.000  0.000  2.000  5.000  5.000 18.000 25.000 37.000 39.000 35.000 22.000  2.000
6      31.000 42.000 18.000  5.000  6.000 17.000 11.000 18.000 38.000 46.000 95.000100.000 53.000107.000114.000 33.000
6      29.000 28.000 28.000 27.000 13.000 20.000 20.000 38.000 57.000 74.000 70.000 41.000 30.000 20.000 21.000 46.000
6      17.000  8.000 15.000  8.000 18.000 19.000 20.000 23.000 50.000 81.000 22.000  7.000  5.000 11.000  6.000  7.000
6       8.000  6.000  5.000 21.000 16.000  8.000 12.000 18.000 46.000 86.000 22.000  4.000  5.000  4.000  4.000  6.000
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    6       1.000  0.000  1.000  3.000 15.000  3.000  3.000  1.000  6.000 26.000  9.000  0.000  0.000  1.000  0.000  6.000
    6       0.000  0.000  0.000  0.000  6.000  0.000  2.000  0.000  0.000  5.000  1.000  0.000  1.000  0.000  0.000  3.000
    6       1.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    6      10.000  4.000  5.000  3.000  3.000  3.000  2.000  9.000  5.000 18.000 24.000 27.000 31.000 36.000 16.000 21.000
    6      19.000 11.000  3.000  2.000  1.000  5.000  4.000 15.000 19.000 23.000 50.000 42.000 17.000 45.000 27.000 22.000
    6       9.000  3.000  1.000  1.000  2.000  3.000 16.000 17.000 14.000 33.000  4.000  2.000  1.000  1.000  3.000  5.000
    6       0.000  0.000  0.000  2.000  3.000  5.000  9.000 14.000 10.000 19.000  1.000  1.000  4.000  0.000  0.000  0.000
    6       0.000  0.000  0.000  0.000  3.000  6.000  2.000  6.000 12.000 17.000  0.000  0.000  1.000  1.000  0.000  0.000
    6       1.000  0.000  0.000  0.000  0.000  0.000  2.000  1.000  0.000  0.000  0.000  0.000  0.000  1.000  0.000  0.000
    6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    6       6.000  2.000  1.000  0.000  0.000  0.000  1.000  0.000  3.000  2.000  7.000 24.000 40.000 49.000 14.000  9.000
    6      11.000  0.000  2.000  1.000  1.000  0.000  6.000  4.000  3.000  4.000  7.000  6.000  7.000 37.000  9.000 13.000
    6       1.000  0.000  0.000  0.000  1.000  6.000  3.000  9.000  4.000  3.000  0.000  0.000  0.000  1.000  1.000  2.000
    6       0.000  0.000  0.000  0.000  1.000  3.000  3.000  9.000  1.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    6       0.000  0.000  0.000  0.000  0.000  1.000  1.000 10.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    6       0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000  0.000
    7        111.  0.750  2.500  4.500  6.500  8.500 11.500 14.500 18.500 23.500  0.000  0.000  0.000  0.000  0.000
VRDIST,VRCR NOT INPUTTED.
   10        918.   918.   918.   918.   918.   918.   918.   918.   918.   918.   918.   918.   918.   918.   918.
   11          0.     0.     0.     0.     0.     0.     0.     0.     0.     0.     0.     0.     0.     0.     0.
   12        11   11    2   10    2
   13     SITE BOUNDARY
   14      11 1825.0 10 1646.0 11  579.0  1 1417.0  2 1542.0  3 1920.0  4 1798.0  5 1390.0

 6 1082.0  7  915.0  8  990.0
   13     Residences
   14       9 1776.0 11 1773.0 10 1646.0  8 1743.0  7 1700.0  6 1103.0  5 1861.0  4 2547.0

 3 2025.0  2 1826.0  1 1640.0
   13     MILK COW
   14       7 5874.0  6 3672.0
   13     VEGETABLE GARDEN
   14       9 2633.0 10 2894.0 11 3200.0  8 4107.0  7 4435.0  2 2414.0  3 7062.0  5 5123.0

 6 2936.0  4 5173.0
   13     Visitor Center/Ice F
   14       2  470.0 13  470.0
   15     Reactor Bldg
   16      11.800  2.190   51.2   47.5 2300.0   51.2  0.00
   17     A   0    0    0
   15     Turbine Bldg
   16       3.310  7.460   40.1   40.1 5130.0   40.1  0.00
   17     B   0    0    0
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USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS A

UMAX (M/S)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
0.34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.012
2.01	0.035	0.116	0.046	0.069	0.069	0.104	0.069	0.116	0.058	0.116	0.093	0.208	0.197	0.301	0.139	0.116	1.851
2.91	0.150	0.162	0.162	0.185	0.208	0.625	0.613	0.451	0.509	0.359	0.278	0.382	0.243	0.602	0.602	0.440	5.969
3.80	0.289	0.069	0.359	0.324	0.208	0.521	0.798	0.567	0.440	0.833	0.347	0.278	0.301	0.474	0.509	0.405	6.721
5.14	0.150	0.116	0.266	0.278	0.335	0.220	0.278	0.197	0.150	0.613	0.382	0.278	0.185	0.347	0.289	0.139	4.222
6.48	0.023	0.000	0.035	0.081	0.278	0.069	0.012	0.012	0.000	0.093	0.093	0.000	0.139	0.081	0.046	0.046	1.006
8.27	0.000	0.000	0.000	0.012	0.104	0.012	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.012	0.012	0.000	0.162
10.51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.012
TOTAL	0.65	0.46	0.87	0.95	1.20	1.55	1.77	1.34	1.16	2.02	1.20	1.15	1.06	1.83	1.60	1.15	19.95

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS B

UMAX (M/S)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
0.34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.12	0.012	0.000	0.000	0.000	0.000	0.000	0.012	0.023	0.000	0.000	0.000	0.012	0.023	0.012	0.023	0.000	0.116
2.01	0.104	0.058	0.012	0.058	0.012	0.069	0.035	0.012	0.046	0.046	0.093	0.139	0.046	0.081	0.081	0.081	0.972
2.91	0.116	0.046	0.081	0.046	0.081	0.035	0.208	0.104	0.150	0.116	0.104	0.058	0.139	0.185	0.150	0.185	1.805
3.80	0.058	0.046	0.081	0.035	0.046	0.069	0.127	0.046	0.046	0.289	0.116	0.174	0.185	0.069	0.093	0.058	1.538
5.14	0.035	0.012	0.046	0.046	0.012	0.058	0.046	0.023	0.058	0.116	0.116	0.081	0.081	0.023	0.046	0.069	0.868
6.48	0.000	0.012	0.000	0.012	0.035	0.058	0.000	0.000	0.000	0.012	0.116	0.012	0.000	0.058	0.046	0.035	0.393
8.27	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.000	0.012	0.081	0.000	0.000	0.000	0.000	0.000	0.104
10.51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.32	0.17	0.22	0.20	0.20	0.29	0.43	0.21	0.30	0.59	0.62	0.47	0.47	0.43	0.44	0.43	5.80

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS C

UMAX (M/S)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
0.34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.12	0.012	0.000	0.023	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.012	0.000	0.000	0.000	0.046	0.104
2.01	0.046	0.046	0.000	0.000	0.012	0.000	0.035	0.023	0.081	0.046	0.058	0.093	0.104	0.058	0.081	0.093	0.775
2.91	0.150	0.046	0.081	0.035	0.035	0.093	0.081	0.104	0.104	0.069	0.035	0.093	0.150	0.046	0.139	0.208	1.469
3.80	0.058	0.046	0.046	0.035	0.035	0.081	0.046	0.081	0.069	0.174	0.139	0.104	0.116	0.093	0.069	0.081	1.272
5.14	0.012	0.000	0.035	0.093	0.023	0.046	0.058	0.012	0.058	0.069	0.116	0.035	0.069	0.058	0.069	0.046	0.798
6.48	0.012	0.012	0.000	0.023	0.035	0.012	0.000	0.012	0.000	0.000	0.093	0.023	0.000	0.035	0.069	0.012	0.335
8.27	0.000	0.000	0.000	0.000	0.023	0.012	0.000	0.000	0.000	0.000	0.069	0.000	0.000	0.000	0.023	0.012	0.139
10.51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.035
TOTAL	0.29	0.15	0.19	0.19	0.16	0.24	0.22	0.23	0.32	0.36	0.54	0.36	0.44	0.29	0.45	0.50	4.93

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS D

UMAX (M/S)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
0.34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.12	0.116	0.058	0.012	0.012	0.000	0.000	0.012	0.012	0.023	0.069	0.069	0.116	0.127	0.185	0.069	0.058	0.937
2.01	0.312	0.370	0.093	0.185	0.104	0.104	0.093	0.104	0.139	0.116	0.312	0.521	0.602	0.544	0.544	0.497	4.639
2.91	0.335	0.335	0.335	0.335	0.174	0.359	0.324	0.185	0.393	0.474	0.717	0.983	0.694	0.578	0.486	0.544	7.253
3.80	0.289	0.405	0.821	0.405	0.382	0.289	0.312	0.231	0.393	0.613	0.995	0.532	0.509	0.359	0.382	0.578	7.496
5.14	0.370	0.243	0.717	0.509	0.555	0.382	0.197	0.243	0.243	0.497	1.400	0.416	0.278	0.370	0.231	0.335	6.987
6.48	0.116	0.162	0.127	0.104	0.370	0.162	0.116	0.046	0.046	0.347	0.995	0.104	0.116	0.208	0.046	0.046	3.112
8.27	0.000	0.000	0.035	0.035	0.139	0.127	0.058	0.000	0.012	0.116	0.162	0.012	0.046	0.069	0.012	0.023	0.844
10.51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.035
TOTAL	1.54	1.57	2.14	1.58	1.72	1.42	1.11	0.82	1.25	2.23	4.68	2.68	2.37	2.31	1.77	2.08	31.30

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS E

UMAX (M/S)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
0.34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.12	0.208	0.093	0.058	0.012	0.000	0.000	0.023	0.058	0.058	0.208	0.289	0.428	0.451	0.405	0.254	0.023	2.568
2.01	0.359	0.486	0.208	0.058	0.069	0.197	0.127	0.208	0.440	0.532	1.099	1.157	0.613	1.238	1.319	0.382	8.490
2.91	0.335	0.324	0.324	0.312	0.150	0.231	0.231	0.440	0.659	0.856	0.810	0.474	0.347	0.231	0.243	0.532	6.501
3.80	0.197	0.093	0.174	0.093	0.208	0.220	0.231	0.266	0.578	0.937	0.254	0.081	0.058	0.127	0.069	0.081	3.667
5.14	0.093	0.069	0.058	0.243	0.185	0.093	0.139	0.208	0.532	0.995	0.254	0.046	0.058	0.046	0.046	0.069	3.135
6.48	0.012	0.000	0.012	0.035	0.174	0.035	0.035	0.012	0.069	0.301	0.104	0.000	0.000	0.012	0.000	0.069	0.868
8.27	0.000	0.000	0.000	0.000	0.069	0.000	0.023	0.000	0.000	0.058	0.012	0.000	0.012	0.000	0.000	0.035	0.208
10.51	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.012
TOTAL	1.21	1.06	0.83	0.75	0.86	0.78	0.81	1.19	2.34	3.89	2.82	2.19	1.54	2.06	1.93	1.19	25.45

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS F

UMAX (M/S)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
0.34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.12	0.116	0.046	0.058	0.035	0.035	0.035	0.023	0.104	0.058	0.208	0.278	0.312	0.359	0.416	0.185	0.243	2.510
2.01	0.220	0.127	0.035	0.023	0.012	0.058	0.046	0.174	0.220	0.266	0.578	0.486	0.197	0.521	0.312	0.254	3.528
2.91	0.104	0.035	0.012	0.012	0.023	0.035	0.185	0.197	0.162	0.382	0.046	0.023	0.012	0.012	0.035	0.058	1.330
3.80	0.000	0.000	0.000	0.023	0.035	0.058	0.104	0.162	0.116	0.220	0.012	0.012	0.046	0.000	0.000	0.000	0.787
5.14	0.000	0.000	0.000	0.000	0.035	0.069	0.023	0.069	0.139	0.197	0.000	0.000	0.012	0.012	0.000	0.000	0.555
6.48	0.012	0.000	0.000	0.000	0.000	0.000	0.023	0.012	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.058
8.27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.45	0.21	0.10	0.09	0.14	0.25	0.40	0.72	0.69	1.27	0.91	0.83	0.62	0.97	0.53	0.56	8.77

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION ATMOSPHERIC STABILITY CLASS G

UMAX (M/S)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
0.34	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
1.12	0.069	0.023	0.012	0.000	0.000	0.000	0.012	0.000	0.035	0.023	0.081	0.278	0.463	0.567	0.162	0.104	1.828
2.01	0.127	0.000	0.023	0.012	0.012	0.000	0.069	0.046	0.035	0.046	0.081	0.069	0.081	0.428	0.104	0.150	1.284
2.91	0.012	0.000	0.000	0.000	0.012	0.069	0.035	0.104	0.046	0.035	0.000	0.000	0.000	0.012	0.012	0.023	0.359
3.80	0.000	0.000	0.000	0.000	0.012	0.035	0.035	0.104	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.197
5.14	0.000	0.000	0.000	0.000	0.000	0.012	0.012	0.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139
6.48	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8.27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10.51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	0.21	0.02	0.03	0.01	0.03	0.12	0.16	0.37	0.13	0.10	0.16	0.35	0.54	1.01	0.28	0.28	3.81

TOTAL HOURS CONSIDERED ARE 8645

WIND MEASURED AT 10.0 METERS.

OVERALL WIND DIRECTION FREQUENCY

WIND DIRECTION:	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
FREQUENCY:	4.7	3.7	4.4	3.8	4.3	4.7	4.9	4.9	6.2	10.5	11.0	8.0	7.1	8.9	7.0	6.2	100.0

OVERALL WIND SPEED FREQUENCY

MAX WIND SPEED (M/S):	0.335	1.118	2.012	2.906	3.800	5.141	6.482	8.270	10.505
AVE WIND SPEED (M/S):	0.168	0.726	1.565	2.459	3.353	4.470	5.812	7.376	9.388
WIND SPEED FREQUENCY:	0.00	8.07	21.54	24.68	21.68	16.70	5.77	1.46	0.09

THE CONVERSION FACTOR APPLIED TO THE WIND SPEED CLASSESS IS 0.447

DISTANCES AND TERRAIN HEIGHTS IN METERS AS FUNCTIONS OF DIRECTION FROM THE SITE:

DIRECTION =	S	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE
DISTANCE	918.	918.	918.	918.	918.	918.	918.	918.	918.	918.	918.	918.	918.	918.	918.	918.
ELEVATION	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

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Fermi 2 2006 Data

Reactor Bldg
NO DECAY, UNDEPLETED
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	2.357E-06	8.774E-07	5.516E-07	3.282E-07	1.691E-07	1.072E-07	7.546E-08	5.672E-08	4.463E-08	3.632E-08	3.034E-08
SSW	1.723E-06	6.544E-07	4.311E-07	2.663E-07	1.408E-07	8.935E-08	6.251E-08	4.662E-08	3.639E-08	2.939E-08	2.437E-08
SW	2.023E-06	7.626E-07	4.979E-07	2.971E-07	1.466E-07	8.862E-08	5.998E-08	4.370E-08	3.352E-08	2.671E-08	2.192E-08
WSW	1.990E-06	7.250E-07	4.513E-07	2.608E-07	1.248E-07	7.432E-08	4.985E-08	3.608E-08	2.754E-08	2.187E-08	1.788E-08
W	2.662E-06	9.351E-07	5.562E-07	3.077E-07	1.393E-07	8.049E-08	5.304E-08	3.797E-08	2.877E-08	2.272E-08	1.851E-08
WNW	2.765E-06	9.233E-07	5.328E-07	2.964E-07	1.387E-07	8.209E-08	5.507E-08	3.996E-08	3.062E-08	2.441E-08	2.005E-08
NW	2.996E-06	9.856E-07	5.565E-07	3.048E-07	1.410E-07	8.342E-08	5.609E-08	4.085E-08	3.141E-08	2.512E-08	2.071E-08
NNW	3.818E-06	1.226E-06	6.832E-07	3.722E-07	1.745E-07	1.053E-07	7.219E-08	5.343E-08	4.167E-08	3.374E-08	2.809E-08
N	4.465E-06	1.554E-06	9.236E-07	5.189E-07	2.448E-07	1.470E-07	9.990E-08	7.330E-08	5.667E-08	4.551E-08	3.762E-08
NNE	7.731E-06	2.676E-06	1.568E-06	8.678E-07	4.034E-07	2.414E-07	1.642E-07	1.207E-07	9.348E-08	7.523E-08	6.229E-08
NE	5.950E-06	2.210E-06	1.384E-06	8.076E-07	3.983E-07	2.453E-07	1.694E-07	1.256E-07	9.788E-08	7.907E-08	6.565E-08
ENE	3.533E-06	1.306E-06	8.463E-07	5.247E-07	2.849E-07	1.856E-07	1.327E-07	1.009E-07	8.001E-08	6.554E-08	5.503E-08
E	2.712E-06	1.026E-06	6.706E-07	4.181E-07	2.290E-07	1.500E-07	1.077E-07	8.215E-08	6.537E-08	5.371E-08	4.524E-08
ESE	4.359E-06	1.465E-06	8.729E-07	5.203E-07	2.797E-07	1.835E-07	1.325E-07	1.017E-07	8.138E-08	6.724E-08	5.692E-08
SE	3.247E-06	1.145E-06	7.083E-07	4.292E-07	2.302E-07	1.489E-07	1.060E-07	8.026E-08	6.346E-08	5.184E-08	4.344E-08
SSE	3.060E-06	1.125E-06	7.097E-07	4.195E-07	2.102E-07	1.300E-07	8.999E-08	6.689E-08	5.223E-08	4.229E-08	3.520E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.589E-08	1.470E-08	1.007E-08	6.160E-09	4.337E-09	3.299E-09	2.637E-09	2.181E-09	1.850E-09	1.600E-09	1.405E-09
SSW	2.065E-08	1.138E-08	7.630E-09	4.522E-09	3.110E-09	2.324E-09	1.830E-09	1.495E-09	1.255E-09	1.075E-09	9.367E-10
SW	1.841E-08	9.885E-09	6.535E-09	3.818E-09	2.609E-09	1.941E-09	1.525E-09	1.244E-09	1.043E-09	8.926E-10	7.770E-10
WSW	1.498E-08	7.974E-09	5.243E-09	3.041E-09	2.067E-09	1.532E-09	1.200E-09	9.763E-10	8.168E-10	6.981E-10	6.067E-10
W	1.546E-08	8.172E-09	5.364E-09	3.114E-09	2.121E-09	1.576E-09	1.237E-09	1.008E-09	8.452E-10	7.236E-10	6.299E-10
WNW	1.687E-08	9.158E-09	6.120E-09	3.640E-09	2.523E-09	1.899E-09	1.506E-09	1.238E-09	1.046E-09	9.011E-10	7.890E-10
NW	1.749E-08	9.650E-09	6.527E-09	3.949E-09	2.770E-09	2.104E-09	1.681E-09	1.392E-09	1.181E-09	1.023E-09	8.993E-10
NNW	2.393E-08	1.358E-08	9.344E-09	5.769E-09	4.091E-09	3.130E-09	2.514E-09	2.088E-09	1.778E-09	1.543E-09	1.359E-09
N	3.182E-08	1.757E-08	1.186E-08	7.130E-09	4.969E-09	3.753E-09	2.983E-09	2.457E-09	2.077E-09	1.791E-09	1.568E-09
NNE	5.278E-08	2.930E-08	1.984E-08	1.196E-08	8.337E-09	6.294E-09	5.000E-09	4.115E-09	3.475E-09	2.995E-09	2.621E-09
NE	5.573E-08	3.108E-08	2.106E-08	1.270E-08	8.844E-09	6.672E-09	5.296E-09	4.356E-09	3.677E-09	3.167E-09	2.770E-09
ENE	4.716E-08	2.716E-08	1.878E-08	1.162E-08	8.239E-09	6.298E-09	5.053E-09	4.193E-09	3.566E-09	3.092E-09	2.721E-09
E	3.889E-08	2.270E-08	1.587E-08	1.000E-08	7.191E-09	5.559E-09	4.501E-09	3.764E-09	3.224E-09	2.811E-09	2.487E-09
ESE	4.915E-08	2.920E-08	2.067E-08	1.324E-08	9.615E-09	7.487E-09	6.098E-09	5.124E-09	4.405E-09	3.854E-09	3.420E-09
SE	3.716E-08	2.126E-08	1.464E-08	9.019E-09	6.378E-09	4.867E-09	3.900E-09	3.233E-09	2.747E-09	2.380E-09	2.093E-09
SSE	2.996E-08	1.692E-08	1.159E-08	7.122E-09	5.044E-09	3.855E-09	3.094E-09	2.568E-09	2.186E-09	1.896E-09	1.670E-09

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	51.20
DIAMETER	(METERS)	2.19
EXIT VELOCITY	(METERS)	11.80

REP. WIND HEIGHT	(METERS)	51.2
BUILDING HEIGHT	(METERS)	47.5
BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	2300.0
HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)	
ELEVATED	LESS THAN	2.360
MIXED	BETWEEN	2.360 AND 11.800
GROUND LEVEL	ABOVE	11.800

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS		WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS	
ELEVATED	LESS THAN	1.043	LESS THAN	1.569
MIXED	BETWEEN	1.043 AND 5.215	BETWEEN	1.569 AND 7.844
GROUND LEVEL	ABOVE	5.215	ABOVE	7.844

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Reactor Bldg
NO DECAY, UNDEPLETED

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	5.247E-07	1.769E-07	7.643E-08	4.492E-08	3.046E-08	1.513E-08	6.219E-09	3.311E-09	2.185E-09	1.602E-09
SSW	4.075E-07	1.458E-07	6.331E-08	3.665E-08	2.448E-08	1.178E-08	4.585E-09	2.336E-09	1.499E-09	1.077E-09
SW	4.675E-07	1.543E-07	6.111E-08	3.384E-08	2.204E-08	1.029E-08	3.885E-09	1.953E-09	1.248E-09	8.943E-10
WSW	4.275E-07	1.326E-07	5.087E-08	2.782E-08	1.799E-08	8.318E-09	3.097E-09	1.542E-09	9.794E-10	6.994E-10
W	5.300E-07	1.506E-07	5.433E-08	2.909E-08	1.863E-08	8.545E-09	3.173E-09	1.586E-09	1.011E-09	7.249E-10
WNW	5.145E-07	1.486E-07	5.623E-08	3.092E-08	2.016E-08	9.522E-09	3.695E-09	1.908E-09	1.241E-09	9.024E-10
NW	5.400E-07	1.518E-07	5.728E-08	3.171E-08	2.082E-08	1.000E-08	3.998E-09	2.113E-09	1.394E-09	1.024E-09
NNW	6.656E-07	1.877E-07	7.353E-08	4.201E-08	2.822E-08	1.400E-08	5.818E-09	3.140E-09	2.091E-09	1.544E-09
N	8.838E-07	2.623E-07	1.018E-07	5.717E-08	3.781E-08	1.820E-08	7.220E-09	3.770E-09	2.462E-09	1.793E-09
NNE	1.503E-06	4.346E-07	1.674E-07	9.430E-08	6.260E-08	3.032E-08	1.210E-08	6.321E-09	4.124E-09	2.999E-09
NE	1.311E-06	4.212E-07	1.721E-07	9.864E-08	6.595E-08	3.211E-08	1.284E-08	6.701E-09	4.366E-09	3.171E-09
ENE	8.055E-07	2.940E-07	1.341E-07	8.045E-08	5.523E-08	2.788E-08	1.171E-08	6.318E-09	4.200E-09	3.095E-09
E	6.374E-07	2.359E-07	1.088E-07	6.572E-08	4.540E-08	2.326E-08	1.006E-08	5.571E-09	3.769E-09	2.813E-09
ESE	8.477E-07	2.904E-07	1.337E-07	8.178E-08	5.710E-08	2.984E-08	1.328E-08	7.499E-09	5.128E-09	3.857E-09
SE	6.814E-07	2.383E-07	1.072E-07	6.383E-08	4.360E-08	2.185E-08	9.095E-09	4.883E-09	3.238E-09	2.383E-09
SSE	6.730E-07	2.210E-07	9.142E-08	5.263E-08	3.536E-08	1.745E-08	7.192E-09	3.868E-09	2.573E-09	1.898E-09

AVERAGE EFFECTIVE STACK HEIGHT IN METERS FOR EACH SEGMENT

DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	6.988E+01	6.988E+01	6.988E+01	6.988E+01	6.988E+01	6.988E+01	6.988E+01	6.988E+01	6.988E+01	6.988E+01
SSW	7.051E+01	7.051E+01	7.051E+01	7.051E+01	7.051E+01	7.051E+01	7.051E+01	7.051E+01	7.051E+01	7.051E+01
SW	6.680E+01	6.680E+01	6.680E+01	6.680E+01	6.680E+01	6.680E+01	6.680E+01	6.680E+01	6.680E+01	6.680E+01
WSW	6.614E+01	6.614E+01	6.614E+01	6.614E+01	6.614E+01	6.614E+01	6.614E+01	6.614E+01	6.614E+01	6.614E+01
W	6.067E+01	6.067E+01	6.067E+01	6.067E+01	6.067E+01	6.067E+01	6.067E+01	6.067E+01	6.067E+01	6.067E+01
WNW	6.631E+01	6.631E+01	6.631E+01	6.631E+01	6.631E+01	6.631E+01	6.631E+01	6.631E+01	6.631E+01	6.631E+01
NW	6.639E+01	6.639E+01	6.639E+01	6.639E+01	6.639E+01	6.639E+01	6.639E+01	6.639E+01	6.639E+01	6.639E+01
NNW	6.671E+01	6.671E+01	6.671E+01	6.671E+01	6.671E+01	6.671E+01	6.671E+01	6.671E+01	6.671E+01	6.671E+01
N	6.611E+01	6.611E+01	6.611E+01	6.611E+01	6.611E+01	6.611E+01	6.611E+01	6.611E+01	6.611E+01	6.611E+01
NNE	6.320E+01	6.320E+01	6.320E+01	6.320E+01	6.320E+01	6.320E+01	6.320E+01	6.320E+01	6.320E+01	6.320E+01
NE	6.543E+01	6.543E+01	6.543E+01	6.543E+01	6.543E+01	6.543E+01	6.543E+01	6.543E+01	6.543E+01	6.543E+01
ENE	7.096E+01	7.096E+01	7.096E+01	7.096E+01	7.096E+01	7.096E+01	7.096E+01	7.096E+01	7.096E+01	7.096E+01
E	7.118E+01	7.118E+01	7.118E+01	7.118E+01	7.118E+01	7.118E+01	7.118E+01	7.118E+01	7.118E+01	7.118E+01
ESE	7.064E+01	7.064E+01	7.064E+01	7.064E+01	7.064E+01	7.064E+01	7.064E+01	7.064E+01	7.064E+01	7.064E+01
SE	7.057E+01	7.057E+01	7.057E+01	7.057E+01	7.057E+01	7.057E+01	7.057E+01	7.057E+01	7.057E+01	7.057E+01
SSE	6.934E+01	6.934E+01	6.934E+01	6.934E+01	6.934E+01	6.934E+01	6.934E+01	6.934E+01	6.934E+01	6.934E+01

USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

Reactor Bldg
2.260 DAY DECAY, UNDEPLETED
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	2.356E-06	8.764E-07	5.507E-07	3.275E-07	1.685E-07	1.067E-07	7.504E-08	5.633E-08	4.427E-08	3.599E-08	3.002E-08
SSW	1.722E-06	6.537E-07	4.304E-07	2.658E-07	1.404E-07	8.899E-08	6.219E-08	4.633E-08	3.613E-08	2.915E-08	2.414E-08
SW	2.022E-06	7.620E-07	4.972E-07	2.966E-07	1.463E-07	8.833E-08	5.973E-08	4.348E-08	3.333E-08	2.653E-08	2.175E-08
WSW	1.989E-06	7.244E-07	4.508E-07	2.604E-07	1.245E-07	7.409E-08	4.965E-08	3.591E-08	2.739E-08	2.173E-08	1.776E-08
W	2.661E-06	9.345E-07	5.556E-07	3.073E-07	1.390E-07	8.027E-08	5.286E-08	3.781E-08	2.863E-08	2.259E-08	1.840E-08
WNW	2.763E-06	9.225E-07	5.322E-07	2.959E-07	1.383E-07	8.183E-08	5.485E-08	3.977E-08	3.045E-08	2.425E-08	1.990E-08
NW	2.994E-06	9.847E-07	5.558E-07	3.043E-07	1.407E-07	8.314E-08	5.585E-08	4.064E-08	3.122E-08	2.495E-08	2.055E-08
NNW	3.816E-06	1.225E-06	6.823E-07	3.715E-07	1.740E-07	1.050E-07	7.186E-08	5.315E-08	4.141E-08	3.349E-08	2.787E-08
N	4.463E-06	1.552E-06	9.223E-07	5.179E-07	2.442E-07	1.465E-07	9.946E-08	7.291E-08	5.632E-08	4.519E-08	3.732E-08
NNE	7.727E-06	2.674E-06	1.566E-06	8.664E-07	4.024E-07	2.406E-07	1.635E-07	1.200E-07	9.292E-08	7.470E-08	6.180E-08
NE	5.947E-06	2.207E-06	1.382E-06	8.062E-07	3.972E-07	2.444E-07	1.686E-07	1.249E-07	9.722E-08	7.846E-08	6.508E-08
ENE	3.530E-06	1.304E-06	8.447E-07	5.235E-07	2.839E-07	1.847E-07	1.320E-07	1.002E-07	7.935E-08	6.492E-08	5.445E-08
E	2.710E-06	1.025E-06	6.696E-07	4.172E-07	2.282E-07	1.493E-07	1.071E-07	8.156E-08	6.482E-08	5.319E-08	4.474E-08
ESE	4.356E-06	1.463E-06	8.712E-07	5.190E-07	2.787E-07	1.826E-07	1.317E-07	1.009E-07	8.067E-08	6.656E-08	5.627E-08
SE	3.245E-06	1.144E-06	7.070E-07	4.282E-07	2.294E-07	1.483E-07	1.054E-07	7.970E-08	6.295E-08	5.136E-08	4.298E-08
SSE	3.058E-06	1.124E-06	7.085E-07	4.186E-07	2.095E-07	1.295E-07	8.952E-08	6.647E-08	5.185E-08	4.193E-08	3.486E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.559E-08	1.444E-08	9.833E-09	5.943E-09	4.134E-09	3.107E-09	2.453E-09	2.005E-09	1.681E-09	1.437E-09	1.247E-09
SSW	2.044E-08	1.120E-08	7.469E-09	4.378E-09	2.979E-09	2.201E-09	1.715E-09	1.386E-09	1.151E-09	9.754E-10	8.404E-10
SW	1.826E-08	9.756E-09	6.421E-09	3.717E-09	2.516E-09	1.855E-09	1.443E-09	1.166E-09	9.679E-10	8.207E-10	7.076E-10
WSW	1.486E-08	7.877E-09	5.157E-09	2.966E-09	1.999E-09	1.469E-09	1.141E-09	9.205E-10	7.636E-10	6.471E-10	5.577E-10
W	1.536E-08	8.087E-09	5.290E-09	3.048E-09	2.061E-09	1.520E-09	1.184E-09	9.582E-10	7.972E-10	6.775E-10	5.854E-10
WNW	1.674E-08	9.049E-09	6.023E-09	3.554E-09	2.443E-09	1.823E-09	1.435E-09	1.170E-09	9.802E-10	8.379E-10	7.277E-10
NW	1.734E-08	9.528E-09	6.417E-09	3.850E-09	2.678E-09	2.017E-09	1.598E-09	1.311E-09	1.104E-09	9.478E-10	8.263E-10
NNW	2.371E-08	1.339E-08	9.175E-09	5.612E-09	3.944E-09	2.990E-09	2.380E-09	1.959E-09	1.653E-09	1.421E-09	1.241E-09
N	3.154E-08	1.734E-08	1.165E-08	6.944E-09	4.797E-09	3.590E-09	2.829E-09	2.309E-09	1.934E-09	1.653E-09	1.435E-09
NNE	5.232E-08	2.891E-08	1.949E-08	1.164E-08	8.036E-09	6.010E-09	4.730E-09	3.857E-09	3.228E-09	2.756E-09	2.390E-09
NE	5.519E-08	3.061E-08	2.064E-08	1.231E-08	8.481E-09	6.329E-09	4.970E-09	4.043E-09	3.376E-09	2.876E-09	2.489E-09
ENE	4.661E-08	2.667E-08	1.833E-08	1.120E-08	7.839E-09	5.916E-09	4.686E-09	3.838E-09	3.223E-09	2.758E-09	2.396E-09
E	3.841E-08	2.227E-08	1.547E-08	9.611E-09	6.815E-09	5.195E-09	4.148E-09	3.421E-09	2.888E-09	2.484E-09	2.167E-09
ESE	4.853E-08	2.863E-08	2.014E-08	1.273E-08	9.118E-09	7.005E-09	5.629E-09	4.666E-09	3.958E-09	3.417E-09	2.991E-09
SE	3.672E-08	2.089E-08	1.430E-08	8.701E-09	6.079E-09	4.583E-09	3.627E-09	2.971E-09	2.494E-09	2.135E-09	1.855E-09
SSE	2.964E-08	1.665E-08	1.134E-08	6.886E-09	4.820E-09	3.642E-09	2.889E-09	2.370E-09	1.994E-09	1.709E-09	1.487E-09

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	51.20
DIAMETER	(METERS)	2.19
EXIT VELOCITY	(METERS)	11.80

REP. WIND HEIGHT	(METERS)	51.2
BUILDING HEIGHT	(METERS)	47.5
BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	2300.0
HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)	
ELEVATED	LESS THAN	2.360
MIXED	BETWEEN	2.360 AND 11.800
GROUND LEVEL	ABOVE	11.800

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS		WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS		
ELEVATED	LESS THAN	1.043	LESS THAN	1.569	
MIXED	BETWEEN	1.043 AND 5.215	BETWEEN	1.569 AND	7.844
GROUND LEVEL	ABOVE	5.215	ABOVE	7.844	

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Fermi 2 2006 Data

Reactor Bldg
2.260 DAY DECAY, UNDEPLETED

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	5.239E-07	1.764E-07	7.601E-08	4.456E-08	3.015E-08	1.487E-08	6.003E-09	3.119E-09	2.010E-09	1.439E-09
SSW	4.069E-07	1.454E-07	6.299E-08	3.638E-08	2.425E-08	1.159E-08	4.443E-09	2.214E-09	1.390E-09	9.773E-10
SW	4.669E-07	1.539E-07	6.086E-08	3.364E-08	2.187E-08	1.016E-08	3.784E-09	1.866E-09	1.170E-09	8.224E-10
WSW	4.270E-07	1.323E-07	5.067E-08	2.767E-08	1.786E-08	8.221E-09	3.023E-09	1.479E-09	9.238E-10	6.485E-10
W	5.295E-07	1.503E-07	5.415E-08	2.895E-08	1.851E-08	8.460E-09	3.107E-09	1.530E-09	9.614E-10	6.789E-10
WNW	5.139E-07	1.482E-07	5.601E-08	3.075E-08	2.002E-08	9.413E-09	3.609E-09	1.833E-09	1.173E-09	8.393E-10
NW	5.393E-07	1.515E-07	5.704E-08	3.153E-08	2.067E-08	9.882E-09	3.899E-09	2.026E-09	1.314E-09	9.491E-10
NNW	6.647E-07	1.872E-07	7.320E-08	4.175E-08	2.799E-08	1.381E-08	5.662E-09	3.000E-09	1.963E-09	1.423E-09
N	8.826E-07	2.616E-07	1.014E-07	5.682E-08	3.751E-08	1.797E-08	7.035E-09	3.607E-09	2.315E-09	1.656E-09
NNE	1.501E-06	4.336E-07	1.667E-07	9.373E-08	6.211E-08	2.992E-08	1.178E-08	6.039E-09	3.867E-09	2.760E-09
NE	1.309E-06	4.201E-07	1.713E-07	9.798E-08	6.538E-08	3.164E-08	1.246E-08	6.359E-09	4.054E-09	2.881E-09
ENE	8.041E-07	2.931E-07	1.333E-07	7.980E-08	5.465E-08	2.739E-08	1.129E-08	5.937E-09	3.846E-09	2.762E-09
E	6.364E-07	2.351E-07	1.081E-07	6.517E-08	4.490E-08	2.283E-08	9.669E-09	5.208E-09	3.426E-09	2.486E-09
ESE	8.462E-07	2.894E-07	1.329E-07	8.107E-08	5.645E-08	2.928E-08	1.277E-08	7.018E-09	4.671E-09	3.419E-09
SE	6.801E-07	2.375E-07	1.066E-07	6.332E-08	4.315E-08	2.148E-08	8.780E-09	4.600E-09	2.977E-09	2.137E-09
SSE	6.719E-07	2.204E-07	9.095E-08	5.225E-08	3.502E-08	1.717E-08	6.958E-09	3.655E-09	2.375E-09	1.711E-09

USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

Reactor Bldg
8.000 DAY DECAY, DEPLETED
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	2.211E-06	8.122E-07	5.079E-07	3.021E-07	1.555E-07	9.836E-08	6.899E-08	5.165E-08	4.048E-08	3.282E-08	2.732E-08
SSW	1.618E-06	6.054E-07	3.979E-07	2.463E-07	1.304E-07	8.247E-08	5.744E-08	4.264E-08	3.312E-08	2.663E-08	2.198E-08
SW	1.902E-06	7.064E-07	4.603E-07	2.745E-07	1.347E-07	8.080E-08	5.427E-08	3.926E-08	2.991E-08	2.369E-08	1.932E-08
WSW	1.872E-06	6.710E-07	4.152E-07	2.393E-07	1.137E-07	6.712E-08	4.461E-08	3.202E-08	2.424E-08	1.910E-08	1.551E-08
W	2.498E-06	8.614E-07	5.076E-07	2.791E-07	1.249E-07	7.131E-08	4.648E-08	3.293E-08	2.472E-08	1.935E-08	1.563E-08
WNW	2.609E-06	8.555E-07	4.888E-07	2.704E-07	1.253E-07	7.350E-08	4.886E-08	3.516E-08	2.673E-08	2.116E-08	1.726E-08
NW	2.830E-06	9.145E-07	5.103E-07	2.775E-07	1.271E-07	7.444E-08	4.961E-08	3.584E-08	2.735E-08	2.173E-08	1.780E-08
NNW	3.585E-06	1.129E-06	6.207E-07	3.356E-07	1.558E-07	9.337E-08	6.355E-08	4.676E-08	3.626E-08	2.921E-08	2.421E-08
N	4.184E-06	1.429E-06	8.399E-07	4.692E-07	2.199E-07	1.312E-07	8.859E-08	6.462E-08	4.969E-08	3.970E-08	3.266E-08
NNE	7.240E-06	2.457E-06	1.421E-06	7.813E-07	3.603E-07	2.143E-07	1.449E-07	1.059E-07	8.163E-08	6.538E-08	5.390E-08
NE	5.568E-06	2.035E-06	1.267E-06	7.384E-07	3.631E-07	2.227E-07	1.531E-07	1.131E-07	8.776E-08	7.062E-08	5.842E-08
ENE	3.321E-06	1.210E-06	7.816E-07	4.857E-07	2.644E-07	1.720E-07	1.228E-07	9.302E-08	7.358E-08	6.010E-08	5.033E-08
E	2.554E-06	9.541E-07	6.222E-07	3.889E-07	2.136E-07	1.397E-07	1.001E-07	7.611E-08	6.039E-08	4.948E-08	4.156E-08
ESE	4.105E-06	1.355E-06	8.013E-07	4.781E-07	2.578E-07	1.690E-07	1.219E-07	9.329E-08	7.450E-08	6.141E-08	5.186E-08
SE	3.062E-06	1.063E-06	6.536E-07	3.967E-07	2.133E-07	1.379E-07	9.795E-08	7.393E-08	5.828E-08	4.747E-08	3.966E-08
SSE	2.879E-06	1.044E-06	6.555E-07	3.870E-07	1.931E-07	1.188E-07	8.177E-08	6.045E-08	4.697E-08	3.785E-08	3.137E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.323E-08	1.299E-08	8.791E-09	5.270E-09	3.650E-09	2.738E-09	2.161E-09	1.766E-09	1.476E-09	1.260E-09	1.090E-09
SSW	1.855E-08	1.004E-08	6.630E-09	3.834E-09	2.586E-09	1.900E-09	1.474E-09	1.187E-09	9.804E-10	8.281E-10	7.099E-10
SW	1.614E-08	8.471E-09	5.496E-09	3.117E-09	2.080E-09	1.517E-09	1.171E-09	9.381E-10	7.717E-10	6.493E-10	5.552E-10
WSW	1.291E-08	6.676E-09	4.285E-09	2.392E-09	1.576E-09	1.138E-09	8.706E-10	6.921E-10	5.658E-10	4.735E-10	4.027E-10
W	1.296E-08	6.639E-09	4.243E-09	2.361E-09	1.554E-09	1.122E-09	8.587E-10	6.828E-10	5.584E-10	4.674E-10	3.978E-10
WNW	1.443E-08	7.637E-09	4.991E-09	2.864E-09	1.928E-09	1.416E-09	1.099E-09	8.839E-10	7.295E-10	6.155E-10	5.275E-10
NW	1.494E-08	8.050E-09	5.330E-09	3.119E-09	2.130E-09	1.582E-09	1.239E-09	1.004E-09	8.343E-10	7.080E-10	6.099E-10
NNW	2.053E-08	1.144E-08	7.747E-09	4.659E-09	3.234E-09	2.429E-09	1.919E-09	1.568E-09	1.311E-09	1.118E-09	9.679E-10
N	2.750E-08	1.491E-08	9.897E-09	5.799E-09	3.957E-09	2.935E-09	2.297E-09	1.862E-09	1.546E-09	1.312E-09	1.130E-09
NNE	4.547E-08	2.482E-08	1.655E-08	9.733E-09	6.648E-09	4.932E-09	3.859E-09	3.128E-09	2.597E-09	2.203E-09	1.897E-09
NE	4.942E-08	2.717E-08	1.819E-08	1.076E-08	7.376E-09	5.491E-09	4.307E-09	3.503E-09	2.914E-09	2.478E-09	2.138E-09
ENE	4.302E-08	2.450E-08	1.678E-08	1.023E-08	7.163E-09	5.417E-09	4.304E-09	3.538E-09	2.970E-09	2.545E-09	2.210E-09
E	3.563E-08	2.058E-08	1.427E-08	8.867E-09	6.305E-09	4.827E-09	3.876E-09	3.213E-09	2.718E-09	2.344E-09	2.048E-09
ESE	4.467E-08	2.629E-08	1.847E-08	1.167E-08	8.387E-09	6.471E-09	5.226E-09	4.355E-09	3.698E-09	3.201E-09	2.805E-09
SE	3.382E-08	1.912E-08	1.303E-08	7.886E-09	5.497E-09	4.143E-09	3.283E-09	2.691E-09	2.254E-09	1.928E-09	1.671E-09
SSE	2.659E-08	1.477E-08	9.986E-09	6.006E-09	4.181E-09	3.150E-09	2.496E-09	2.046E-09	1.714E-09	1.467E-09	1.272E-09

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	51.20
DIAMETER	(METERS)	2.19
EXIT VELOCITY	(METERS)	11.80

REP. WIND HEIGHT	(METERS)	51.2
BUILDING HEIGHT	(METERS)	47.5
BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	2300.0
HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)	
ELEVATED	LESS THAN	2.360
MIXED	BETWEEN	2.360 AND 11.800
GROUND LEVEL	ABOVE	11.800

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS			WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS		
ELEVATED	LESS THAN	1.043		LESS THAN	1.569	
MIXED	BETWEEN	1.043 AND	5.215	BETWEEN	1.569 AND	7.844
GROUND LEVEL	ABOVE	5.215		ABOVE	7.844	

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Fermi 2 2006 Data

Reactor Bldg
8.000 DAY DECAY, DEPLETED

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.841E-07	1.627E-07	6.989E-08	4.076E-08	2.743E-08	1.340E-08	5.332E-09	2.750E-09	1.768E-09	1.261E-09
SSW	3.766E-07	1.348E-07	5.819E-08	3.337E-08	2.209E-08	1.042E-08	3.901E-09	1.912E-09	1.190E-09	8.294E-10
SW	4.324E-07	1.418E-07	5.534E-08	3.021E-08	1.944E-08	8.854E-09	3.185E-09	1.528E-09	9.411E-10	6.507E-10
WSW	3.939E-07	1.209E-07	4.558E-08	2.450E-08	1.561E-08	6.998E-09	2.450E-09	1.148E-09	6.950E-10	4.746E-10
W	4.847E-07	1.353E-07	4.768E-08	2.502E-08	1.574E-08	6.979E-09	2.421E-09	1.132E-09	6.857E-10	4.686E-10
WNW	4.732E-07	1.345E-07	4.995E-08	2.702E-08	1.737E-08	7.971E-09	2.921E-09	1.426E-09	8.866E-10	6.167E-10
NW	4.967E-07	1.371E-07	5.072E-08	2.764E-08	1.790E-08	8.373E-09	3.171E-09	1.591E-09	1.007E-09	7.091E-10
NNW	6.069E-07	1.680E-07	6.479E-08	3.658E-08	2.433E-08	1.182E-08	4.712E-09	2.440E-09	1.570E-09	1.120E-09
N	8.061E-07	2.359E-07	9.036E-08	5.015E-08	3.283E-08	1.548E-08	5.891E-09	2.952E-09	1.866E-09	1.314E-09
NNE	1.367E-06	3.889E-07	1.478E-07	8.237E-08	5.418E-08	2.573E-08	9.876E-09	4.960E-09	3.135E-09	2.206E-09
NE	1.203E-06	3.841E-07	1.557E-07	8.846E-08	5.870E-08	2.813E-08	1.091E-08	5.520E-09	3.509E-09	2.481E-09
ENE	7.454E-07	2.725E-07	1.240E-07	7.400E-08	5.052E-08	2.519E-08	1.032E-08	5.437E-09	3.540E-09	2.547E-09
E	5.923E-07	2.197E-07	1.011E-07	6.072E-08	4.171E-08	2.112E-08	8.928E-09	4.841E-09	3.214E-09	2.345E-09
ESE	7.806E-07	2.673E-07	1.230E-07	7.488E-08	5.203E-08	2.690E-08	1.172E-08	6.484E-09	4.354E-09	3.201E-09
SE	6.304E-07	2.206E-07	9.900E-08	5.864E-08	3.981E-08	1.968E-08	7.967E-09	4.160E-09	2.694E-09	1.930E-09
SSE	6.225E-07	2.032E-07	8.311E-08	4.735E-08	3.152E-08	1.527E-08	6.079E-09	3.163E-09	2.048E-09	1.468E-09

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Fermi 2 2006 Data

Reactor Bldg
CORRECTED USING STANDARD OPEN TERRAIN FACTORS
********** RELATIVE DEPOSITION PER UNIT AREA (M**-2) AT FIXED POINTS BY DOWNWIND SECTORS **********

DIRECTION FROM SITE	DISTANCES IN MILES 0.25	0.50	0.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	2.685E-08	1.247E-08	7.267E-09	3.791E-09	1.508E-09	7.937E-10	4.863E-10	3.281E-10	2.363E-10	1.783E-10	1.394E-10
SSW	1.883E-08	9.027E-09	5.530E-09	2.974E-09	1.213E-09	6.451E-10	3.974E-10	2.691E-10	1.942E-10	1.467E-10	1.147E-10
SW	3.031E-08	1.449E-08	8.671E-09	4.570E-09	1.839E-09	9.608E-10	5.842E-10	3.919E-10	2.811E-10	2.116E-10	1.651E-10
WSW	3.097E-08	1.408E-08	8.130E-09	4.198E-09	1.656E-09	8.620E-10	5.237E-10	3.513E-10	2.520E-10	1.896E-10	1.480E-10
W	4.530E-08	1.901E-08	1.064E-08	5.374E-09	2.074E-09	1.066E-09	6.427E-10	4.285E-10	3.060E-10	2.295E-10	1.786E-10
WNW	4.169E-08	1.877E-08	1.042E-08	5.231E-09	2.007E-09	1.034E-09	6.246E-10	4.175E-10	2.989E-10	2.247E-10	1.753E-10
NW	4.423E-08	2.002E-08	1.090E-08	5.404E-09	2.051E-09	1.054E-09	6.364E-10	4.253E-10	3.045E-10	2.290E-10	1.788E-10
NNW	3.834E-08	1.674E-08	9.104E-09	4.507E-09	1.703E-09	8.734E-10	5.266E-10	3.516E-10	2.514E-10	1.889E-10	1.474E-10
N	4.746E-08	2.028E-08	1.118E-08	5.591E-09	2.132E-09	1.095E-09	6.607E-10	4.410E-10	3.152E-10	2.367E-10	1.844E-10
NNE	9.121E-08	3.769E-08	2.057E-08	1.022E-08	3.874E-09	1.981E-09	1.191E-09	7.930E-10	5.657E-10	4.241E-10	3.300E-10
NE	7.621E-08	3.346E-08	1.967E-08	1.026E-08	4.082E-09	2.124E-09	1.288E-09	8.628E-10	6.178E-10	4.642E-10	3.617E-10
ENE	3.817E-08	1.868E-08	1.123E-08	5.949E-09	2.393E-09	1.264E-09	7.753E-10	5.237E-10	3.775E-10	2.851E-10	2.230E-10
E	3.651E-08	1.754E-08	1.034E-08	5.439E-09	2.180E-09	1.153E-09	7.090E-10	4.797E-10	3.461E-10	2.615E-10	2.046E-10
ESE	4.683E-08	2.185E-08	1.252E-08	6.453E-09	2.534E-09	1.330E-09	8.143E-10	5.494E-10	3.957E-10	2.987E-10	2.336E-10
SE	4.140E-08	1.946E-08	1.099E-08	5.616E-09	2.196E-09	1.151E-09	7.043E-10	4.751E-10	3.422E-10	2.584E-10	2.021E-10
SSE	3.933E-08	1.855E-08	1.074E-08	5.570E-09	2.203E-09	1.157E-09	7.076E-10	4.772E-10	3.435E-10	2.593E-10	2.027E-10

DIRECTION FROM SITE	DISTANCES IN MILES 5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	1.120E-10	5.124E-11	3.091E-11	1.608E-11	1.021E-11	7.287E-12	5.589E-12	4.488E-12	3.739E-12	3.177E-12	2.759E-12
SSW	9.218E-11	4.214E-11	2.528E-11	1.299E-11	8.174E-12	5.794E-12	4.408E-12	3.514E-12	2.905E-12	2.454E-12	2.120E-12
SW	1.326E-10	6.006E-11	3.583E-11	1.834E-11	1.154E-11	8.123E-12	6.134E-12	4.841E-12	3.963E-12	3.312E-12	2.822E-12
WSW	1.188E-10	5.400E-11	3.246E-11	1.678E-11	1.060E-11	7.490E-12	5.664E-12	4.468E-12	3.651E-12	3.044E-12	2.584E-12
W	1.431E-10	6.475E-11	3.895E-11	2.006E-11	1.260E-11	8.828E-12	6.623E-12	5.188E-12	4.213E-12	3.492E-12	2.949E-12
WNW	1.408E-10	6.423E-11	3.892E-11	2.044E-11	1.307E-11	9.338E-12	7.136E-12	5.677E-12	4.678E-12	3.924E-12	3.347E-12
NW	1.437E-10	6.572E-11	4.001E-11	2.124E-11	1.369E-11	9.846E-12	7.575E-12	6.059E-12	5.020E-12	4.228E-12	3.619E-12
NNW	1.183E-10	5.405E-11	3.290E-11	1.738E-11	1.115E-11	8.024E-12	6.196E-12	4.997E-12	4.180E-12	3.558E-12	3.090E-12
N	1.480E-10	6.731E-11	4.077E-11	2.130E-11	1.354E-11	9.663E-12	7.417E-12	5.961E-12	4.975E-12	4.232E-12	3.679E-12
NNE	2.644E-10	1.199E-10	7.254E-11	3.774E-11	2.388E-11	1.692E-11	1.290E-11	1.030E-11	8.549E-12	7.237E-12	6.261E-12
NE	2.900E-10	1.311E-10	7.828E-11	3.987E-11	2.491E-11	1.746E-11	1.317E-11	1.043E-11	8.580E-12	7.220E-12	6.218E-12
ENE	1.793E-10	8.209E-11	4.939E-11	2.561E-11	1.625E-11	1.164E-11	8.969E-12	7.242E-12	6.067E-12	5.184E-12	4.530E-12
E	1.645E-10	7.547E-11	4.557E-11	2.375E-11	1.511E-11	1.083E-11	8.332E-12	6.711E-12	5.606E-12	4.774E-12	4.154E-12
ESE	1.878E-10	8.624E-11	5.230E-11	2.746E-11	1.756E-11	1.267E-11	9.826E-12	7.983E-12	6.730E-12	5.777E-12	5.071E-12
SE	1.626E-10	7.474E-11	4.543E-11	2.399E-11	1.541E-11	1.112E-11	8.612E-12	6.964E-12	5.840E-12	4.982E-12	4.338E-12
SSE	1.630E-10	7.466E-11	4.513E-11	2.358E-11	1.502E-11	1.075E-11	8.235E-12	6.587E-12	5.460E-12	4.612E-12	3.972E-12

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Fermi 2 2006 Data

Reactor Bldg

********** RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS **********

SEGMENT BOUNDARIES IN MILES

DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	6.879E-09	1.698E-09	5.050E-10	2.404E-10	1.408E-10	5.570E-11	1.677E-11	7.386E-12	4.517E-12	3.189E-12
SSW	5.171E-09	1.352E-09	4.121E-10	1.975E-10	1.158E-10	4.576E-11	1.358E-11	5.874E-12	3.538E-12	2.464E-12
SW	8.141E-09	2.056E-09	6.077E-10	2.863E-10	1.668E-10	6.541E-11	1.920E-11	8.239E-12	4.876E-12	3.324E-12
WSW	7.705E-09	1.868E-09	5.450E-10	2.566E-10	1.495E-10	5.882E-11	1.752E-11	7.590E-12	4.498E-12	3.053E-12
W	1.016E-08	2.359E-09	6.700E-10	3.119E-10	1.806E-10	7.070E-11	2.094E-11	8.952E-12	5.227E-12	3.505E-12
WNW	9.969E-09	2.291E-09	6.509E-10	3.045E-10	1.772E-10	7.000E-11	2.127E-11	9.453E-12	5.713E-12	3.934E-12
NW	1.049E-08	2.353E-09	6.633E-10	3.103E-10	1.807E-10	7.162E-11	2.206E-11	9.963E-12	6.096E-12	4.237E-12
NNW	8.757E-09	1.957E-09	5.491E-10	2.562E-10	1.489E-10	5.893E-11	1.806E-11	8.128E-12	5.028E-12	3.569E-12
N	1.072E-08	2.440E-09	6.887E-10	3.212E-10	1.864E-10	7.344E-11	2.218E-11	9.799E-12	6.001E-12	4.247E-12
NNE	1.977E-08	4.443E-09	1.243E-09	5.767E-10	3.336E-10	1.310E-10	3.931E-11	1.717E-11	1.038E-11	7.264E-12
NE	1.855E-08	4.585E-09	1.341E-09	6.293E-10	3.655E-10	1.429E-10	4.176E-11	1.773E-11	1.051E-11	7.252E-12
ENE	1.054E-08	2.681E-09	8.048E-10	3.840E-10	2.252E-10	8.916E-11	2.673E-11	1.180E-11	7.288E-12	5.204E-12
E	9.763E-09	2.448E-09	7.357E-10	3.520E-10	2.066E-10	8.197E-11	2.476E-11	1.097E-11	6.753E-12	4.791E-12
ESE	1.190E-08	2.870E-09	8.459E-10	4.026E-10	2.359E-10	9.373E-11	2.858E-11	1.284E-11	8.032E-12	5.798E-12
SE	1.048E-08	2.491E-09	7.317E-10	3.483E-10	2.042E-10	8.123E-11	2.494E-11	1.126E-11	7.007E-12	4.998E-12
SSE	1.018E-08	2.486E-09	7.352E-10	3.496E-10	2.047E-10	8.116E-11	2.457E-11	1.088E-11	6.629E-12	4.626E-12

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	51.20	REP. WIND HEIGHT	(METERS)	51.2
DIAMETER	(METERS)	2.19	BUILDING HEIGHT	(METERS)	47.5
EXIT VELOCITY	(METERS)	11.80	BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	2300.0
			HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)	
ELEVATED	LESS THAN	2.360
MIXED	BETWEEN	2.360 AND 11.800
GROUND LEVEL	ABOVE	11.800

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS		WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS	
ELEVATED	LESS THAN	1.043	LESS THAN	1.569
MIXED	BETWEEN	1.043 AND 5.215	BETWEEN	1.569 AND 7.844
GROUND LEVEL	ABOVE	5.215	ABOVE	7.844

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Fermi 2 2006 Data

Reactor Bldg
CORRECTED USING STANDARD OPEN TERRAIN FACTORS
SPECIFIC POINTS OF INTEREST

RELEASE ID	TYPE OF LOCATION	DIRECTION FROM SITE	DISTANCE (MILES)	DISTANCE (METERS)	X/Q (SEC/CUB.METER) NO DECAY UNDEPLETED	X/Q (SEC/CUB.METER) 2.260 DAY DECAY UNDEPLETED	X/Q (SEC/CUB.METER) 8.000 DAY DECAY DEPLETED	D/Q (PER SQ.METER)
A	SITE BOUNDARY	NE	1.13	1825.	6.4E-07	6.4E-07	5.9E-07	7.7E-09
A	SITE BOUNDARY	NNE	1.02	1646.	8.3E-07	8.3E-07	7.5E-07	9.7E-09
A	SITE BOUNDARY	NE	0.36	579.	3.4E-06	3.4E-06	3.2E-06	5.0E-08
A	SITE BOUNDARY	S	0.88	1417.	4.1E-07	4.1E-07	3.8E-07	5.1E-09
A	SITE BOUNDARY	SSW	0.96	1542.	2.8E-07	2.8E-07	2.6E-07	3.3E-09
A	SITE BOUNDARY	SW	1.19	1920.	2.2E-07	2.2E-07	2.0E-07	3.1E-09
A	SITE BOUNDARY	WSW	1.12	1798.	2.1E-07	2.1E-07	1.9E-07	3.3E-09
A	SITE BOUNDARY	W	0.86	1390.	4.1E-07	4.1E-07	3.8E-07	7.6E-09
A	SITE BOUNDARY	WNW	0.67	1082.	6.0E-07	6.0E-07	5.6E-07	1.2E-08
A	SITE BOUNDARY	NW	0.57	915.	8.0E-07	8.0E-07	7.4E-07	1.7E-08
A	SITE BOUNDARY	NNW	0.62	990.	8.9E-07	8.9E-07	8.1E-07	1.2E-08
A	Residences	N	1.10	1776.	4.3E-07	4.3E-07	3.9E-07	4.4E-09
A	Residences	NE	1.10	1773.	6.8E-07	6.8E-07	6.2E-07	8.2E-09
A	Residences	NNE	1.02	1646.	8.3E-07	8.3E-07	7.5E-07	9.7E-09
A	Residences	NNW	1.08	1743.	3.2E-07	3.2E-07	2.9E-07	3.7E-09
A	Residences	NW	1.06	1700.	2.7E-07	2.7E-07	2.5E-07	4.7E-09
A	Residences	WNW	0.69	1103.	5.9E-07	5.9E-07	5.4E-07	1.2E-08
A	Residences	W	1.16	1861.	2.3E-07	2.3E-07	2.1E-07	3.8E-09
A	Residences	WSW	1.58	2547.	1.1E-07	1.1E-07	1.0E-07	1.5E-09
A	Residences	SW	1.26	2025.	2.0E-07	2.0E-07	1.8E-07	2.7E-09
A	Residences	SSW	1.13	1826.	2.2E-07	2.2E-07	2.0E-07	2.3E-09
A	Residences	S	1.02	1640.	3.2E-07	3.2E-07	2.9E-07	3.6E-09
A	MILK COW	NW	3.65	5874.	2.9E-08	2.9E-08	2.5E-08	2.8E-10
A	MILK COW	WNW	2.28	3672.	6.5E-08	6.4E-08	5.8E-08	7.7E-10
A	VEGETABLE GARDEN	N	1.64	2633.	2.1E-07	2.1E-07	1.9E-07	1.7E-09
A	VEGETABLE GARDEN	NNE	1.80	2894.	2.9E-07	2.9E-07	2.6E-07	2.5E-09
A	VEGETABLE GARDEN	NE	1.99	3200.	2.5E-07	2.5E-07	2.2E-07	2.2E-09
A	VEGETABLE GARDEN	NNW	2.55	4107.	7.0E-08	6.9E-08	6.1E-08	5.0E-10
A	VEGETABLE GARDEN	NW	2.76	4435.	4.7E-08	4.7E-08	4.2E-08	5.1E-10
A	VEGETABLE GARDEN	SSW	1.50	2414.	1.4E-07	1.4E-07	1.3E-07	1.2E-09
A	VEGETABLE GARDEN	SW	4.39	7062.	2.3E-08	2.3E-08	2.0E-08	1.7E-10
A	VEGETABLE GARDEN	W	3.18	5123.	3.4E-08	3.4E-08	2.9E-08	3.8E-10
A	VEGETABLE GARDEN	WNW	1.82	2936.	9.7E-08	9.6E-08	8.7E-08	1.3E-09
A	VEGETABLE GARDEN	WSW	3.21	5173.	3.2E-08	3.2E-08	2.8E-08	3.0E-10
A	Visitor Center/Ice F	SSW	0.29	470.	1.3E-06	1.3E-06	1.2E-06	1.6E-08

A	Visitor Center/Ice F	E	0.29	470.	2.1E-06	2.1E-06	2.0E-06	3.1E-08

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	51.20
DIAMETER	(METERS)	2.19
EXIT VELOCITY	(METERS)	11.80

REP. WIND HEIGHT	(METERS)	51.2
BUILDING HEIGHT	(METERS)	47.5
BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	2300.0
HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)	
ELEVATED	LESS THAN	2.360
MIXED	BETWEEN	2.360 AND 11.800
GROUND LEVEL	ABOVE	11.800

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS		WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS	
ELEVATED	LESS THAN	1.043	LESS THAN	1.569
MIXED	BETWEEN	1.043 AND 5.215	BETWEEN	1.569 AND 7.844
GROUND LEVEL	ABOVE	5.215	ABOVE	7.844

USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

Turbine Bldg
NO DECAY, UNDEPLETED
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.590E-05	5.360E-06	2.905E-06	1.486E-06	6.111E-07	3.375E-07	2.172E-07	1.534E-07	1.153E-07	9.065E-08	7.366E-08
SSW	1.136E-05	4.051E-06	2.229E-06	1.133E-06	4.573E-07	2.488E-07	1.581E-07	1.105E-07	8.229E-08	6.415E-08	5.175E-08
SW	1.119E-05	3.878E-06	2.064E-06	1.029E-06	4.041E-07	2.159E-07	1.356E-07	9.391E-08	6.949E-08	5.390E-08	4.330E-08
WSW	8.437E-06	2.897E-06	1.541E-06	7.677E-07	3.019E-07	1.613E-07	1.012E-07	7.009E-08	5.182E-08	4.016E-08	3.224E-08
W	8.646E-06	2.920E-06	1.544E-06	7.667E-07	3.006E-07	1.603E-07	1.005E-07	6.956E-08	5.144E-08	3.988E-08	3.202E-08
WNW	1.123E-05	3.661E-06	1.923E-06	9.582E-07	3.794E-07	2.039E-07	1.286E-07	8.945E-08	6.643E-08	5.170E-08	4.166E-08
NW	1.262E-05	3.980E-06	2.087E-06	1.045E-06	4.187E-07	2.268E-07	1.439E-07	1.006E-07	7.505E-08	5.862E-08	4.740E-08
NNW	1.646E-05	5.292E-06	2.831E-06	1.439E-06	5.867E-07	3.220E-07	2.064E-07	1.455E-07	1.092E-07	8.577E-08	6.967E-08
N	2.010E-05	6.892E-06	3.756E-06	1.897E-06	7.587E-07	4.104E-07	2.601E-07	1.816E-07	1.353E-07	1.055E-07	8.524E-08
NNE	3.071E-05	1.051E-05	5.746E-06	2.906E-06	1.166E-06	6.339E-07	4.034E-07	2.825E-07	2.110E-07	1.650E-07	1.335E-07
NE	3.419E-05	1.188E-05	6.479E-06	3.279E-06	1.316E-06	7.149E-07	4.547E-07	3.183E-07	2.376E-07	1.856E-07	1.501E-07
ENE	2.849E-05	9.801E-06	5.364E-06	2.745E-06	1.126E-06	6.211E-07	3.996E-07	2.823E-07	2.123E-07	1.670E-07	1.358E-07
E	2.231E-05	7.503E-06	4.051E-06	2.084E-06	8.680E-07	4.849E-07	3.152E-07	2.246E-07	1.701E-07	1.346E-07	1.101E-07
ESE	3.488E-05	1.139E-05	6.083E-06	3.131E-06	1.309E-06	7.325E-07	4.767E-07	3.401E-07	2.580E-07	2.044E-07	1.673E-07
SE	2.361E-05	8.066E-06	4.387E-06	2.240E-06	9.163E-07	5.040E-07	3.235E-07	2.280E-07	1.712E-07	1.344E-07	1.091E-07
SSE	1.983E-05	6.581E-06	3.534E-06	1.796E-06	7.298E-07	3.999E-07	2.561E-07	1.803E-07	1.352E-07	1.061E-07	8.617E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	6.143E-08	3.245E-08	2.139E-08	1.254E-08	8.618E-09	6.451E-09	5.097E-09	4.179E-09	3.520E-09	3.027E-09	2.645E-09
SSW	4.289E-08	2.208E-08	1.430E-08	8.171E-09	5.513E-09	4.069E-09	3.177E-09	2.580E-09	2.155E-09	1.839E-09	1.597E-09
SW	3.576E-08	1.822E-08	1.173E-08	6.665E-09	4.486E-09	3.306E-09	2.580E-09	2.093E-09	1.748E-09	1.492E-09	1.295E-09
WSW	2.661E-08	1.352E-08	8.685E-09	4.918E-09	3.301E-09	2.428E-09	1.892E-09	1.533E-09	1.279E-09	1.090E-09	9.456E-10
W	2.644E-08	1.348E-08	8.684E-09	4.943E-09	3.331E-09	2.458E-09	1.921E-09	1.560E-09	1.304E-09	1.114E-09	9.683E-10
WNW	3.451E-08	1.782E-08	1.159E-08	6.694E-09	4.560E-09	3.394E-09	2.670E-09	2.182E-09	1.834E-09	1.574E-09	1.373E-09
NW	3.939E-08	2.061E-08	1.353E-08	7.915E-09	5.440E-09	4.076E-09	3.225E-09	2.648E-09	2.234E-09	1.924E-09	1.684E-09
NNW	5.810E-08	3.073E-08	2.031E-08	1.197E-08	8.256E-09	6.201E-09	4.913E-09	4.038E-09	3.409E-09	2.937E-09	2.572E-09
N	7.073E-08	3.671E-08	2.395E-08	1.387E-08	9.459E-09	7.042E-09	5.540E-09	4.527E-09	3.802E-09	3.262E-09	2.844E-09
NNE	1.110E-07	5.787E-08	3.786E-08	2.197E-08	1.498E-08	1.115E-08	8.772E-09	7.164E-09	6.015E-09	5.157E-09	4.495E-09
NE	1.247E-07	6.484E-08	4.232E-08	2.448E-08	1.666E-08	1.238E-08	9.722E-09	7.930E-09	6.651E-09	5.697E-09	4.962E-09
ENE	1.134E-07	6.008E-08	3.973E-08	2.340E-08	1.612E-08	1.209E-08	9.569E-09	7.855E-09	6.624E-09	5.702E-09	4.987E-09
E	9.236E-08	4.993E-08	3.347E-08	2.010E-08	1.404E-08	1.064E-08	8.492E-09	7.020E-09	5.955E-09	5.152E-09	4.528E-09
ESE	1.405E-07	7.622E-08	5.125E-08	3.089E-08	2.163E-08	1.643E-08	1.313E-08	1.087E-08	9.231E-09	7.995E-09	7.032E-09
SE	9.097E-08	4.801E-08	3.166E-08	1.858E-08	1.278E-08	9.577E-09	7.572E-09	6.213E-09	5.237E-09	4.506E-09	3.940E-09
SSE	7.183E-08	3.793E-08	2.504E-08	1.473E-08	1.016E-08	7.632E-09	6.046E-09	4.969E-09	4.195E-09	3.614E-09	3.164E-09

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	40.10
DIAMETER	(METERS)	7.46
EXIT VELOCITY	(METERS)	3.31

REP. WIND HEIGHT	(METERS)	40.1
BUILDING HEIGHT	(METERS)	40.1
BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	5130.0
HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)			
ELEVATED	LESS THAN	0.662		
MIXED	BETWEEN	0.662	AND	3.310
GROUND LEVEL	ABOVE	3.310		

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS			
ELEVATED	LESS THAN	0.331		
MIXED	BETWEEN	0.331	AND	1.653
GROUND LEVEL	ABOVE	1.653		

WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS			
LESS THAN	0.468		
BETWEEN	0.468	AND	2.339
ABOVE	2.339		

USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

Turbine Bldg
NO DECAY, UNDEPLETED

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	2.820E-06	6.840E-07	2.238E-07	1.168E-07	7.417E-08	3.397E-08	1.276E-08	6.487E-09	4.190E-09	3.032E-09
SSW	2.147E-06	5.149E-07	1.632E-07	8.343E-08	5.214E-08	2.325E-08	8.351E-09	4.097E-09	2.589E-09	1.843E-09
SW	2.007E-06	4.593E-07	1.403E-07	7.053E-08	4.365E-08	1.923E-08	6.822E-09	3.330E-09	2.101E-09	1.495E-09
WSW	1.499E-06	3.429E-07	1.048E-07	5.260E-08	3.250E-08	1.428E-08	5.037E-09	2.446E-09	1.539E-09	1.092E-09
W	1.504E-06	3.418E-07	1.041E-07	5.221E-08	3.228E-08	1.423E-08	5.058E-09	2.476E-09	1.566E-09	1.117E-09
WNW	1.880E-06	4.300E-07	1.330E-07	6.739E-08	4.199E-08	1.876E-08	6.834E-09	3.416E-09	2.189E-09	1.577E-09
NW	2.045E-06	4.727E-07	1.487E-07	7.609E-08	4.776E-08	2.164E-08	8.064E-09	4.099E-09	2.655E-09	1.927E-09
NNW	2.759E-06	6.584E-07	2.129E-07	1.106E-07	7.016E-08	3.218E-08	1.217E-08	6.234E-09	4.048E-09	2.942E-09
N	3.627E-06	8.569E-07	2.688E-07	1.372E-07	8.588E-08	3.860E-08	1.415E-08	7.086E-09	4.540E-09	3.267E-09
NNE	5.543E-06	1.316E-06	4.165E-07	2.139E-07	1.345E-07	6.077E-08	2.240E-08	1.122E-08	7.186E-09	5.166E-09
NE	6.257E-06	1.485E-06	4.695E-07	2.409E-07	1.512E-07	6.813E-08	2.497E-08	1.246E-08	7.955E-09	5.707E-09
ENE	5.186E-06	1.261E-06	4.117E-07	2.151E-07	1.367E-07	6.287E-08	2.379E-08	1.216E-08	7.876E-09	5.710E-09
E	3.944E-06	9.679E-07	3.242E-07	1.722E-07	1.108E-07	5.204E-08	2.038E-08	1.069E-08	7.035E-09	5.159E-09
ESE	5.950E-06	1.458E-06	4.903E-07	2.610E-07	1.684E-07	7.941E-08	3.130E-08	1.649E-08	1.089E-08	8.005E-09
SE	4.250E-06	1.027E-06	3.334E-07	1.734E-07	1.099E-07	5.029E-08	1.891E-08	9.630E-09	6.229E-09	4.513E-09
SSE	3.438E-06	8.200E-07	2.641E-07	1.370E-07	8.678E-08	3.974E-08	1.499E-08	7.673E-09	4.982E-09	3.619E-09

AVERAGE EFFECTIVE STACK HEIGHT IN METERS FOR EACH SEGMENT

DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	2.339E+01	2.339E+01	2.339E+01	2.339E+01	2.339E+01	2.339E+01	2.339E+01	2.339E+01	2.339E+01	2.339E+01
SSW	2.432E+01	2.432E+01	2.432E+01	2.432E+01	2.432E+01	2.432E+01	2.432E+01	2.432E+01	2.432E+01	2.432E+01
SW	8.066E+00	8.066E+00	8.066E+00	8.066E+00	8.066E+00	8.066E+00	8.066E+00	8.066E+00	8.066E+00	8.066E+00
WSW	8.330E+00	8.330E+00	8.330E+00	8.330E+00	8.330E+00	8.330E+00	8.330E+00	8.330E+00	8.330E+00	8.330E+00
W	4.847E+00	4.847E+00	4.847E+00	4.847E+00	4.847E+00	4.847E+00	4.847E+00	4.847E+00	4.847E+00	4.847E+00
WNW	7.431E+00	7.431E+00	7.431E+00	7.431E+00	7.431E+00	7.431E+00	7.431E+00	7.431E+00	7.431E+00	7.431E+00
NW	7.028E+00	7.028E+00	7.028E+00	7.028E+00	7.028E+00	7.028E+00	7.028E+00	7.028E+00	7.028E+00	7.028E+00
NNW	1.076E+01	1.076E+01	1.076E+01	1.076E+01	1.076E+01	1.076E+01	1.076E+01	1.076E+01	1.076E+01	1.076E+01
N	1.124E+01	1.124E+01	1.124E+01	1.124E+01	1.124E+01	1.124E+01	1.124E+01	1.124E+01	1.124E+01	1.124E+01
NNE	9.400E+00	9.400E+00	9.400E+00	9.400E+00	9.400E+00	9.400E+00	9.400E+00	9.400E+00	9.400E+00	9.400E+00
NE	1.562E+01	1.562E+01	1.562E+01	1.562E+01	1.562E+01	1.562E+01	1.562E+01	1.562E+01	1.562E+01	1.562E+01
ENE	2.855E+01	2.855E+01	2.855E+01	2.855E+01	2.855E+01	2.855E+01	2.855E+01	2.855E+01	2.855E+01	2.855E+01
E	2.920E+01	2.920E+01	2.920E+01	2.920E+01	2.920E+01	2.920E+01	2.920E+01	2.920E+01	2.920E+01	2.920E+01
ESE	3.173E+01	3.173E+01	3.173E+01	3.173E+01	3.173E+01	3.173E+01	3.173E+01	3.173E+01	3.173E+01	3.173E+01
SE	2.734E+01	2.734E+01	2.734E+01	2.734E+01	2.734E+01	2.734E+01	2.734E+01	2.734E+01	2.734E+01	2.734E+01
SSE	2.080E+01	2.080E+01	2.080E+01	2.080E+01	2.080E+01	2.080E+01	2.080E+01	2.080E+01	2.080E+01	2.080E+01

USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

Turbine Bldg
2.260 DAY DECAY, UNDEPLETED
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.589E-05	5.352E-06	2.898E-06	1.482E-06	6.080E-07	3.353E-07	2.154E-07	1.519E-07	1.140E-07	8.942E-08	7.252E-08
SSW	1.136E-05	4.045E-06	2.224E-06	1.130E-06	4.552E-07	2.472E-07	1.569E-07	1.094E-07	8.139E-08	6.335E-08	5.103E-08
SW	1.118E-05	3.873E-06	2.061E-06	1.026E-06	4.025E-07	2.148E-07	1.347E-07	9.318E-08	6.886E-08	5.333E-08	4.279E-08
WSW	8.433E-06	2.894E-06	1.539E-06	7.660E-07	3.009E-07	1.606E-07	1.007E-07	6.961E-08	5.141E-08	3.979E-08	3.190E-08
W	8.642E-06	2.917E-06	1.541E-06	7.652E-07	2.997E-07	1.597E-07	1.000E-07	6.914E-08	5.107E-08	3.955E-08	3.173E-08
WNW	1.123E-05	3.657E-06	1.920E-06	9.559E-07	3.781E-07	2.029E-07	1.278E-07	8.882E-08	6.588E-08	5.121E-08	4.122E-08
NW	1.261E-05	3.976E-06	2.083E-06	1.043E-06	4.171E-07	2.257E-07	1.430E-07	9.987E-08	7.439E-08	5.804E-08	4.687E-08
NNW	1.645E-05	5.285E-06	2.825E-06	1.435E-06	5.844E-07	3.203E-07	2.051E-07	1.443E-07	1.082E-07	8.486E-08	6.884E-08
N	2.009E-05	6.883E-06	3.749E-06	1.892E-06	7.557E-07	4.082E-07	2.584E-07	1.802E-07	1.340E-07	1.044E-07	8.422E-08
NNE	3.069E-05	1.050E-05	5.735E-06	2.898E-06	1.162E-06	6.306E-07	4.007E-07	2.803E-07	2.091E-07	1.632E-07	1.319E-07
NE	3.417E-05	1.186E-05	6.465E-06	3.269E-06	1.310E-06	7.105E-07	4.512E-07	3.153E-07	2.350E-07	1.833E-07	1.480E-07
ENE	2.847E-05	9.783E-06	5.350E-06	2.735E-06	1.120E-06	6.165E-07	3.959E-07	2.792E-07	2.096E-07	1.645E-07	1.335E-07
E	2.229E-05	7.488E-06	4.039E-06	2.076E-06	8.628E-07	4.810E-07	3.120E-07	2.218E-07	1.677E-07	1.324E-07	1.081E-07
ESE	3.484E-05	1.137E-05	6.065E-06	3.118E-06	1.301E-06	7.266E-07	4.720E-07	3.360E-07	2.543E-07	2.011E-07	1.643E-07
SE	2.359E-05	8.052E-06	4.375E-06	2.232E-06	9.113E-07	5.004E-07	3.205E-07	2.255E-07	1.690E-07	1.324E-07	1.073E-07
SSE	1.982E-05	6.571E-06	3.525E-06	1.790E-06	7.263E-07	3.973E-07	2.540E-07	1.785E-07	1.337E-07	1.047E-07	8.488E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	6.038E-08	3.161E-08	2.066E-08	1.190E-08	8.032E-09	5.907E-09	4.585E-09	3.693E-09	3.057E-09	2.583E-09	2.218E-09
SSW	4.221E-08	2.156E-08	1.385E-08	7.786E-09	5.168E-09	3.752E-09	2.882E-09	2.302E-09	1.892E-09	1.589E-09	1.357E-09
SW	3.529E-08	1.786E-08	1.142E-08	6.395E-09	4.244E-09	3.083E-09	2.372E-09	1.897E-09	1.562E-09	1.314E-09	1.124E-09
WSW	2.630E-08	1.328E-08	8.481E-09	4.744E-09	3.146E-09	2.286E-09	1.759E-09	1.408E-09	1.160E-09	9.774E-10	8.376E-10
W	2.617E-08	1.327E-08	8.504E-09	4.789E-09	3.193E-09	2.331E-09	1.801E-09	1.448E-09	1.197E-09	1.012E-09	8.699E-10
WNW	3.411E-08	1.751E-08	1.132E-08	6.457E-09	4.346E-09	3.196E-09	2.484E-09	2.006E-09	1.666E-09	1.412E-09	1.218E-09
NW	3.890E-08	2.022E-08	1.319E-08	7.617E-09	5.169E-09	3.823E-09	2.986E-09	2.420E-09	2.016E-09	1.714E-09	1.481E-09
NNW	5.734E-08	3.012E-08	1.977E-08	1.150E-08	7.825E-09	5.799E-09	4.534E-09	3.678E-09	3.064E-09	2.606E-09	2.252E-09
N	6.978E-08	3.597E-08	2.331E-08	1.331E-08	8.954E-09	6.575E-09	5.102E-09	4.112E-09	3.406E-09	2.882E-09	2.479E-09
NNE	1.095E-07	5.670E-08	3.683E-08	2.108E-08	1.418E-08	1.041E-08	8.072E-09	6.502E-09	5.384E-09	4.553E-09	3.915E-09
NE	1.227E-07	6.329E-08	4.097E-08	2.331E-08	1.560E-08	1.140E-08	8.800E-09	7.059E-09	5.822E-09	4.904E-09	4.200E-09
ENE	1.112E-07	5.838E-08	3.823E-08	2.208E-08	1.492E-08	1.097E-08	8.516E-09	6.856E-09	5.670E-09	4.786E-09	4.106E-09
E	9.047E-08	4.839E-08	3.210E-08	1.887E-08	1.291E-08	9.577E-09	7.482E-09	6.056E-09	5.031E-09	4.262E-09	3.668E-09
ESE	1.377E-07	7.392E-08	4.919E-08	2.905E-08	1.993E-08	1.482E-08	1.161E-08	9.415E-09	7.835E-09	6.650E-09	5.731E-09
SE	8.931E-08	4.669E-08	3.050E-08	1.757E-08	1.186E-08	8.722E-09	6.768E-09	5.450E-09	4.508E-09	3.807E-09	3.268E-09
SSE	7.064E-08	3.698E-08	2.419E-08	1.399E-08	9.482E-09	6.996E-09	5.446E-09	4.398E-09	3.648E-09	3.088E-09	2.656E-09

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	40.10
DIAMETER	(METERS)	7.46
EXIT VELOCITY	(METERS)	3.31

REP. WIND HEIGHT	(METERS)	40.1
BUILDING HEIGHT	(METERS)	40.1
BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	5130.0
HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)	
ELEVATED	LESS THAN	0.662
MIXED	BETWEEN	0.662 AND 3.310
GROUND LEVEL	ABOVE	3.310

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS		WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS	
ELEVATED	LESS THAN	0.331	LESS THAN	0.468
MIXED	BETWEEN	0.331 AND 1.653	BETWEEN	0.468 AND 2.339
GROUND LEVEL	ABOVE	1.653	ABOVE	2.339

USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

Turbine Bldg
2.260 DAY DECAY, UNDEPLETED

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	2.814E-06	6.809E-07	2.220E-07	1.154E-07	7.303E-08	3.314E-08	1.213E-08	5.945E-09	3.705E-09	2.588E-09
SSW	2.142E-06	5.127E-07	1.620E-07	8.253E-08	5.141E-08	2.272E-08	7.969E-09	3.782E-09	2.312E-09	1.593E-09
SW	2.004E-06	4.577E-07	1.395E-07	6.989E-08	4.313E-08	1.887E-08	6.555E-09	3.108E-09	1.905E-09	1.317E-09
WSW	1.496E-06	3.419E-07	1.042E-07	5.218E-08	3.216E-08	1.404E-08	4.864E-09	2.305E-09	1.414E-09	9.798E-10
W	1.502E-06	3.409E-07	1.036E-07	5.185E-08	3.199E-08	1.402E-08	4.905E-09	2.349E-09	1.453E-09	1.014E-09
WNW	1.877E-06	4.287E-07	1.323E-07	6.685E-08	4.155E-08	1.844E-08	6.599E-09	3.218E-09	2.013E-09	1.415E-09
NW	2.041E-06	4.711E-07	1.478E-07	7.544E-08	4.723E-08	2.125E-08	7.768E-09	3.847E-09	2.428E-09	1.717E-09
NNW	2.754E-06	6.560E-07	2.115E-07	1.096E-07	6.933E-08	3.157E-08	1.170E-08	5.834E-09	3.689E-09	2.611E-09
N	3.620E-06	8.538E-07	2.671E-07	1.359E-07	8.486E-08	3.786E-08	1.360E-08	6.620E-09	4.126E-09	2.888E-09
NNE	5.533E-06	1.312E-06	4.138E-07	2.120E-07	1.329E-07	5.959E-08	2.151E-08	1.048E-08	6.525E-09	4.563E-09
NE	6.244E-06	1.479E-06	4.660E-07	2.382E-07	1.491E-07	6.657E-08	2.381E-08	1.148E-08	7.085E-09	4.915E-09
ENE	5.173E-06	1.255E-06	4.080E-07	2.123E-07	1.344E-07	6.117E-08	2.249E-08	1.104E-08	6.878E-09	4.796E-09
E	3.933E-06	9.626E-07	3.210E-07	1.697E-07	1.088E-07	5.050E-08	1.916E-08	9.627E-09	6.073E-09	4.270E-09
ESE	5.934E-06	1.450E-06	4.855E-07	2.574E-07	1.654E-07	7.710E-08	2.947E-08	1.490E-08	9.439E-09	6.661E-09
SE	4.239E-06	1.022E-06	3.305E-07	1.712E-07	1.081E-07	4.897E-08	1.791E-08	8.777E-09	5.468E-09	3.815E-09
SSE	3.431E-06	8.164E-07	2.620E-07	1.355E-07	8.549E-08	3.878E-08	1.425E-08	7.039E-09	4.411E-09	3.094E-09

USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

Turbine Bldg
8.000 DAY DECAY, DEPLETED
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.480E-05	4.878E-06	2.594E-06	1.307E-06	5.245E-07	2.841E-07	1.798E-07	1.251E-07	9.277E-08	7.201E-08	5.783E-08
SSW	1.058E-05	3.688E-06	1.991E-06	9.972E-07	3.925E-07	2.092E-07	1.306E-07	8.981E-08	6.593E-08	5.072E-08	4.041E-08
SW	1.041E-05	3.527E-06	1.841E-06	9.021E-07	3.447E-07	1.801E-07	1.109E-07	7.552E-08	5.502E-08	4.208E-08	3.336E-08
WSW	7.854E-06	2.637E-06	1.375E-06	6.738E-07	2.578E-07	1.346E-07	8.284E-08	5.634E-08	4.099E-08	3.130E-08	2.479E-08
W	8.048E-06	2.656E-06	1.376E-06	6.720E-07	2.559E-07	1.333E-07	8.186E-08	5.562E-08	4.044E-08	3.088E-08	2.445E-08
WNW	1.046E-05	3.331E-06	1.715E-06	8.399E-07	3.231E-07	1.695E-07	1.047E-07	7.145E-08	5.218E-08	3.998E-08	3.176E-08
NW	1.174E-05	3.622E-06	1.861E-06	9.165E-07	3.566E-07	1.886E-07	1.172E-07	8.043E-08	5.899E-08	4.537E-08	3.616E-08
NNW	1.532E-05	4.814E-06	2.524E-06	1.261E-06	4.999E-07	2.681E-07	1.685E-07	1.167E-07	8.620E-08	6.671E-08	5.346E-08
N	1.871E-05	6.270E-06	3.349E-06	1.663E-06	6.464E-07	3.415E-07	2.121E-07	1.454E-07	1.066E-07	8.189E-08	6.522E-08
NNE	2.858E-05	9.562E-06	5.123E-06	2.547E-06	9.946E-07	5.286E-07	3.300E-07	2.273E-07	1.672E-07	1.289E-07	1.030E-07
NE	3.182E-05	1.081E-05	5.778E-06	2.877E-06	1.124E-06	5.979E-07	3.734E-07	2.572E-07	1.893E-07	1.459E-07	1.166E-07
ENE	2.652E-05	8.918E-06	4.790E-06	2.414E-06	9.664E-07	5.231E-07	3.311E-07	2.306E-07	1.713E-07	1.331E-07	1.071E-07
E	2.077E-05	6.828E-06	3.620E-06	1.835E-06	7.479E-07	4.107E-07	2.632E-07	1.852E-07	1.387E-07	1.087E-07	8.808E-08
ESE	3.246E-05	1.036E-05	5.428E-06	2.751E-06	1.122E-06	6.158E-07	3.943E-07	2.773E-07	2.076E-07	1.626E-07	1.317E-07
SE	2.197E-05	7.340E-06	3.917E-06	1.970E-06	7.861E-07	4.239E-07	2.674E-07	1.856E-07	1.374E-07	1.066E-07	8.552E-08
SSE	1.846E-05	5.989E-06	3.156E-06	1.578E-06	6.248E-07	3.351E-07	2.107E-07	1.460E-07	1.080E-07	8.364E-08	6.709E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) DISTANCE IN MILES FROM THE SITE

SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.771E-08	2.414E-08	1.534E-08	8.472E-09	5.546E-09	3.982E-09	3.032E-09	2.403E-09	1.958E-09	1.633E-09	1.386E-09
SSW	3.309E-08	1.627E-08	1.012E-08	5.423E-09	3.472E-09	2.449E-09	1.838E-09	1.438E-09	1.160E-09	9.579E-10	8.058E-10
SW	2.722E-08	1.322E-08	8.170E-09	4.347E-09	2.774E-09	1.953E-09	1.464E-09	1.145E-09	9.225E-10	7.617E-10	6.407E-10
WSW	2.020E-08	9.756E-09	5.998E-09	3.165E-09	2.006E-09	1.404E-09	1.046E-09	8.142E-10	6.536E-10	5.376E-10	4.507E-10
W	1.992E-08	9.637E-09	5.935E-09	3.142E-09	1.996E-09	1.400E-09	1.046E-09	8.148E-10	6.551E-10	5.396E-10	4.529E-10
WNW	2.596E-08	1.271E-08	7.895E-09	4.232E-09	2.713E-09	1.916E-09	1.438E-09	1.126E-09	9.086E-10	7.507E-10	6.318E-10
NW	2.965E-08	1.471E-08	9.227E-09	5.011E-09	3.242E-09	2.306E-09	1.741E-09	1.369E-09	1.110E-09	9.203E-10	7.771E-10
NNW	4.402E-08	2.215E-08	1.402E-08	7.701E-09	5.017E-09	3.586E-09	2.719E-09	2.146E-09	1.743E-09	1.449E-09	1.226E-09
N	5.341E-08	2.633E-08	1.643E-08	8.862E-09	5.704E-09	4.040E-09	3.040E-09	2.385E-09	1.928E-09	1.595E-09	1.344E-09
NNE	8.453E-08	4.204E-08	2.639E-08	1.434E-08	9.268E-09	6.587E-09	4.971E-09	3.910E-09	3.166E-09	2.625E-09	2.216E-09
NE	9.572E-08	4.762E-08	2.992E-08	1.628E-08	1.054E-08	7.509E-09	5.679E-09	4.476E-09	3.631E-09	3.016E-09	2.549E-09
ENE	8.851E-08	4.514E-08	2.888E-08	1.614E-08	1.067E-08	7.722E-09	5.921E-09	4.723E-09	3.871E-09	3.245E-09	2.766E-09
E	7.327E-08	3.835E-08	2.502E-08	1.440E-08	9.722E-09	7.159E-09	5.569E-09	4.498E-09	3.725E-09	3.152E-09	2.709E-09
ESE	1.095E-07	5.717E-08	3.721E-08	2.131E-08	1.432E-08	1.050E-08	8.140E-09	6.552E-09	5.410E-09	4.566E-09	3.915E-09
SE	7.052E-08	3.567E-08	2.268E-08	1.257E-08	8.249E-09	5.939E-09	4.532E-09	3.600E-09	2.940E-09	2.457E-09	2.088E-09
SSE	5.530E-08	2.795E-08	1.777E-08	9.852E-09	6.479E-09	4.670E-09	3.567E-09	2.835E-09	2.317E-09	1.938E-09	1.648E-09

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	40.10
DIAMETER	(METERS)	7.46
EXIT VELOCITY	(METERS)	3.31

REP. WIND HEIGHT	(METERS)	40.1
BUILDING HEIGHT	(METERS)	40.1
BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	5130.0
HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)	
ELEVATED	LESS THAN	0.662
MIXED	BETWEEN	0.662 AND 3.310
GROUND LEVEL	ABOVE	3.310

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS		WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS	
ELEVATED	LESS THAN	0.331	LESS THAN	0.468
MIXED	BETWEEN	0.331 AND 1.653	BETWEEN	0.468 AND 2.339
GROUND LEVEL	ABOVE	1.653	ABOVE	2.339

USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

Turbine Bldg
8.000 DAY DECAY, DEPLETED

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	2.530E-06	5.916E-07	1.857E-07	9.410E-08	5.828E-08	2.547E-08	8.697E-09	4.019E-09	2.413E-09	1.638E-09
SSW	1.926E-06	4.454E-07	1.352E-07	6.696E-08	4.075E-08	1.728E-08	5.599E-09	2.477E-09	1.446E-09	9.613E-10
SW	1.798E-06	3.954E-07	1.152E-07	5.595E-08	3.367E-08	1.409E-08	4.497E-09	1.976E-09	1.151E-09	7.645E-10
WSW	1.344E-06	2.955E-07	8.605E-08	4.169E-08	2.502E-08	1.041E-08	3.279E-09	1.421E-09	8.193E-10	5.398E-10
W	1.348E-06	2.939E-07	8.508E-08	4.113E-08	2.468E-08	1.028E-08	3.253E-09	1.417E-09	8.199E-10	5.417E-10
WNW	1.685E-06	3.696E-07	1.087E-07	5.304E-08	3.204E-08	1.351E-08	4.371E-09	1.938E-09	1.132E-09	7.534E-10
NW	1.833E-06	4.063E-07	1.215E-07	5.993E-08	3.648E-08	1.559E-08	5.162E-09	2.330E-09	1.377E-09	9.234E-10
NNW	2.472E-06	5.661E-07	1.743E-07	8.748E-08	5.389E-08	2.340E-08	7.912E-09	3.621E-09	2.156E-09	1.453E-09
N	3.249E-06	7.369E-07	2.199E-07	1.083E-07	6.579E-08	2.795E-08	9.141E-09	4.084E-09	2.398E-09	1.601E-09
NNE	4.965E-06	1.132E-06	3.418E-07	1.698E-07	1.038E-07	4.453E-08	1.476E-08	6.656E-09	3.930E-09	2.634E-09
NE	5.606E-06	1.280E-06	3.868E-07	1.922E-07	1.176E-07	5.044E-08	1.676E-08	7.586E-09	4.498E-09	3.025E-09
ENE	4.651E-06	1.091E-06	3.421E-07	1.737E-07	1.079E-07	4.755E-08	1.654E-08	7.787E-09	4.741E-09	3.253E-09
E	3.539E-06	8.396E-07	2.713E-07	1.406E-07	8.871E-08	4.019E-08	1.468E-08	7.207E-09	4.510E-09	3.158E-09
ESE	5.335E-06	1.259E-06	4.066E-07	2.104E-07	1.326E-07	5.992E-08	2.174E-08	1.058E-08	6.571E-09	4.575E-09
SE	3.812E-06	8.881E-07	2.764E-07	1.394E-07	8.620E-08	3.764E-08	1.290E-08	5.992E-09	3.615E-09	2.463E-09
SSE	3.084E-06	7.079E-07	2.180E-07	1.096E-07	6.763E-08	2.950E-08	1.011E-08	4.711E-09	2.847E-09	1.943E-09

USNRC COMPUTER CODE - XOQDOQ, VERSION 2.0 RUN DATE: 3-26-2007 9:31

Fermi 2 2006 Data

Turbine Bldg
CORRECTED USING STANDARD OPEN TERRAIN FACTORS
********** RELATIVE DEPOSITION PER UNIT AREA (M**-2) AT FIXED POINTS BY DOWNWIND SECTORS **********

DIRECTION FROM SITE	DISTANCES IN MILES 0.25	0.50	0.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	8.916E-08	3.081E-08	1.603E-08	7.707E-09	2.807E-09	1.403E-09	8.304E-10	5.459E-10	3.853E-10	2.863E-10	2.210E-10
SSW	7.047E-08	2.455E-08	1.282E-08	6.180E-09	2.258E-09	1.130E-09	6.691E-10	4.401E-10	3.107E-10	2.309E-10	1.783E-10
SW	9.574E-08	3.260E-08	1.681E-08	8.012E-09	2.887E-09	1.434E-09	8.455E-10	5.541E-10	3.902E-10	2.893E-10	2.231E-10
WSW	8.155E-08	2.796E-08	1.446E-08	6.913E-09	2.501E-09	1.245E-09	7.346E-10	4.818E-10	3.395E-10	2.519E-10	1.943E-10
W	9.635E-08	3.283E-08	1.691E-08	8.061E-09	2.905E-09	1.443E-09	8.505E-10	5.574E-10	3.925E-10	2.910E-10	2.244E-10
WNW	1.030E-07	3.520E-08	1.813E-08	8.638E-09	3.113E-09	1.547E-09	9.117E-10	5.976E-10	4.209E-10	3.121E-10	2.407E-10
NW	1.086E-07	3.705E-08	1.908E-08	9.091E-09	3.275E-09	1.627E-09	9.593E-10	6.288E-10	4.428E-10	3.284E-10	2.532E-10
NNW	1.052E-07	3.594E-08	1.852E-08	8.830E-09	3.182E-09	1.581E-09	9.325E-10	6.113E-10	4.305E-10	3.193E-10	2.463E-10
N	1.341E-07	4.579E-08	2.360E-08	1.125E-08	4.057E-09	2.016E-09	1.189E-09	7.794E-10	5.490E-10	4.072E-10	3.140E-10
NNE	2.267E-07	7.711E-08	3.967E-08	1.889E-08	6.804E-09	3.380E-09	1.993E-09	1.306E-09	9.198E-10	6.821E-10	5.259E-10
NE	2.283E-07	7.789E-08	4.018E-08	1.918E-08	6.923E-09	3.443E-09	2.031E-09	1.332E-09	9.381E-10	6.959E-10	5.366E-10
ENE	1.466E-07	5.082E-08	2.642E-08	1.268E-08	4.614E-09	2.304E-09	1.363E-09	8.959E-10	6.322E-10	4.696E-10	3.626E-10
E	1.201E-07	4.180E-08	2.184E-08	1.053E-08	3.847E-09	1.925E-09	1.140E-09	7.501E-10	5.297E-10	3.937E-10	3.040E-10
ESE	1.567E-07	5.427E-08	2.822E-08	1.356E-08	4.937E-09	2.467E-09	1.460E-09	9.602E-10	6.777E-10	5.035E-10	3.888E-10
SE	1.327E-07	4.592E-08	2.391E-08	1.149E-08	4.181E-09	2.087E-09	1.234E-09	8.110E-10	5.722E-10	4.249E-10	3.280E-10
SSE	1.209E-07	4.191E-08	2.183E-08	1.049E-08	3.818E-09	1.906E-09	1.127E-09	7.406E-10	5.226E-10	3.881E-10	2.996E-10

DIRECTION FROM SITE	DISTANCES IN MILES 5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	1.758E-10	7.837E-11	4.740E-11	2.400E-11	1.461E-11	9.869E-12	7.140E-12	5.419E-12	4.264E-12	3.446E-12	2.849E-12
SSW	1.419E-10	6.325E-11	3.821E-11	1.935E-11	1.179E-11	7.967E-12	5.764E-12	4.371E-12	3.436E-12	2.773E-12	2.287E-12
SW	1.773E-10	7.885E-11	4.775E-11	2.416E-11	1.465E-11	9.850E-12	7.082E-12	5.338E-12	4.168E-12	3.343E-12	2.741E-12
WSW	1.545E-10	6.874E-11	4.159E-11	2.104E-11	1.278E-11	8.600E-12	6.190E-12	4.667E-12	3.645E-12	2.924E-12	2.396E-12
W	1.783E-10	7.929E-11	4.801E-11	2.429E-11	1.473E-11	9.899E-12	7.112E-12	5.354E-12	4.175E-12	3.343E-12	2.735E-12
WNW	1.913E-10	8.511E-11	5.155E-11	2.612E-11	1.586E-11	1.068E-11	7.683E-12	5.793E-12	4.524E-12	3.627E-12	2.971E-12
NW	2.013E-10	8.954E-11	5.423E-11	2.746E-11	1.667E-11	1.122E-11	8.069E-12	6.082E-12	4.748E-12	3.806E-12	3.117E-12
NNW	1.958E-10	8.711E-11	5.277E-11	2.673E-11	1.624E-11	1.094E-11	7.879E-12	5.949E-12	4.654E-12	3.739E-12	3.070E-12
N	2.496E-10	1.110E-10	6.725E-11	3.406E-11	2.068E-11	1.392E-11	1.002E-11	7.562E-12	5.912E-12	4.746E-12	3.895E-12
NNE	4.179E-10	1.858E-10	1.126E-10	5.698E-11	3.457E-11	2.324E-11	1.672E-11	1.261E-11	9.857E-12	7.914E-12	6.497E-12
NE	4.265E-10	1.897E-10	1.149E-10	5.811E-11	3.526E-11	2.373E-11	1.710E-11	1.292E-11	1.012E-11	8.142E-12	6.702E-12
ENE	2.885E-10	1.286E-10	7.779E-11	3.944E-11	2.404E-11	1.628E-11	1.181E-11	9.001E-12	7.116E-12	5.778E-12	4.802E-12
E	2.420E-10	1.079E-10	6.519E-11	3.302E-11	2.013E-11	1.364E-11	9.920E-12	7.581E-12	6.015E-12	4.902E-12	4.094E-12
ESE	3.093E-10	1.379E-10	8.343E-11	4.229E-11	2.578E-11	1.746E-11	1.269E-11	9.683E-12	7.672E-12	6.244E-12	5.206E-12
SE	2.610E-10	1.162E-10	7.027E-11	3.557E-11	2.164E-11	1.462E-11	1.058E-11	8.038E-12	6.331E-12	5.122E-12	4.239E-12
SSE	2.384E-10	1.062E-10	6.422E-11	3.253E-11	1.980E-11	1.338E-11	9.679E-12	7.340E-12	5.769E-12	4.656E-12	3.841E-12

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Fermi 2 2006 Data

Turbine Bldg

********** RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS **********

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES .5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.562E-08	3.272E-09	8.692E-10	3.935E-10	2.236E-10	8.626E-11	2.503E-11	1.004E-11	5.471E-12	3.467E-12
SSW	1.248E-08	2.628E-09	7.004E-10	3.173E-10	1.804E-10	6.960E-11	2.018E-11	8.104E-12	4.413E-12	2.789E-12
SW	1.641E-08	3.380E-09	8.859E-10	3.986E-10	2.258E-10	8.691E-11	2.517E-11	1.002E-11	5.391E-12	3.364E-12
WSW	1.411E-08	2.923E-09	7.695E-10	3.468E-10	1.966E-10	7.573E-11	2.194E-11	8.750E-12	4.713E-12	2.942E-12
W	1.651E-08	3.401E-09	8.913E-10	4.010E-10	2.271E-10	8.740E-11	2.531E-11	1.007E-11	5.407E-12	3.364E-12
WNW	1.770E-08	3.644E-09	9.554E-10	4.300E-10	2.436E-10	9.380E-11	2.721E-11	1.086E-11	5.849E-12	3.650E-12
NW	1.863E-08	3.835E-09	1.005E-09	4.524E-10	2.563E-10	9.868E-11	2.862E-11	1.141E-11	6.141E-12	3.830E-12
NNW	1.808E-08	3.726E-09	9.770E-10	4.398E-10	2.492E-10	9.599E-11	2.785E-11	1.113E-11	6.007E-12	3.763E-12
N	2.304E-08	4.748E-09	1.246E-09	5.608E-10	3.178E-10	1.224E-10	3.549E-11	1.416E-11	7.636E-12	4.776E-12
NNE	3.876E-08	7.969E-09	2.088E-09	9.396E-10	5.322E-10	2.049E-10	5.938E-11	2.365E-11	1.274E-11	7.965E-12
NE	3.923E-08	8.100E-09	2.128E-09	9.583E-10	5.430E-10	2.091E-10	6.056E-11	2.415E-11	1.304E-11	8.194E-12
ENE	2.574E-08	5.381E-09	1.427E-09	6.456E-10	3.668E-10	1.415E-10	4.112E-11	1.656E-11	9.087E-12	5.813E-12
E	2.125E-08	4.478E-09	1.194E-09	5.408E-10	3.076E-10	1.187E-10	3.444E-11	1.388E-11	7.653E-12	4.933E-12
ESE	2.749E-08	5.755E-09	1.529E-09	6.921E-10	3.933E-10	1.518E-10	4.409E-11	1.777E-11	9.775E-12	6.283E-12
SE	2.328E-08	4.874E-09	1.293E-09	5.843E-10	3.319E-10	1.280E-10	3.709E-11	1.488E-11	8.116E-12	5.153E-12
SSE	2.125E-08	4.451E-09	1.180E-09	5.336E-10	3.032E-10	1.169E-10	3.391E-11	1.361E-11	7.410E-12	4.684E-12

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	40.10	REP. WIND HEIGHT	(METERS)	40.1
DIAMETER	(METERS)	7.46	BUILDING HEIGHT	(METERS)	40.1
EXIT VELOCITY	(METERS)	3.31	BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	5130.0
			HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)	
ELEVATED	LESS THAN	0.662
MIXED	BETWEEN	0.662 AND 3.310
GROUND LEVEL	ABOVE	3.310

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS		WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS	
ELEVATED	LESS THAN	0.331	LESS THAN	0.468
MIXED	BETWEEN	0.331 AND 1.653	BETWEEN	0.468 AND 2.339
GROUND LEVEL	ABOVE	1.653	ABOVE	2.339

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Fermi 2 2006 Data

Turbine Bldg
CORRECTED USING STANDARD OPEN TERRAIN FACTORS
SPECIFIC POINTS OF INTEREST

RELEASE ID	TYPE OF LOCATION	DIRECTION FROM SITE	DISTANCE (MILES)	DISTANCE (METERS)	X/Q (SEC/CUB.METER) NO DECAY UNDEPLETED	X/Q (SEC/CUB.METER) 2.260 DAY DECAY UNDEPLETED	X/Q (SEC/CUB.METER) 8.000 DAY DECAY DEPLETED	D/Q (PER SQ.METER)
B	SITE BOUNDARY	NE	1.13	1825.	2.5E-06	2.4E-06	2.1E-06	1.4E-08
B	SITE BOUNDARY	NNE	1.02	1646.	2.8E-06	2.8E-06	2.4E-06	1.8E-08
B	SITE BOUNDARY	NE	0.36	579.	2.0E-05	2.0E-05	1.8E-05	1.3E-07
B	SITE BOUNDARY	S	0.88	1417.	2.0E-06	2.0E-06	1.8E-06	1.1E-08
B	SITE BOUNDARY	SSW	0.96	1542.	1.3E-06	1.2E-06	1.1E-06	6.9E-09
B	SITE BOUNDARY	SW	1.19	1920.	6.8E-07	6.8E-07	5.9E-07	5.1E-09
B	SITE BOUNDARY	WSW	1.12	1798.	5.9E-07	5.9E-07	5.2E-07	5.2E-09
B	SITE BOUNDARY	W	0.86	1390.	1.1E-06	1.1E-06	9.7E-07	1.2E-08
B	SITE BOUNDARY	WNW	0.67	1082.	2.3E-06	2.3E-06	2.1E-06	2.2E-08
B	SITE BOUNDARY	NW	0.57	915.	3.2E-06	3.2E-06	2.9E-06	3.0E-08
B	SITE BOUNDARY	NNW	0.62	990.	3.9E-06	3.8E-06	3.5E-06	2.6E-08
B	Residences	N	1.10	1776.	1.5E-06	1.5E-06	1.3E-06	8.7E-09
B	Residences	NE	1.10	1773.	2.6E-06	2.6E-06	2.3E-06	1.5E-08
B	Residences	NNE	1.02	1646.	2.8E-06	2.8E-06	2.4E-06	1.8E-08
B	Residences	NNW	1.08	1743.	1.2E-06	1.2E-06	1.0E-06	7.2E-09
B	Residences	NW	1.06	1700.	9.2E-07	9.2E-07	8.0E-07	7.9E-09
B	Residences	WNW	0.69	1103.	2.2E-06	2.2E-06	2.0E-06	2.1E-08
B	Residences	W	1.16	1861.	5.4E-07	5.4E-07	4.7E-07	5.6E-09
B	Residences	WSW	1.58	2547.	2.7E-07	2.7E-07	2.3E-07	2.2E-09
B	Residences	SW	1.26	2025.	6.0E-07	6.0E-07	5.2E-07	4.5E-09
B	Residences	SSW	1.13	1826.	8.5E-07	8.5E-07	7.4E-07	4.5E-09
B	Residences	S	1.02	1640.	1.4E-06	1.4E-06	1.3E-06	7.3E-09
B	MILK COW	NW	3.65	5874.	6.9E-08	6.9E-08	5.4E-08	4.0E-10
B	MILK COW	WNW	2.28	3672.	1.5E-07	1.5E-07	1.3E-07	1.1E-09
B	VEGETABLE GARDEN	N	1.64	2633.	6.3E-07	6.3E-07	5.3E-07	3.3E-09
B	VEGETABLE GARDEN	NNE	1.80	2894.	7.9E-07	7.9E-07	6.7E-07	4.4E-09
B	VEGETABLE GARDEN	NE	1.99	3200.	7.2E-07	7.2E-07	6.1E-07	3.5E-09
B	VEGETABLE GARDEN	NNW	2.55	4107.	2.0E-07	2.0E-07	1.6E-07	8.9E-10
B	VEGETABLE GARDEN	NW	2.76	4435.	1.2E-07	1.2E-07	9.6E-08	7.6E-10
B	VEGETABLE GARDEN	SSW	1.50	2414.	4.6E-07	4.6E-07	3.9E-07	2.3E-09
B	VEGETABLE GARDEN	SW	4.39	7062.	4.5E-08	4.5E-08	3.5E-08	2.4E-10
B	VEGETABLE GARDEN	W	3.18	5123.	6.2E-08	6.1E-08	4.9E-08	4.9E-10
B	VEGETABLE GARDEN	WNW	1.82	2936.	2.5E-07	2.5E-07	2.1E-07	1.9E-09
B	VEGETABLE GARDEN	WSW	3.21	5173.	6.1E-08	6.1E-08	4.9E-08	4.1E-10
B	Visitor Center/Ice F	SSW	0.29	470.	9.0E-06	9.0E-06	8.3E-06	5.6E-08

B	Visitor Center/Ice F	E	0.29	470.	1.7E-05	1.7E-05	1.6E-05	9.5E-08

VENT AND BUILDING PARAMETERS:

RELEASE HEIGHT	(METERS)	40.10
DIAMETER	(METERS)	7.46
EXIT VELOCITY	(METERS)	3.31

REP. WIND HEIGHT	(METERS)	40.1
BUILDING HEIGHT	(METERS)	40.1
BLDG.MIN.CRS.SEC.AREA	(SQ.METERS)	5130.0
HEAT EMISSION RATE	(CAL/SEC)	0.0

AT THE RELEASE HEIGHT:

VENT RELEASE MODE	WIND SPEED (METERS/SEC)	
ELEVATED	LESS THAN	0.662
MIXED	BETWEEN	0.662 AND 3.310
GROUND LEVEL	ABOVE	3.310

AT THE MEASURED WIND HEIGHT (10.0 METERS):

VENT RELEASE MODE	WIND SPEED (METERS/SEC) STABLE CONDITIONS		WIND SPEED (METERS/SEC) UNSTABLE/NEUTRAL CONDITIONS	
ELEVATED	LESS THAN	0.331	LESS THAN	0.468
MIXED	BETWEEN	0.331 AND 1.653	BETWEEN	0.468 AND 2.339
GROUND LEVEL	ABOVE	1.653	ABOVE	2.339