

# Annual Radiological Environmental Operating Report

Watts Bar  
Nuclear Plant  
1998

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ANNUAL ENVIRONMENTAL RADIOLOGICAL OPERATING REPORT  
WATTS BAR NUCLEAR PLANT  
1998

TENNESSEE VALLEY AUTHORITY  
ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION

April 1999

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## EXECUTIVE SUMMARY

This report describes the radiological environmental monitoring program conducted by TVA in the vicinity of the Watts Bar Nuclear Plant (WBN) in 1998. WBN Unit 1 achieved initial criticality in January 1996 and received a full power operating license on February 7, 1996. Commercial operation began on May 27, 1996. The program includes the collection of samples from the environment and the determination of the concentrations of radioactive materials in the samples. Samples are taken from stations in the general area of the plant and from areas that should not be influenced by plant operations. Station locations are selected after careful consideration of the weather patterns and projected radiation doses to the various areas around the plant. Material sampled includes air, water, milk, foods, vegetation, soil, fish, clams, sediment, and direct radiation levels. Results from stations near the plant are compared with concentrations from control locations and with preoperational measurements to determine potential impacts of plant operations.

The majority of environmental radioactivity measured by the program was due to naturally occurring radioactive materials or radionuclides commonly found in the environment as a result of atmospheric fallout and the operation of other nuclear facilities in the area. Trace levels of a small number of radionuclides of the type that can be produced from the operation of a nuclear power plant were detected in a few of the samples collected and analyzed for the WBN monitoring program. Low levels of Co-60 and Cs-137 were measured in samples of bottom sediment. In addition, Co-58, Co-60, Sb-125, Cs-134 and Cs-137 were identified in sediment collected from the onsite Yard Holding Pond. The level of activity measured in these samples would result in no measurable increase over background in the dose to the general public.

## INTRODUCTION

This report describes and summarizes the results of radioactivity measurements made in the vicinity of WBN and laboratory analyses of samples collected in the area. The measurements are made to comply with the requirements of 10 CFR 50, Appendix A, Criterion 64 and 10 CFR 50, Appendix I, Section IV.B.2, IV.B.3 and IV.C and to determine potential effects on public health and safety. This report satisfies the annual reporting requirements of WBN Technical Specification 5.9.2 and Offsite Dose Calculation Manual (ODCM) Administrative Control 5.1. Estimates of the maximum potential doses to the surrounding population from radioactivity measured both in plant effluents and in environmental samples are summarized in this report. In addition to reporting the data prescribed by specific requirements, other information is included to help correlate the significance of results measured by this monitoring program to the levels of environmental radiation resulting from naturally occurring radioactive materials.

### Naturally Occurring and Background Radioactivity

Most materials in our world today contain trace amounts of naturally occurring radioactivity. Approximately 0.01 percent of all potassium is radioactive potassium-40. Potassium-40 (K-40), with a half-life of 1.3 billion years, is one of the major types of radioactive materials found naturally in our environment. Naturally occurring radioactive materials have always been in the environment. Other examples of naturally occurring radioactive materials are beryllium (Be)-7, bismuth (Bi)-212 and 214, lead (Pb)-212 and 214, thallium (Tl)-208, actinium (Ac)-228, uranium (U)-238 and 235, thorium (Th)-234, radium (Ra)-226, radon (Ra)-222, carbon (C) -14, and hydrogen (H)-3 (generally called tritium). These naturally occurring radioactive materials are in the soil, our food, our drinking water, and our bodies. The radiation from these materials makes up a part of the low-level natural background radiation. The remainder of the natural background radiation comes from outer space. We are all exposed to this natural radiation 24 hours per day.

It is possible to get an idea of the relative hazard of different types of radiation sources by evaluating the amount of radiation the U.S. population receives from each general type of radiation source. The information below is primarily adapted from References 2 and 3.

## U.S. GENERAL POPULATION AVERAGE DOSE EQUIVALENT ESTIMATES

Source	Millirem/Year Per Person
<hr/>	
Natural background dose equivalent	
Cosmic	27
Cosmogenic	1
Terrestrial	28
In the body	39
Radon	200
Total	295
Release of radioactive material in natural gas, mining, ore processing, etc.	5
Medical (effective dose equivalent)	53
Nuclear weapons fallout	less than 1
Nuclear energy	0.28
Consumer products	0.03
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Total	355 (approximately)

As can be seen from the table, natural background radiation dose equivalent to the U.S. population normally exceeds that from nuclear plants by several hundred times. This indicates that nuclear plant operations normally result in a population radiation dose equivalent which is insignificant compared to that which results from natural background radiation. It should be noted that the use of radiation and radioactive materials for medical uses has resulted in a similar effective dose equivalent to the U.S. population as that caused by natural background cosmic and terrestrial radiation.

### Electric Power Production

Nuclear power plants are similar in many respects to conventional coal burning (or other fossil fuel) electrical generating plants. The basic process behind electrical power production in both types of plants is that fuel is used to heat water to produce steam which provides the force to turn

turbines and generators. However, nuclear plants include many complex systems to control the nuclear fission process and to safeguard against the possibility of reactor malfunction, which could lead to the release of radioactive materials. Very small amounts of these fission and activation products are released into the plant systems. This radioactive material can be transported throughout plant systems and some of it released to the environment.

Paths through which radioactivity from a nuclear power plant is routinely released are monitored. Liquid and gaseous effluent monitors record the radiation levels for each release. These monitors also provide alarm mechanisms to prompt termination of any release above limits.

Releases are monitored at the onsite points of release and through the radiological environmental monitoring program which measures the environmental radiation in outlying areas around the plant. In this way, the release of radioactive materials from the plant is tightly controlled, and verification is provided that the population is not exposed to significant levels of radiation or radioactive materials.

The WBN ODCM, which describes the program required by the plant Technical Specifications, prescribes limits for the release of radioactive effluents, as well as limits for doses to the general public from the release of these effluents.

The dose to a member of the general public from radioactive materials released to unrestricted areas, as given in NRC guidelines and the ODCM, is limited as follows:

Liquid Effluents

Total body	$\leq 3$ mrem/year
Any organ	$\leq 10$ mrem/year

Gaseous Effluents

Noble gases:

Gamma radiation	$\leq 10$ mrad/year
Beta radiation	$\leq 20$ mrad/year

Particulates:

Any organ	$\leq 15$ mrem/year
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The EPA limits for the total dose to the public in the vicinity of a nuclear power plant, established in the Environmental Dose Standard of 40 CFR 190, are as follows:

Total body	$\leq 25$ mrem/year
Thyroid	$\leq 75$ mrem/year
Any other organ	$\leq 25$ mrem/year

Appendix B to 10 CFR 20 presents annual average limits for the concentrations of radioactive materials released in gaseous and liquid effluents at the boundary of the unrestricted areas. Table 1 of this report presents the annual average concentration limits for the principal radionuclides associated with nuclear power plant effluents. The table also presents (1) the concentrations of radioactive materials in the environment which would require a special report to the NRC and (2) the detection limits for measured radionuclides. It should be noted that the levels of radioactive materials measured in the environment are typically below or only slightly above the lower limit of detection.

## SITE/PLANT DESCRIPTION

The WBN site is located in Rhea county, Tennessee, on the west bank of the Tennessee River at Tennessee River Mile (TRM) 528. Figure 1 shows the site in relation to other TVA projects.

The WBN site, containing approximately 1770 acres on Chickamauga Lake, is approximately 2 miles south of the Watts Bar Dam and approximately 31 miles north-northeast of TVA's Sequoyah Nuclear Plant (SQN) site. Also located within the reservation are the Watts Bar Dam and Hydro-Electric Plant, the Watts Bar Steam Plant (not in operation), the TVA Central Maintenance Facility, and the Watts Bar Resort Area.

Approximately 16,000 people live within 10 miles of the WBN site. More than 80 percent of these live between 5 and 10 miles from the site. Two small towns, Spring City and Decatur, are located in this area. Spring City, with a population of approximately 2,200, is northwest and north-northwest from the site, while Decatur, with about 1,400 people, is south and south-southwest from the plant. The remainder of the area within 10 miles of the site is sparsely populated, consisting primarily of small farms and individual residences.

The area between 10 and 50 miles from the site includes portions of the cities of Chattanooga and Knoxville. The largest urban concentration in this area is the city of Chattanooga, located to the southwest and south-southwest. The city of Chattanooga has a population of about 160,000, with approximately 80 percent located between 40 and 50 miles from the site and the remainder located beyond 50 miles. The city of Knoxville is located to the east-northeast, with not more than 10 percent of its 165,000 plus people living within 50 miles of the site. Three smaller urban areas of greater than 20,000 people are located between 30 and 40 miles from the site. Oak Ridge is approximately 40 miles to the northeast, the twin cities of Alcoa and Maryville are located 45 to 50 miles to the east-northeast, and Cleveland is located about 30 miles to the south.

Chickamauga Reservoir is one of a series of highly controlled multiple-use reservoirs whose primary uses are flood control, navigation, and the generation of electric power. Secondary

uses include industrial and public water supply and waste disposal, commercial fishing, and recreation. Public access areas, boat docks, and residential subdivisions have been developed along the reservoir shoreline.

WBN consists of two pressurized water reactors. WBN Unit 1 received a low power operating license (NPF-20) on November 9, 1995, and achieved initial criticality in January 1996. The full operating license (NPF-90) was received on February 7, 1996. WBN Unit 2 remains in a layup and construction condition.

## RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

Most of the radiation and radioactivity generated in a nuclear power reactor is contained within the reactor itself or one of the other plant systems. Plant effluent radiation monitors are designed to monitor radionuclides released to the environment. Environmental monitoring is a final verification that the systems are performing as planned. The monitoring program is designed to most efficiently monitor the pathways between the plant and the people in the immediate vicinity of the plant. Sample types are chosen so that the potential for detection of radioactivity in the environment will be maximized. The Radiological Environmental Monitoring Program (REMP) for WBN is outlined in Appendix A.

There are two primary pathways by which radioactivity can move through the environment to humans: air and water (see Figure 2). The air pathway can be separated into two components: the direct (airborne) pathway and the indirect (ground or terrestrial) pathway. The direct airborne pathway consists of direct radiation and inhalation by humans. In the terrestrial pathway, radioactive materials may be deposited on the ground or on plants and subsequently ingested by animals and/or humans. Human exposure through the liquid pathway may result from drinking water, eating fish, or by direct exposure at the shoreline. The types of samples collected in this program are designed to monitor these pathways.

A number of factors were considered in determining the locations for collecting environmental samples. The locations for the atmospheric monitoring stations were determined from a critical pathway analysis based on weather patterns, dose projections, population distribution, and land use. Terrestrial sampling stations were selected after reviewing such things as the locations of dairy animals and gardens in conjunction with the air pathway analysis. Liquid pathway stations were selected based on dose projections, water use information, and availability of media such as fish and sediment. Table A-2 (Appendix A, Table 2: This notation system is used for all tables and figures given in the appendices.) lists the sampling stations and the types of samples

collected from each. There were no modifications made to the WBN monitoring program in 1998. Program modifications in previous years were described in Appendix B of the annual report. To maintain a consistent format, Appendix B is included in this report with the statement that no modifications were made in 1998. Exceptions to the sampling and analysis schedule are described in Appendix C.

To determine the amount of radioactivity in the environment prior to the operation of WBN, a preoperational radiological environmental monitoring program was initiated in December 1976 and operated through December 31, 1995. Measurements of the same types of radioactive materials that are measured currently were assessed during the preoperational phase to establish normal background levels for various radionuclides in the environment.

The preoperational monitoring program is a very important part of the overall program. During the 1950s, 60s, and 70s, atmospheric nuclear weapons testing released radioactive material to the environment causing fluctuations in background radiation levels. This radioactive material is the same type as that which is produced by the operation of the WBN reactor. Preoperational knowledge of preexisting radionuclide patterns in the environment permits a determination, through comparison and trending analyses, of whether the operation of WBN is impacting the environment and thus the surrounding population.

The determination of environmental impact during the operating phase also considers the presence of control stations that have been established in the environment. Results of environmental samples taken at control stations (far from the plant) are compared with those from indicator stations (near the plant) to aid in the determination of the impacts from WBN operation.

All samples are analyzed by the radioanalytical laboratory of TVA's Environmental Radiological Monitoring and Instrumentation group located at the Western Area Radiological Laboratory (WARL) in Muscle Shoals, Alabama. Analyses are conducted in accordance with written and

approved procedures and are based on accepted methods. A summary of the analysis techniques and methodology is presented in Appendix D. Data tables summarizing the sample analysis results are presented in Appendix H. The Data Supplement to this report contains the results of all measurements made as a part of this program.

The radiation detection devices and analysis methods used to determine the radionuclide content of samples collected in the environment are very sensitive to small amounts of radioactivity. The sensitivity of the measurement process is defined in terms of the lower limit of detection (LLD). A description of the nominal LLDs for the Radioanalytical Laboratory is presented in Appendix E.

The Radioanalytical Laboratory operates under a comprehensive quality assurance/quality control program to monitor laboratory performance throughout the year. The program is intended to detect any problems in the measurement process as soon as possible so they can be corrected. This program includes equipment checks to ensure that the radiation detection instruments are working properly and the analysis of quality control samples which are included alongside routine environmental samples. The laboratory participated in the Environmental Protection Agency (EPA) Interlaboratory Comparison Program during 1998. Samples split with the State of Tennessee provide an additional verification of the overall performance of the laboratory. A complete description of the program is presented in Appendix F.

## DIRECT RADIATION MONITORING

Direct radiation levels are measured at a number of stations around the plant site. These measurements include contributions from cosmic radiation, radioactivity in the ground, fallout from atmospheric nuclear weapons tests conducted in the past, and any radioactivity that may be present as a result of plant operations. Because of the relatively large variations in background radiation as compared to the small levels from the plant, contributions from the plant may be difficult to distinguish.

Direct radiation levels measured in the area around the WBN site in 1998 were consistent with levels from previous years and with levels measured at other locations in the region.

### Measurement Techniques

Direct radiation measurements are made with thermoluminescent dosimeters (TLDs). When certain materials are exposed to ionizing radiation, many of the electrons which become displaced are trapped in the crystalline structure of the material. They remain trapped for long periods of time as long as the material is not heated. When heated (thermo-), the electrons are released, producing a pulse of light (-luminescence). The intensity of the light pulse is proportional to the amount of radiation to which the material was exposed. Materials which display these characteristics are used in the manufacture of TLDs.

From 1977 through 1989, TVA used a Victoreen dosimeter consisting of a manganese activated calcium fluoride ( $\text{Ca}_2\text{F:Mn}$ ) TLD material encased in a glass bulb. In 1989, TVA began the process of changing from the Victoreen dosimeter to the Panasonic Model UD-814 dosimeter, and completely changed to the Panasonic dosimeter in 1990. This dosimeter contains four elements consisting of one lithium borate and three calcium sulfate phosphors. The calcium sulfate phosphors are shielded by approximately  $100 \text{ mg/cm}^2$  plastic and lead to compensate for the over-response of the detector to low energy radiation.

The TLDs are placed approximately one meter above the ground, with two or more TLDs at each station. Sixteen monitoring points are located around the plant near the site boundary; one location in each of the 16 compass sectors. An additional 16 monitoring points are located approximately 5 miles from the plant in each of the 16 sectors. Dosimeters are also placed at the perimeter and remote air monitoring sites and at additional locations out to approximately 32 miles from the site. The environmental TLD locations are listed in Table A-3. The TLDs are exchanged every 3 months and the accumulated exposure is read with a Panasonic Model UD-710A automatic reader interfaced with a Hewlett Packard Model 9000 computer system. The program of NRC environmental TLD locations which was referenced in previous reports was terminated by the NRC at the end of 1997.

Since the calcium sulfate phosphor is much more sensitive than the lithium borate, the measured exposure is taken as the median of the results obtained from the nine calcium sulfate phosphors in three detectors. The values are corrected for gamma response, system variations, and transit exposure, with individual gamma response calibrations for each element. The system meets or exceeds the performance specifications outlined in Regulatory Guide 4.13 for environmental applications of TLDs.

Since 1974, TVA has participated in intercomparisons of environmental dosimeters conducted by the U. S. Department of Energy and other interested parties. The results, shown in Table 2, demonstrate that direct radiation levels determined by TVA are generally within ten percent of the calculated or known values.

### Results

Results are normalized to a standard quarter (91.25 days or 2190 hours). The monitoring locations are grouped according to the distance from the plant. The first group consists of locations within 1 mile of the plant. The second group lies between 1 and 2 miles, the third group between 2 and 4 miles, the fourth group between 4 and 6 miles, and the fifth group is made up of monitoring points more than 6 miles from the plant. Past data have shown that the average

results from groups greater than 2 miles from the plant are essentially the same. Therefore, for purposes of this report, locations 2 miles or less from the plant are identified as "onsite" and all others are considered "offsite."

The quarterly gamma radiation levels determined from the TLDs deployed around WBN in 1998 are summarized in Table H-1. The results from all measurements at individual stations are presented in Table H-2. The exposures are measured in milliroentgens (mR). For purposes of this report, one milliroentgen, one millirem (mrem) and one millirad (mrad) are assumed to be numerically equivalent. The rounded average annual exposures are shown below. For comparison purposes, the average direct radiation measurements made in the preoperational monitoring program for the period of 1990 to 1995 are also shown.

	Annual Average Direct Radiation Levels WBN <u>mR/Year</u>	
	<u>1998</u>	<u>Preoperational Average</u>
Onsite Stations	65	65
Offsite Stations	59	57

The data in Table H-1 indicate that the average quarterly radiation levels at the WBN onsite stations are approximately 1.5 mR/quarter higher than levels at the offsite stations. This difference is consistent with levels measured for the preoperation and construction phases of TVA nuclear power plant sites where the average levels onsite were generally 2-6 mR/quarter higher than levels offsite. The causes of these differences have not been isolated; however, it is postulated that the differences are probably attributable to combinations of influences such as natural variations in environmental radiation levels, earth-moving activities onsite, and the mass of concrete employed in the construction of the plant. Other undetermined influences may also play a part.

Figure H-1 compares plots of the data from the onsite or site boundary stations with those from the offsite stations over the period from 1990 through 1998. The results reported in 1998 are consistent with direct radiation levels reported in previous years. There is no indication that WBN activities increased the background radiation levels normally observed in the areas surrounding the plant.

## ATMOSPHERIC MONITORING

The atmospheric monitoring network is divided into three groups identified as local, perimeter, and remote. Four local air monitoring stations are located on or adjacent to the plant site in the general directions of greatest wind frequency. Four perimeter air monitoring stations are located between 6 to 11 miles from the plant, and two remote air monitors are located out to 15 miles. The monitoring program and the locations of monitoring stations are identified in the tables and figures of Appendix A. The remote stations are used as control or baseline stations.

Results from the analysis of samples in the atmospheric pathway are presented in Tables H-3 and H-4. Radioactivity levels identified in this reporting period are consistent with background and preoperational program data. There is no indication of an increase in atmospheric radioactivity as a result of WBN.

### Sample Collection and Analysis

Air particulates are collected by continuously sampling air at a flow rate of approximately 2 cubic feet per minute (cfm) through a 2-inch glass fiber filter. The sampling system consists of a pump, a magnehelic gauge for measuring the drop in pressure across the system, and a dry gas meter. This allows an accurate determination of the volume of air passing through the filter. This system is housed in a building approximately 2 feet by 3 feet by 4 feet. The filter is contained in a sampling head mounted on the outside of the monitor building. The filter is replaced weekly. Each filter is analyzed for gross beta activity about 3 days after collection to allow time for the radon daughters to decay. Every 4 weeks composites of the filters from each location are analyzed by gamma spectroscopy.

Gaseous radioiodine is collected using a commercially available cartridge containing TEDA-impregnated charcoal. This system is designed to collect iodine in both the elemental form and as organic compounds. The cartridge is located in the same sampling head as the air particulate

filter and is downstream of the particulate filter. The cartridge is changed at the same time as the particulate filter and samples the same volume of air. Each cartridge is analyzed for I-131 by gamma spectroscopy analysis.

Rainwater is collected by use of a collection tray attached to the monitor building. The collection tray is protected from debris by a screen cover. As water drains from the tray, it is collected in one of two 5-gallon containers inside the monitor building. A 1-gallon sample is removed from the container every 4 weeks. Any excess water is discarded. Rainwater samples are held to be analyzed only if air particulate samples indicate the presence of elevated levels or if fallout is expected. For example, rainwater samples were analyzed during the period of fallout following the accident at Chernobyl in 1986. Since no plant-related air activity was detected in 1998, no rainwater samples from WBN were analyzed in this reporting period.

### Results

The results from the analysis of air particulate samples are summarized in Table H-3. Gross beta activity in 1998 was consistent with levels reported in previous years. The average gross beta activity measured for air particulate samples was  $0.021 \text{ pCi/m}^3$  for both indicator and control locations. The annual averages of the gross beta activity in air particulate filters at these stations for the period 1977-1998 are presented in Figure H-2. Increased levels due to fallout from atmospheric nuclear weapons testing are evident in the years prior to 1981 and a small increase from the Chernobyl accident can be seen in 1986. These patterns are consistent with data from monitoring programs conducted by TVA at other nuclear power plant construction sites. Comparison with the same data for the preoperational period of 1990-1995 indicates that the annual average gross beta activity for air particulates as measured in the 1998 monitoring program was consistent with preoperational data.

Only natural radioactive materials were identified by the monthly gamma spectral analysis of the air particulate samples. As shown in Table H-4, I-131 was not detected in any charcoal cartridge samples collected in 1998.

## TERRESTRIAL MONITORING

Terrestrial monitoring is accomplished by collecting samples of environmental media that may transport radioactive material from the atmosphere to humans. For example, radioactive material may be deposited on a vegetable garden and be ingested along with the vegetables or it may be deposited on pasture grass where dairy cattle are grazing. When the cow ingests the radioactive material, some of it may be transferred to the milk and consumed by humans who drink the milk. Therefore, samples of milk, vegetation, soil, and food crops are collected and analyzed to determine potential impacts from exposure through this pathway. The results from the analysis of these samples are shown in Tables H-5 through H-12.

A land use survey is conducted annually between April and October to identify the location of the nearest milk animal, the nearest residence, and the nearest garden of greater than 500 square feet producing fresh leafy vegetables in each of 16 meteorological sectors within a distance of 5 miles from the plant. This land use survey satisfies the requirements 10 CFR 50, Appendix I, Section IV.B.3. From data produced by the land use survey, radiation doses are projected for individuals living near the plant. Doses from air submersion are calculated for the nearest residence in each sector, while doses from drinking milk or eating foods produced near the plant are calculated for the areas with milk-producing animals and gardens, respectively. These dose projections are hypothetical extremes and do not represent actual doses to the general public. The doses projected as a result of the 1998 land use survey are presented in Appendix G.

### Sample Collection and Analysis

Milk samples are collected every 2 weeks from three indicator dairies and from at least one of three control dairies. Milk samples are placed on ice for transport to the radioanalytical laboratory. A specific analysis for I-131 and a gamma spectral analysis are performed on each sample and once per quarter samples are analyzed for Sr-89 and Sr-90.

Samples of vegetation are collected every 4 weeks from one farm that had milk producing animals in the past. In addition, samples are also collected every 4 weeks from one dairy farm

and from one control station. The samples are collected by cutting or breaking enough vegetation to provide between 100 and 200 grams of sample. Care is taken not to include any soil with the vegetation. The sample is placed in a container with 1650 ml of 0.5N NaOH for transport back to the Radioanalytical Laboratory for I-131 analysis. A second sample of between 750 and 1000 grams is also collected from each location. After drying and grinding, these samples are analyzed by gamma spectroscopy. Once each quarter, the sample is ashed after the gamma analysis is completed and analyzed for Sr-89 and Sr-90.

Soil samples are collected annually from the air monitoring locations. The samples are collected with either a "cookie cutter" or an auger type sampler. After drying and grinding, the sample is analyzed by gamma spectroscopy. When the gamma analysis is complete, the sample is ashed and analyzed for Sr-89 and Sr-90.

Samples representative of food crops raised in the area near the plant are obtained from individual gardens, corner markets, or cooperatives. Types of foods may vary from year to year as a result of changes in the local vegetable gardens. In 1998 samples of corn, green beans, potatoes, tomatoes, and turnip greens were collected from local vegetable gardens. Samples of the same food products grown in areas that would not be effected by the plant were collected as control samples. The edible portion of each sample is analyzed by gamma spectroscopy.

### Results

The results from the analysis of milk samples are presented in Table H-5. All I-131 values were below the established nominal LLD of 0.4 pCi/liter. Sr-90 was detected in levels above the nominal LLD of 2.0 pCi/liter in two samples. The average concentration was 2.2 pCi/liter. These levels are consistent with concentrations measured in samples collected in the preoperational radiological environmental monitoring program and with concentrations reported in milk as a result of fallout from atmospheric nuclear weapons tests (Reference 1). Figure H-3 displays the average Sr-90 concentrations measured in milk since 1976. The concentrations have steadily decreased as a result of the 28-year half-life of Sr-90 and the washout and transport of

the element through the soil over the period. The only other radionuclides detected in the analysis of milk samples were naturally occurring radionuclides. The predominant isotope reported in milk samples was the naturally occurring K-40. An average of approximately 1350 pCi/liter of K-40 was identified in all milk samples.

Results from the analysis of vegetation samples are presented in Table H-6. Sr-90 was identified in six samples from indicator locations with an average concentration of 21.5 pCi/kg. The average concentration for samples from control locations was 26.8 pCi/kg. The highest concentrations of radionuclides identified in vegetation were for the naturally occurring isotopes K-40 and Be-7. The concentrations of Sr-90 were consistent with preoperational data and represent the levels of Sr-90 in the environment as the result of fallout from past nuclear weapons testing.

Consistent with most of the environment, Cs-137 was detected in all but one of the soil samples collected in 1998. The maximum concentration of Cs-137 was 0.78 pCi/g. The concentrations were consistent with levels previously reported from fallout. All other radionuclides reported were naturally occurring isotopes. The results of the analysis of soil samples are summarized in Table H-7.

A plot of the annual average Cs-137 concentrations in soil is presented in Figure H-4. Like the levels of Sr-90 in milk, concentrations of Cs-137 in soil are steadily decreasing as a result of the cessation of weapons testing in the atmosphere, the 30 year half-life of Cs-137, and transport through the environment.

All radionuclides reported in food samples were naturally occurring. The maximum K-40 value was 3830 pCi/kg in potatoes. The results are reported in Tables H-8 through H-12.

## LIQUID PATHWAY MONITORING

Potential exposures from the liquid pathway can occur from drinking water, ingestion of edible fish and invertebrates, or from direct radiation exposure from radioactive materials deposited in the river sediment. The aquatic monitoring program includes the collection of samples of river (reservoir) water, groundwater, drinking water supplies, fish, Asiatic clams (no known human consumption), and bottom and shoreline sediment. Samples from the reservoir are collected both upstream and downstream from the plant.

Results from the analysis of the liquid pathway samples are presented in Table H-13 through H-22. Radioactivity levels in water, fish, and shoreline sediment were consistent with background and/or fallout levels previously reported. Low levels of Co-60, and Cs-137 were measured in samples of bottom sediment and Cs-137 was identified in fish samples and in shoreline sediment. There is no direct exposure pathway to the public through radioactivity in bottom sediment. The levels of Cs-137 in fish and shoreline sediment are consistent with preoperational data. Results for the sediment sampling conducted in the onsite Yard Holding Pond and Low Volume Waste Treatment Pond are discussed later in this section.

### Sample Collection and Analysis

Samples of surface water are collected from the Tennessee River using automatic sampling systems from two downstream stations and one upstream station. A timer turns on the system at least once every 2 hours. The line is flushed and a sample collected into a composite container. A 1-gallon sample is removed from the container at 4-week intervals and the remaining water is discarded. Each sample is analyzed for gamma-emitting radionuclides and for gross beta activity. The samples are composited quarterly and analyzed for Sr-89, Sr-90, and tritium.

Samples are also collected by an automatic sampling system at the first two downstream drinking water intakes. These samples are collected in the same manner as the surface water samples. These monthly samples are analyzed for gamma-emitting radionuclides and for gross beta activity. Quarterly composites are analyzed for Sr-89, Sr-90, and tritium. The samples collected

by the automatic sampling device are taken directly from the river at the intake structure. Since the sample at this point is raw water, the upstream surface water sample is used as a control sample for drinking water.

Groundwater is sampled from one onsite well down gradient from the plant and one onsite well up gradient from the plant. The onsite wells are sampled with a continuous sampling system. In addition, a grab sample is collected from a private well in an area unaffected by WBN. The samples are composited by location quarterly and analyzed for gross beta activity, for gamma-emitting radionuclides, for Sr-89, Sr-90 and for tritium content.

Samples of commercial and game fish species are collected semiannually from each of two reservoirs: the reservoir on which the plant is located (Chickamauga Reservoir) and the upstream reservoir (Watts Bar Reservoir). The samples are collected using a combination of netting techniques and electrofishing. The ODCM specifies analysis of the edible portion of the fish. To comply with this requirement, filleted portions are taken from several fish of each species. Crappie is collected as a game species and channel catfish and smallmouth buffalo are sampled as commercial species. The samples are analyzed by gamma spectroscopy.

Bottom sediment is collected semiannually from selected Tennessee River Mile (TRM) locations using a dredging apparatus or divers. Samples of shoreline sediment are also taken from recreation areas in the vicinity of the plant. The samples are dried, ground, and analyzed by gamma spectroscopy.

Samples of sediment are also collected from the onsite Yard Holding Pond and Low Volume Waste Treatment Pond. A total of five samples were collected in 1998.

Samples of Asiatic clams are collected semiannually from one location downstream from the plant and one location upstream. The clams are usually collected in the sampling process with the sediment. Enough clams are collected to produce approximately 50 grams of wet flesh. The flesh is separated from the shells and the dried flesh samples are analyzed by gamma spectroscopy.

## Results

Gross beta activity was detectable above the nominal LLD in most of the surface water samples. The gross beta concentrations averaged 3.0 pCi/liter in downstream samples and 2.8 pCi/liter in upstream samples. These levels were consistent with results found during the preoperational monitoring program and agreed with previously reported levels resulting from fallout or naturally occurring isotopes. A summary table of the results is shown in Table H-13.

No fission or activation products were identified in drinking water samples. Average gross beta activity at downstream stations was 2.9 pCi/liter while the average for upstream stations was 2.8 pCi/liter. The results are shown in Table H-14. Trend plots of the gross beta activity in surface water and drinking water samples from 1977 through 1998 are presented in Figure H-5.

Only naturally occurring radionuclides were identified in ground water samples. Gross beta concentrations in samples from the onsite indicator location averaged 6.1 pCi/liter, while concentrations from the control locations averaged 2.8 pCi/liter. These results were consistent with the well water results from the preoperational program in that the down gradient well has always produced higher gross beta activity than the samples from the control locations. The results are presented in Table H-15.

Measurable levels of Cs-137 were identified in a total of six fish samples. The maximum concentration measured for indicator (downstream) samples was 0.05 pCi/g, while the maximum for upstream samples was 0.11 pCi/g. Other radioisotopes found in fish were naturally occurring, with the most notable being K-40.

The results are summarized in Tables H-16, H-17, and H-18. Trend plots of the annual average Cs-137 concentrations measured in fish samples are presented in Figure H-6. The Cs-137 activities are consistent with preoperational results produced by fallout or effluents from other nuclear facilities.

Two radionuclides of the type produced in nuclear power plants were identified in bottom sediment samples. These radionuclides were Co-60 and Cs-137. The highest concentration of Co-60 measured in sediment collected downstream was 0.03 pCi/gm. There was no Co-60 detected in the upstream bottom sediment samples. A total of three downstream and two upstream samples contained measurable concentrations of Cs-137. The average concentration of Cs-137 measured in bottom sediment collected downstream of WBN was 0.51 pCi/gm while the average concentration for the upstream samples was 1.62 pCi/gm. Results from the analysis of bottom sediment samples are shown in Table H-19.

The only manmade radionuclide identified in samples of shoreline sediment was Cs-137. A concentration of 0.10 pCi/gm was measured in one sample from the downstream sampling location. There was no measurable Cs-137 in samples from the upstream sampling point. The presence of Cs-137 in shoreline sediment is consistent with previously reported results. The results for the analysis of shoreline sediment is presented in Table H-20. Trend plots of the average concentration of Cs-137 in bottom and shoreline sediment are presented in Figure H-7.

Consistent with previous monitoring conducted for the onsite ponds, Cs-137 was detected in most of the samples. The average of the Cs-137 levels measured in sediment from the onsite ponds was 0.24 pCi/gm. In addition to the Cs-137, Co-58, Co-60, Cs-134 and Sb-125 were detected in varying concentrations in samples collected from the Yard Holding Pond. Measurable Co-58 at a concentration of 0.03 pCi/gm was detected in one sample. Two samples contained measurable levels of Co-60 with highest concentration being 0.07 pCi/gm. One sample contained Sb-125 at 0.15 pCi/gm and Cs-134 was measured in two samples with an average concentration of 0.05 pCi/gm. The results for the analysis of pond sediment samples are provided in Table H-21.

The concentrations of radionuclides in the sediment in the Yard Holding Pond have decreased relative to the levels reported in 1997 and are most likely deposited in the sediment as a result of back flow from the plant discharge. The back flow occurs into the Yard Holding Pond if

discharge to the river has to be temporarily halted. Since these radionuclides were present in relatively low concentrations and confined to the Yard Holding Pond located in the owner controlled area not open to the general public, the presence of these radionuclides would not represent any increased risk of exposure to the general public.

Only naturally occurring radionuclides were detected in samples of Asiatic clams. The results from the analysis of clams samples is presented in Table H-22.

## ASSESSMENT AND EVALUATION

Potential doses to the public are estimated from measured effluents using computer models. These models were developed by TVA and are based on guidance provided by the NRC in Regulatory Guide 1.109 for determining the potential dose to individuals and populations living in the vicinity of the plant. The doses calculated are a representation of the dose to a "maximum exposed individual." Some of the factors used in these calculations (such as ingestion rates) are maximum expected values which will tend to overestimate the dose to the "hypothetical" person. In reality, the expected dose to actual individuals is significantly lower.

The area around the plant is analyzed to determine the pathways through which the public may receive an exposure. As indicated in Figure 2, the two major ways by which radioactivity is introduced into the environment are through liquid and gaseous effluents.

For liquid effluents, the public can be exposed to radiation from three sources: drinking water from the Tennessee River, eating fish caught in the Tennessee River, and direct exposure to radioactive material due to activities on the banks of the river (recreational activities). Data used to determine these doses are based on guidance given by the NRC for maximum ingestion rates, exposure times, and distribution of the material in the river. Whenever possible, data used in the dose calculation are based on specific conditions for the WBN area.

For gaseous effluents, the public can be exposed to radiation from several sources: direct radiation from the radioactivity in the air, direct radiation from radioactivity deposited on the ground, inhalation of radioactivity in the air, ingestion of vegetation which contains radioactivity deposited from the atmosphere, and ingestion of milk from animals which consumed vegetation containing deposited radioactivity. The concentrations of radioactivity in the air and the soil are estimated by computer models which use the actual meteorological conditions to determine the distribution of the effluents in the atmosphere. Again, as many of the parameters as possible are based on actual site specific data.

## Results

The estimated doses to the maximum exposed individual due to radioactivity released from WBN in 1998 are presented in Table 3. These estimates were made using the concentrations of the liquids and gases measured at the effluent monitoring points. Also shown are the regulatory limits for these doses and a comparison between the calculated dose and the corresponding limit. The maximum calculated whole body dose equivalent from measured liquid effluents as presented in Table 3 is  $6.2E-03$  mrem/year, or less than one percent of the limit. The maximum organ dose equivalent from gaseous effluents is  $5.7E-02$  mrem/year. This value is 0.4 percent of the ODCM limit. A more complete description of the effluents released from WBN and the corresponding doses projected from these effluents can be found in the WBN Annual Radioactive Effluent Release Report.

The estimated increase in radiation dose equivalent to the general public resulting from the operation of WBN is negligible when compared to the dose from natural background radiation. The results from each environmental sample are compared with the concentrations from the corresponding control stations and appropriate preoperational and background data to determine influences from the plant. During this report period, Cs-137 was detected in sediment, soil, and fish collected for the WBN program and Sr-90 was measured in milk and vegetation samples. The concentrations measured were consistent with levels measured through out the preoperational monitoring program. The trace amounts of Co-60 found in bottom sediment would produce no measurable increase in the dose to the general public.

Dose estimates were made from concentrations of radioactivity found in samples of environmental media. Media evaluated include, but are not limited to, air, milk, food products, drinking water, fish and shoreline sediment. Inhalation, ingestion and direct exposure dose estimates for persons at the indicator locations were essentially identical to those determined for persons at control stations. More than 99 percent of the doses to the public produced by radionuclides in the environmental media sampled in the WBN program were contributed by the

naturally occurring radionuclide K-40 and by Sr-90 and Cs-137. The concentrations of Sr-90 and Cs-137 are consistent with levels measured in TVA's preoperational radiological environmental monitoring programs.

The samples of pond sediment were not included in the assessment of doses from environmental radionuclides. As discussed earlier, these radionuclides were contained in the sediment from the Yard Holding Pond which is in the owner controlled area and would not present an exposure pathway for the general public.

### Conclusions

It is concluded from the above analysis of environmental samples and from the trend plots presented in Appendix H, that exposure to members of the general public which may have been attributable to WBN is negligible. The radioactivity reported herein is primarily the result of fallout or natural background. Any activity which may be present in the environment as a result of plant operations does not represent a significant contribution to the exposure of Members of the Public.

## REFERENCES

1. Merril Eisenbud, Environmental Radioactivity, Academic Press, Inc., New York, NY, 1987.
2. National Council on Radiation Protection and Measurements, Report No. 93, "Ionizing Radiation Exposure of the Population of the United States," September 1987.
3. United States Nuclear Regulatory Commission, Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure," July 1981.
4. Hansen, W.G., Campbell, J. E., Fooks, J. H., Mitchell, H.C., and Eller C.H., Farming Practices and Concentrations of Emission Products in Milk, U.S. Department of Health, Education, and Welfare; Public Health Service Publication No. 999-R-6, May 1964.

Table 1  
COMPARISON OF  
PROGRAM LOWER LIMITS OF DETECTION WITH THE REGULATORY LIMITS FOR  
MAXIMUM ANNUAL AVERAGE EFFLUENT CONCENTRATIONS  
RELEASED TO UNRESTRICTED AREAS  
AND REPORTING LEVELS

	<u>Concentrations in Water, pCi/Liter</u>			<u>Concentrations in Air, pCi/Cubic Meter</u>		
	<u>Effluent Concentration<sup>1</sup></u>	<u>Reporting Level<sup>2</sup></u>	<u>Lower limit of Detection<sup>3</sup></u>	<u>Effluent Concentration<sup>1</sup></u>	<u>Reporting Level<sup>2</sup></u>	<u>Lower limit of Detection<sup>3</sup></u>
H-3	1,000,000	20,000	300	100,000		
Cr-51	500,000		45	30,000		0.02
Mn-54	30,000	1,000	5	1,000		0.005
Co-58	20,000	1,000	5	1,000		0.005
Co-60	3,000	300	5	50		0.005
Zn-65	5,000	300	10	400		0.005
Sr-89	8,000		5	1,000		0.0011
Sr-90	500		2	6		0.0004
Nb-95	30,000	400	5	2,000		0.005
Zr-95	20,000	400	10	400		0.005
Ru-103	30,000		5	900		0.005
Ru-106	3,000		40	20		0.02
I-131	1,000	2	0.4	200	0.9	0.03
Cs-134	900	30	5	200	10	0.005
Cs-137	1,000	50	5	200	20	0.005
Ce-144	3,000		30	40		0.01
Ba-140	8,000	200	25	2,000		0.015
La-140	9,000	200	10	2,000		0.01

Note: 1 pCi = 3.7 x 10<sup>-2</sup> Bq.

Note: For those reporting levels that are blank, no value is given in the reference.

1 Source: Table 2 of Appendix B to 10 CFR 20.1001-20.2401

2 Source: WBN Offsite Dose Calculation Manual, Table 2.3-2

3 Source: Table E-1 of this report.

Table 2  
Results from the  
Intercomparison of Environmental Dosimeters

<u>Year</u>	<u>TVA Results</u> <u>mrem</u>	<u>Average, all</u> <u>Respondents</u> <u>mrem</u>	<u>Calculated</u> <u>Exposure</u> <u>(See Note 1)</u> <u>mrem</u>	<u>% Difference</u> <u>TVA:</u> <u>Calculated</u>	<u>% Difference</u> <u>Respondents:</u> <u>Calculated</u>
<b>Field Dosimeters</b>					
74	15.0	16.3	16.3	-8.0	0.0
77	30.4	31.5	34.9	-12.9	-9.7
79	13.8	16.0	14.1	-2.1	13.5
81	31.8	30.2	30.0	6.0	0.7
82	43.2	45.0	43.5	-0.7	3.4
84	73.0	75.1	75.8	-3.7	-0.9
86a	33.2	28.9	29.7	11.8	-2.7
86b	9.4	10.1	10.4	-9.6	-2.9
93a	24.4	26.4	27.0	-9.6	-2.2
93b	27.6	26.4	27.0	2.2	-2.2
96a	16.9	18.9	19.0	-11.1	-0.5
96b	17.6	18.9	19.0	-7.4	-0.5
<b>Low Irradiated Dosimeters</b>					
74	27.9	28.5	30.0	-7.0	-5.0
79	12.1	12.1	12.2	-0.8	-0.8
86	18.2	16.2	17.2	5.8	-5.8
93a	24.9	25.0	25.9	-3.9	-3.5
93b	27.8	25.0	25.9	7.3	-3.5
<b>High Irradiated Dosimeters</b>					
77	99.4	86.2	91.7	8.4	-6.0
79	46.1	43.9	45.8	0.7	-4.1
81a	84.1	75.8	75.2	11.8	0.8
81b	102.0	90.7	88.4	15.4	2.6
82a	179.0	191.0	202.0	-11.4	-5.4
82b	136.0	149.0	158.0	-13.9	-5.7
84a	85.6	77.9	79.9	7.1	-2.5
84b	76.8	73.0	75.0	2.4	-2.7
93a	67.8	69.8	72.7	-6.7	-4.0
93b	80.2	69.8	72.7	10.3	-4.0
96a	60.7	55.2	58.1	4.5	-5.0
96b	59.4	55.2	58.1	2.2	-5.0

Notes: 1. The calculated exposure is the "known" exposure determined by the testing agency.

Table 3

Maximum Dose Due to Radioactive Effluent Releases

Watts Bar Nuclear Plant  
1998  
mrem/year

Dose From Liquid Effluents

<u>Type</u>	<u>1998 Dose</u>	<u>NRC Limit</u>	<u>Percent of NRC Limit</u>
Total Body	6.2E-3	3	< 1
Any Organ	8.2E-3	10	< 1

Doses From Gaseous Effluents

<u>Type</u>	<u>1998 Dose</u>	<u>NRC Limit</u>	<u>Percent of NRC Limit</u>
Noble Gas (Gamma)	2.9E-1	10	2.9
Noble Gas (Beta)	1.2E-1	20	< 1
Any Organ	5.7E-2	15	< 1

Total Cumulative Dose

<u>Type</u>	<u>1998 Dose</u>	<u>EPA Limit</u>	<u>Percent of EPA Limit</u>
Total Body or Any Other Organ	2.3E-1	25	< 1
Thyroid	2.2E-1	75	< 1

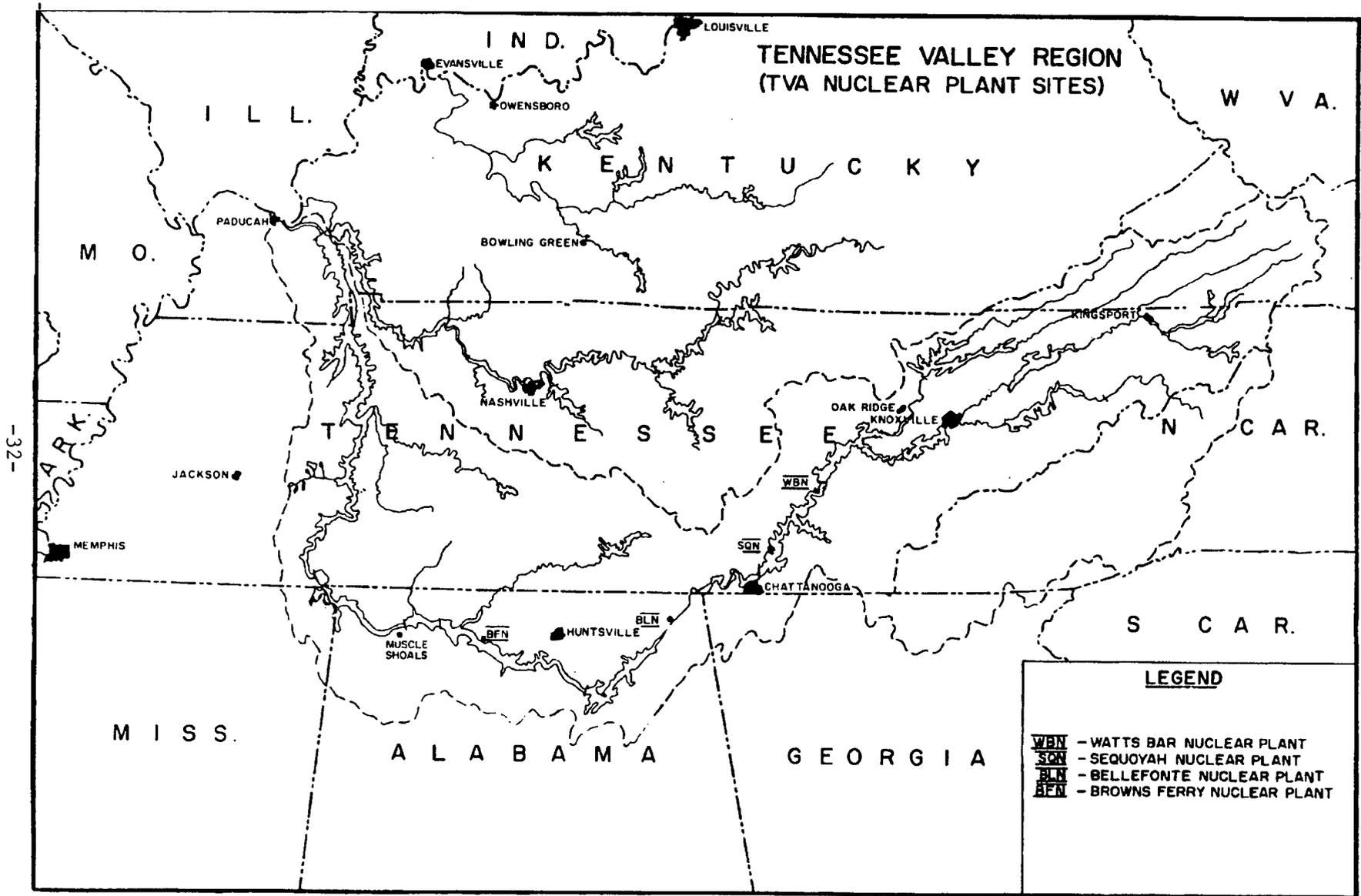
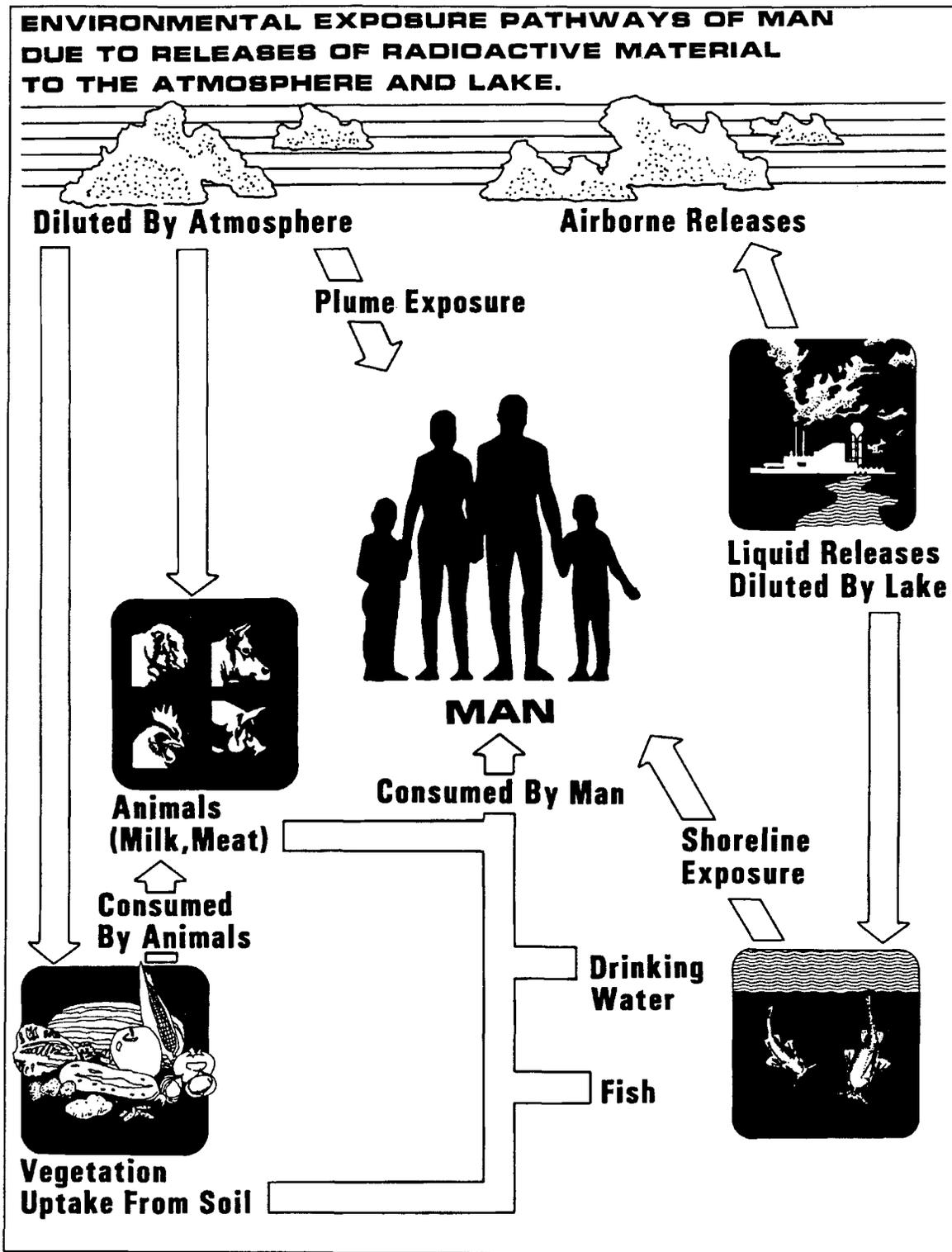


Figure 1

Figure 2



APPENDIX A

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM AND  
SAMPLING LOCATIONS

Table A-1

WATTS BAR NUCLEAR PLANT  
 RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

<u>Exposure Pathway and/or Sample</u>	<u>Number of Samples and Locations<sup>b</sup></u>	<u>Sampling and Collection Frequency</u>	<u>Type and Frequency of Analysis</u>
1. AIRBORNE			
a. Particulates	4 samples from locations (in different sectors) at or near the site boundary (LM-1, 2, 3, and 4).	Continuous sampler operation with sample collection weekly (more frequently if required by dust loading).	Analyze for gross beta radioactivity greater than or equal to 24 hours following filter change. Perform gamma isotopic analysis on each sample if gross beta is greater than 10 times yearly mean of control sample. Composite at least once per 31 days (by location) for gamma scan.
	4 samples from communities approximately 6-10 miles from the plant (PM-2, 3, 4, and 5).		
	2 samples from control locations greater than 10 miles from the plant (RM-2 and 3).		
b. Radioiodine	Samples from same locations as air particulates.	Continuous sampler operation with filter collection weekly.	I-131 at least once per 7 days. Analysis is performed by gamma spectroscopy.
c. Rainwater	Samples from same locations as air particulates.	Rainwater collected continuously with composite sample taken monthly.	Analyzed for gamma activity only if radioactivity in other media indicates the presence of increased levels of fallout.
d. Soil	Samples from same locations as air particulates.	Once per year.	Gamma scan, Sr-89, Sr-90 once per year.

Table A-1

WATTS BAR NUCLEAR PLANT  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM<sup>a</sup>

<u>Exposure Pathway and/or Sample</u>	<u>Number of Samples and Locations<sup>b</sup></u>	<u>Sampling and Collection Frequency</u>	<u>Type and Frequency of Analysis</u>
2. DIRECT	2 or more dosimeters (TLDs) placed at or near the site boundary in each of the 16 sectors.	At least once per 92 days.	Gamma dose at least once per 92 days.
	2 or more dosimeters placed at stations located approximately 5 miles from the plant in each of the 16 sectors.		
	2 or more dosimeters in at least 8 additional locations of special interest, including at least 2 control stations.		
3. WATERBORNE			
a. Surface	2 samples downstream from plant discharge (TRM 517.9 and TRM 523.1).	Collected by automatic sequential-type sampler <sup>c</sup> with composite samples collected over a period of approximately 31 days.	Gross beta and gamma scan of each composite sample. Composite for Sr-89, Sr-90, and tritium analysis at least once per 92 days.
	1 sample at a control location upstream from plant discharge (TRM 529.3).		
b. Ground	One sample adjacent to plant (well No. 1).	Collected by automatic sequential-type sampler <sup>c</sup> with composite samples collected over a period of approximately 31 days.	Composited for gross beta, gamma scan, Sr-89, Sr-90 and tritium at least once per 92 days.

Table A-1

WATTS BAR NUCLEAR PLANT  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM<sup>a</sup>

<u>Exposure Pathway and/or Sample</u>	<u>Number of Samples and Locations<sup>b</sup></u>	<u>Sampling and Collection Frequency</u>	<u>Type and Frequency of Analysis</u>
b. Ground (Continued)	1 sample from ground water source up gradient (well No. 5).	Same as well No. 1.	Gross beta, gamma scan, Sr-89, Sr-90 and tritium at least once per 92 days.
	1 sample from ground water source up gradient (Farm L).	Grab sample at least once per 92 days.	Same as above.
c. Drinking	1 sample at the first two potable surface water supplies downstream from the plant (TRM 503.8 and TRM 473.0).	Collected by automatic sequential-type sampler <sup>c</sup> with composite sample collected monthly.	Gross beta and gamma scan on each composite. Quarterly composite also analyzed for tritium, Sr-89, and Sr-90.
	1 sample at a control location TRM529.3 <sup>d</sup> .		
d. Sediment	1 sample in the area immediately downstream of plant discharge (TRM 527.4).	At least once per 184 days.	Gamma scan of each sample.
	2 additional samples downstream of plant discharge (TRM 518.0 and 496.5).		
	1 sample at a control location upstream from plant discharge (TRM 532.1).		

Table A-1

WATTS BAR NUCLEAR PLANT  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM<sup>a</sup>

<u>Exposure Pathway and/or Sample</u>	<u>Number of Samples and Locations<sup>b</sup></u>	<u>Sampling and Collection Frequency</u>	<u>Type and Frequency of Analysis</u>
e. Sediment from shoreline.	1 sample downstream from plant Discharge (TRM 513.0).  1 sample from a control location upstream from plant discharge (TRM 530.2).	At least once per 184 days.	Gamma scan of each sample.
f. Pond Sediment	1 sample from at least three locations in the Yard Holding Pond.	At least once per year.	Gamma scan of each sample.
5. INGESTION			
a. Milk	3 samples from farms and/or dairies in the immediate vicinity of the plant (Farms L, Mu and N).  1 or more samples from control locations (Farms B, C, and/or S). (Also used at SQN).	Every 2 weeks.	I-131 and gamma analysis on each sample. Sr-89 and Sr-90 once per quarter.
b. Fish	At least one sample of each monitored species from Chickamauga and Watts Bar Reservoirs.	At least once per 184 days. One sample of each of the following species:  Channel Catfish Crappie Smallmouth Buffalo	Gamma scan on edible portions.

Table A-1

WATTS BAR NUCLEAR PLANT  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

<u>Exposure Pathway and/or Sample</u>	<u>Number of Samples and Locations<sup>b</sup></u>	<u>Sampling and Collection Frequency</u>	<u>Type and Frequency of Analysis</u>
c. Clams	1 sample downstream of plant discharge.	At least once per 184 days.	Gamma scan on flesh only.
	1 sample at a control location upstream from plant discharge.		
d. Vegetation (Pasturage and grass)	2 samples from farms from which milk is or has been obtained (Farms L and OH).	Monthly	I-131 analysis and gamma scan of each sample. Sr-89 and Sr-90 Analysis at least once per 92 days.
	1 sample from a control location (Farm S; also used for SQN).	Monthly	
e. Food Products	1 sample each of principal food products grown at private gardens and/or farms in the immediate vicinity of the plant.	Annually at time of harvest. The types of foods available for sampling will vary. Following is a list of typical foods which may be available:	Gamma scan on edible portion.
		Cabbage, Lettuce and/or Greens Corn Green Beans Potatoes Tomatoes	

- a. The sampling program outlined in this table is that which was in effect at the end of 1998.  
 b. Sample locations are shown on Figures A-1, A-2, A-3.  
 c. Samples shall be collected by collecting an aliquot at intervals not exceeding 2 hours.  
 d. The samples collected at TRMs 503.8 and 473.0 are taken from the raw water supply, therefore, the upstream surface water sample will be considered the control sample for drinking water.

Table A-2  
WATTS BAR NUCLEAR PLANT  
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM  
SAMPLING LOCATIONS

Map Location Number <sup>a</sup>	Station	Sector	Approximate Distance (Miles)	Indicator (I) or Control (C)	Samples Collected <sup>b</sup>
2	PM-2	NW	7.0	I	AP,CF,R,S
3	PM-3	NNE	10.4	I	AP,CF,R,S
4	PM-4	NE/ENE <sup>c</sup>	7.6	I	AP,CF,R,S
5	PM-5	S	6.2	I	AP,CF,R,S
6	RM-2	SW	15.0	C	AP,CF,R,S
7	RM-3	NNW	15.0	C	AP,CF,R,S
8	LM-1	SSW	0.5	I	AP,CF,R,S
9	LM-2	N	0.5	I	AP,CF,R,S
10	LM-3	NNE	1.9	I	AP,CF,R,S
11	LM-4	SE	0.9	I	AP,CF,R,S
12	Farm L	SSW	1.3	Id	M,V,W
15	Farm B	E	15.0	C	M
16	Farm C	SSW	16.0	C	M
17	Farm S	SW	19.5	C	M,V
18	Well #1	S	0.6	I	W
19	Farm Mu	ESE	3.7	I	M
20	Farm N	ESE	4.1	I	M
21	Farm OH	WSW	4.8	I	V
22	Well #5	N	0.5	C	W
25	TRM 517.9	--	9.9 <sup>e</sup>	I	SW
25a	TRM 518.0	--	9.8 <sup>e</sup>	I	SD
26	TRM 523.1	--	4.7 <sup>e</sup>	I	SW
27	TRM 529.3	--	1.5 <sup>e</sup>	C	SW,PW <sup>f</sup>
28	TRM 532.1	--	4.3 <sup>e</sup>	C	SD
29	TRM 527.4	--	0.4 <sup>e</sup>	I	SD
31	TRM 473.0 (C. F. Industries)	--	54.8 <sup>e</sup>	I	PW
32	TRM 513.0	--	14.8 <sup>e</sup>	I	SS
33	TRM 530.2	--	2.4 <sup>e</sup>	C	SS
35	TRM 503.8 (Dayton)	--	24.0 <sup>e</sup>	I	PW
36	TRM 496.5	--	31.3 <sup>e</sup>	I	SD
38	Chickamauga Reservoir	--		I/C	F,CL
39	Watts Bar Reservoir	--		C	F
81	Yard Pond	SSE/S/SSW	Onsite	I	PS

a. See Figures A-1, A-2, and A-3

b. Sample codes:

AP = Air particulate filter

CF = Charcoal filter

CL = Clams

F = Fish

M = Milk

PW = Public Water

PS = Pond Sediment

R = Rainwater

S = Soil

SD = Sediment

SS = Shoreline sediment

SW = Surface water

V = Vegetation

W = Well water

c. Station located on the boundary between these two sectors.

d. A control for well water.

e. Distance from the plant discharge (TRM 527.8)

f. The surface water sample is also used as a control for public water.

Table A-3  
WATTS BAR NUCLEAR PLANT  
THERMOLUMINESCENT DOSIMETER (TLD) LOCATIONS

<u>Map<sup>a</sup> Location Number</u>	<u>Station</u>	<u>Sector</u>	<u>Approximate Distance (miles)</u>	<u>Onsite (On)<sup>b</sup> or Offsite (Off)</u>
2	NW-3	NW	7.0	Off
3	NNE-3	NNE	10.4	Off
4	ENE-3	ENE	7.6	Off
5	S-3	S	6.2	Off
6	SW-3	SW	15.0	Off
7	NNW-4	NNW	15.0	Off
10	NNE-1A	NNE	1.9	On
11	SE-1A	SE	0.9	On
12	SSW-2	SSW	1.3	On
14	W-2	W	4.8	Off
15	E-3	E	15.0	Off
40	N-1	N	1.2	On
41	N-2	N	4.7	Off
42	NNE-1	NNE	1.2	On
43	NNE-2	NNE	4.1	Off
44	NE-1	NE	0.9	On
45	NE-2	NE	2.9	Off
46	NE-3	NE	6.1	Off
47	ENE-1	ENE	0.7	On
48	ENE-2	ENE	5.8	Off
49	E-1	E	1.3	On
50	E-2	E	5.0	Off
51	ESE-1	ESE	1.2	On
52	ESE-2	ESE	4.4	Off
54	SE-2	SE	5.3	Off
55	SSE-1	SSE	0.6	On
56	SSE-2	SSE	5.8	Off
57	S-1	S	0.7	On
58	S-2	S	4.8	Off
59	SSW-1	SSW	0.8	On
60	SSW-3	SSW	5.0	Off
62	SW-1	SS	0.8	On
63	SW-2	SW	5.3	Off
64	WSW-1	WSW	0.9	On
65	WSW-2	WSW	3.9	Off
66	W-1	W	0.9	On
67	WNW-1	WNW	0.9	On
68	WNW-2	WNW	4.9	Off
69	NW-1	NW	1.1	On
70	NW-2	NW	4.7	Off
71	NNW-1	NNW	1.0	On
72	NNW-2	NNW	4.5	Off
73	NNW-3	NNW	7.0	Off
74	ENE-2A	ENE	3.5	Off
75	SE-2A	SE	3.1	Off
76	S-2A	S	2.0	Off
77	W-2A	W	3.2	Off
78	NW-2A	NW	3.0	Off

a. See Figures A-1, A-2, and A-3.

b. TLDs designated "onsite" are located 2 miles or less from the plant; "offsite" are located more than 2 miles from the plant.

Figure A-1

### Radiological Environmental Sampling Locations

Within 1 Mile of the Plant

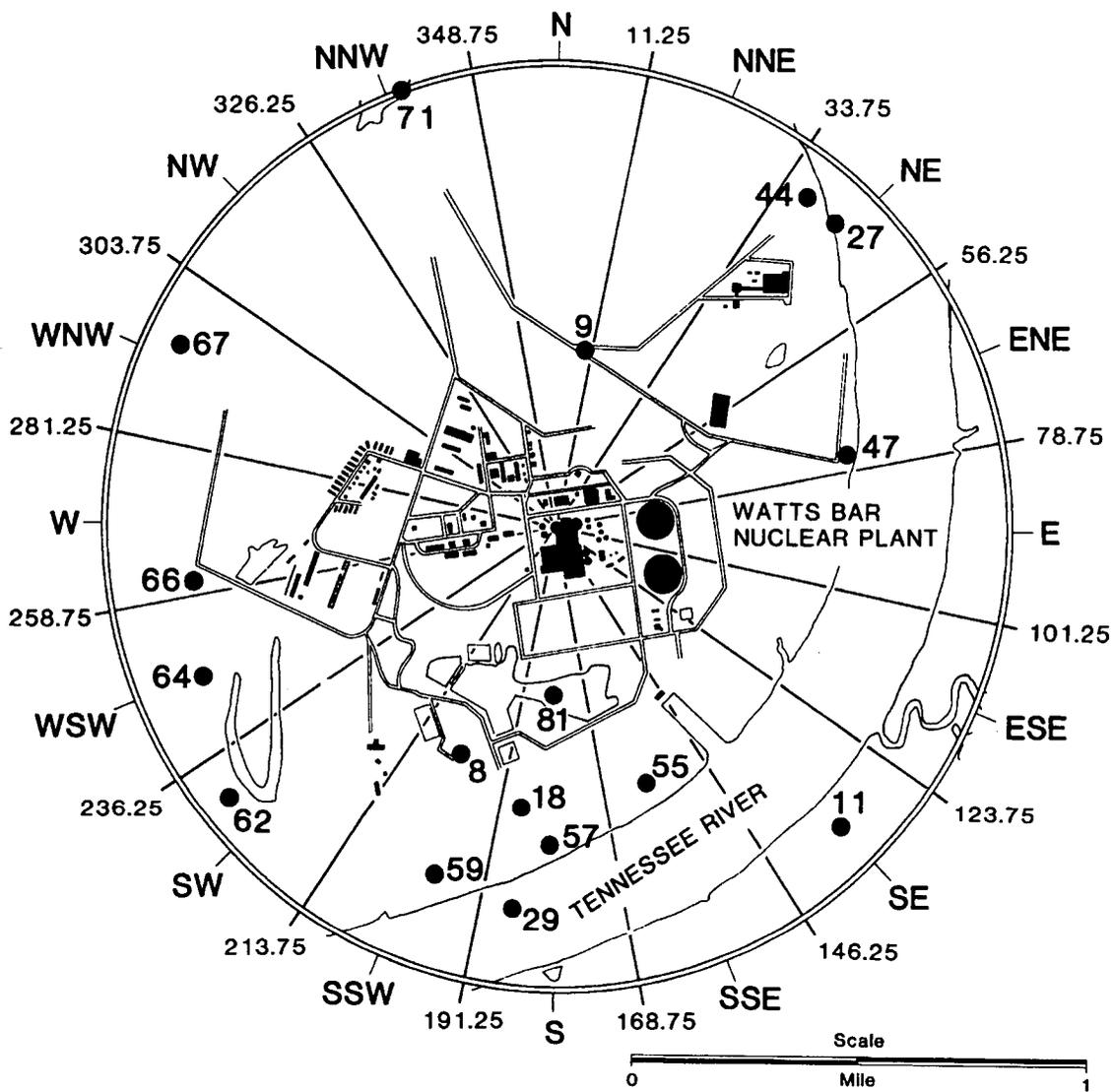


Figure A-2

# Radiological Environmental Sampling Locations

## From 1 to 5 Miles From The Plant

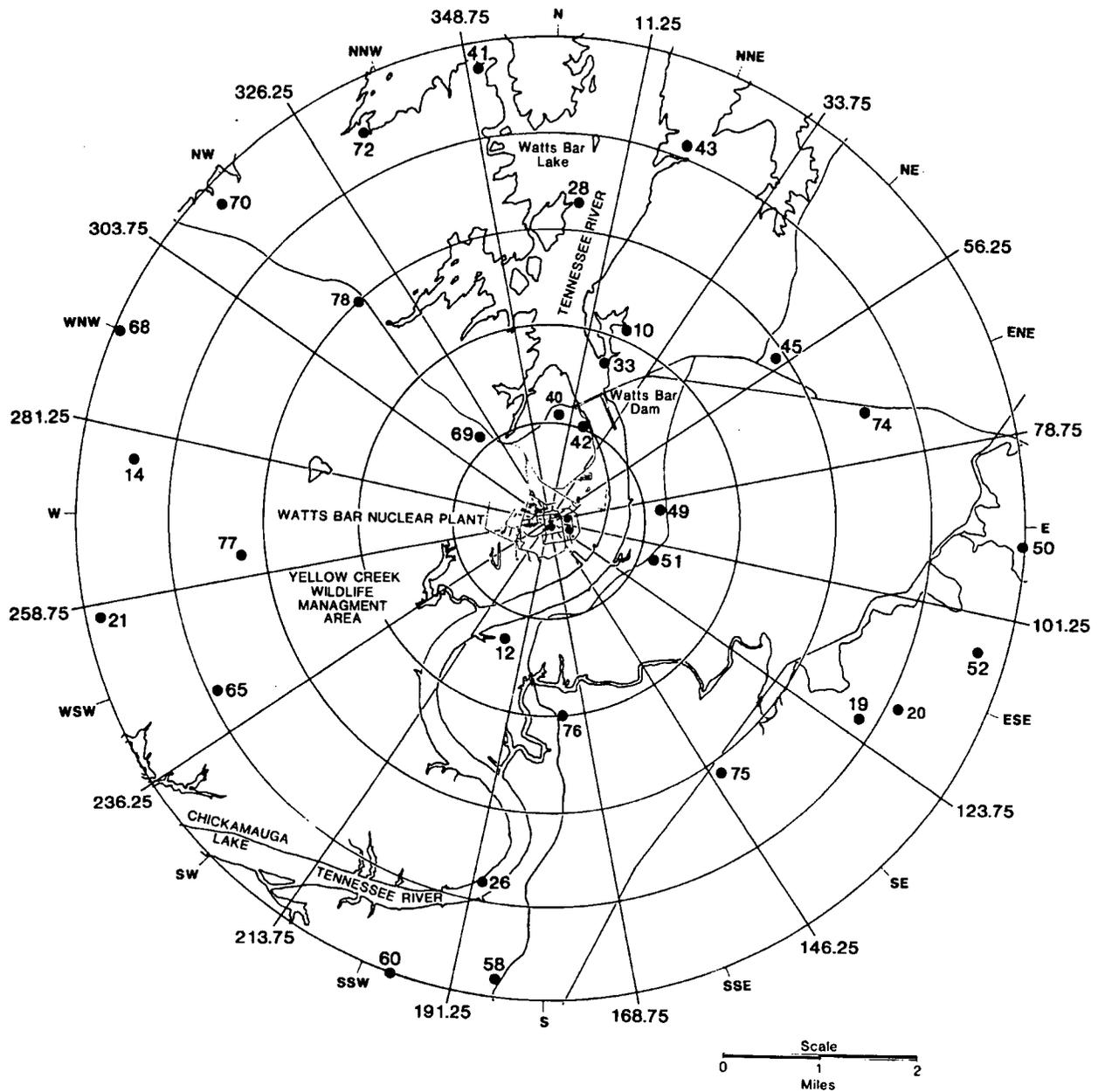
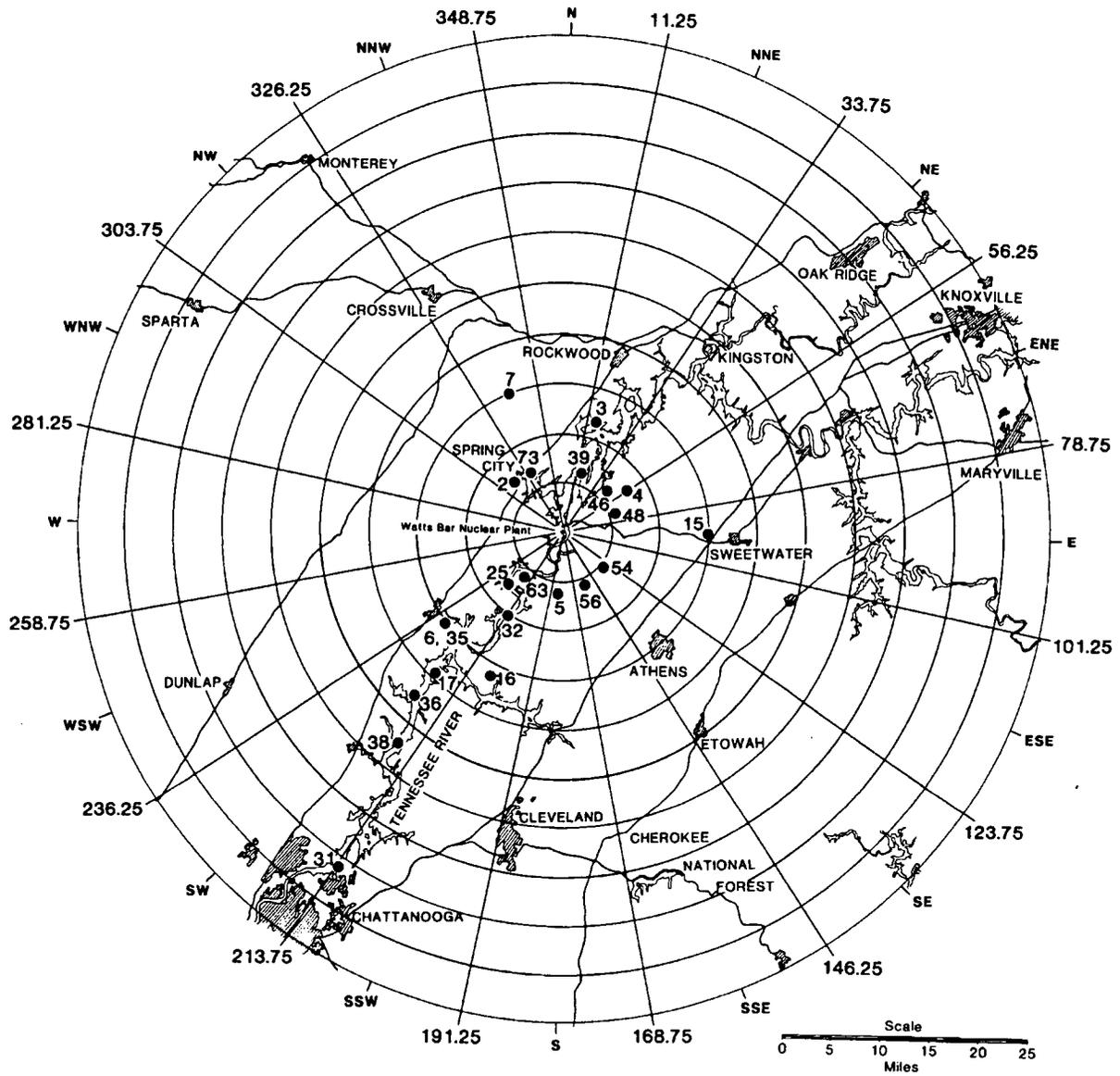


Figure A-3

# Radiological Environmental Sampling Locations

## Greater Than 5 Miles From the Plant



APPENDIX B

1998 PROGRAM MODIFICATIONS

Appendix B

Radiological Environmental Monitoring Program Modification

There were no modifications to the WBN radiological environmental monitoring program during 1998.

APPENDIX C  
PROGRAM DEVIATIONS

## Appendix C

### Program Deviations

During 1998, there were four air particulate filter and charcoal cartridge samples that could not be collected due to equipment problems. In each case, repairs were made and the samples were collected as scheduled for the next sampling period.

The sample scheduled for collection from TRM 503.8 (Dayton) was not available on April 14, 1998, due to problems with the electrical power service to the sampling station. Power was returned to the sampler and the equipment operated correctly for the next sampling period.

On February 2, 1998, the milk sample could not be collected at the Shadden dairy due to bad road conditions. This farm is one of three control locations and milk was collected as scheduled from the other two control locations.

Table C-1 provides a detail summary of these missed samples.

Table C-1

Radiological Environmental Monitoring Program Deviations

<u>Date</u>	<u>Station</u>	<u>Location</u>	<u>Remarks</u>
01/06/98	PM-3	10.4 miles NNE	Air particulate and charcoal cartridge samples were not available due to pulley problems on the sample pump. Repairs were made and the samples were collected as scheduled for the next sampling period.
01/07/98	PM-4	7.6 miles NE/ENE	Air particulate and charcoal cartridge samples were not available due to problems with the motor on the sampling pump. Repairs were made and the samples were collected as scheduled for the next sampling period.
02/02/98	Farm S	19.5 miles SW	Milk could not be collected from this dairy farm due to bad road conditions. This farm is one of three control locations and milk was collected from the other two control locations.
04/14/98	TRM 503.8	24.0 miles downstream	The continuous public water sample was not available due to a loss of power to the sampling system. The power was restored and the equipment operated correctly for the next sampling period.
07/21/98	PM-3	10.4 miles NNE	Air particulate and charcoal cartridge samples were not available due to loss of power to the sampling system. Repairs were made and the samples were collected as scheduled for the next sampling period.
11/03/98	LM-3	1.9 miles NNE	Air particulate and charcoal cartridge samples were not available due to a loss of power to the sampling system. Repairs were made and the samples were collected as scheduled for the next sampling period.

APPENDIX D  
ANALYTICAL PROCEDURES

## Appendix D

### Analytical Procedures

Analyses of environmental samples are performed by the radioanalytical laboratory located at the Western Area Radiological Laboratory facility in Muscle Shoals, Alabama. All analysis procedures are based on accepted methods. A summary of the analysis techniques and methodology follows.

The gross beta measurements are made with an automatic low background counting system. Normal counting times are 50 minutes. Water samples are prepared by evaporating 500 ml of samples to near dryness, transferring to a stainless steel planchet, and completing the evaporation process. Air particulate filters are counted directly in a shallow planchet.

The specific analysis of I-131 in milk, water, or vegetation samples is performed by first isolating and purifying the iodine by radiochemical separation and then counting the final precipitate on a beta-gamma coincidence counting system. The normal count time is 50 minutes. With the beta-gamma coincidence counting system, background counts are virtually eliminated and extremely low levels of activity can be detected.

After a radiochemical separation, samples analyzed for Sr-89,90 are counted on a low background beta counting system. The sample is counted a second time after a 7-day ingrowth period. From the two counts the Sr-89 and Sr-90 concentrations can be determined.

Water samples are analyzed for tritium content by first distilling a portion of the sample and then counting by liquid scintillation. A commercially available scintillation cocktail is used.

Gamma analyses are performed in various counting geometries depending on the sample type and volume. All gamma counts are obtained with germanium type detectors interfaced with a high resolution gamma spectroscopy system. Spectral data reduction is performed by the computer program HYPERMET.

The charcoal cartridges used to sample gaseous radioiodine are analyzed by gamma spectroscopy using a high resolution gamma spectroscopy system with germanium detectors.

All of the necessary efficiency values, weight-efficiency curves, and geometry tables are established and maintained on each detector and counting system. A series of daily and periodic quality control checks are performed to monitor counting instrumentation. System logbooks and control charts are used to document the results of the quality control checks.

APPENDIX E

NOMINAL LOWER LIMITS OF DETECTION (LLD)

## Appendix E

### Nominal Lower Limits of Detection

Sensitive radiation detection devices can produce a signal even when no radioactivity is present in a sample being analyzed. This signal may come from trace amounts of radioactivity in the components of the device, from cosmic rays, from naturally occurring radon gas, or from electronic noise. The signal registered when no activity is present in the sample is called the background.

The point at which the signal is determined to represent radioactivity in the sample is called the critical level. This point is based on statistical analysis of the background readings from any particular device. However, any sample measured over and over in the same device will give different readings, some higher than others. The sample should have a well-defined average reading, but any individual reading will vary from that average. In order to determine the activity present in a sample that will produce a reading above the critical level, additional statistical analysis of the background readings is required. The hypothetical activity calculated from this analysis is called the lower limit of detection (LLD). A listing of typical LLD values that a laboratory publishes is a guide to the sensitivity of the analytical measurements performed by the laboratory.

Every time an activity is calculated from a sample, the background must be subtracted from the sample signal. For the very low levels encountered in environmental monitoring, the sample signals are often very close to the background. The measuring equipment is being used at the limit of its capability. For a sample with no measurable activity, which often happens, about half the time its signal should fall below the average machine background and half the time it should be above the background. If a signal above the background is present, the calculated activity is compared to the calculated LLD to determine if there is really activity present or if the number is an artifact of the way radioactivity is measured.

A number of factors influence the LLD, including sample size, count time, counting efficiency, chemical processes, radioactive decay factors, and interfering isotopes encountered in the sample. The most likely values for these factors have been evaluated for the various analyses performed in the environmental monitoring program. The nominal LLDs calculated from these values, in accordance with the methodology prescribed in the ODCM, are presented in Table E-1. The maximum values for the lower limits of detection specified in the ODCM are shown in Table E-2.

The nominal LLDs are also presented in the data tables. For analyses for which nominal LLDs have not been established, an LLD of zero is assumed in determining if a measured activity is greater than the LLD.

TABLE E-1  
 Nominal LLD Values  
 A. Radiochemical Procedures

	Air Filters ( <u>pCi/m<sup>3</sup></u> )	Water ( <u>pCi/L</u> )	Milk ( <u>pCi/L</u> )	Wet Vegetation ( <u>pCi/Kg wet</u> )	Sediment and Soil ( <u>pCi/g dry</u> )
Gross Beta	0.002	1.9			
Tritium		300			
Iodine-131		0.4	0.4	6.0	
Strontium-89	0.0011	5.0	3.5	31.0	1.6
Strontium-90	0.0004	2.0	2.0	12.0	0.4

Table E-1  
Nominal LLD Values  
B. Gamma Analyses

	Particulate Filter <u>pCi/m<sup>3</sup></u>	Charcoal Filter <u>pCi/m<sup>3</sup></u>	Water and Milk <u>pCi/L</u>	Vegetation and Grain <u>pCi/g, dry</u>	Wet Vegetation <u>pCi/kg, wet</u>	Soil and Sediment <u>pCi/g, dry</u>	Fish <u>pCi/g, dry</u>	Clam Flesh <u>pCi/g, dry</u>	Foods Tomatoes Potatoes, etc. <u>pCi/kg, wet</u>
Ce-141	.005	.02	10	.07	35	.10	.07	.35	20
Ce-144	.01	.07	30	.15	115	.20	.15	.85	60
Cr-51	.02	0.15	45	.30	200	.35	.30	2.40	95
I-131	.005	0.03	10	.20	60	.25	.20	1.70	20
Ru-103	.005	0.02	5	.03	25	.03	.03	.25	25
Ru-106	.02	0.12	40	.15	190	.20	.15	1.25	90
Cs-134	.005	0.02	5	.03	30	.03	.03	.14	10
Cs-137	.005	0.02	5	.03	25	.03	.03	.15	10
Zr-95	.005	0.03	10	.05	45	.05	.05	.45	45
Nb-95	.005	0.02	5	.25	30	.04	.25	.25	10
Co-58	.005	0.02	5	.03	20	.03	.03	.25	10
Mn-54	.005	0.02	5	.03	20	.03	.03	.20	10
Zn-65	.005	0.03	10	.05	45	.05	.05	.40	45
Co-60	.005	0.02	5	.03	20	.03	.03	.20	10
K-40	.04	0.30	100	.40	400	.75	.40	3.50	250
Ba-140	.015	0.07	25	.30	130	.30	.30	2.40	50
La-140	.01	0.04	10	.20	50	.20	.20	1.40	25
Fe-59	.005	0.04	10	.08	40	.05	.08	.45	25
Be-7	.02	0.15	45	.25	200	.25	.25	1.90	90
Pb-212	.005	0.03	15	.04	40	.10	.04	.30	40
Pb-214	.005	0.07	20	.50	80	.15	.50	.10	80
Bi-214	.005	0.05	20	.10	55	.15	.10	.50	40
Bi-212	.02	0.20	50	.25	250	.45	.25	2.00	130
Tl-208	.002	0.02	10	.03	30	.06	.03	.25	30
Ra-224	--	--	--	--	--	.75	--	--	--
Ra-226	--	--	--	--	--	.15	--	--	--
Ac-228	.01	0.07	20	.10	70	.25	.10	.75	50

Table E-2

Maximum Values for the Lower Limits of Detection (LLD)  
Specified by the WBN Offsite Dose Calculation Manual

<u>Analysis</u>	<u>Water pCi/L</u>	<u>Airborne Particulate or Gases pCi/m<sup>3</sup></u>	<u>Fish pCi/kg, wet</u>	<u>Milk pCi/L</u>	<u>Food Products pCi/kg, wet</u>	<u>Sediment pCi/kg, dry</u>
gross beta	4	1 x 10 <sup>-2</sup>	N.A.	N.A.	N.A.	N.A.
H-3	2000 <sup>a</sup>	N.A.	N.A.	N.A.	N.A.	N.A.
Mn-54	15	N.A.	130	N.A.	N.A.	N.A.
Fe-59	30	N.A.	260	N.A.	N.A.	N.A.
Co-58,60	15	N.A.	130	N.A.	N.A.	N.A.
Zn-65	30	N.A.	260	N.A.	N.A.	N.A.
Zr-95	30	N.A.	N.A.	N.A.	N.A.	N.A.
Nb-95	15	N.A.	N.A.	N.A.	N.A.	N.A.
I-131	1 <sup>b</sup>	7 x 10 <sup>-2</sup>	N.A.	1	60	N.A.
Cs-134	15	5 x 10 <sup>-2</sup>	130	15	60	150
Cs-137	18	6 x 10 <sup>-2</sup>	150	18	80	180
Ba-140	60	N.A.	N.A.	60	N.A.	N.A.
La-140	15	N.A.	N.A.	15	N.A.	N.A.

a. If no drinking water pathway exists, a value of 3000 pCi/liter may be used.

b. If no drinking water pathway exists, a value of 15 pCi/liter may be used.

APPENDIX F

QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

## Appendix F

### Quality Assurance/Quality Control Program

A thorough quality assurance program is employed by the laboratory to ensure that the environmental monitoring data are reliable. This program includes the use of written, approved procedures in performing the work, a complete training and qualification process, internal self assessments of program performance, audits by various external organizations, and a laboratory quality control program.

The quality control program employed by the radioanalytical laboratory is designed to ensure that the sampling and analysis process is working as intended. The program includes equipment checks and the analysis of quality control samples along with routine samples.

Radiation detection devices can be tested in a number of ways. There are two primary tests which are performed on all devices. In the first type, the device is operated without a sample on the detector to determine the background count rate. The background counts are usually low values and are due to machine noise, cosmic rays, trace amounts of radioactivity in the materials used to construct the detector, or terrestrial sources. Charts of background counts are kept and monitored to ensure that no unusually high or low values are encountered.

In the second test, the device is operated with a known amount of radioactivity present. The number of counts registered from such a radioactive standard should be very reproducible. These reproducibility checks are also monitored to ensure that they are neither higher nor lower than expected. When counts from either test fall outside the expected range, the device is inspected for malfunction or contamination. It is not placed into service until it is operating properly.

In addition to these two general checks, other quality control checks are performed on the variety of detectors used in the laboratory. The exact nature of these checks depends on the type of device and the method it uses to detect radiation or store the information obtained.

Quality control samples of a variety of types are used by the laboratory to verify the performance of different portions of the analytical process. These quality control samples may be blanks, replicate samples, blind samples, or cross-checks.

Blanks are samples which contain no measurable radioactivity or no activity of the type being measured. Such samples are analyzed to determine whether there is any contamination of equipment or commercial laboratory chemicals, cross-contamination in the chemical process, or interference from isotopes other than the one being measured.

Duplicate samples are generated at random by the sample computer program which schedules the collection of the routine samples. For example, if the routine program calls for four milk samples every week, on a random basis each farm might provide an additional sample several times a year. These duplicate samples are analyzed along with other routine samples. They provide information about the variability of radioactive content in the various sample media.

If enough sample is available for a particular analysis, the laboratory personnel can split it into two portions. Such a sample can provide information about the variability of the analytical process since two identical portions of material are analyzed side by side.

Analytical knowns are another category of quality control sample. A known amount of radioactivity is added to a sample medium. Whenever possible, the analytical knowns contain the same amount of radioactivity each time they are run. In this way, the lab staff has immediate knowledge of the quality of the measurement process. A portion of these samples are also blanks.

Blind spikes are samples containing radioactivity which are introduced into the analysis process disguised as ordinary environmental samples. The lab staff does not know the samples contain radioactivity. Since the bulk of the ordinary workload of the environmental

laboratory contains no measurable activity or only naturally occurring radioisotopes, blind spikes can be used to test the detection capability of the laboratory or they can be used to test the data review process. If an analysis routinely generates numerous zeroes for a particular isotope, the presence of a positive result will be brought to the attention of the laboratory supervisor in the daily review process. Blind spikes test this process since they contain radioactivity at levels high enough to be detected. Furthermore, the activity can be put into such samples at the extreme limit of detection (near the LLD) to determine whether or not the laboratory can find any unusual radioactivity whatsoever.

At present, 5 percent of the laboratory workload is in the category of internal cross-checks. These samples have a known amount of radioactivity added and are presented to the lab staff labeled as cross-check samples. This means that the quality control staff knows the radioactive content or "right answer" but the personnel performing the analyses do not. They are aware they are being tested. Such samples test the best performance of the laboratory by determining if the staff can find the "right answer". These samples provide information about the accuracy of the measurement process. Further information is available about the variability of the process if multiple analyses are requested on the same sample. Like blind spikes or analytical knowns, these samples can also be spiked with low levels of activity to test detection limits.

A series of cross-checks is produced by the EPA in Las Vegas. These interlaboratory comparison samples or "EPA cross-checks" are considered to be the primary indicator of laboratory performance. They provide an independent check of the entire measurement process that cannot be easily provided by the laboratory itself. That is, unlike internal cross-checks, EPA cross-checks test the calibration of the laboratory detection devices since different radioactive standards produced by individuals outside TVA are used in the cross-checks. The results of the analysis of these samples are reported back to EPA which then issues a report of all the results of all participants. These reports indicate how well the laboratory is doing compared to others across the nation. Like internal cross-checks, the EPA

cross-checks provide information to the laboratory about the precision and accuracy of the radioanalytical work it does. The results of TVA's participation in the EPA Interlaboratory Comparison Program are presented in Table F-1. For 1998, all EPA cross-check sample concentrations measured by TVA's laboratory were within  $\pm 3$ -sigma of the EPA reported values.

TVA splits certain environmental samples with laboratories operated by the States of Alabama and Tennessee and the EPA National Air and Radiation Environmental Laboratory in Montgomery, Alabama. When radioactivity has been present in the environment in measurable quantities, such as following atmospheric nuclear weapons testing, following the Chernobyl incident, or as naturally occurring radionuclides, the split samples have provided TVA with yet another level of information about laboratory performance. These samples demonstrate performance on actual environmental sample matrices rather than on the constructed matrices used in cross-check programs.

All the quality control data are routinely collected, examined, and reported to laboratory supervisory personnel. They are checked for trends, problem areas, or other indications that a portion of the analytical process needs correction or improvement. The end result is a measurement process that provides reliable and verifiable data and is sensitive enough to measure the presence of radioactivity far below the levels which could be harmful to humans.

Table F-1

## RESULTS OBTAINED IN INTERLABORATORY COMPARISON PROGRAM

## A. Radiochemical Analysis of Water (pCi/L)

Date	Gross Beta		Strontium-89		Strontium-90		Tritium		Iodine-131	
	EPA Value (+3 sigma)	TVA Avg.								
01/98	4 <sub>±9</sub>	8	8 <sub>±9</sub>	10	32 <sub>±9</sub>	30				
02/98									105 <sub>±18</sub>	104
03/98							2155 <sub>±602</sub>	2199		
04/98			6 <sub>±9</sub>	8	18 <sub>±9</sub>	18				
07/98	13 <sub>±9</sub>	16	21 <sub>±9</sub>	21	7 <sub>±9</sub>	8				
08/98							17996 <sub>±3118</sub>	17900		
09/98									6 <sub>±3</sub>	7
10/98			19 <sub>±9</sub>	19	8 <sub>±9</sub>	8				
11/98	4 <sub>±9</sub>	7								

## B. Gamma-Spectral Analysis of Water (pCi/L)

Date	Barium-133		Cobalt-60		Zinc-65		Cesium-134		Cesium-137	
	EPA Value (+3 sigma)	TVA Avg.								
04/98			50 <sub>±9</sub>	51			22 <sub>±9</sub>	21	10 <sub>±9</sub>	10
06/98	40 <sub>±9</sub>	41	12 <sub>±9</sub>	13	104 <sub>±17</sub>	104	31 <sub>±9</sub>	30	35 <sub>±9</sub>	35
10/98			21 <sub>±9</sub>	22			6 <sub>±9</sub>	7	50 <sub>±9</sub>	51
11/98	56 <sub>±10</sub>	55	38 <sub>±9</sub>	41	131 <sub>±23</sub>	132	105 <sub>±9</sub>	94	111 <sub>±10</sub>	108

APPENDIX G

LAND USE SURVEY

Appendix G  
Land Use Survey

A land use survey was conducted in accordance with the provisions of ODCM Control 1.3.2 to identify the location of the nearest milk animal, the nearest residence, and the nearest garden of greater than 500 square feet producing fresh leafy vegetables in each of 16 meteorological sectors within a distance of 5 miles from the plant.

The land use survey was conducted between April 1 and October 1 using appropriate techniques such as door-to-door survey, mail survey, telephone survey, aerial survey, or information from local agricultural authorities or other reliable sources.

From the data of the surveys, relative radiation doses were projected for individuals near the plant. Doses from air submersion were calculated for the nearest resident in each sector, while doses from drinking milk or eating foods produced near the plant were calculated for the areas with milk producing animals and gardens, respectively. These doses were calculated using design basis source terms and historical meteorological data. They also assume that the effluent releases are equivalent to the design basis source terms. The calculated doses are relative in nature and do not reflect actual exposures received by individuals living near WBN. Calculated doses to individuals based on measured effluents from the plant are well below applicable dose limits (see Assessment and Evaluation Section and Table 3 of this report).

In response to the 1998 WBN land use survey, annual doses were calculated for air submersion, vegetable ingestion, and milk ingestion. The air submersion doses calculated for the nearest residence in each sector were almost identical to those calculated in 1997 except for a small change due to differences in rounding for the ENE sector and a change in distance to the nearest residence for the ESE sector.

Doses calculated for ingestion of home grown foods changed slightly in some sectors compared to the results calculated in 1997 due to changes in the location of the nearest garden and gardens were identified in two sectors where no gardens were identified in the 1997 survey.

For milk ingestion, projected doses were consistent with those calculated for 1997. There was a small change for the annual dose result at one location due to a change in the feeding factor.

Except for the farm where the owner does not want to participate in the program (Farm Ho), milk samples are being collected from the three farms where the calculated doses are highest. One of the farms providing a milk sample is between Farm Ho and the plant.

The results of the 1998 land use survey and resulting relative projected annual dose calculations documented that there were no significant changes in land use of unrestricted areas. No required changes in the sampling locations for the radiological environmental monitoring program were identified as result of the land use survey.

Tables G-1, G-2, and G-3 compare results of the relative projected annual dose calculations for 1997 and 1998.

Table G-1

Watts Bar Nuclear Plant  
 Relative Projected Annual Air Submersion Dose to the Nearest Residence  
 Within 5 Miles of Plant<sup>a</sup>

mrem/year

<u>Sector</u>	<u>1997</u>		<u>1998</u>	
	<u>Approximate Distance (Miles)</u>	<u>Annual Dose</u>	<u>Approximate Distance (Miles)</u>	<u>Annual Dose</u>
N	1.3	0.24	1.3	0.24
NNE	2.3	0.20	2.3	0.20
NE	2.1	0.19	2.1	0.19
ENE	1.5	0.30	1.5	0.31
E	2.0	0.18	2.0	0.18
ESE	2.9	0.10	2.8	0.12
SE	0.9	0.76	0.9	0.76
SSE	1.0	0.38	1.0	0.38
S	1.0	0.37	1.0	0.37
SSW	1.2	0.29	1.2	0.29
SW	2.7	0.09	2.7	0.09
WSW	1.3	0.38	1.3	0.38
W	1.8	0.07	1.8	0.07
WNS	1.0	0.17	1.0	0.17
NW	1.9	0.04	1.9	0.04
NNW	2.7	0.03	2.7	0.03

a. Assumes the effluent releases are equivalent to design basis source terms.

Table G-2

Watts Bar Nuclear Plant  
 Relative Projected Annual Ingestion Dose to Child's Bone  
 Organ from Ingestion of Home-Grown Foods  
 Nearest Garden Within 5 Miles of Plant<sup>a</sup>

mrem/year

<u>Sector</u>	<u>1997</u>		<u>1998</u>	
	<u>Approximate Distance (Miles)</u>	<u>Annual Dose</u>	<u>Approximate Distance (Miles)</u>	<u>Annual Dose</u>
N	4.8	0.50	4.8	0.50
NNE	4.0	1.47	3.8	1.68
NE	3.1	2.13	3.1	2.13
ENE	b		3.0	1.98
E	5.0	0.83	5.0	0.83
ESE	2.8	2.57	3.0	2.25
SE	2.9	2.17	2.9	2.17
SSE	1.0	7.46	1.0	7.45
S	2.0	3.08	2.0	3.08
SSW	1.2	6.86	1.2	6.86
SW	b		b	
WSW	1.7	4.30	1.7	4.30
W	3.0	0.65	3.0	0.65
WNW	b		4.1	0.15
NW	2.0	0.76	2.0	0.76
NNW	2.8	0.69	2.8	0.69

a. Assumes the effluent releases are equivalent to design basis source terms.

b. Garden not identified within 5 miles of the plant in this sector.

Table G-3

Watts Bar Nuclear Plant  
 Relative Projected Annual Dose to Receptor Thyroid from Ingestion of Milk<sup>a</sup>  
 (Nearest Milk-Producing Animal Within 5 Miles of Plant)

mrem/year

<u>Location</u>	<u>Sector</u>	<u>Approximate Distance Miles</u>	<u>Annual Dose</u>		<u>X/Q s/m<sup>3</sup></u>
			<u>1997</u>	<u>1998</u>	
<u>Cows</u>					
Farm Mu <sup>b</sup>	ESE	3.7	0.07	0.07	1.14 E-6
Farm N <sup>b</sup>	ESE	4.1	0.04	0.04	9.44 E-7
Farm Hu	SE	5.0	0.02	0.02	5.62 E-7
Farm L <sup>b</sup>	SSW	1.3	0.71	0.49	2.36 E-6
Farm Ho <sup>c</sup>	SSW	1.5	0.33	0.33	1.43 E-6
Farm S	NW	4.9	0.01	0.01	1.30 E-7

- 
- a. Assumes the plant is operating and effluent releases are equivalent to design basis source terms.
  - b. Milk being sampled at these locations.
  - c. Owner unwilling to provide samples or information. The dose calculated assumes consumption of the milk by an adult and a feeding factor equivalent to 33 percent. If milk from this location were to be consumed by teens, children or infants, the estimated doses would be 0.52, 1.07 and 2.53 mrem/year, respectively.

APPENDIX H  
DATA TABLES AND FIGURES

Table H - 1

DIRECT RADIATION LEVELS

Average External Gamma Radiation Levels at Various Distances from  
Watts Bar Nuclear Plant for Each Quarter - 1998  
mR / Quarter (a)

Distance miles	Average External Gamma Radiation Levels (b)				per annum mR / yr
	1st qtr	2nd qtr	3rd qtr	4th qtr	
0 - 1	16.7 ± 2.5	16.7 ± 2.4	16.4 ± 2.6	18.0 ± 2.7	68
1 - 2	15.7 ± 1.3	14.6 ± 1.5	14.8 ± 1.9	16.4 ± 1.9	61
2 - 4	14.7 ± 1.4	13.9 ± 1.2	14.2 ± 1.4	15.7 ± 1.3	58
4 - 6	15.1 ± 1.7	14.3 ± 1.7	14.7 ± 1.8	16.4 ± 1.9	60
> 6	14.4 ± 1.8	13.7 ± 1.9	13.9 ± 2.1	15.2 ± 2.3	57
Average 0 - 2 miles (onsite)	16.4 ± 2.2	15.9 ± 2.3	15.8 ± 2.5	17.4 ± 2.5	65
Average > 2 miles (offsite)	14.8 ± 1.7	14.0 ± 1.7	14.4 ± 1.9	15.9 ± 2.0	59

(a) Field periods normalized to one standard quarter (2190 hours)

(b) Average of the individual measurements in the set ± 1 standard deviation of the set

TABLE H - 2

## DIRECT RADIATION LEVELS

Individual Stations at Watts Bar Nuclear Plant

Map Location Number	TLD Station Number	Direction, degrees	Approx Distance, miles	Environmental Radiation Levels mR / quarter				Annual Exposure mR/year
				1st Qtr Dec - Feb 1997 - 98	2nd Qtr Mar - May 1998	3rd Qtr Jun - Aug 1998	4th Qtr Sep - Nov 1998	
40	N-1	10	1.2	17.2	16.5	17.4	19.0	70.1
41	N-2	350	4.7	16.1	15.6	15.8	17.5	65.0
42	NNE-1	21	1.2	16.8	15.7	16.6	18.0	67.1
10	NNE-1A	22	1.9	13.9	14.1	12.8	14.9	55.7
43	NNE-2	20	4.1	13.9	12.9	13.3	14.7	54.8
3	NNE-3	17	10.4	13.7	12.9	13.5	14.8	54.9
44	NE-1	39	.9	19.1	18.6	18.8	20.7	77.2
45	NE-2	54	2.9	15.6	13.9	14.7	15.5	59.7
46	NE-3	47	6.1	12.6	11.5	11.8	12.7	48.6
47	ENE-1	74	.7	17.7	17.4	17.3	18.6	71.0
48	ENE-2	69	5.8	14.1	13.3	14.0	14.9	56.3
74	ENE-2A	69	3.5	12.2	11.9	11.8	13.4	49.3
4	ENE-3	56	7.6	13.8	12.8	13.9	14.8	55.3
49	E-1	85	1.3	14.9	14.7	14.4	15.6	59.6
50	E-2	92	5.0	16.0	14.7	15.1	17.4	63.2
15	E-3	90	15.0	17.6	17.3	17.6	19.3	71.8
51	ESE-1	109	1.2	note 1	11.8	12.2	13.3	49.7
52	ESE-2	106	4.4	18.6	17.7	18.0	19.0	73.3
11	SE-1A	138	.9	14.4	14.3	14.2	15.2	58.1
54	SE-2	128	5.3	13.3	12.7	12.7	14.5	53.2
75	SE-2A	144	3.1	14.7	14.4	14.4	15.6	59.1
55	SSE-1	156	.6	15.7	16.2	14.7	16.9	63.5
56	SSE-2	156	5.8	15.6	14.9	15.2	16.4	62.1

note 1 Sum of available quarterly data normalized to 1 year for the annual exposure value

TABLE H - 2 continued

## DIRECT RADIATION LEVELS

## Individual Stations at Watts Bar Nuclear Plant

Map Location Number	TLD Station Number	Direction, degrees	Approx Distance, miles	Environmental Radiation Levels				Annual Exposure mR/year
				mR / quarter				
				1st Qtr Dec - Feb 1997 - 98	2nd Qtr Mar - May 1998	3rd Qtr Jun - Aug 1998	4th Qtr Sep - Nov 1998	
57	S-1	182	.7	14.4	16.0	13.7	15.9	60.0
58	S-2	185	4.8	12.2	11.6	12.0	13.6	49.4
76	S-2A	177	2.0	16.3	15.7	15.7	17.5	65.2
5	S-3	185	6.2	14.7	14.3	14.6	16.5	60.1
59	SSW-1	199	.8	19.1	18.7	18.5	20.2	76.5
12	SSW-2	200	1.3	14.5	13.4	13.9	15.7	57.5
60	SSW-3	199	5.0	13.2	12.2	12.1	14.8	52.3
62	SW-1	226	.8	17.4	17.4	17.0	18.7	70.5
63	SW-2	220	5.3	14.4	14.0	14.4	16.3	59.1
6	SW-3	225	15.0	13.6	13.3	12.8	14.3	54.0
64	WSW-1	255	.9	14.2	14.1	14.1	15.3	57.7
65	WSW-2	247	4.0	16.1	15.6	15.7	note 1	63.2
66	W-1	270	.9	15.4	15.8	15.4	16.8	63.4
14	W-2	277	4.8	12.9	12.5	12.4	14.2	52.0
77	W-2A	268	3.2	15.5	14.4	15.5	16.9	62.3
67	WNW-1	294	.9	22.4	21.9	22.4	24.1	90.8
68	WNW-2	292	4.9	17.4	16.6	17.5	19.8	71.3
69	NW-1	320	1.1	16.8	15.8	16.7	18.2	67.5
70	NW-2	313	4.7	16.5	15.8	16.4	18.7	67.4
78	NW-2A	321	3.0	13.8	13.1	13.2	15.0	55.1
2	NW-3	317	7.0	17.6	16.4	17.1	18.5	69.6
71	NNW-1	340	1.0	14.4	13.2	13.9	15.3	56.8
72	NNW-2	333	4.5	15.7	14.8	15.7	17.5	63.7
73	NNW-3	329	7.0	12.8	12.0	11.3	12.5	48.6
7	NNW-4	337	15.0	13.1	12.7	12.9	13.8	52.5

note 1 Sum of available quarterly data normalized to 1 year for the annual exposure value

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GROSS BETA	516	2.00E-03	2.09E-02( 412/ 412) PM4 7.79E-03- 4.21E-02 7.6 MILES NE/ENE	2.15E-02( 51/ 51) 1.02E-02- 4.12E-02	2.07E-02( 104/ 104) 9.71E-03- 4.56E-02	
GAMMA SCAN (GELI)	130	2.00E-02	9.98E-02( 104/ 104) PM3 4.69E-02- 1.47E-01 10.4 MILES NNE	1.06E-01( 13/ 13) 5.18E-02- 1.47E-01	1.05E-01( 26/ 26) 5.94E-02- 1.59E-01	
BE-7		5.00E-03	1.30E-02( 56/ 104) PM5 DECATUR 5.30E-03- 4.16E-02 6.2 MILES S	1.84E-02( 5/ 13) 5.70E-03- 4.16E-02	1.07E-02( 14/ 26) 6.10E-03- 2.40E-02	
BI-214		5.00E-03	1.29E-02( 53/ 104) PM5 DECATUR 5.10E-03- 4.16E-02 6.2 MILES S	1.77E-02( 5/ 13) 5.70E-03- 4.16E-02	9.81E-03( 14/ 26) 5.00E-03- 2.10E-02	
PB-214						

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.

NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
	516					
BI-214	5.00E-02	7.08E-02( 11/ 412)	PM3	9.07E-02( 1/ 50)	6.82E-02( 9/ 104)	
		5.41E-02- 9.19E-02	10.4 MILES NNE	9.07E-02- 9.07E-02	5.28E-02- 9.29E-02	
K-40	3.00E-01	3.42E-01( 17/ 412)	LM3	4.01E-01( 2/ 51)	3.68E-01( 5/ 104)	
		3.01E-01- 4.34E-01	1.9 MILES NNE	3.69E-01- 4.34E-01	3.00E-01- 4.69E-01	
PB-214	7.00E-02	8.69E-02( 7/ 412)	PM4	9.96E-02( 2/ 51)	8.30E-02( 4/ 104)	
		7.32E-02- 1.20E-01	7.6 MILES NE/ENE	7.88E-02- 1.20E-01	7.23E-02- 1.02E-01	
I-131	SEE NOTE 3					

- NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).  
 NOTE: 3. THE ANALYSIS OF CHARCOAL FILTERS WAS PERFORMED BY GAMMA SPECTROSCOPY. NO I-131 WAS DETECTED. THE LLD FOR I-131 BY GAMMA SPECTROSCOPY WAS 0.03 pCi/m<sup>3</sup>.

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN MILK  
 PCI/L - 0.037 BQ/L

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

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TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
IODINE-131						
155	4.00E-01	78 VALUES < LLD			77 VALUES < LLD	
GAMMA SCAN (GELI)						
155						
BI-214	2.00E+01	1.61E+02( 10/ 78)	LAYMAN FARM	1.76E+02( 9/ 26)	2.76E+01( 4/ 77)	
		2.26E+01- 3.21E+02	1.3 MILES SSW	2.26E+01- 3.21E+02	2.33E+01- 3.68E+01	
K-40	1.00E+02	1.31E+03( 78/ 78)	NORTON FARM	1.38E+03( 26/ 26)	1.38E+03( 77/ 77)	
		7.80E+02- 1.72E+03	4.1 MILES ESE	1.15E+03- 1.57E+03	6.66E+02- 1.55E+03	
PB-214	2.00E+01	1.72E+02( 9/ 78)	LAYMAN FARM	1.91E+02( 8/ 26)	2.71E+01( 1/ 77)	
		2.15E+01- 3.03E+02	1.3 MILES SSW	8.74E+01- 3.03E+02	2.71E+01- 2.71E+01	
SR 89						
24	3.50E+00	12 VALUES < LLD			12 VALUES < LLD	
SR 90						
24	2.00E+00	2.22E+00( 2/ 12)	LAYMAN FARM	2.32E+00( 1/ 4)	12 VALUES < LLD	
		2.12E+00- 2.32E+00	1.3 MILES SSW	2.32E+00- 2.32E+00		

Table H-5

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN VEGETATION  
 PCI/KG - 0.037 BQ/KG (WET WEIGHT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
IODINE-131						
	39	6.00E+00	26 VALUES < LLD		13 VALUES < LLD	
GAMMA SCAN (GELI)	39					
BE-7		2.00E+02	1.14E+03( 25/ 26) OWEN HENDERSON FARM 3.78E+02- 3.66E+03 4.8 MILES WSW	1.23E+03( 13/ 13) 3.85E+02- 3.66E+03	1.00E+03( 13/ 13) 3.60E+02- 2.52E+03	
BI-214		5.50E+01	8.83E+01( 9/ 26) LAYMAN FARM 5.73E+01- 1.43E+02 1.3 MILES SSW	9.69E+01( 4/ 13) 6.07E+01- 1.43E+02	6.55E+01( 2/ 13) 6.11E+01- 6.99E+01	
K-40		4.00E+02	5.93E+03( 26/ 26) LAYMAN FARM 3.34E+03- 7.45E+03 1.3 MILES SSW	6.27E+03( 13/ 13) 4.48E+03- 7.45E+03	5.43E+03( 13/ 13) 3.52E+03- 7.43E+03	
PB-214		8.00E+01	1.03E+02( 4/ 26) LAYMAN FARM 8.14E+01- 1.15E+02 1.3 MILES SSW	1.07E+02( 2/ 13) 1.06E+02- 1.09E+02	13 VALUES < LLD	
SR 89						
	11	3.10E+01	8 VALUES < LLD		3 VALUES < LLD	
SR 90						
	12	1.20E+01	2.15E+01( 6/ 8) OWEN HENDERSON FARM 1.22E+01- 3.33E+01 4.8 MILES WSW	2.85E+01( 3/ 4) 2.36E+01- 3.33E+01	2.68E+01( 2/ 4) 1.60E+01- 3.77E+01	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY  
 RADIOACTIVITY IN SOIL  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
	12					
AC-228	2.50E-01	1.08E+00( 8/ 8)	LM2	1.48E+00( 1/ 1)	6.96E-01( 4/ 4)	
BE-7	2.50E-01	7.85E-01- 1.48E+00 8 VALUES < LLD	0.5 MILES N PM3	1.48E+00- 1.48E+00 1 VALUES < LLD	5.42E-01- 7.58E-01 5.12E-01( 1/ 4)	
BI-212	4.50E-01	1.09E+00( 8/ 8)	LM2	1.50E+00( 1/ 1)	5.12E-01- 5.12E-01	
BI-214	1.50E-01	8.85E-01- 1.50E+00 7.74E-01( 8/ 8)	0.5 MILES N LM2	1.50E+00- 1.50E+00 1.24E+00( 1/ 1)	7.61E-01( 4/ 4) 6.42E-01- 8.81E-01	
CS-137	3.00E-02	5.35E-01- 1.24E+00 3.65E-01( 7/ 8)	0.5 MILES N PM2 SPRING CITY	1.24E+00- 1.24E+00 7.80E-01( 1/ 1)	5.11E-01- 7.39E-01 1.81E-01( 4/ 4)	
K-40	7.50E-01	4.00E-02- 7.80E-01 1.17E+01( 8/ 8)	7.0 MILES NW LM-4 WB	7.80E-01- 7.80E-01 2.56E+01( 1/ 1)	4.98E-02- 5.63E-01 3.47E+00( 4/ 4)	
PB-212	1.00E-01	3.38E+00- 2.56E+01 1.04E+00( 8/ 8)	0.9 MILES SE LM2	2.56E+01- 2.56E+01 1.44E+00( 1/ 1)	2.86E+00- 4.88E+00 7.20E-01( 4/ 4)	
PB-214	1.50E-01	8.12E-01- 1.44E+00 8.61E-01( 8/ 8)	0.5 MILES N LM2	1.44E+00- 1.44E+00 1.41E+00( 1/ 1)	5.59E-01- 8.12E-01 6.94E-01( 4/ 4)	
RA-224	7.50E-01	5.98E-01- 1.41E+00 1.20E+00( 5/ 8)	0.5 MILES N LM-4 WB	1.41E+00- 1.41E+00 1.54E+00( 1/ 1)	5.49E-01- 7.92E-01 8.33E-01( 1/ 4)	
RA-226	1.50E-01	9.30E-01- 1.54E+00 7.74E-01( 8/ 8)	0.9 MILES SE LM2	1.54E+00- 1.54E+00 1.24E+00( 1/ 1)	8.33E-01- 8.33E-01 6.32E-01( 4/ 4)	
TL-208	6.00E-02	5.35E-01- 1.24E+00 3.32E-01( 8/ 8)	0.5 MILES N LM2	1.24E+00- 1.24E+00 4.93E-01( 1/ 1)	5.11E-01- 7.39E-01 2.25E-01( 4/ 4)	
SR 89		2.59E-01- 4.93E-01	0.5 MILES N	4.93E-01- 4.93E-01	1.87E-01- 2.50E-01	
SR 90	12	1.60E+00	8 VALUES < LLD		4 VALUES < LLD	
	12	4.00E-01	8 VALUES < LLD		4 VALUES < LLD	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN CORN  
 PCI/KG - 0.037 BQ/KG (WET WT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

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TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
K-40	2.50E+02	1.89E+03( 1/ 1) 1.89E+03- 1.89E+03	2.0 MILES NW	1.89E+03( 1/ 1) 1.89E+03- 1.89E+03	1.75E+03( 1/ 1) 1.75E+03- 1.75E+03	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

Table H-8

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN GREEN BEANS  
 PCI/KG - 0.037 BQ/KG (WET WT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
K-40	2.50E+02	2.18E+03( 1/ 1) 2.18E+03- 2.18E+03	2.0 MILES NW	2.18E+03( 1/ 1) 2.18E+03- 2.18E+03	1.70E+03( 1/ 1) 1.70E+03- 1.70E+03	2

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN POTATOES  
 PCI/KG - 0.037 BQ/KG (WET WT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
K-40	2.50E+02	3.83E+03( 1/ 1) 3.83E+03- 3.83E+03	2.0 MILES NW	3.83E+03( 1/ 1) 3.83E+03- 3.83E+03	3.62E+03( 1/ 1) 3.62E+03- 3.62E+03	2

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN TOMATOES  
 PCI/KG - 0.037 BQ/KG (WET WT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
K-40	2.50E+02	2.07E+03( 1/ 1) 2.07E+03- 2.07E+03	2.0 MILES NW	2.07E+03( 1/ 1) 2.07E+03- 2.07E+03	2.31E+03( 1/ 1) 2.31E+03- 2.31E+03	2

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN TURNIP GREENS  
 PCI/KG - 0.037 BQ/KG (WET WT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
BI-214	2 4.00E+01	1 VALUES < LLD	2.0 MILES NW	1 VALUES < LLD	1.10E+02( 1/ 1) 1.10E+02- 1.10E+02	
K-40	2.50E+02	2.34E+03( 1/ 1) 2.34E+03- 2.34E+03	2.0 MILES NW	2.34E+03( 1/ 1) 2.34E+03- 2.34E+03	1.92E+03( 1/ 1) 1.92E+03- 1.92E+03	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN SURFACE WATER(Total)  
 PCI/L - 0.037 BQ/L

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

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TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST ANNUAL MEAN NAME DISTANCE AND DIRECTION . RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GROSS BETA					
39	1.90E+00	2.97E+00( 22/ 26) 2.03E+00- 7.61E+00	TRM 523.1	3.11E+00( 11/ 13) 2.03E+00- 7.61E+00	2.79E+00( 13/ 13) 2.03E+00- 3.50E+00
GAMMA SCAN (GELT)					
39					
BI-214	2.00E+01	2.86E+01( 2/ 26) 2.80E+01- 2.93E+01	TRM 523.1	2.93E+01( 1/ 13) 2.93E+01- 2.93E+01	13 VALUES < LLD
SR 89					
12	5.00E+00	8 VALUES < LLD			4 VALUES < LLD
SR 90					
12	2.00E+00	8 VALUES < LLD			4 VALUES < LLD
TRITIUM					
12	3.00E+02	8 VALUES < LLD			4 VALUES < LLD

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

Table H-13

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN PUBLIC WATER(Total)  
 PCI/L - 0.037 BQ/L

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GROSS BETA	38	1.90E+00	2.91E+00( 24/ 25) 1.92E+00- 4.22E+00	RM-2 DAYTON TN 17.8 MILES NNE	2.94E+00( 12/ 12) 1.92E+00- 4.22E+00	2.79E+00( 13/ 13) 2.03E+00- 3.50E+00
GAMMA SCAN (GELI)	38	2.00E+01	2.31E+01( 6/ 25) 2.05E+01- 2.64E+01	CF INDUSTRIES TRM 473.0	2.32E+01( 3/ 13) 2.08E+01- 2.64E+01	13 VALUES < LLD
BI-214		2.00E+01	2.00E+01( 1/ 25) 2.00E+01- 2.00E+01	RM-2 DAYTON TN 17.8 MILES NNE	2.00E+01( 1/ 12) 2.00E+01- 2.00E+01	13 VALUES < LLD
PB-214		2.00E+01				
SR 89	12	5.00E+00	8 VALUES < LLD			4 VALUES < LLD
SR 90	12	2.00E+00	8 VALUES < LLD			4 VALUES < LLD
TRITIUM	12	3.00E+02	8 VALUES < LLD			4 VALUES < LLD

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

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Table H-14

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN WELL WATER(Total)  
 PCI/L - 0.037 Bq/L

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GROSS BETA	12	1.90E+00	6.09E+00( 4/ 4) WBN WELL #1 4.97E+00- 7.15E+00 0.6 MILES S	6.09E+00( 4/ 4) 2.78E+00( 5/ 8) 4.97E+00- 7.15E+00 2.30E+00- 3.59E+00	
GAMMA SCAN (GELI)	12				
BI-214		2.00E+01	4 VALUES < LLD WBN WELL #1 0.6 MILES S	4 VALUES < LLD 4.07E+02( 4/ 8) 2.58E+02- 4.93E+02	
PB-214		2.00E+01	4 VALUES < LLD WBN WELL #1 0.6 MILES S	4 VALUES < LLD 4.05E+02( 4/ 8) 2.58E+02- 4.84E+02	
SR 89	11	5.00E+00	3 VALUES < LLD	8 VALUES < LLD	
SR 90	11	2.00E+00	3 VALUES < LLD	8 VALUES < LLD	
TRITIUM	12	3.00E+02	4 VALUES < LLD	8 VALUES < LLD	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1 .  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

Table H-15

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN CHANNEL CATFISH FLESH  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

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TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
	6					
BI-214	1.00E-01	4 VALUES < LLD	CHICKAMAUGA RES TRM 471-530	2 VALUES < LLD	1.71E-01( 1/ 2) 1.71E-01- 1.71E-01	
CS-137	3.00E-02	4 VALUES < LLD	CHICKAMAUGA RES TRM 471-530	2 VALUES < LLD	4.68E-02( 2/ 2) 3.86E-02- 5.49E-02	
K-40	4.00E-01	1.14E+01( 4/ 4) 1.02E+01- 1.36E+01	DOWNSTREAM STATION 1 DOWNSTREAM	1.20E+01( 2/ 2) 1.03E+01- 1.36E+01	1.32E+01( 2/ 2) 1.23E+01- 1.40E+01	

Table H-16

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN CRAPPIE FLESH  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

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TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
BI-214	1.00E-01	2 VALUES < LLD	CHICKAMAUGA RES TRM 471-530	2 VALUES < LLD	1.76E-01( 1/ 2) 1.76E-01- 1.76E-01	4
CS-137	3.00E-02	3.88E-02( 1/ 2) 3.88E-02- 3.88E-02	CHICKAMAUGA RES TRM 471-530	3.88E-02( 1/ 2) 3.88E-02- 3.88E-02	9.22E-02( 2/ 2) 7.73E-02- 1.07E-01	
K-40	4.00E-01	1.90E+01( 2/ 2) 1.65E+01- 2.14E+01	CHICKAMAUGA RES TRM 471-530	1.90E+01( 2/ 2) 1.65E+01- 2.14E+01	1.74E+01( 2/ 2) 1.56E+01- 1.93E+01	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

Table H-17

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN SMALLMOUTH BUFFALO FLESH  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
	4					
BI-214	1.00E-01	2 VALUES < LLD	CHICKAMAUGA RES TRM 471-530	2 VALUES < LLD	1.09E-01( 1/ 2) 1.09E-01- 1.09E-01	
CS-137	3.00E-02	4.71E-02( 1/ 2) 4.71E-02- 4.71E-02	CHICKAMAUGA RES TRM 471-530	4.71E-02( 1/ 2) 4.71E-02- 4.71E-02	2 VALUES < LLD	
K-40	4.00E-01	1.15E+01( 2/ 2) 1.05E+01- 1.26E+01	CHICKAMAUGA RES TRM 471-530	1.15E+01( 2/ 2) 1.05E+01- 1.26E+01	1.07E+01( 2/ 2) 1.03E+01- 1.11E+01	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.

NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN SEDIMENT  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
	8					
AC-228	2.50E-01	1.62E+00( 6/ 6) 1.25E+00- 2.23E+00	TRM 527.4	1.80E+00( 2/ 2) 1.37E+00- 2.23E+00	1.61E+00( 2/ 2) 1.57E+00- 1.64E+00	
BE-7	2.50E-01	9.81E-01( 1/ 6) 9.81E-01- 9.81E-01	TRM 496.5	9.81E-01( 1/ 2) 9.81E-01- 9.81E-01	3.43E-01( 1/ 2) 3.43E-01- 3.43E-01	
BI-212	4.50E-01	1.71E+00( 6/ 6) 1.35E+00- 2.38E+00	TRM 527.4	1.89E+00( 2/ 2) 1.41E+00- 2.38E+00	1.78E+00( 2/ 2) 1.67E+00- 1.89E+00	
BI-214	1.50E-01	1.06E+00( 6/ 6) 8.21E-01- 1.25E+00	TRM 518.0	1.15E+00( 2/ 2) 1.13E+00- 1.17E+00	1.11E+00( 2/ 2) 9.54E-01- 1.26E+00	
CO-60	3.00E-02	3.32E-02( 1/ 6) 3.32E-02- 3.32E-02	TRM 496.5	3.32E-02( 1/ 2) 3.32E-02- 3.32E-02	2 VALUES < LLD	
CS-137	3.00E-02	5.05E-01( 3/ 6) 9.01E-02- 7.34E-01	TRM 496.5	7.12E-01( 2/ 2) 6.90E-01- 7.34E-01	1.62E+00( 2/ 2) 1.57E+00- 1.66E+00	
K-40	7.50E-01	1.40E+01( 6/ 6) 1.28E+01- 1.48E+01	TRM 518.0	1.41E+01( 2/ 2) 1.40E+01- 1.42E+01	1.53E+01( 2/ 2) 1.51E+01- 1.55E+01	
PB-212	1.00E-01	1.57E+00( 6/ 6) 1.23E+00- 2.15E+00	TRM 518.0	1.73E+00( 2/ 2) 1.59E+00- 1.86E+00	1.56E+00( 2/ 2) 1.52E+00- 1.61E+00	
PB-214	1.50E-01	1.19E+00( 6/ 6) 9.58E-01- 1.42E+00	TRM 518.0	1.25E+00( 2/ 2) 1.24E+00- 1.26E+00	1.23E+00( 2/ 2) 1.09E+00- 1.38E+00	
RA-224	7.50E-01	2.04E+00( 3/ 6) 1.77E+00- 2.44E+00	TRM 527.4	2.44E+00( 1/ 2) 2.44E+00- 2.44E+00	1.70E+00( 1/ 2) 1.70E+00- 1.70E+00	
RA-226	1.50E-01	1.06E+00( 6/ 6) 8.21E-01- 1.25E+00	TRM 518.0	1.15E+00( 2/ 2) 1.13E+00- 1.17E+00	1.11E+00( 2/ 2) 9.54E-01- 1.26E+00	
TL-208	6.00E-02	5.03E-01( 6/ 6) 3.87E-01- 6.80E-01	TRM 518.0	5.50E-01( 2/ 2) 5.09E-01- 5.92E-01	4.89E-01( 2/ 2) 4.85E-01- 4.93E-01	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.

NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN SHORELINE SEDIMENT  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
	4					
AC-228	2.50E-01	1.50E+00( 2/ 2) 1.40E+00- 1.60E+00	COTTON PORT MARINA TRM 513	1.50E+00( 2/ 2) 1.40E+00- 1.60E+00	2 VALUES < LLD	
BE-7	2.50E-01	3.34E-01( 1/ 2) 3.34E-01- 3.34E-01	COTTON PORT MARINA TRM 513	3.34E-01( 1/ 2) 3.34E-01- 3.34E-01	2 VALUES < LLD	
BI-212	4.50E-01	1.52E+00( 2/ 2) 1.34E+00- 1.71E+00	COTTON PORT MARINA TRM 513	1.52E+00( 2/ 2) 1.34E+00- 1.71E+00	2 VALUES < LLD	
BI-214	1.50E-01	5.97E-01( 2/ 2) 5.20E-01- 6.74E-01	COTTON PORT MARINA TRM 513	5.97E-01( 2/ 2) 5.20E-01- 6.74E-01	2 VALUES < LLD	
CS-137	3.00E-02	1.00E-01( 1/ 2) 1.00E-01- 1.00E-01	COTTON PORT MARINA TRM 513	1.00E-01( 1/ 2) 1.00E-01- 1.00E-01	2 VALUES < LLD	
K-40	7.50E-01	3.35E+01( 2/ 2) 3.05E+01- 3.65E+01	COTTON PORT MARINA TRM 513	3.35E+01( 2/ 2) 3.05E+01- 3.65E+01	2 VALUES < LLD	
PB-212	1.00E-01	1.40E+00( 2/ 2) 1.39E+00- 1.41E+00	COTTON PORT MARINA TRM 513	1.40E+00( 2/ 2) 1.39E+00- 1.41E+00	1.44E-01( 2/ 2) 1.23E-01- 1.64E-01	
PB-214	1.50E-01	6.76E-01( 2/ 2) 6.07E-01- 7.45E-01	COTTON PORT MARINA TRM 513	6.76E-01( 2/ 2) 6.07E-01- 7.45E-01	1.57E-01( 1/ 2) 1.57E-01- 1.57E-01	
RA-226	1.50E-01	5.97E-01( 2/ 2) 5.20E-01- 6.74E-01	COTTON PORT MARINA TRM 513	5.97E-01( 2/ 2) 5.20E-01- 6.74E-01	2 VALUES < LLD	
TL-208	6.00E-02	4.91E-01( 2/ 2) 4.66E-01- 5.16E-01	COTTON PORT MARINA TRM 513	4.91E-01( 2/ 2) 4.66E-01- 5.16E-01	2 VALUES < LLD	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.

NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY  
 RADIOACTIVITY IN POND SEDIMENT  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELT)						
	5					
AC-228	2.50E-01	1.13E+00( 4/ 5)	YP-5	1.21E+00( 1/ 1)	0 VALUES < LLD	
		1.08E+00- 1.21E+00	YARD POND	1.21E+00- 1.21E+00		
BE-7	2.50E-01	3.94E-01( 2/ 5)	YP-17	4.62E-01( 1/ 1)	0 VALUES < LLD	
		3.25E-01- 4.62E-01	YARD POND	4.62E-01- 4.62E-01		
BI-212	4.50E-01	1.17E+00( 4/ 5)	YP-5	1.36E+00( 1/ 1)	0 VALUES < LLD	
		9.66E-01- 1.36E+00	YARD POND	1.36E+00- 1.36E+00		
BI-214	1.50E-01	6.43E-01( 5/ 5)	YP-16	8.19E-01( 1/ 1)	0 VALUES < LLD	
		2.08E-01- 8.19E-01	YARD POND	8.19E-01- 8.19E-01		
CO-58	3.00E-02	3.20E-02( 1/ 5)	YP-17	3.20E-02( 1/ 1)	0 VALUES < LLD	
		3.20E-02- 3.20E-02	YARD POND	3.20E-02- 3.20E-02		
CO-60	3.00E-02	7.05E-02( 2/ 5)	YP-16	7.24E-02( 1/ 1)	0 VALUES < LLD	
		6.85E-02- 7.24E-02	YARD POND	7.24E-02- 7.24E-02		
CS-134	3.00E-02	4.62E-02( 2/ 5)	YP-16	4.99E-02( 1/ 1)	0 VALUES < LLD	
		4.25E-02- 4.99E-02	YARD POND	4.99E-02- 4.99E-02		
CS-137	3.00E-02	2.35E-01( 4/ 5)	YP-16	2.66E-01( 1/ 1)	0 VALUES < LLD	
		1.87E-01- 2.66E-01	YARD POND	2.66E-01- 2.66E-01		
K-40	7.50E-01	1.18E+01( 5/ 5)	YP-5	1.55E+01( 1/ 1)	0 VALUES < LLD	
		4.02E+00- 1.55E+01	YARD POND	1.55E+01- 1.55E+01		
PB-212	1.00E-01	9.16E-01( 5/ 5)	YP-5	1.26E+00( 1/ 1)	0 VALUES < LLD	
		1.22E-01- 1.26E+00	YARD POND	1.26E+00- 1.26E+00		
PB-214	1.50E-01	7.15E-01( 5/ 5)	YP-16	8.95E-01( 1/ 1)	0 VALUES < LLD	
		2.27E-01- 8.95E-01	YARD POND	8.95E-01- 8.95E-01		
RA-224	7.50E-01	1.22E+00( 3/ 5)	YP-5	1.44E+00( 1/ 1)	0 VALUES < LLD	
		1.10E+00- 1.44E+00	YARD POND	1.44E+00- 1.44E+00		
SB-125	NOT ESTAB	1.49E-01( 1/ 5)	YP-17	1.49E-01( 1/ 1)	0 VALUES < LLD	
		1.49E-01- 1.49E-01	YARD POND	1.49E-01- 1.49E-01		
TL-208	6.00E-02	3.51E-01( 4/ 5)	YP-5	3.70E-01( 1/ 1)	0 VALUES < LLD	
		3.29E-01- 3.70E-01	YARD POND	3.70E-01- 3.70E-01		

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.  
 NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

Table H-21

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

RADIOACTIVITY IN CLAM FLESH  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)

NAME OF FACILITY: WATTS BAR NUCLEAR PLANT  
 LOCATION OF FACILITY: RHEA TENNESSEE

DOCKET NO.: 50-390,391  
 REPORTING PERIOD: 1998

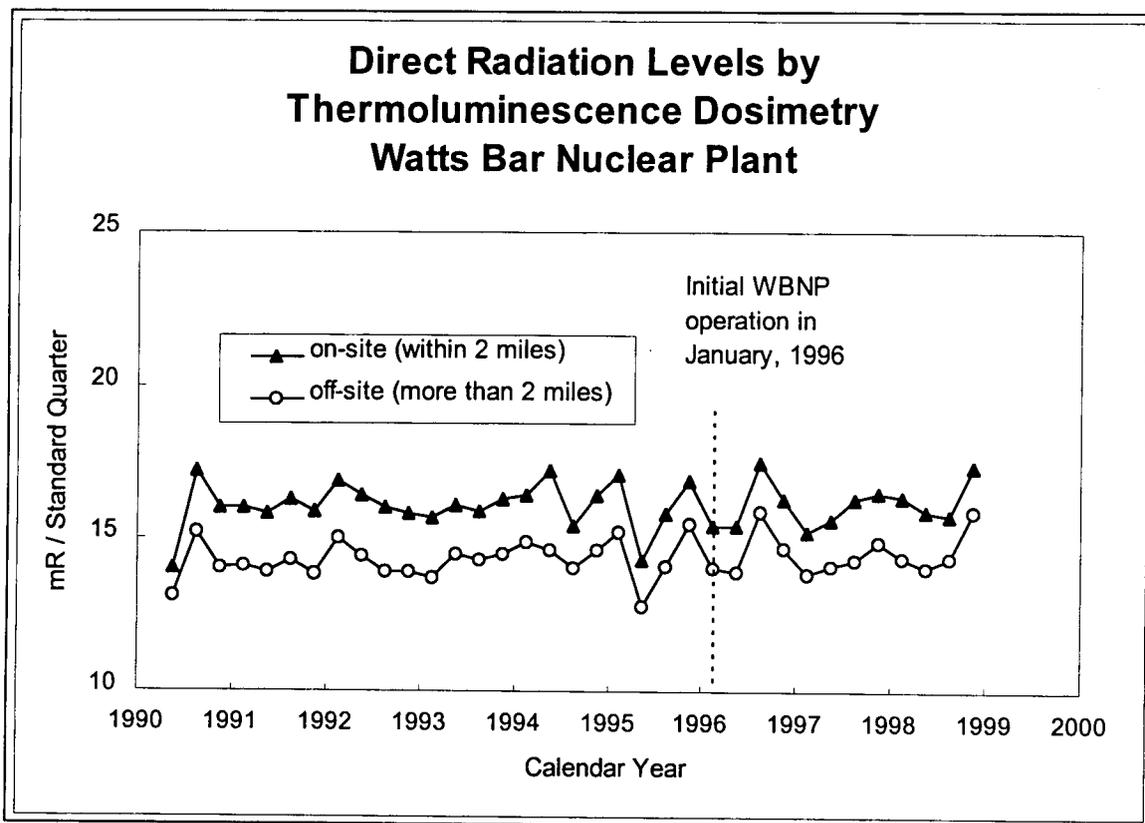
TYPE AND TOTAL NUMBER OF ANALYSIS PERFORMED	LOWER LIMIT OF DETECTION (LLD) SEE NOTE 1	ALL INDICATOR LOCATIONS MEAN (F) RANGE SEE NOTE 2	LOCATION WITH HIGHEST NAME DISTANCE AND DIRECTION	ANNUAL MEAN MEAN (F) RANGE SEE NOTE 2	CONTROL LOCATIONS MEAN (F) RANGE SEE NOTE 2	NUMBER OF NONROUTINE REPORTED MEASUREMENTS
GAMMA SCAN (GELI)						
BI-214	5.00E-01	1.37E+00( 2/ 2) 1.01E+00- 1.73E+00	DOWNSTREAM	1.37E+00( 2/ 2) 1.01E+00- 1.73E+00	1.33E+00( 1/ 2) 1.33E+00- 1.33E+00	4
PB-214	1.00E-01	1.23E+00( 2/ 2) 8.74E-01- 1.58E+00	DOWNSTREAM	1.23E+00( 2/ 2) 8.74E-01- 1.58E+00	8.18E-01( 2/ 2) 3.16E-01- 1.32E+00	

NOTE: 1. NOMINAL LOWER LIMIT OF DETECTION (LLD) AS DESCRIBED IN TABLE E-1.

NOTE: 2. MEAN AND RANGE BASED UPON DETECTABLE MEASUREMENTS ONLY. FRACTION OF DETECTABLE MEASUREMENTS AT SPECIFIED LOCATIONS IS INDICATED IN PARENTHESES (F).

Figure H-1

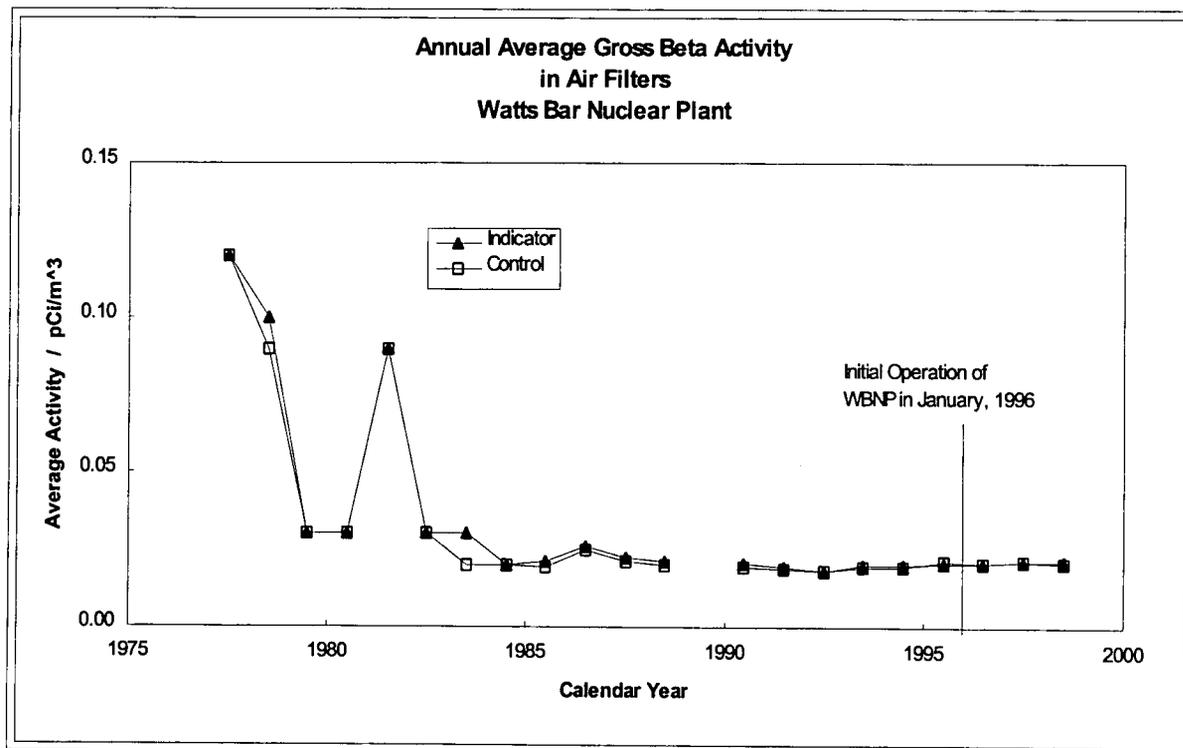
Direct Radiation



Thermoluminescent dosimeters are processed quarterly. This chart shows trends in the average measurement for all dosimeters grouped as "on-site" or "off-site". The persistent difference between "on-site" and "off-site" measurements observed in the preoperational phase indicates that slightly higher on-site levels are not due to plant operations.

Figure H-2

Radioactivity in Air Filters



To more clearly show trends developed since the end of atmospheric weapons testing, the data beginning with the resumption of the monitoring program in 1990 is shown in greater detail.

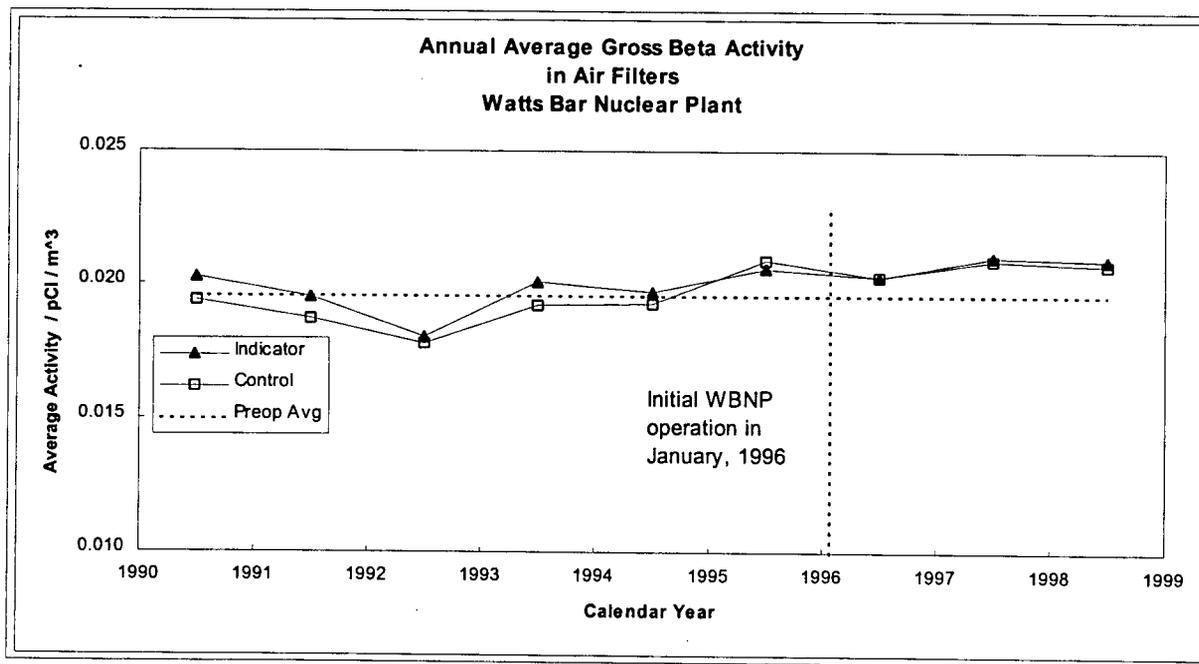
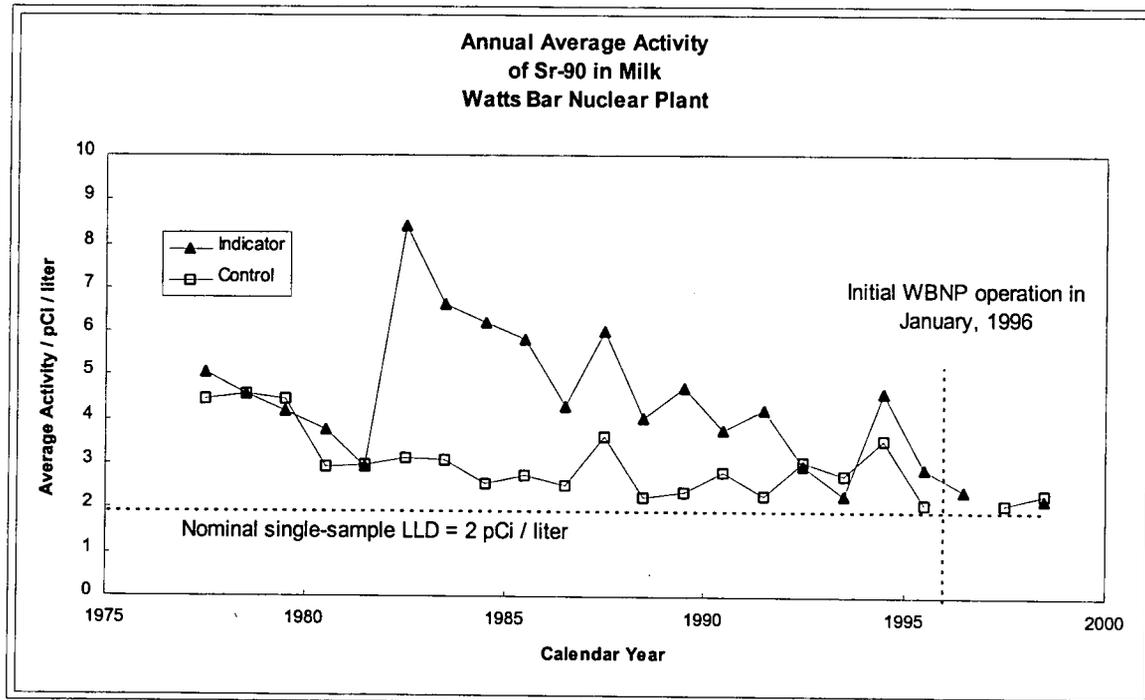


Figure H-3

Strontium-90 in Milk



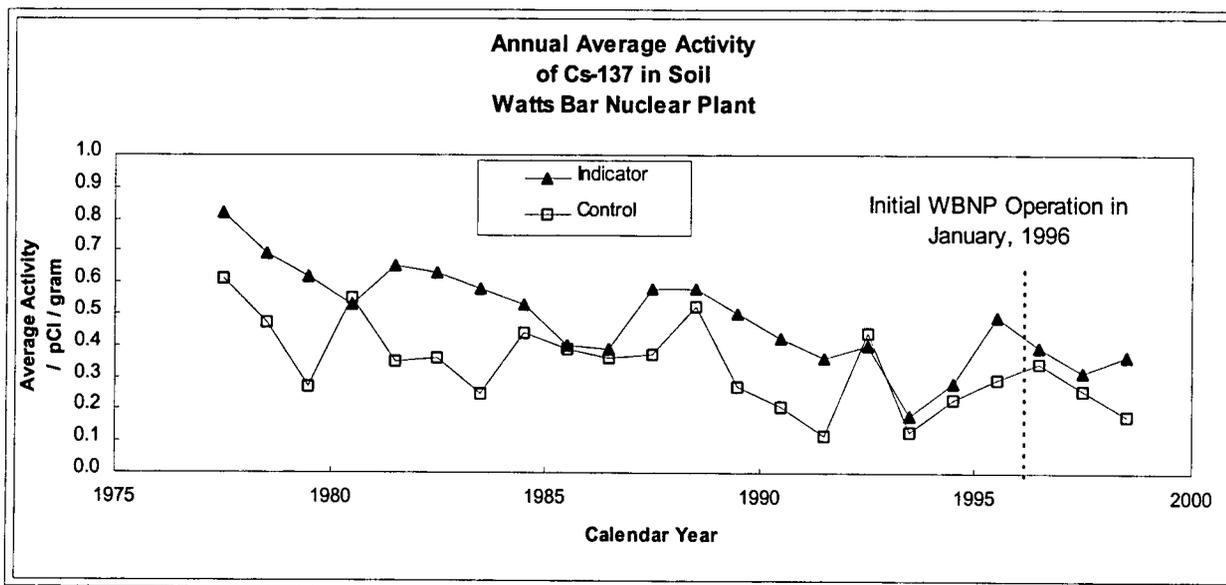
When the radiological environmental monitoring program was initiated for the Watts Bar site in the 1970's, strontium-90 produced by atmospheric detonation of nuclear weapons was present in essentially all milk samples. Since that time, a generally decreasing trend has been observed, due to the 28-year half-life of strontium-90, and due to transport out of the upper layers of soil, and thus out of the vegetation used for feeding cows.

The values plotted above are the average of all samples within the year with a measurement result above the nominal Lower Limit of Detection (LLD) of 2 pCi/liter.

Figure H-4

Cs-137 in Soil

Cesium-137, like strontium-90, was produced by nuclear weapons detonations and is present in almost every environmental sample exposed to the atmosphere. The "control" and "indicator" locations have generally trended downward with year-to-year variation, since the beginning of the monitoring program from the Watts Bar site.



In almost every year, the "indicator" locations have shown greater activity of Cs-137 than the "control" locations. This trend, with its preoperational average is shown below.

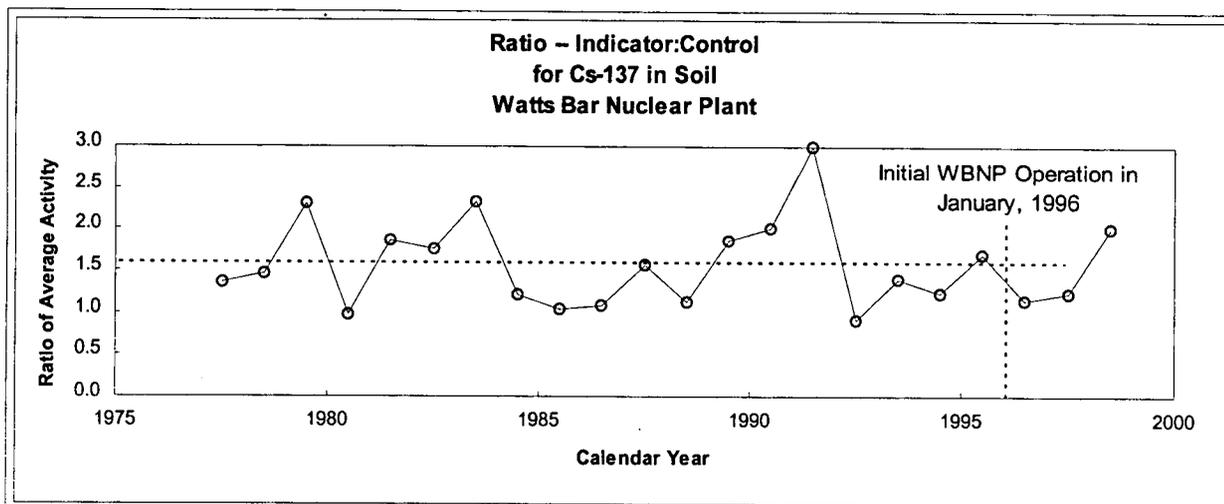


Figure H-5

Gross Beta Activity in Surface and Drinking Water

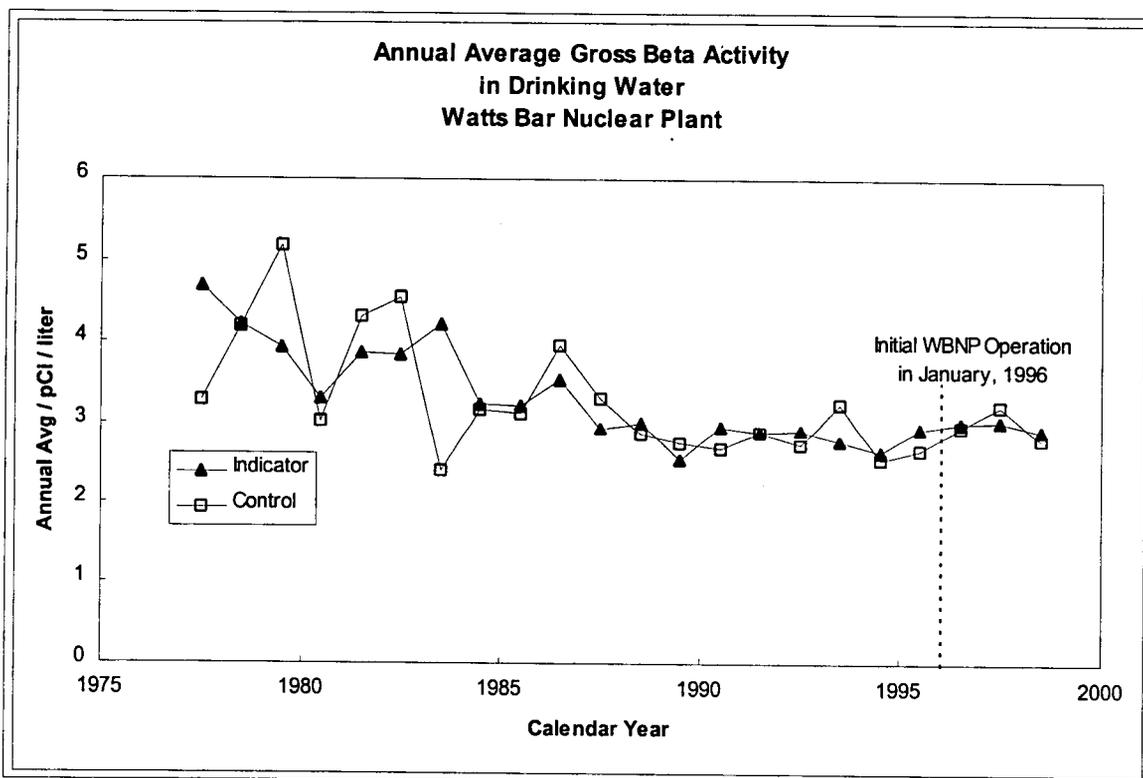
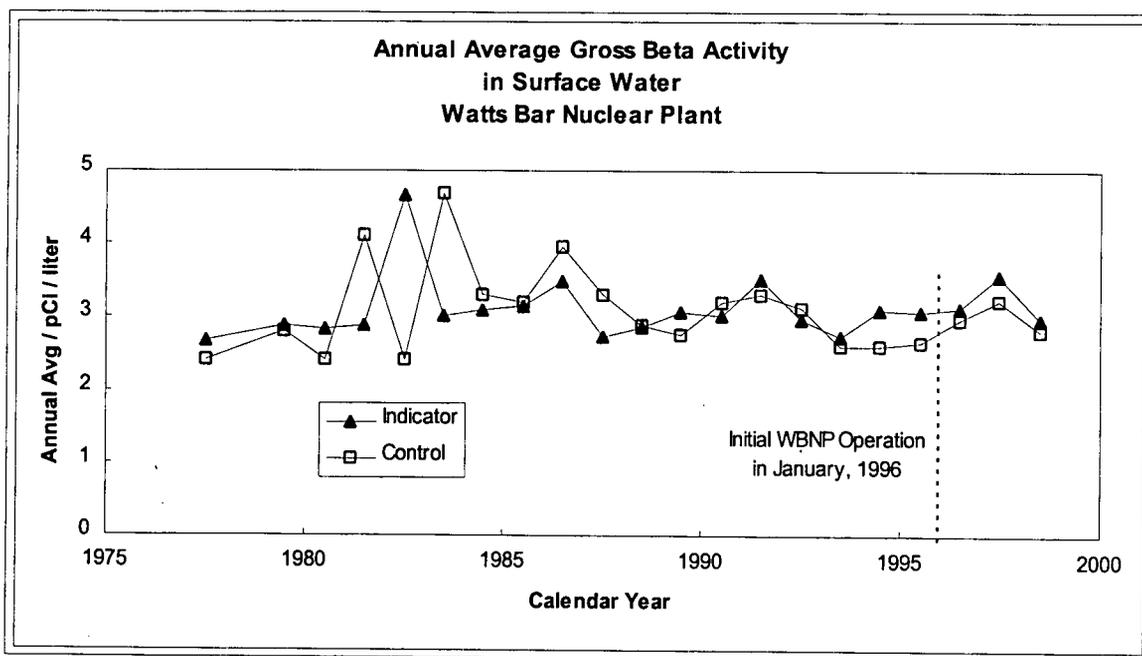


Figure H-6

Radioactivity in Fish

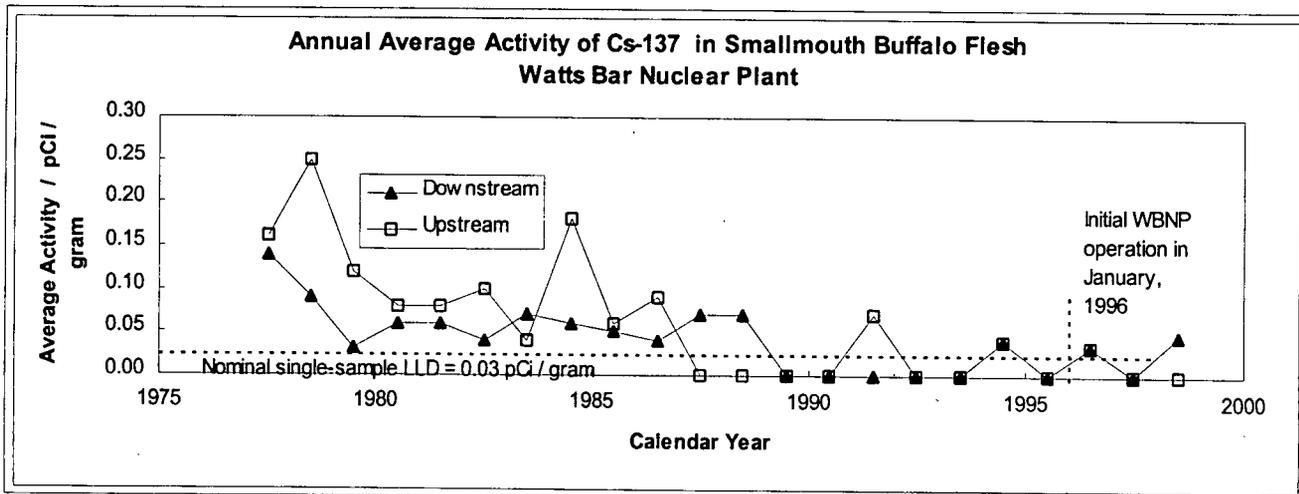
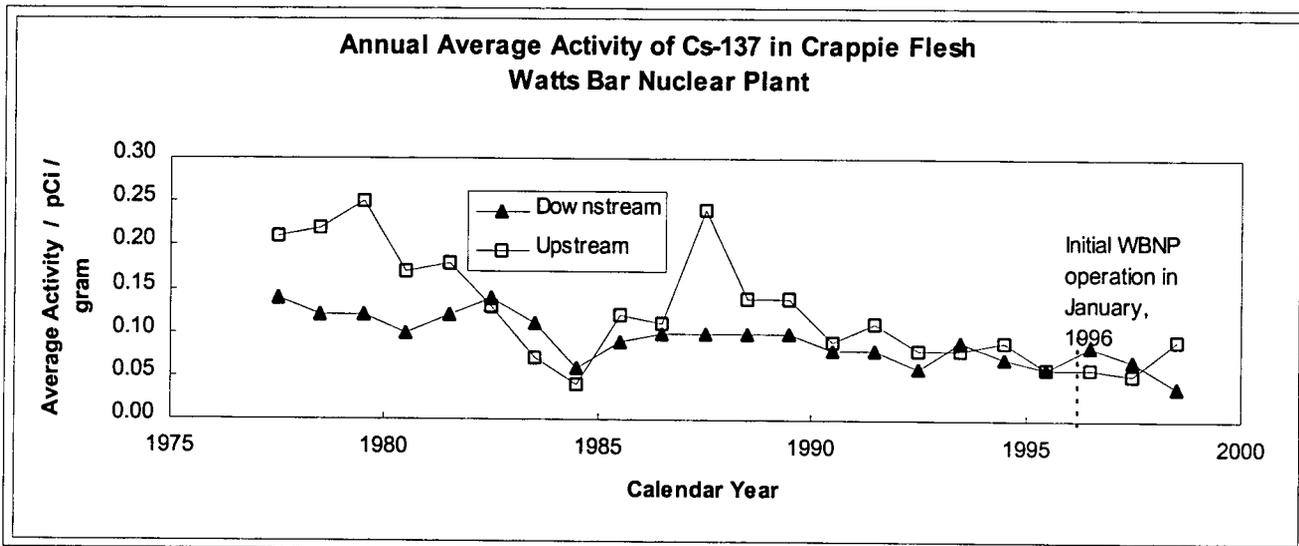
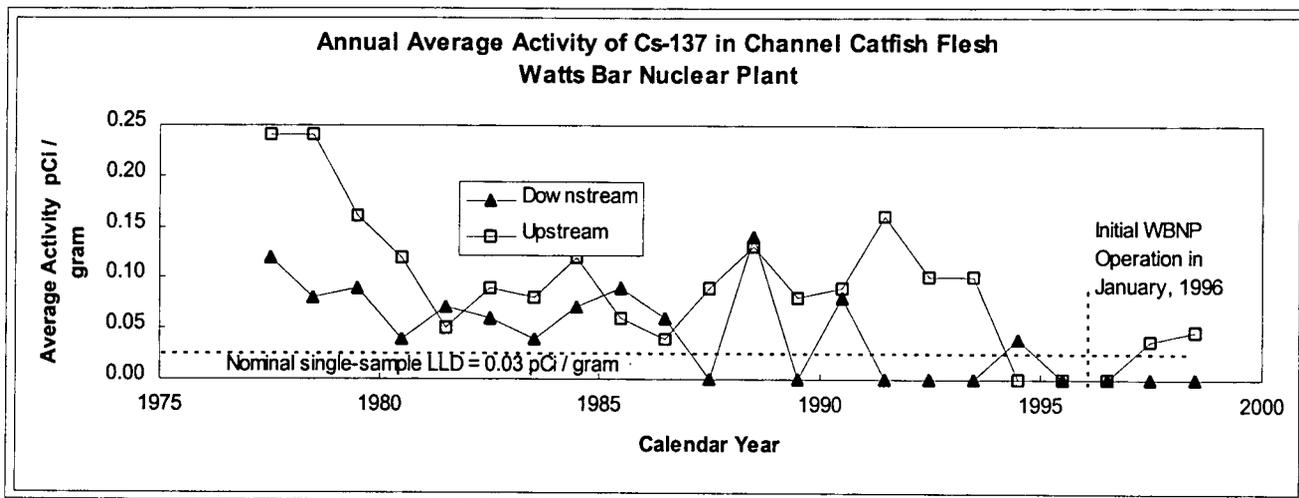
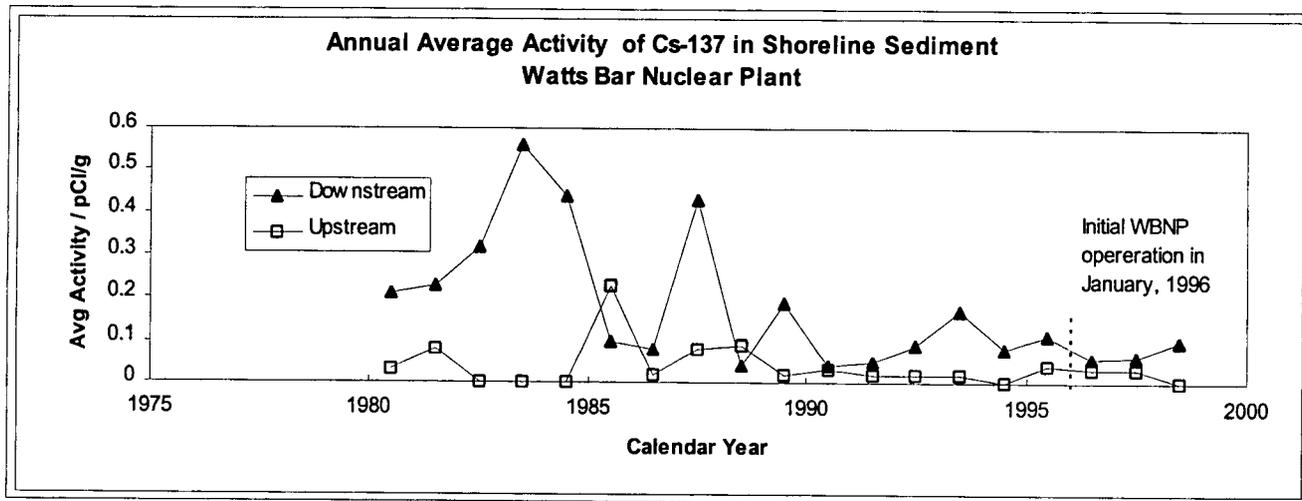
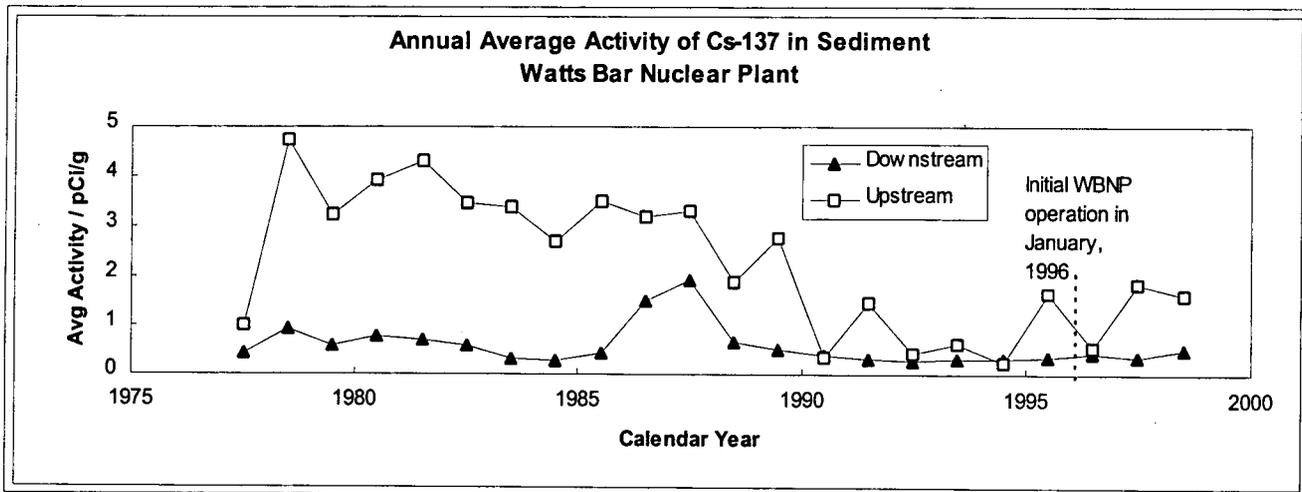


Figure H-7

Radioactivity in Sediment

The Cs-137 present in the shoreline and bottom sediments of the Tennessee River system was produced both by detonation of nuclear weapons and by related nuclear operations in the upper reaches of the Tennessee River watershed. The amounts of Cs-137 have declined significantly during the course of monitoring for the Watts Bar site, so much so that not all samples contain detectable levels.



# **Annual Radiological Environmental Operating Report**

**Data Supplement**

**Watts Bar  
Nuclear Plant  
1998**



ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

WATTS BAR NUCLEAR PLANT

DATA SUPPLEMENT

1998

TENNESSEE VALLEY AUTHORITY

ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION

April 1999

RADIOLOGICAL ENVIRONMENTAL MONITORING DATA  
WATTS BAR NUCLEAR PLANT

1998

This supplement to the Watts Bar Nuclear Plant Annual Radiological Environmental Operating Report (AREOR) presents the results of individual sample analyses and radiation measurements. The results are ordered by sample type then by sample location and analysis type. If no gamma activity was detected in a sample, the notation 'NO ACTIVITY DETECTED' is entered in place of the activity. The sample locations are described in Appendix A to the AREOR.

These tables include all results, whether above or below the Lower Limit of Detection. Negative values are an artifact of counting statistics and do not imply a negative activity.

The uncertainty reported for specific analyses such as gross alpha, gross beta, Sr-89 and 90 and tritium is the one sigma counting error. For gamma analyses, the uncertainty reported is the one-sigma error calculated by the gamma spectral analysis software.

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
2116 RM-2 DAYTON TN	15.0 MILES SW	GROSS BETA			
		+0.0154	+0.0017	12/29/97	800055
		+0.0179	+0.0020	01/06/98	800153
		+0.0151	+0.0017	01/13/98	800269
		+0.0150	+0.0017	01/20/98	800370
		+0.0200	+0.0022	01/27/98	800573
		+0.0163	+0.0018	02/03/98	800718
		+0.0162	+0.0018	02/10/98	800843
		+0.0183	+0.0020	02/17/98	800947
		+0.0132	+0.0015	02/24/98	801148
		+0.0193	+0.0021	03/03/98	801250
		+0.0131	+0.0015	03/10/98	801395
		+0.0232	+0.0025	03/17/98	801503
		+0.0118	+0.0014	03/24/98	801683
		+0.0219	+0.0024	03/31/98	801817
		+0.0123	+0.0015	04/07/98	801951
		+0.0188	+0.0021	04/14/98	802051
		+0.0125	+0.0015	04/21/98	802229
		+0.0191	+0.0021	04/28/98	802416
		+0.0132	+0.0015	05/05/98	802609
		+0.0131	+0.0015	05/12/98	802704
		+0.0240	+0.0026	05/19/98	802895
		+0.0273	+0.0029	05/26/98	802993
		+0.0175	+0.0020	06/02/98	803138
		+0.0138	+0.0016	06/09/98	803268
		+0.0181	+0.0020	06/16/98	803433
		+0.0169	+0.0019	06/23/98	803584
		+0.0212	+0.0023	06/30/98	803733
		+0.0208	+0.0023	07/07/98	803887
		+0.0259	+0.0028	07/14/98	804051
		+0.0265	+0.0029	07/21/98	804169
		+0.0178	+0.0020	07/28/98	804333
		+0.0204	+0.0022	08/04/98	804447
		+0.0201	+0.0022	08/11/98	804618
		+0.0229	+0.0025	08/18/98	804725
		+0.0358	+0.0038	08/25/98	804887
		+0.0359	+0.0038	09/01/98	804995
		+0.0456	+0.0047	09/08/98	805169
		+0.0298	+0.0032	09/15/98	805278

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
2116 RM-2 DAYTON TN 15.0 MILES SW	GROSS BETA	+0.0247	+0.0027	09/22/98	805430	
		+0.0228	+0.0025	09/29/98	805556	
		+0.0231	+0.0025	10/06/98	805747	
		+0.0189	+0.0021	10/13/98	805870	
		+0.0324	+0.0034	10/20/98	806009	
		+0.0239	+0.0026	10/27/98	806172	
		+0.0348	+0.0037	11/03/98	806359	
		+0.0203	+0.0023	11/10/98	806460	
		+0.0297	+0.0032	11/17/98	806594	
		+0.0348	+0.0037	11/23/98	806712	
		+0.0304	+0.0032	12/01/98	806870	
	GAMMA SCAN (GELI)	BE-7	+0.0202	+0.0022	12/08/98	806992
			+0.0225	+0.0025	12/15/98	807115
			+0.0230	+0.0026	12/21/98	807262
			+0.0614	+0.0071	01/20/98	800446
			+0.0646	+0.0075	02/17/98	801024
			+0.0898	+0.0073	03/17/98	801582
		BI-214	+0.1271	+0.0085	04/14/98	802126
			+0.0906	+0.0065	05/12/98	802779
			+0.1215	+0.0084	06/09/98	803346
			+0.1081	+0.0090	07/07/98	803963
			+0.1290	+0.0085	08/04/98	804523
			+0.1590	+0.0113	09/01/98	805073
			+0.1446	+0.0127	09/29/98	805633
			+0.1306	+0.0106	10/27/98	806277
			+0.0870	+0.0081	11/23/98	806787
			+0.1092	+0.0114	12/21/98	807341
+0.0087	+0.0110	01/20/98	800446			
+0.0240	+0.0024	02/17/98	801024			
+0.0088	+0.0012	03/17/98	801582			
+0.0011	+0.0010	04/14/98	802126			
+0.0108	+0.0015	05/12/98	802779			
+0.0065	+0.0011	06/09/98	803346			
+0.0033	+0.0009	07/07/98	803963			
+0.0063	+0.0012	08/04/98	804523			
+0.0018	+0.0011	09/01/98	805073			

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
2116 RM-2 DAYTON TN 15.0 MILES SW	GAMMA SCAN (GELI)			
		BI-214	+0.0077	+0.0017 09/29/98 805633
		+0.0041	+0.0010 10/27/98 806277	
		+0.0074	+0.0015 11/23/98 806787	
		+0.0148	+0.0017 12/21/98 807341	
	K-40	+0.0116	+0.0069 07/07/98 803963	
		+0.0073	+0.0058 08/04/98 804523	
		+0.0143	+0.0074 09/01/98 805073	
		+0.0062	+0.0069 10/27/98 806277	
		+0.0103	+0.0050 11/23/98 806787	
		+0.0078	+0.0065 12/21/98 807341	
	PB-214	+0.0092	+0.0009 01/20/98 800446	
		+0.0210	+0.0021 02/17/98 801024	
		+0.0079	+0.0013 03/17/98 801582	
		+0.0004	+0.0008 04/14/98 802126	
		+0.0100	+0.0015 05/12/98 802779	
		+0.0061	+0.0012 06/09/98 803346	
		+0.0021	+0.0007 07/07/98 803963	
		+0.0068	+0.0008 08/04/98 804523	
		+0.0035	+0.0013 09/01/98 805073	
		+0.0051	+0.0011 09/29/98 805633	
		+0.0062	+0.0015 11/23/98 806787	
		+0.0192	+0.0017 12/21/98 807341	
	TL-208	+0.0006	+0.0004 02/17/98 801024	
3101 LM1 0.5 MILES SSW	GROSS BETA	+0.0163	+0.0018 12/29/97 800079	
		+0.0167	+0.0018 01/06/98 800178	
		+0.0136	+0.0016 01/13/98 800286	
		+0.0141	+0.0016 01/20/98 800406	
		+0.0211	+0.0023 01/27/98 800597	
		+0.0181	+0.0020 02/03/98 800743	
		+0.0143	+0.0016 02/10/98 800860	
		+0.0151	+0.0017 02/17/98 800983	
		+0.0095	+0.0012 02/24/98 801172	
		+0.0173	+0.0019 03/03/98 801275	
		+0.0143	+0.0016 03/10/98 801412	
		+0.0249	+0.0027 03/17/98 801540	
		+0.0102	+0.0012 03/24/98 801707	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
3101 LM1	0.5 MILES SSW	GROSS BETA		
		+0.0204	+0.0022	03/31/98 801842
		+0.0133	+0.0015	04/07/98 801968
		+0.0171	+0.0019	04/14/98 802086
		+0.0078	+0.0010	04/21/98 802253
		+0.0182	+0.0020	04/28/98 802465
		+0.0113	+0.0013	05/05/98 802626
		+0.0126	+0.0015	05/12/98 802739
		+0.0243	+0.0026	05/19/98 802919
		+0.0242	+0.0026	05/26/98 803018
		+0.0179	+0.0020	06/02/98 803155
		+0.0120	+0.0014	06/09/98 803304
		+0.0175	+0.0019	06/16/98 803457
		+0.0151	+0.0017	06/23/98 803609
		+0.0201	+0.0022	06/30/98 803762
		+0.0196	+0.0021	07/07/98 803923
		+0.0241	+0.0026	07/14/98 804075
		+0.0257	+0.0027	07/21/98 804194
		+0.0158	+0.0018	07/28/98 804350
		+0.0187	+0.0021	08/04/98 804483
		+0.0215	+0.0023	08/11/98 804642
		+0.0230	+0.0025	08/18/98 804750
		+0.0316	+0.0033	08/25/98 804904
		+0.0332	+0.0035	09/01/98 805031
		+0.0412	+0.0043	09/08/98 805193
		+0.0250	+0.0027	09/15/98 805303
		+0.0289	+0.0031	09/22/98 805447
		+0.0268	+0.0029	09/29/98 805592
		+0.0221	+0.0024	10/06/98 805771
		+0.0178	+0.0020	10/13/98 805895
		+0.0315	+0.0033	10/20/98 806026
		+0.0240	+0.0026	10/27/98 806226
		+0.0307	+0.0032	11/03/98 806383
		+0.0205	+0.0022	11/10/98 806485
		+0.0293	+0.0031	11/17/98 806611
		+0.0298	+0.0032	11/23/98 806747
		+0.0277	+0.0029	12/01/98 806894
		+0.0200	+0.0022	12/08/98 807016
		+0.0215	+0.0024	12/15/98 807132

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR	DATE	LAB NO	
			TERM	COLLECTED		
3101 LM1 0.5 MILES SSW	GROSS BETA	+0.0233	+0.0026	12/21/98	807299	
	GAMMA SCAN (GELI)					
	AC-228	+0.0011	+0.0015	09/29/98	805640	
	BE-7	+0.0469	+0.0057	01/20/98	800453	
		+0.0490	+0.0053	02/17/98	801031	
		+0.0782	+0.0063	03/17/98	801589	
		+0.1209	+0.0076	04/14/98	802133	
		+0.0882	+0.0085	05/12/98	802786	
		+0.1170	+0.0101	06/09/98	803353	
		+0.1033	+0.0093	07/07/98	803970	
		+0.1198	+0.0083	08/04/98	804530	
		+0.1365	+0.0111	09/01/98	805080	
		+0.1180	+0.0097	09/29/98	805640	
		+0.1023	+0.0102	10/27/98	806284	
		+0.0808	+0.0069	11/23/98	806794	
		+0.0972	+0.0097	12/21/98	807348	
		BI-214	+0.0022	+0.0010	01/20/98	800453
			+0.0207	+0.0019	02/17/98	801031
			+0.0026	+0.0009	03/17/98	801589
			+0.0054	+0.0014	05/12/98	802786
			+0.0009	+0.0008	06/09/98	803353
			+0.0045	+0.0011	07/07/98	803970
			+0.0041	+0.0013	08/04/98	804530
			+0.0020	+0.0009	09/01/98	805080
			+0.0013	+0.0009	09/29/98	805640
			+0.0035	+0.0009	10/27/98	806284
			+0.0069	+0.0011	11/23/98	806794
			+0.0100	+0.0014	12/21/98	807348
		K-40	+0.0013	+0.0062	01/20/98	800453
			+0.0001	+0.0078	08/04/98	804530
			+0.0114	+0.0051	09/01/98	805080
			+0.0093	+0.0076	09/29/98	805640
			+0.0043	+0.0051	10/27/98	806284
		+0.0039	+0.0050	12/21/98	807348	
	PB-212	+0.0000	+0.0004	03/17/98	801589	
		+0.0002	+0.0007	07/07/98	803970	
	PB-214	+0.0018	+0.0008	01/20/98	800453	

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE				
			TERM	COLLECTED	LAB NO		
3101 LM1  0.5 MILES SSW	GAMMA SCAN (GELI) PB-214	+0.0193	+0.0017	02/17/98	801031		
		+0.0013	+0.0009	03/17/98	801589		
		+0.0036	+0.0010	05/12/98	802786		
		+0.0016	+0.0006	06/09/98	803353		
		+0.0052	+0.0011	07/07/98	803970		
		+0.0044	+0.0009	08/04/98	804530		
		+0.0006	+0.0007	09/01/98	805080		
		+0.0013	+0.0011	09/29/98	805640		
		+0.0039	+0.0012	10/27/98	806284		
		+0.0069	+0.0012	11/23/98	806794		
		+0.0091	+0.0015	12/21/98	807348		
		3102 LM2  0.5 MILES N	GROSS BETA	+0.0159	+0.0018	12/29/97	800082
				+0.0169	+0.0019	01/06/98	800180
				+0.0148	+0.0017	01/13/98	800288
+0.0176	+0.0020			01/20/98	800408		
+0.0181	+0.0020			01/27/98	800600		
+0.0193	+0.0021			02/03/98	800745		
+0.0157	+0.0018			02/10/98	800862		
+0.0148	+0.0017			02/17/98	800985		
+0.0115	+0.0014			02/24/98	801175		
+0.0168	+0.0019			03/03/98	801277		
+0.0141	+0.0016			03/10/98	801414		
+0.0229	+0.0025			03/17/98	801542		
+0.0112	+0.0014			03/24/98	801710		
+0.0194	+0.0021			03/31/98	801844		
+0.0148	+0.0017			04/07/98	801970		
+0.0182	+0.0020			04/14/98	802088		
+0.0116	+0.0014			04/21/98	802256		
+0.0203	+0.0022			04/28/98	802467		
+0.0134	+0.0016			05/05/98	802628		
+0.0150	+0.0017			05/12/98	802741		
+0.0247	+0.0027			05/19/98	802922		
+0.0247	+0.0027	05/26/98	803020				
+0.0171	+0.0019	06/02/98	803157				
+0.0143	+0.0016	06/09/98	803306				
+0.0171	+0.0019	06/16/98	803460				

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO			
3102 LM2	0.5 MILES N	GROSS BETA						
			+0.0145	+0.0017	06/23/98	803611		
			+0.0228	+0.0025	06/30/98	803765		
			+0.0181	+0.0020	07/07/98	803925		
			+0.0246	+0.0026	07/14/98	804078		
			+0.0236	+0.0026	07/21/98	804196		
			+0.0163	+0.0018	07/28/98	804352		
			+0.0185	+0.0020	08/04/98	804485		
			+0.0191	+0.0021	08/11/98	804645		
			+0.0245	+0.0026	08/18/98	804752		
			+0.0333	+0.0035	08/25/98	804906		
			+0.0345	+0.0036	09/01/98	805033		
			+0.0418	+0.0044	09/08/98	805196		
			+0.0296	+0.0032	09/15/98	805305		
			+0.0261	+0.0028	09/22/98	805449		
			+0.0228	+0.0025	09/29/98	805594		
			+0.0216	+0.0024	10/06/98	805774		
			+0.0187	+0.0021	10/13/98	805897		
			+0.0360	+0.0038	10/20/98	806028		
			+0.0278	+0.0030	10/27/98	806228		
			+0.0311	+0.0033	11/03/98	806386		
			+0.0185	+0.0021	11/10/98	806487		
			+0.0285	+0.0030	11/17/98	806613		
			+0.0327	+0.0035	11/23/98	806749		
			+0.0292	+0.0031	12/01/98	806897		
			+0.0212	+0.0023	12/08/98	807018		
			+0.0217	+0.0024	12/15/98	807134		
			+0.0213	+0.0024	12/21/98	807301		
				GAMMA SCAN (GELI)				
				BE-7	+0.0623	+0.0063	01/20/98	800454
	+0.0630	+0.0096	02/17/98		801032			
	+0.0855	+0.0061	03/17/98		801590			
	+0.1092	+0.0096	04/14/98		802134			
	+0.0843	+0.0078	05/12/98		802787			
	+0.1168	+0.0103	06/09/98		803354			
	+0.1031	+0.0089	07/07/98		803971			
	+0.1173	+0.0112	08/04/98		804531			
	+0.1438	+0.0125	09/01/98		805081			

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		
			TERM	COLLECTED LAB NO	
3102 LM2 0.5 MILES N	GAMMA SCAN (GELI) BE-7	+0.1336	+0.0091	09/29/98 805641	
		+0.1134	+0.0127	10/27/98 806285	
		+0.0858	+0.0086	11/23/98 806795	
		+0.1021	+0.0077	12/21/98 807349	
		BI-214	+0.0071	+0.0013	01/20/98 800454
			+0.0142	+0.0017	02/17/98 801032
			+0.0036	+0.0012	03/17/98 801590
			+0.0121	+0.0017	04/14/98 802134
			+0.0057	+0.0013	05/12/98 802787
			+0.0023	+0.0012	06/09/98 803354
			+0.0043	+0.0014	07/07/98 803971
			+0.0049	+0.0011	08/04/98 804531
			+0.0015	+0.0009	09/01/98 805081
			+0.0061	+0.0014	09/29/98 805641
	K-40	+0.0121	+0.0017	10/27/98 806285	
		+0.0117	+0.0014	11/23/98 806795	
		+0.0207	+0.0022	12/21/98 807349	
		+0.0185	+0.0081	07/07/98 803971	
		+0.0054	+0.0052	08/04/98 804531	
		+0.0107	+0.0062	09/01/98 805081	
		+0.0036	+0.0070	09/29/98 805641	
		+0.0103	+0.0062	10/27/98 806285	
		+0.0034	+0.0049	12/21/98 807349	
		PB-212 PB-214	+0.0001	+0.0004	11/23/98 806795
	+0.0067		+0.0013	01/20/98 800454	
	+0.0140		+0.0021	02/17/98 801032	
	+0.0019		+0.0010	03/17/98 801590	
	+0.0097		+0.0017	04/14/98 802134	
	+0.0057		+0.0010	05/12/98 802787	
	+0.0034		+0.0009	06/09/98 803354	
	+0.0068		+0.0012	07/07/98 803971	
	+0.0044		+0.0009	08/04/98 804531	
	+0.0033		+0.0010	09/01/98 805081	
	3106 PM2 SPRING CITY 7.0 MILES NW	GROSS BETA	+0.0041	+0.0009	09/29/98 805641
+0.0123			+0.0017	10/27/98 806285	
+0.0104			+0.0012	11/23/98 806795	
+0.0194			+0.0019	12/21/98 807349	
+0.0156			+0.0018	12/29/97 800086	

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
3106 PM2 SPRING CITY 7.0 MILES NW	GROSS BETA	+0.0203	+0.0022	01/06/98	800183
		+0.0144	+0.0017	01/13/98	800291
		+0.0142	+0.0017	01/20/98	800411
		+0.0209	+0.0023	01/27/98	800604
		+0.0194	+0.0022	02/03/98	800748
		+0.0163	+0.0019	02/10/98	800865
		+0.0162	+0.0019	02/17/98	800988
		+0.0118	+0.0014	02/24/98	801179
		+0.0192	+0.0021	03/03/98	801280
		+0.0121	+0.0015	03/10/98	801417
		+0.0256	+0.0028	03/17/98	801545
		+0.0127	+0.0015	03/24/98	801714
		+0.0201	+0.0022	03/31/98	801847
		+0.0132	+0.0016	04/07/98	801973
		+0.0186	+0.0021	04/14/98	802091
		+0.0105	+0.0013	04/21/98	802260
		+0.0174	+0.0019	04/28/98	802470
		+0.0137	+0.0016	05/05/98	802631
		+0.0128	+0.0015	05/12/98	802744
		+0.0239	+0.0026	05/19/98	802926
		+0.0251	+0.0027	05/26/98	803023
		+0.0164	+0.0019	06/02/98	803160
		+0.0116	+0.0014	06/09/98	803309
		+0.0161	+0.0018	06/16/98	803464
		+0.0157	+0.0018	06/23/98	803614
		+0.0214	+0.0023	06/30/98	803769
		+0.0184	+0.0020	07/07/98	803928
		+0.0220	+0.0024	07/14/98	804082
		+0.0231	+0.0025	07/21/98	804199
		+0.0151	+0.0017	07/28/98	804355
		+0.0181	+0.0020	08/04/98	804488
		+0.0200	+0.0022	08/11/98	804649
		+0.0224	+0.0024	08/18/98	804755
+0.0341	+0.0036	08/25/98	804909		
+0.0329	+0.0035	09/01/98	805036		
+0.0409	+0.0043	09/08/98	805200		
+0.0289	+0.0031	09/15/98	805308		
+0.0291	+0.0031	09/22/98	805452		

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO			
3106 PM2 SPRING CITY 7.0 MILES NW	GROSS BETA	+0.0252	+0.0027	09/29/98	805597			
		+0.0223	+0.0024	10/06/98	805778			
		+0.0198	+0.0022	10/13/98	805900			
		+0.0357	+0.0037	10/20/98	806031			
		+0.0281	+0.0030	10/27/98	806231			
		+0.0328	+0.0035	11/03/98	806390			
		+0.0225	+0.0025	11/10/98	806490			
		+0.0290	+0.0031	11/17/98	806616			
		+0.0340	+0.0036	11/23/98	806752			
		+0.0272	+0.0029	12/01/98	806901			
		+0.0255	+0.0028	12/08/98	807021			
		+0.0216	+0.0024	12/15/98	807137			
		+0.0222	+0.0025	12/21/98	807304			
			GAMMA SCAN (GELI)	BE-7	+0.0561	+0.0073	01/20/98	800455
					+0.0620	+0.0065	02/17/98	801033
					+0.0888	+0.0066	03/17/98	801591
					+0.1248	+0.0104	04/14/98	802135
					+0.0868	+0.0104	05/12/98	802788
					+0.0996	+0.0093	06/09/98	803355
					+0.1100	+0.0100	07/07/98	803972
+0.1112	+0.0107				08/04/98	804532		
+0.1174	+0.0097				09/01/98	805082		
+0.1280	+0.0080				09/29/98	805642		
+0.1039	+0.0105				10/27/98	806286		
+0.0807	+0.0080				11/23/98	806796		
+0.0831	+0.0089				12/21/98	807350		
BI-214	+0.0091				+0.0015	01/20/98	800455	
	+0.0143				+0.0019	02/17/98	801033	
	+0.0180				+0.0020	04/14/98	802135	
	+0.0043				+0.0014	05/12/98	802788	
	+0.0012				+0.0008	06/09/98	803355	
	+0.0013				+0.0013	07/07/98	803972	
	+0.0142				+0.0022	08/04/98	804532	
	+0.0040	+0.0019	09/01/98	805082				
+0.0076	+0.0039	09/29/98	805642					
+0.0113	+0.0016	10/27/98	806286					

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
3106 PM2 SPRING CITY 7.0 MILES NW	GAMMA SCAN (GELI)			
		BI-214	+0.0076	+0.0014 11/23/98 806796
			+0.0110	+0.0017 12/21/98 807350
	K-40		+0.0058	+0.0066 03/17/98 801591
			+0.0051	+0.0050 09/29/98 805642
			+0.0147	+0.0056 10/27/98 806286
	PB-214		+0.0156	+0.0078 12/21/98 807350
			+0.0062	+0.0015 01/20/98 800455
			+0.0136	+0.0018 02/17/98 801033
			+0.0163	+0.0013 04/14/98 802135
			+0.0029	+0.0009 06/09/98 803355
			+0.0144	+0.0015 08/04/98 804532
			+0.0038	+0.0014 09/01/98 805082
			+0.0039	+0.0012 09/29/98 805642
			+0.0110	+0.0013 10/27/98 806286
3107 PM3 10.4 MILES NNE	GROSS BETA		+0.0093	+0.0021 11/23/98 806796
			+0.0055	+0.0011 12/21/98 807350
			+0.0159	+0.0018 12/29/97 800089
	+0.0162	+0.0020 01/13/98 800293		
	+0.0142	+0.0017 01/20/98 800413		
	+0.0182	+0.0020 01/27/98 800607		
	+0.0174	+0.0019 02/03/98 800750		
	+0.0180	+0.0020 02/10/98 800867		
	+0.0156	+0.0018 02/17/98 800990		
	+0.0099	+0.0012 02/24/98 801182		
	+0.0170	+0.0019 03/03/98 801282		
	+0.0140	+0.0016 03/10/98 801419		
	+0.0240	+0.0026 03/17/98 801547		
	+0.0108	+0.0013 03/24/98 801717		
	+0.0207	+0.0023 03/31/98 801849		
	+0.0137	+0.0016 04/07/98 801975		
	+0.0169	+0.0019 04/14/98 802093		
	+0.0120	+0.0014 04/21/98 802263		
	+0.0177	+0.0020 04/28/98 802472		
	+0.0135	+0.0016 05/05/98 802633		
	+0.0122	+0.0014 05/12/98 802746		
	+0.0232	+0.0025 05/19/98 802929		

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO		
			TERM	COLLECTED			
3107 PM3	10.4 MILES NNE	GROSS BETA					
			+0.0274	+0.0029	05/26/98	803025	
			+0.0174	+0.0019	06/02/98	803162	
			+0.0118	+0.0014	06/09/98	803311	
			+0.0172	+0.0019	06/16/98	803467	
			+0.0151	+0.0017	06/23/98	803616	
			+0.0193	+0.0021	06/30/98	803772	
			+0.0199	+0.0022	07/07/98	803930	
			+0.0226	+0.0024	07/14/98	804085	
			+0.0164	+0.0018	07/28/98	804357	
			+0.0180	+0.0020	08/04/98	804490	
			+0.0199	+0.0022	08/11/98	804652	
			+0.0253	+0.0027	08/18/98	804757	
			+0.0327	+0.0034	08/25/98	804911	
			+0.0330	+0.0035	09/01/98	805038	
			+0.0421	+0.0044	09/08/98	805203	
			+0.0283	+0.0030	09/15/98	805310	
			+0.0281	+0.0030	09/22/98	805454	
			+0.0218	+0.0024	09/29/98	805599	
			+0.0224	+0.0024	10/06/98	805781	
			+0.0209	+0.0023	10/13/98	805902	
			+0.0329	+0.0035	10/20/98	806033	
			+0.0247	+0.0027	10/27/98	806233	
			+0.0303	+0.0032	11/03/98	806393	
			+0.0204	+0.0022	11/10/98	806492	
			+0.0264	+0.0028	11/17/98	806618	
			+0.0329	+0.0035	11/23/98	806754	
			+0.0246	+0.0026	12/01/98	806904	
			+0.0187	+0.0021	12/08/98	807023	
			+0.0216	+0.0024	12/15/98	807139	
				+0.0208	+0.0023	12/21/98	807306
				GAMMA SCAN (GEL1)			
				BE-7			
	+0.0518	+0.0071	01/20/98	800456			
	+0.0761	+0.0093	02/17/98	801034			
	+0.0988	+0.0080	03/17/98	801592			
	+0.1300	+0.0113	04/14/98	802136			
	+0.0959	+0.0080	05/12/98	802789			
	+0.1217	+0.0111	06/09/98	803356			

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 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3107 PM3 10.4 MILES NNE	GAMMA SCAN (GELI) BE-7	+0.1081	+0.0091	07/07/98	803973	
		+0.1122	+0.0092	08/04/98	804533	
		+0.1396	+0.0120	09/01/98	805083	
		+0.1467	+0.0123	09/29/98	805643	
		+0.1139	+0.0093	10/27/98	806287	
		+0.0847	+0.0070	11/23/98	806797	
		+0.0969	+0.0068	12/21/98	807351	
		BI-214	+0.0111	+0.0020	01/20/98	800456
			+0.0190	+0.0021	02/17/98	801034
			+0.0036	+0.0012	03/17/98	801592
			+0.0169	+0.0021	04/14/98	802136
			+0.0063	+0.0011	05/12/98	802789
			+0.0065	+0.0013	06/09/98	803356
			+0.0028	+0.0012	07/07/98	803973
			+0.0125	+0.0016	08/04/98	804533
	+0.0049		+0.0016	09/01/98	805083	
	+0.0057		+0.0011	09/29/98	805643	
	K-40	+0.0174	+0.0020	10/27/98	806287	
		+0.0037	+0.0009	11/23/98	806797	
		+0.0191	+0.0020	12/21/98	807351	
		+0.0102	+0.0055	04/14/98	802136	
		+0.0123	+0.0069	08/04/98	804533	
		+0.0093	+0.0052	09/01/98	805083	
		+0.0041	+0.0056	11/23/98	806797	
		+0.0050	+0.0066	12/21/98	807351	
	PB-214	+0.0113	+0.0021	01/20/98	800456	
		+0.0170	+0.0019	02/17/98	801034	
		+0.0179	+0.0013	04/14/98	802136	
		+0.0067	+0.0015	05/12/98	802789	
		+0.0064	+0.0010	06/09/98	803356	
		+0.0148	+0.0015	08/04/98	804533	
		+0.0054	+0.0011	09/01/98	805083	
		+0.0042	+0.0011	09/29/98	805643	
+0.0154		+0.0018	10/27/98	806287		
+0.0052		+0.0010	11/23/98	806797		
+0.0199	+0.0020	12/21/98	807351			
3108 PM4 7.6 MILES NE/ENE	GROSS BETA	+0.0163	+0.0018	12/29/97	800092	

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 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
3108 PM4	7.6 MILES NE/ENE	GROSS BETA			
		+0.0164	+0.0019	01/14/98	800295
		+0.0153	+0.0017	01/20/98	800415
		+0.0183	+0.0020	01/28/98	800610
		+0.0180	+0.0020	02/03/98	800752
		+0.0146	+0.0017	02/10/98	800869
		+0.0148	+0.0017	02/17/98	800992
		+0.0125	+0.0014	02/25/98	801185
		+0.0162	+0.0018	03/03/98	801284
		+0.0139	+0.0016	03/11/98	801421
		+0.0233	+0.0025	03/17/98	801549
		+0.0129	+0.0015	03/25/98	801720
		+0.0188	+0.0021	03/31/98	801851
		+0.0150	+0.0017	04/08/98	801977
		+0.0177	+0.0020	04/14/98	802095
		+0.0111	+0.0013	04/22/98	802266
		+0.0181	+0.0020	04/28/98	802474
		+0.0130	+0.0015	05/06/98	802635
		+0.0136	+0.0016	05/12/98	802748
		+0.0273	+0.0029	05/20/98	802932
		+0.0238	+0.0026	05/26/98	803027
		+0.0174	+0.0019	06/03/98	803164
		+0.0102	+0.0013	06/09/98	803313
		+0.0174	+0.0019	06/17/98	803470
		+0.0157	+0.0018	06/23/98	803618
		+0.0215	+0.0023	07/01/98	803776
		+0.0213	+0.0023	07/07/98	803932
		+0.0235	+0.0025	07/15/98	804088
		+0.0273	+0.0029	07/22/98	804203
		+0.0170	+0.0019	07/29/98	804359
		+0.0187	+0.0021	08/05/98	804492
		+0.0216	+0.0024	08/12/98	804655
		+0.0257	+0.0028	08/19/98	804759
		+0.0307	+0.0033	08/26/98	804913
		+0.0358	+0.0038	09/02/98	805040
		+0.0412	+0.0043	09/09/98	805206
		+0.0310	+0.0033	09/16/98	805312
		+0.0262	+0.0028	09/22/98	805456
		+0.0228	+0.0025	09/30/98	805601

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO		
			TERM	COLLECTED			
3108 PM4  7.6 MILES NE/ENE	GROSS BETA	+0.0270	+0.0029	10/07/98	805784		
		+0.0228	+0.0025	10/14/98	805904		
		+0.0349	+0.0037	10/21/98	806035		
		+0.0314	+0.0033	10/28/98	806235		
		+0.0317	+0.0034	11/04/98	806396		
		+0.0217	+0.0024	11/11/98	806494		
		+0.0289	+0.0031	11/18/98	806620		
		+0.0311	+0.0033	11/24/98	806756		
		+0.0287	+0.0030	12/02/98	806907		
		+0.0181	+0.0020	12/09/98	807025		
		+0.0226	+0.0025	12/16/98	807141		
		+0.0200	+0.0022	12/22/98	807308		
		GAMMA SCAN (GELI)	AC-228 BE-7	+0.0000	+0.0012	06/09/98	803357
				+0.0545	+0.0066	01/20/98	800457
	+0.0596			+0.0058	02/17/98	801035	
	+0.0909			+0.0092	03/17/98	801593	
	+0.1223			+0.0091	04/14/98	802137	
	+0.1078			+0.0079	05/12/98	802790	
	+0.1147			+0.0083	06/09/98	803357	
	BI-214		+0.1089	+0.0090	07/07/98	803974	
			+0.1112	+0.0092	08/05/98	804534	
			+0.1466	+0.0110	09/02/98	805084	
			+0.1376	+0.0101	09/30/98	805644	
			+0.1071	+0.0097	10/28/98	806288	
			+0.0879	+0.0091	11/24/98	806798	
			+0.0884	+0.0076	12/22/98	807352	
	+0.0043	+0.0014	01/20/98	800457			
	+0.0319	+0.0027	02/17/98	801035			
+0.0043	+0.0011	03/17/98	801593				
+0.0073	+0.0014	04/14/98	802137				
+0.0063	+0.0011	05/12/98	802790				
+0.0032	+0.0010	06/09/98	803357				
+0.0013	+0.0010	07/07/98	803974				
+0.0101	+0.0015	08/05/98	804534				
+0.0041	+0.0010	09/02/98	805084				
+0.0053	+0.0011	09/30/98	805644				

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
3108 PM4 7.6 MILES NE/ENE	GAMMA SCAN (GELI) B1-214	+0.0073	+0.0014	10/28/98	806288
		+0.0105	+0.0015	11/24/98	806798
	K-40	+0.0406	+0.0040	12/22/98	807352
		+0.0080	+0.0045	02/17/98	801035
	PB-214	+0.0102	+0.0071	07/07/98	803974
		+0.0076	+0.0065	10/28/98	806288
		+0.0042	+0.0013	01/20/98	800457
		+0.0289	+0.0021	02/17/98	801035
		+0.0036	+0.0009	03/17/98	801593
		+0.0073	+0.0012	04/14/98	802137
		+0.0042	+0.0010	05/12/98	802790
		+0.0026	+0.0009	06/09/98	803357
		+0.0023	+0.0010	07/07/98	803974
		+0.0109	+0.0011	08/05/98	804534
	+0.0040	+0.0009	09/02/98	805084	
	+0.0048	+0.0009	09/30/98	805644	
	+0.0083	+0.0011	10/28/98	806288	
	+0.0118	+0.0022	11/24/98	806798	
	+0.0372	+0.0039	12/22/98	807352	
	3109 PM5 DECATUR 6.2 MILES S	GROSS BETA	+0.0172	+0.0019	12/29/97
+0.0173			+0.0019	01/07/98	800189
+0.0127			+0.0015	01/14/98	800297
+0.0157			+0.0018	01/21/98	800417
+0.0193			+0.0021	01/28/98	800613
+0.0152			+0.0017	02/04/98	800754
+0.0166			+0.0019	02/11/98	800871
+0.0139			+0.0016	02/18/98	800994
+0.0144			+0.0017	02/25/98	801188
+0.0147			+0.0017	03/04/98	801286
+0.0145			+0.0017	03/11/98	801423
+0.0232			+0.0025	03/18/98	801551
+0.0103			+0.0012	03/25/98	801723
+0.0183			+0.0020	04/01/98	801853
+0.0151			+0.0017	04/08/98	801979
+0.0169			+0.0019	04/15/98	802097
+0.0116	+0.0014	04/22/98	802269		

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR	DATE	LAB NO
			TERM	COLLECTED	
3109 PM5 DECATUR 6.2 MILES S	GROSS BETA	+0.0195	+0.0021	04/29/98	802476
		+0.0125	+0.0015	05/06/98	802637
		+0.0133	+0.0015	05/13/98	802750
		+0.0257	+0.0028	05/20/98	802935
		+0.0233	+0.0025	05/27/98	803029
		+0.0195	+0.0021	06/03/98	803166
		+0.0094	+0.0012	06/10/98	803315
		+0.0162	+0.0018	06/17/98	803473
		+0.0158	+0.0018	06/24/98	803620
		+0.0209	+0.0023	07/01/98	803779
		+0.0220	+0.0024	07/08/98	803934
		+0.0244	+0.0026	07/15/98	804091
		+0.0240	+0.0026	07/22/98	804205
		+0.0155	+0.0018	07/29/98	804361
		+0.0186	+0.0021	08/05/98	804494
		+0.0198	+0.0022	08/12/98	804658
		+0.0213	+0.0023	08/19/98	804761
		+0.0319	+0.0034	08/26/98	804915
		+0.0302	+0.0032	09/02/98	805042
		+0.0400	+0.0042	09/09/98	805209
		+0.0306	+0.0032	09/16/98	805314
		+0.0304	+0.0032	09/22/98	805458
		+0.0226	+0.0024	09/30/98	805603
		+0.0231	+0.0025	10/07/98	805787
		+0.0221	+0.0024	10/14/98	805906
		+0.0334	+0.0035	10/21/98	806037
		+0.0299	+0.0032	10/28/98	806237
		+0.0303	+0.0032	11/04/98	806399
		+0.0214	+0.0023	11/11/98	806496
		+0.0325	+0.0034	11/18/98	806622
		+0.0300	+0.0032	11/24/98	806758
		+0.0275	+0.0030	12/02/98	806910
		+0.0154	+0.0018	12/09/98	807027
+0.0265	+0.0029	12/16/98	807143		
+0.0209	+0.0024	12/22/98	807310		
	GAMMA SCAN (GELI)				
	AC-228	+0.0012	+0.0010	08/05/98	804535

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
3109 PM5 DECATUR 6.2 MILES S	GAMMA SCAN (GELI) BE-7	+0.0567	+0.0058	01/21/98	800458	
		+0.0553	+0.0062	02/18/98	801036	
		+0.0801	+0.0100	03/18/98	801594	
		+0.1305	+0.0087	04/15/98	802138	
		+0.0909	+0.0079	05/13/98	802791	
		+0.1086	+0.0090	06/10/98	803358	
		+0.1080	+0.0114	07/08/98	803975	
		+0.1175	+0.0097	08/05/98	804535	
		+0.1356	+0.0118	09/02/98	805085	
		+0.1171	+0.0097	09/30/98	805645	
		+0.1033	+0.0079	10/28/98	806289	
		+0.0836	+0.0078	11/24/98	806799	
		+0.1106	+0.0089	12/22/98	807353	
		BI-214	+0.0044	+0.0015	01/21/98	800458
			+0.0184	+0.0020	02/18/98	801036
	+0.0018		+0.0011	03/18/98	801594	
	+0.0186		+0.0016	04/15/98	802138	
	+0.0009		+0.0010	05/13/98	802791	
	+0.0048		+0.0010	08/05/98	804535	
	+0.0014		+0.0009	09/02/98	805085	
	+0.0057		+0.0012	09/30/98	805645	
	+0.0032		+0.0012	10/28/98	806289	
	+0.0077		+0.0012	11/24/98	806799	
	+0.0416		+0.0032	12/22/98	807353	
	K-40		+0.0050	+0.0051	08/05/98	804535
			+0.0112	+0.0060	09/02/98	805085
			+0.0077	+0.0069	10/28/98	806289
	PB-212 PB-214		+0.0003	+0.0006	04/15/98	802138
		+0.0046	+0.0013	01/21/98	800458	
		+0.0206	+0.0016	02/18/98	801036	
		+0.0011	+0.0006	03/18/98	801594	
		+0.0131	+0.0012	04/15/98	802138	
		+0.0015	+0.0007	05/13/98	802791	
		+0.0036	+0.0014	07/08/98	803975	
		+0.0057	+0.0013	08/05/98	804535	
		+0.0010	+0.0007	09/02/98	805085	
		+0.0039	+0.0009	09/30/98	805645	
		+0.0014	+0.0007	10/28/98	806289	

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
3109 PM5 DECATUR 6.2 MILES S	GAMMA SCAN (GELI) PB-214	+0.0075	+0.0016	11/24/98	806799
		+0.0416	+0.0030	12/22/98	807353
3203 LM3 1.9 MILES NNE	GROSS BETA	+0.0159	+0.0018	12/29/97	800098
		+0.0168	+0.0019	01/06/98	800202
		+0.0135	+0.0016	01/13/98	800299
		+0.0143	+0.0016	01/20/98	800423
		+0.0174	+0.0019	01/27/98	800616
		+0.0168	+0.0019	02/03/98	800767
		+0.0177	+0.0021	02/10/98	800873
		+0.0146	+0.0017	02/17/98	801000
		+0.0121	+0.0014	02/24/98	801191
		+0.0168	+0.0019	03/03/98	801301
		+0.0132	+0.0015	03/10/98	801425
		+0.0225	+0.0024	03/17/98	801557
		+0.0094	+0.0012	03/24/98	801726
		+0.0218	+0.0024	03/31/98	801866
		+0.0151	+0.0017	04/07/98	801981
		+0.0165	+0.0019	04/14/98	802103
		+0.0118	+0.0014	04/21/98	802272
		+0.0165	+0.0019	04/28/98	802498
		+0.0124	+0.0014	05/05/98	802639
		+0.0143	+0.0016	05/12/98	802756
		+0.0244	+0.0026	05/19/98	802938
		+0.0246	+0.0026	05/26/98	803043
		+0.0167	+0.0019	06/02/98	803168
+0.0115	+0.0014	06/09/98	803321		
+0.0147	+0.0017	06/16/98	803476		
+0.0138	+0.0016	06/23/98	803633		
+0.0187	+0.0021	06/30/98	803782		
+0.0182	+0.0020	07/07/98	803940		
+0.0223	+0.0024	07/14/98	804094		
+0.0231	+0.0025	07/21/98	804218		
+0.0171	+0.0019	07/28/98	804363		
+0.0171	+0.0019	08/04/98	804500		
+0.0173	+0.0019	08/11/98	804661		
+0.0216	+0.0023	08/18/98	804775		

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 PC1/M3 - 0.037 Bq/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		
			TERM	COLLECTED LAB NO	
3203 LM3  1.9 MILES NNE	GROSS BETA	+0.0286	+0.0030	08/25/98 804917	
		+0.0311	+0.0033	09/01/98 805048	
		+0.0383	+0.0040	09/08/98 805212	
		+0.0266	+0.0028	09/15/98 805327	
		+0.0293	+0.0031	09/22/98 805460	
		+0.0232	+0.0025	09/29/98 805609	
		+0.0194	+0.0022	10/06/98 805790	
		+0.0164	+0.0021	10/13/98 805919	
		+0.0281	+0.0032	10/20/98 806039	
		+0.0246	+0.0027	10/27/98 806252	
		+0.0213	+0.0025	11/10/98 806509	
		+0.0287	+0.0031	11/17/98 806624	
		+0.0271	+0.0029	11/23/98 806764	
		+0.0249	+0.0027	12/01/98 806913	
		+0.0171	+0.0019	12/08/98 807042	
	+0.0214	+0.0023	12/15/98 807145		
	+0.0228	+0.0025	12/21/98 807316		
	GAMMA SCAN (GELI)	BE-7	+0.0587	+0.0054	01/20/98 800459
			+0.0665	+0.0056	02/17/98 801037
			+0.0722	+0.0071	03/17/98 801595
			+0.1126	+0.0079	04/14/98 802139
			+0.0813	+0.0078	05/12/98 802792
			+0.1033	+0.0129	06/09/98 803359
			+0.0942	+0.0082	07/07/98 803976
			+0.1137	+0.0113	08/04/98 804536
			+0.1136	+0.0093	09/01/98 805086
			+0.1393	+0.0125	09/29/98 805646
+0.1165			+0.0118	10/27/98 806290	
+0.0716			+0.0083	11/23/98 806800	
81-214	+0.0975	+0.0093	12/21/98 807354		
	+0.0063	+0.0011	01/20/98 800459		
	+0.0208	+0.0021	02/17/98 801037		
	+0.0023	+0.0009	03/17/98 801595		
	+0.0127	+0.0023	04/14/98 802139		
	+0.0015	+0.0010	05/12/98 802792		
	+0.0032	+0.0010	06/09/98 803359		

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE			
			TERM	COLLECTED LAB NO		
3203 LM3 1.9 MILES NNE	GAMMA SCAN (GELI) BI-214	+0.0016	+0.0009	07/07/98	803976	
		+0.0048	+0.0010	08/04/98	804536	
		+0.0029	+0.0009	09/01/98	805086	
		+0.0092	+0.0017	09/29/98	805646	
		+0.0065	+0.0018	10/27/98	806290	
		+0.0117	+0.0016	11/23/98	806800	
		+0.0412	+0.0034	12/21/98	807354	
		K-40	+0.0052	+0.0059	04/14/98	802139
			+0.0039	+0.0065	08/04/98	804536
			+0.0054	+0.0047	09/29/98	805646
	+0.0258		+0.0096	10/27/98	806290	
	+0.0037		+0.0117	11/23/98	806800	
	PB-212	+0.0002	+0.0005	08/04/98	804536	
		+0.0006	+0.0006	09/01/98	805086	
		+0.0004	+0.0007	11/23/98	806800	
	PB-214	+0.0051	+0.0009	01/20/98	800459	
		+0.0205	+0.0020	02/17/98	801037	
		+0.0085	+0.0014	04/14/98	802139	
		+0.0019	+0.0006	07/07/98	803976	
		+0.0043	+0.0011	08/04/98	804536	
		+0.0033	+0.0009	09/01/98	805086	
		+0.0087	+0.0011	09/29/98	805646	
		+0.0082	+0.0014	10/27/98	806290	
		+0.0126	+0.0022	11/23/98	806800	
		+0.0408	+0.0031	12/21/98	807354	
	3204 LM-4 WB 0.9 MILES SE	GROSS BETA	+0.0139	+0.0016	12/29/97	800101
			+0.0159	+0.0018	01/06/98	800204
+0.0145			+0.0016	01/14/98	800301	
+0.0160			+0.0018	01/20/98	800425	
+0.0194			+0.0021	01/28/98	800619	
+0.0169			+0.0019	02/03/98	800769	
+0.0182			+0.0020	02/10/98	800875	
+0.0169			+0.0019	02/17/98	801002	
+0.0135			+0.0016	02/25/98	801194	
+0.0173			+0.0020	03/03/98	801303	
+0.0138			+0.0016	03/11/98	801427	

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WATTS BAR NUCLEAR PLANT  
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 PC1/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
3204 LM-4 WB	0.9 MILES SE	GROSS BETA			
		+0.0247	+0.0027	03/17/98	801559
		+0.0125	+0.0015	03/25/98	801729
		+0.0213	+0.0023	03/31/98	801868
		+0.0142	+0.0016	04/08/98	801983
		+0.0174	+0.0020	04/14/98	802105
		+0.0097	+0.0012	04/22/98	802275
		+0.0180	+0.0020	04/28/98	802500
		+0.0128	+0.0015	05/05/98	802641
		+0.0145	+0.0017	05/12/98	802758
		+0.0265	+0.0028	05/20/98	802941
		+0.0266	+0.0029	05/26/98	803045
		+0.0189	+0.0021	06/03/98	803170
		+0.0106	+0.0013	06/09/98	803323
		+0.0195	+0.0023	06/17/98	803479
		+0.0143	+0.0017	06/23/98	803635
		+0.0203	+0.0022	07/01/98	803785
		+0.0182	+0.0020	07/07/98	803942
		+0.0251	+0.0027	07/15/98	804097
		+0.0260	+0.0028	07/21/98	804220
		+0.0140	+0.0016	07/29/98	804365
		+0.0201	+0.0022	08/04/98	804502
		+0.0215	+0.0023	08/12/98	804664
		+0.0227	+0.0025	08/18/98	804777
		+0.0323	+0.0034	08/26/98	804919
		+0.0341	+0.0036	09/01/98	805050
		+0.0398	+0.0041	09/09/98	805215
		+0.0310	+0.0033	09/15/98	805329
		+0.0276	+0.0029	09/22/98	805462
		+0.0260	+0.0028	09/29/98	805611
		+0.0239	+0.0026	10/07/98	805793
		+0.0200	+0.0022	10/13/98	805921
		+0.0325	+0.0034	10/21/98	806041
		+0.0282	+0.0030	10/27/98	806254
		+0.0308	+0.0032	11/04/98	806405
		+0.0206	+0.0023	11/10/98	806511
		+0.0314	+0.0033	11/18/98	806626
		+0.0311	+0.0033	11/23/98	806766
		+0.0268	+0.0028	12/02/98	806916

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WATTS BAR NUCLEAR PLANT  
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 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
3204 LM-4 WB	GROSS BETA	+0.0180	+0.0020	12/08/98 807044
		+0.0197	+0.0022	12/16/98 807147
		+0.0216	+0.0024	12/21/98 807318
0.9 MILES SE	GAMMA SCAN (GELI)	BE-7	+0.0526	+0.0077 01/20/98 800460
			+0.0576	+0.0075 02/17/98 801038
			+0.0860	+0.0096 03/17/98 801596
			+0.1192	+0.0102 04/14/98 802140
			+0.0879	+0.0068 05/12/98 802793
			+0.1253	+0.0094 06/09/98 803360
			+0.1068	+0.0105 07/07/98 803977
			+0.1174	+0.0102 08/04/98 804537
			+0.1382	+0.0164 09/01/98 805087
			+0.1246	+0.0098 09/29/98 805647
			+0.1035	+0.0087 10/27/98 806291
			+0.0827	+0.0093 11/23/98 806801
			+0.0942	+0.0089 12/21/98 807355
			+0.0107	+0.0014 01/20/98 800460
			+0.0144	+0.0016 02/17/98 801038
			+0.0073	+0.0009 04/14/98 802140
			+0.0035	+0.0011 05/12/98 802793
			+0.0060	+0.0016 06/09/98 803360
			+0.0047	+0.0012 07/07/98 803977
			+0.0039	+0.0010 08/04/98 804537
			+0.0031	+0.0009 09/01/98 805087
			+0.0053	+0.0008 09/29/98 805647
			+0.0017	+0.0006 10/27/98 806291
			+0.0061	+0.0015 11/23/98 806801
			+0.0188	+0.0018 12/21/98 807355
			+0.0043	+0.0062 02/17/98 801038
			+0.0062	+0.0054 09/01/98 805087
			+0.0048	+0.0050 09/29/98 805647
			+0.0080	+0.0046 10/27/98 806291
			+0.0114	+0.0015 01/20/98 800460
			+0.0154	+0.0014 02/17/98 801038
			+0.0059	+0.0012 04/14/98 802140
			+0.0027	+0.0006 05/12/98 802793

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 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO				
			TERM	COLLECTED					
3204 LM-4 WB	0.9 MILES SE	GAMMA SCAN (GELI) PB-214	+0.0042	+0.0013	06/09/98	803360			
			+0.0052	+0.0012	07/07/98	803977			
			+0.0049	+0.0010	08/04/98	804537			
			+0.0023	+0.0011	09/01/98	805087			
			+0.0041	+0.0009	09/29/98	805647			
			+0.0041	+0.0010	10/27/98	806291			
			+0.0061	+0.0013	11/23/98	806801			
			+0.0189	+0.0016	12/21/98	807355			
			3205 RM-3 WB	15 MILES NNW	GROSS BETA	+0.0124	+0.0015	12/29/97	800104
						+0.0137	+0.0016	01/06/98	800206
+0.0137	+0.0016	01/13/98				800303			
+0.0126	+0.0015	01/20/98				800427			
+0.0182	+0.0020	01/27/98				800622			
+0.0175	+0.0020	02/03/98				800771			
+0.0161	+0.0019	02/10/98				800877			
+0.0159	+0.0018	02/17/98				801004			
+0.0104	+0.0013	02/24/98				801197			
+0.0186	+0.0021	03/03/98				801305			
+0.0141	+0.0016	03/10/98				801429			
+0.0219	+0.0024	03/17/98				801561			
+0.0097	+0.0012	03/24/98				801732			
+0.0191	+0.0021	03/31/98				801870			
+0.0126	+0.0015	04/07/98				801985			
+0.0158	+0.0018	04/14/98				802107			
+0.0121	+0.0014	04/21/98				802278			
+0.0184	+0.0020	04/28/98				802502			
+0.0128	+0.0015	05/05/98				802643			
+0.0153	+0.0017	05/12/98				802760			
+0.0236	+0.0026	05/19/98				802944			
+0.0244	+0.0026	05/26/98				803047			
+0.0153	+0.0017	06/02/98				803172			
+0.0129	+0.0015	06/09/98				803325			
+0.0141	+0.0016	06/16/98				803482			
+0.0141	+0.0016	06/23/98				803637			
+0.0201	+0.0022	06/30/98				803788			
+0.0181	+0.0020	07/07/98				803944			

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO		
3205 RM-3 WB  15 MILES NNW	GROSS BETA	+0.0234	+0.0025	07/14/98	804100		
		+0.0221	+0.0024	07/21/98	804222		
		+0.0159	+0.0018	07/28/98	804367		
		+0.0168	+0.0019	08/04/98	804504		
		+0.0190	+0.0021	08/11/98	804667		
		+0.0259	+0.0028	08/18/98	804779		
		+0.0334	+0.0035	08/25/98	804921		
		+0.0292	+0.0031	09/01/98	805052		
		+0.0421	+0.0044	09/08/98	805218		
		+0.0251	+0.0027	09/15/98	805331		
		+0.0275	+0.0029	09/22/98	805464		
		+0.0232	+0.0025	09/29/98	805613		
		+0.0205	+0.0023	10/06/98	805796		
		+0.0177	+0.0020	10/13/98	805923		
		+0.0308	+0.0033	10/20/98	806043		
		+0.0243	+0.0026	10/27/98	806256		
		+0.0255	+0.0027	11/03/98	806408		
		+0.0180	+0.0020	11/10/98	806513		
		+0.0305	+0.0032	11/17/98	806628		
		+0.0288	+0.0031	11/23/98	806768		
		+0.0243	+0.0026	12/01/98	806919		
		+0.0143	+0.0016	12/08/98	807046		
		+0.0207	+0.0023	12/15/98	807149		
		+0.0208	+0.0023	12/21/98	807320		
			GAMMA SCAN (GELI)				
			AC-228	+0.0022	+0.0012	09/01/98	805088
			BE-7	+0.0601	+0.0063	01/20/98	800461
				+0.0594	+0.0070	02/17/98	801039
				+0.0763	+0.0074	03/17/98	801597
				+0.1196	+0.0095	04/14/98	802141
				+0.0931	+0.0072	05/12/98	802794
				+0.1073	+0.0083	06/09/98	803361
				+0.1004	+0.0079	07/07/98	803978
		+0.1176	+0.0123	08/04/98	804538		
		+0.1406	+0.0118	09/01/98	805088		
		+0.1350	+0.0094	09/29/98	805648		
		+0.1043	+0.0116	10/27/98	806292		

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 RADIOACTIVITY IN AIR FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
3205 RM-3 WB	15 MILES NNW	GAMMA SCAN (GELI)			
		BE-7	+0.0895	+0.0072 11/23/98	806802
			+0.1016	+0.0074 12/21/98	807356
		BI-214	+0.0165	+0.0018 01/20/98	800461
			+0.0079	+0.0015 02/17/98	801039
			+0.0030	+0.0010 04/14/98	802141
			+0.0061	+0.0012 05/12/98	802794
			+0.0037	+0.0010 06/09/98	803361
			+0.0084	+0.0013 08/04/98	804538
			+0.0021	+0.0008 09/01/98	805088
			+0.0023	+0.0008 09/29/98	805648
			+0.0028	+0.0012 10/27/98	806292
			+0.0036	+0.0010 11/23/98	806802
			+0.0157	+0.0017 12/21/98	807356
		K-40	+0.0015	+0.0073 05/12/98	802794
			+0.0080	+0.0049 08/04/98	804538
			+0.0072	+0.0074 09/01/98	805088
			+0.0043	+0.0063 09/29/98	805648
			+0.0062	+0.0080 11/23/98	806802
			+0.0070	+0.0065 12/21/98	807356
		PB-212	+0.0007	+0.0004 09/01/98	805088
		PB-214	+0.0162	+0.0016 01/20/98	800461
			+0.0050	+0.0015 02/17/98	801039
			+0.0021	+0.0010 04/14/98	802141
			+0.0046	+0.0013 05/12/98	802794
			+0.0051	+0.0014 06/09/98	803361
			+0.0026	+0.0009 07/07/98	803978
			+0.0068	+0.0013 08/04/98	804538
			+0.0022	+0.0009 09/01/98	805088
			+0.0022	+0.0012 09/29/98	805648
			+0.0027	+0.0010 10/27/98	806292
			+0.0043	+0.0012 11/23/98	806802
			+0.0127	+0.0015 12/21/98	807356

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PC1/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
2116 RM-2 DAYTON TN	15.0 MILES SW	GAMMA SCAN (GELI)			
		NO ACTIVITY DETECTED		02/17/98	800949
		NO ACTIVITY DETECTED		04/28/98	802418
		NO ACTIVITY DETECTED		05/12/98	802706
		NO ACTIVITY DETECTED		06/02/98	803140
		NO ACTIVITY DETECTED		06/16/98	803435
		NO ACTIVITY DETECTED		07/07/98	803889
		NO ACTIVITY DETECTED		07/14/98	804053
		NO ACTIVITY DETECTED		07/21/98	804171
		NO ACTIVITY DETECTED		08/18/98	804727
		NO ACTIVITY DETECTED		09/22/98	805432
	BI-214	+0.0342	+0.0106	12/29/97	800057
		+0.0336	+0.0083	01/06/98	800155
		+0.0546	+0.0121	01/13/98	800271
		+0.0929	+0.0188	01/20/98	800372
		+0.0179	+0.0086	02/03/98	800720
		+0.0465	+0.0094	02/10/98	800845
		+0.0617	+0.0106	02/24/98	801150
		+0.0386	+0.0111	03/03/98	801252
		+0.0377	+0.0089	03/10/98	801397
		+0.0557	+0.0118	03/17/98	801505
		+0.0146	+0.0073	03/31/98	801819
		+0.0212	+0.0080	04/21/98	802231
		+0.0111	+0.0069	05/05/98	802611
		+0.0157	+0.0059	05/19/98	802897
		+0.0889	+0.0107	05/26/98	802995
		+0.0196	+0.0073	06/30/98	803735
		+0.0157	+0.0072	08/04/98	804449
		+0.0242	+0.0081	09/01/98	804997
		+0.0118	+0.0058	09/15/98	805280
		+0.0285	+0.0117	10/13/98	805872
		+0.0259	+0.0094	10/27/98	806174
		+0.0262	+0.0088	11/03/98	806361
		+0.0654	+0.0121	11/10/98	806462
		+0.0349	+0.0094	11/17/98	806596
		+0.0224	+0.0109	11/23/98	806714
		+0.0528	+0.0084	12/01/98	806872
		+0.0636	+0.0135	12/15/98	807117
		+0.0343	+0.0106	12/21/98	807264

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
2116 RM-2 DAYTON TN 15.0 MILES SW	GAMMA SCAN (GELI) K-40	+0.2273	+0.0476	02/24/98	801150	
		+0.2073	+0.0433	03/10/98	801397	
		+0.2263	+0.0404	05/26/98	802995	
		+0.2482	+0.0519	06/23/98	803586	
		+0.2904	+0.0799	08/04/98	804449	
		+0.2056	+0.0479	08/25/98	804889	
		+0.2741	+0.0592	09/01/98	804997	
		+0.3030	+0.0476	09/15/98	805280	
		+0.1895	+0.0450	10/13/98	805872	
		+0.0836	+0.0373	10/27/98	806174	
		+0.2892	+0.0427	11/17/98	806596	
		+0.1326	+0.0431	11/23/98	806714	
		+0.1738	+0.0556	12/01/98	806872	
		+0.2489	+0.0619	12/08/98	806994	
		+0.4540	+0.0851	12/21/98	807264	
		PB-214	+0.0423	+0.0114	12/29/97	800057
			+0.0297	+0.0083	01/06/98	800155
	+0.0574		+0.0129	01/13/98	800271	
	+0.1024		+0.0106	01/20/98	800372	
	+0.0284		+0.0072	01/27/98	800575	
	+0.0357		+0.0095	02/03/98	800720	
	+0.0660		+0.0195	02/10/98	800845	
	+0.0846		+0.0097	02/24/98	801150	
	+0.0358		+0.0081	03/03/98	801252	
	+0.0308		+0.0088	03/10/98	801397	
	+0.0188		+0.0088	03/17/98	801505	
	+0.0161		+0.0097	03/24/98	801685	
	+0.0417		+0.0111	03/31/98	801819	
	+0.0306		+0.0102	04/07/98	801953	
	+0.0184		+0.0112	04/14/98	802053	
	+0.0201		+0.0076	04/21/98	802231	
	+0.0727		+0.0128	05/26/98	802995	
	+0.0268	+0.0072	06/09/98	803270		
	+0.0254	+0.0102	06/23/98	803586		
+0.0313	+0.0089	07/28/98	804335			
+0.0173	+0.0065	08/04/98	804449			
+0.0199	+0.0059	08/11/98	804620			
+0.0321	+0.0070	09/01/98	804997			

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE			
			TERM COLLECTED	LAB NO		
2116 RM-2 DAYTON TN 15.0 MILES SW	GAMMA SCAN (GELI) PB-214	+0.0364	+0.0059	09/08/98	805171	
		+0.0198	+0.0063	09/15/98	805280	
		+0.0478	+0.0135	09/29/98	805558	
		+0.0108	+0.0047	10/06/98	805749	
		+0.0357	+0.0109	10/13/98	805872	
		+0.0112	+0.0112	10/20/98	806011	
		+0.0228	+0.0084	10/27/98	806174	
		+0.0309	+0.0075	11/03/98	806361	
		+0.0494	+0.0130	11/10/98	806462	
		+0.0415	+0.0095	11/17/98	806596	
		+0.0259	+0.0079	11/23/98	806714	
		+0.0300	+0.0119	12/01/98	806872	
		+0.0275	+0.0051	12/08/98	806994	
		+0.0527	+0.0115	12/15/98	807117	
			+0.0458	+0.0067	12/21/98	807264
3101 LM1 0.5 MILES SSW	GAMMA SCAN (GELI)  BI-214	NO ACTIVITY DETECTED		04/07/98	801969	
		NO ACTIVITY DETECTED		04/14/98	802087	
		NO ACTIVITY DETECTED		05/05/98	802627	
		NO ACTIVITY DETECTED		05/12/98	802740	
		NO ACTIVITY DETECTED		06/02/98	803156	
		NO ACTIVITY DETECTED		06/09/98	803305	
		NO ACTIVITY DETECTED		06/23/98	803610	
		NO ACTIVITY DETECTED		06/30/98	803763	
		NO ACTIVITY DETECTED		07/07/98	803924	
		NO ACTIVITY DETECTED		07/14/98	804076	
		NO ACTIVITY DETECTED		07/21/98	804195	
		NO ACTIVITY DETECTED		08/18/98	804751	
		NO ACTIVITY DETECTED		09/01/98	805032	
		NO ACTIVITY DETECTED		09/29/98	805593	
		NO ACTIVITY DETECTED		10/27/98	806227	
			+0.0541	+0.0116	01/13/98	800287
			+0.0191	+0.0083	01/27/98	800598
			+0.0587	+0.0146	02/10/98	800861
			+0.0470	+0.0102	02/24/98	801173
			+0.0163	+0.0071	03/17/98	801541
	+0.0075	+0.0058	03/24/98	801708		

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 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
3101 LM1	0.5 MILES SSW	GAMMA SCAN (GELI)			
		BI-214	+0.0271	+0.0085 03/31/98	801843
			+0.0171	+0.0078 04/21/98	802254
			+0.0111	+0.0071 07/28/98	804351
			+0.0212	+0.0105 08/04/98	804484
			+0.0194	+0.0076 08/25/98	804905
			+0.0165	+0.0084 10/13/98	805896
			+0.0133	+0.0069 10/20/98	806027
			+0.0011	+0.0043 11/10/98	806486
			+0.0230	+0.0063 11/17/98	806612
			+0.0208	+0.0087 11/23/98	806748
			+0.0147	+0.0076 12/15/98	807133
			+0.0380	+0.0108 12/21/98	807300
	K-40		+0.2738	+0.0486 04/28/98	802466
			+0.3434	+0.0554 05/26/98	803019
			+0.1868	+0.0440 08/11/98	804643
			+0.2580	+0.0566 10/20/98	806027
			+0.2506	+0.0467 11/17/98	806612
	PB-214		+0.0243	+0.0075 12/29/97	800080
			+0.0137	+0.0047 01/06/98	800179
			+0.0570	+0.0098 01/13/98	800287
			+0.0275	+0.0078 01/20/98	800407
			+0.0206	+0.0069 01/27/98	800598
			+0.0134	+0.0069 02/03/98	800744
			+0.0555	+0.0153 02/10/98	800861
			+0.0172	+0.0066 02/17/98	800984
			+0.0251	+0.0079 02/24/98	801173
			+0.0185	+0.0075 03/03/98	801276
			+0.0156	+0.0060 03/10/98	801413
			+0.0180	+0.0092 03/17/98	801541
			+0.0349	+0.0083 03/31/98	801843
			+0.0179	+0.0073 04/21/98	802254
			+0.0081	+0.0057 04/28/98	802466
			+0.0391	+0.0094 05/19/98	802920
			+0.0021	+0.0046 06/16/98	803458
			+0.0356	+0.0117 08/04/98	804484
			+0.0020	+0.0057 09/08/98	805194
			+0.0094	+0.0042 09/15/98	805304
			+0.0143	+0.0069 09/22/98	805448

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
3101 LM1 0.5 MILES SSW	GAMMA SCAN (GELI) PB-214	+0.0210	+0.0079	10/06/98 805772
		+0.0186	+0.0087	10/13/98 805896
		+0.0140	+0.0070	10/20/98 806027
		+0.0269	+0.0079	11/03/98 806384
		+0.0106	+0.0044	11/10/98 806486
		+0.0266	+0.0074	11/17/98 806612
		+0.0228	+0.0068	12/01/98 806895
		+0.0133	+0.0076	12/08/98 807017
		+0.0215	+0.0054	12/15/98 807133
		+0.0511	+0.0089	12/21/98 807300
		3102 LM2 0.5 MILES N	GAMMA SCAN (GELI)	NO ACTIVITY DETECTED
NO ACTIVITY DETECTED				02/03/98 800747
NO ACTIVITY DETECTED				03/03/98 801279
NO ACTIVITY DETECTED				04/14/98 802090
NO ACTIVITY DETECTED				04/21/98 802258
NO ACTIVITY DETECTED				05/05/98 802630
NO ACTIVITY DETECTED				05/19/98 802924
NO ACTIVITY DETECTED				05/26/98 803022
NO ACTIVITY DETECTED				06/02/98 803159
NO ACTIVITY DETECTED				06/30/98 803767
NO ACTIVITY DETECTED				07/07/98 803927
NO ACTIVITY DETECTED				07/14/98 804080
NO ACTIVITY DETECTED				07/21/98 804198
NO ACTIVITY DETECTED				08/11/98 804647
NO ACTIVITY DETECTED				08/18/98 804754
NO ACTIVITY DETECTED				08/25/98 804908
NO ACTIVITY DETECTED				09/29/98 805596
NO ACTIVITY DETECTED				10/13/98 805899
NO ACTIVITY DETECTED				11/10/98 806489
NO ACTIVITY DETECTED				12/08/98 807020
BI-214	+0.0243			+0.0085
	+0.0261	+0.0082	02/10/98 800864	
	+0.0881	+0.0123	02/24/98 801177	
	+0.0112	+0.0050	04/07/98 801972	
	+0.0205	+0.0076	04/28/98 802469	
	+0.0277	+0.0079	06/09/98 803308	

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 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3102 LM2  0.5 MILES N	GAMMA SCAN (GELI) BI-214	+0.0236	+0.0093	06/16/98	803462	
		+0.0295	+0.0086	08/04/98	804487	
		+0.0159	+0.0070	09/22/98	805451	
		+0.0187	+0.0086	10/27/98	806230	
		+0.0235	+0.0078	11/17/98	806615	
		+0.0480	+0.0114	11/23/98	806751	
		+0.0068	+0.0057	12/01/98	806899	
		+0.0323	+0.0099	12/15/98	807136	
		K-40	+0.2834	+0.0840	01/20/98	800410
			+0.2634	+0.0752	02/10/98	800864
			+0.3054	+0.0462	04/28/98	802469
			+0.2737	+0.0450	07/28/98	804354
	+0.2324		+0.0444	08/04/98	804487	
	+0.2642		+0.0520	10/06/98	805776	
	+0.1564		+0.0392	11/03/98	806388	
	+0.2066		+0.0523	11/17/98	806615	
	+0.3715		+0.0697	11/23/98	806751	
	PB-214		+0.0293	+0.0078	12/29/97	800084
			+0.0291	+0.0068	01/13/98	800290
			+0.0302	+0.0069	01/20/98	800410
		+0.0167	+0.0104	01/27/98	800602	
		+0.0699	+0.0116	02/10/98	800864	
		+0.0404	+0.0114	02/17/98	800987	
		+0.0770	+0.0087	02/24/98	801177	
		+0.0231	+0.0084	03/10/98	801416	
		+0.0178	+0.0064	03/17/98	801544	
		+0.0222	+0.0076	03/24/98	801712	
		+0.0418	+0.0083	03/31/98	801846	
		+0.0244	+0.0073	04/07/98	801972	
	+0.0229	+0.0100	05/12/98	802743		
	+0.0182	+0.0063	06/09/98	803308		
	+0.0301	+0.0062	06/16/98	803462		
	+0.0118	+0.0056	06/23/98	803613		
	+0.0392	+0.0128	07/28/98	804354		
	+0.0357	+0.0081	08/04/98	804487		
	+0.0173	+0.0081	09/01/98	805035		
+0.0303	+0.0085	09/08/98	805198			
+0.0000	+0.0071	09/15/98	805307			

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
3102 LM2	0.5 MILES N	GAMMA SCAN (GELI) PB-214				
			+0.0322	+0.0087	09/22/98	805451
			+0.0264	+0.0084	10/06/98	805776
			+0.0076	+0.0063	10/20/98	806030
			+0.0258	+0.0097	10/27/98	806230
			+0.0359	+0.0112	11/03/98	806388
			+0.0171	+0.0056	11/17/98	806615
			+0.0491	+0.0125	11/23/98	806751
			+0.0206	+0.0058	12/01/98	806899
			+0.0617	+0.0102	12/15/98	807136
		+0.0287	+0.0097	12/21/98	807303	
3106 PM2 SPRING CITY	7.0 MILES NW	GAMMA SCAN (GELI)				
			NO ACTIVITY DETECTED		01/20/98	800412
			NO ACTIVITY DETECTED		03/10/98	801418
			NO ACTIVITY DETECTED		03/17/98	801546
			NO ACTIVITY DETECTED		04/07/98	801974
			NO ACTIVITY DETECTED		04/14/98	802092
			NO ACTIVITY DETECTED		04/28/98	802471
			NO ACTIVITY DETECTED		06/02/98	803161
			NO ACTIVITY DETECTED		06/09/98	803310
			NO ACTIVITY DETECTED		06/16/98	803465
			NO ACTIVITY DETECTED		06/23/98	803615
			NO ACTIVITY DETECTED		06/30/98	803770
			NO ACTIVITY DETECTED		07/07/98	803929
			NO ACTIVITY DETECTED		07/14/98	804083
			NO ACTIVITY DETECTED		07/21/98	804200
			NO ACTIVITY DETECTED		08/18/98	804756
			NO ACTIVITY DETECTED		08/25/98	804910
			NO ACTIVITY DETECTED		09/08/98	805201
			NO ACTIVITY DETECTED		09/15/98	805309
			NO ACTIVITY DETECTED		10/06/98	805779
		NO ACTIVITY DETECTED		12/01/98	806902	
	BI-214	+0.0127	+0.0076	12/29/97	800087	
		+0.0359	+0.0086	01/06/98	800184	
		+0.0123	+0.0064	01/13/98	800292	
		+0.0266	+0.0092	01/27/98	800605	
		+0.0255	+0.0103	02/10/98	800866	
		+0.0267	+0.0086	03/03/98	801281	

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 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
3106 PM2 SPRING CITY 7.0 MILES NW	GAMMA SCAN (GELI) BI-214	+0.0382	+0.0100	03/31/98	801848	
		+0.0193	+0.0067	05/05/98	802632	
		+0.0098	+0.0084	05/26/98	803024	
		+0.0162	+0.0099	09/22/98	805453	
		+0.0149	+0.0067	09/29/98	805598	
		+0.0128	+0.0076	10/13/98	805901	
		+0.0273	+0.0069	10/27/98	806232	
		+0.0297	+0.0088	11/03/98	806391	
		+0.0073	+0.0064	11/17/98	806617	
		+0.0680	+0.0172	11/23/98	806753	
		+0.0103	+0.0066	12/15/98	807138	
		+0.0234	+0.0089	12/21/98	807305	
		K-40	+0.2675	+0.0537	01/06/98	800184
			+0.2293	+0.0451	01/13/98	800292
			+0.3077	+0.0588	02/24/98	801180
			+0.1939	+0.0471	03/31/98	801848
			+0.2142	+0.0459	04/21/98	802261
			+0.2154	+0.0440	05/12/98	802745
	+0.2124		+0.0690	09/29/98	805598	
	+0.3051		+0.0459	10/13/98	805901	
	+0.3262		+0.0477	10/27/98	806232	
	+0.2810		+0.0502	12/15/98	807138	
	+0.2660		+0.0656	12/21/98	807305	
	PB-214		+0.0231	+0.0085	12/29/97	800087
			+0.0556	+0.0104	01/06/98	800184
			+0.0251	+0.0092	01/13/98	800292
			+0.0243	+0.0084	01/27/98	800605
			+0.0221	+0.0087	02/03/98	800749
			+0.0274	+0.0095	02/10/98	800866
			+0.0088	+0.0069	02/17/98	800989
		+0.0286	+0.0100	02/24/98	801180	
		+0.0550	+0.0102	03/03/98	801281	
		+0.0057	+0.0080	03/24/98	801715	
		+0.0327	+0.0078	03/31/98	801848	
		+0.0171	+0.0042	04/21/98	802261	
		+0.0139	+0.0059	05/12/98	802745	
+0.0303		+0.0100	05/19/98	802927		
+0.0027		+0.0076	05/26/98	803024		

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 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
3106 PM2 SPRING CITY 7.0 MILES NW	GAMMA SCAN (GELI) PB-214	+0.0163	+0.0070	07/28/98	804356
		+0.0150	+0.0081	08/04/98	804489
		+0.0096	+0.0075	08/11/98	804650
		+0.0183	+0.0062	09/01/98	805037
		+0.0263	+0.0061	09/22/98	805453
		+0.0299	+0.0106	09/29/98	805598
		+0.0258	+0.0082	10/13/98	805901
		+0.0189	+0.0100	10/20/98	806032
		+0.0322	+0.0068	10/27/98	806232
		+0.0143	+0.0045	11/03/98	806391
		+0.0147	+0.0059	11/10/98	806491
		+0.0151	+0.0056	11/17/98	806617
		+0.0609	+0.0100	11/23/98	806753
		+0.0366	+0.0102	12/08/98	807022
		+0.0322	+0.0114	12/15/98	807138
	+0.0431	+0.0086	12/21/98	807305	
3107 PM3 10.4 MILES NNE	GAMMA SCAN (GELI)	NO ACTIVITY DETECTED		12/29/97	800090
		NO ACTIVITY DETECTED		01/27/98	800608
		NO ACTIVITY DETECTED		02/10/98	800868
		NO ACTIVITY DETECTED		02/17/98	800991
		NO ACTIVITY DETECTED		03/10/98	801420
		NO ACTIVITY DETECTED		03/31/98	801850
		NO ACTIVITY DETECTED		04/07/98	801976
		NO ACTIVITY DETECTED		04/21/98	802264
		NO ACTIVITY DETECTED		05/05/98	802634
		NO ACTIVITY DETECTED		05/12/98	802747
		NO ACTIVITY DETECTED		06/09/98	803312
		NO ACTIVITY DETECTED		06/23/98	803617
		NO ACTIVITY DETECTED		07/07/98	803931
		NO ACTIVITY DETECTED		07/14/98	804086
		NO ACTIVITY DETECTED		07/28/98	804358
		NO ACTIVITY DETECTED		08/04/98	804491
		NO ACTIVITY DETECTED		08/11/98	804653
NO ACTIVITY DETECTED		09/08/98	805204		
NO ACTIVITY DETECTED		09/15/98	805311		
NO ACTIVITY DETECTED		09/22/98	805455		

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 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO		
3107 PM3	10.4 MILES NNE	GAMMA SCAN (GELI)					
			NO ACTIVITY DETECTED	09/29/98	805600		
			NO ACTIVITY DETECTED	11/03/98	806394		
			NO ACTIVITY DETECTED	11/10/98	806493		
			NO ACTIVITY DETECTED	12/08/98	807024		
			NO ACTIVITY DETECTED	12/21/98	807307		
			BI-214	+0.0258	+0.0094	01/13/98	800294
				+0.0244	+0.0082	01/20/98	800414
				+0.0907	+0.0136	02/24/98	801183
				+0.0397	+0.0113	03/17/98	801548
				+0.0219	+0.0084	05/19/98	802930
				+0.0141	+0.0062	06/16/98	803468
				+0.0054	+0.0058	06/30/98	803773
				+0.0153	+0.0067	10/13/98	805903
				+0.0213	+0.0099	10/27/98	806234
				+0.0271	+0.0087	11/17/98	806619
				+0.0283	+0.0068	12/15/98	807140
			K-40	+0.3316	+0.0930	01/13/98	800294
				+0.3653	+0.0504	01/20/98	800414
				+0.2160	+0.0636	02/24/98	801183
				+0.2323	+0.0601	04/14/98	802094
				+0.1814	+0.0638	05/19/98	802930
				+0.3524	+0.0413	10/13/98	805903
				+0.3362	+0.0654	11/17/98	806619
				+0.2634	+0.0476	12/15/98	807140
			PB-214	+0.0545	+0.0144	01/13/98	800294
				+0.0267	+0.0084	01/20/98	800414
				+0.0059	+0.0043	02/03/98	800751
				+0.0696	+0.0114	02/24/98	801183
				+0.0173	+0.0069	03/03/98	801283
				+0.0280	+0.0094	03/17/98	801548
				+0.0142	+0.0062	03/24/98	801718
				+0.0109	+0.0067	04/28/98	802473
				+0.0213	+0.0053	05/19/98	802930
				+0.0102	+0.0046	05/26/98	803026
				+0.0062	+0.0051	06/02/98	803163
				+0.0144	+0.0116	06/16/98	803468
		+0.0176	+0.0105	08/18/98	804758		
		+0.0147	+0.0073	08/25/98	804912		

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE			
			TERM	COLLECTED LAB NO		
3107 PM3	10.4 MILES NNE GAMMA SCAN (GELI) PB-214	+0.0238	+0.0103	09/01/98 805039		
		+0.0123	+0.0082	10/06/98 805782		
		+0.0339	+0.0076	10/13/98 805903		
		+0.0154	+0.0060	10/20/98 806034		
		+0.0246	+0.0082	10/27/98 806234		
		+0.0354	+0.0081	11/23/98 806755		
		+0.0207	+0.0053	12/01/98 806905		
		+0.0227	+0.0083	12/15/98 807140		
		3108 PM4	7.6 MILES NE/ENE GAMMA SCAN (GELI)	NO ACTIVITY DETECTED		12/29/97 800093
				NO ACTIVITY DETECTED		02/03/98 800753
NO ACTIVITY DETECTED				03/11/98 801422		
NO ACTIVITY DETECTED				03/25/98 801721		
NO ACTIVITY DETECTED				04/22/98 802267		
NO ACTIVITY DETECTED				05/12/98 802749		
NO ACTIVITY DETECTED				05/20/98 802933		
NO ACTIVITY DETECTED				06/03/98 803165		
NO ACTIVITY DETECTED				06/09/98 803314		
NO ACTIVITY DETECTED				06/17/98 803471		
NO ACTIVITY DETECTED				06/23/98 803619		
NO ACTIVITY DETECTED				07/07/98 803933		
NO ACTIVITY DETECTED				07/15/98 804089		
NO ACTIVITY DETECTED				07/29/98 804360		
NO ACTIVITY DETECTED				08/05/98 804493		
NO ACTIVITY DETECTED				08/12/98 804656		
NO ACTIVITY DETECTED				08/26/98 804914		
NO ACTIVITY DETECTED				09/22/98 805457		
NO ACTIVITY DETECTED				09/30/98 805602		
NO ACTIVITY DETECTED				10/07/98 805785		
NO ACTIVITY DETECTED				11/11/98 806495		
NO ACTIVITY DETECTED				11/24/98 806757		
NO ACTIVITY DETECTED				12/09/98 807026		
BI-214				+0.0372	+0.0108	01/14/98 800296
				+0.0388	+0.0093	01/20/98 800416
				+0.0575	+0.0124	01/28/98 800611
				+0.0371	+0.0105	02/10/98 800870
				+0.0272	+0.0102	02/17/98 800993

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE			
			TERM	COLLECTED LAB NO		
3108 PM4  7.6 MILES NE/ENE	GAMMA SCAN (GELI) BI-214	+0.0177	+0.0074	02/25/98	801186	
		+0.0258	+0.0081	03/17/98	801550	
		+0.0049	+0.0065	07/22/98	804204	
		+0.0111	+0.0061	08/19/98	804760	
		+0.0282	+0.0163	09/09/98	805207	
		+0.0103	+0.0062	10/14/98	805905	
		+0.0197	+0.0070	10/21/98	806036	
		+0.0371	+0.0100	10/28/98	806236	
		+0.0387	+0.0080	12/02/98	806908	
		+0.0267	+0.0078	12/16/98	807142	
	K-40	+0.0780	+0.0190	12/22/98	807309	
		+0.2463	+0.0527	03/17/98	801550	
		+0.2402	+0.0495	07/01/98	803777	
		+0.2114	+0.0500	08/19/98	804760	
		+0.2924	+0.0437	10/14/98	805905	
		+0.3046	+0.0435	11/18/98	806621	
		+0.1844	+0.0492	12/16/98	807142	
		PB-214	+0.0618	+0.0157	01/14/98	800296
			+0.0508	+0.0080	01/20/98	800416
			+0.0788	+0.0091	01/28/98	800611
	+0.0280		+0.0116	02/10/98	800870	
	+0.0298		+0.0108	02/17/98	800993	
	+0.0289		+0.0077	02/25/98	801186	
	+0.0251		+0.0091	03/03/98	801285	
	+0.0263		+0.0081	03/17/98	801550	
	+0.0375		+0.0099	03/31/98	801852	
	+0.0154		+0.0070	04/08/98	801978	
	+0.0174	+0.0079	04/14/98	802096		
	+0.0141	+0.0045	04/28/98	802475		
	+0.0197	+0.0086	05/06/98	802636		
	+0.0077	+0.0042	05/26/98	803028		
	+0.0079	+0.0061	09/02/98	805041		
	+0.0198	+0.0063	09/16/98	805313		
	+0.0205	+0.0080	10/14/98	805905		
	+0.0260	+0.0065	10/21/98	806036		
	+0.0336	+0.0087	10/28/98	806236		
	+0.0196	+0.0067	11/04/98	806397		
	+0.0400	+0.0092	12/02/98	806908		

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		
			TERM	COLLECTED LAB NO	
3108 PM4	7.6 MILES NE/ENE	GAMMA SCAN (GELI) PB-214	+0.0380	+0.0077 12/16/98	807142
			+0.1204	+0.0186 12/22/98	807309
3109 PM5 DECATUR	6.2 MILES S	GAMMA SCAN (GELI)	NO ACTIVITY DETECTED	03/25/98	801724
			NO ACTIVITY DETECTED	04/08/98	801980
			NO ACTIVITY DETECTED	04/15/98	802098
			NO ACTIVITY DETECTED	04/22/98	802270
			NO ACTIVITY DETECTED	04/29/98	802477
			NO ACTIVITY DETECTED	05/06/98	802638
			NO ACTIVITY DETECTED	05/20/98	802936
			NO ACTIVITY DETECTED	05/27/98	803030
			NO ACTIVITY DETECTED	06/03/98	803167
			NO ACTIVITY DETECTED	06/17/98	803474
			NO ACTIVITY DETECTED	06/24/98	803621
			NO ACTIVITY DETECTED	07/01/98	803780
			NO ACTIVITY DETECTED	07/08/98	803935
			NO ACTIVITY DETECTED	07/22/98	804206
			NO ACTIVITY DETECTED	08/19/98	804762
			NO ACTIVITY DETECTED	09/09/98	805210
			NO ACTIVITY DETECTED	10/07/98	805788
			NO ACTIVITY DETECTED	10/14/98	805907
			NO ACTIVITY DETECTED	10/21/98	806038
			NO ACTIVITY DETECTED	11/18/98	806623
			NO ACTIVITY DETECTED	12/02/98	806911
			NO ACTIVITY DETECTED	12/16/98	807144
			BI-214	+0.0270	+0.0077 01/07/98
+0.0655	+0.0124 01/14/98	800298			
+0.0404	+0.0090 01/28/98	800614			
+0.0134	+0.0069 02/04/98	800755			
+0.0919	+0.0134 02/25/98	801189			
+0.0177	+0.0074 04/01/98	801854			
+0.0037	+0.0054 06/10/98	803316			
+0.0052	+0.0059 07/29/98	804362			
+0.0126	+0.0100 08/05/98	804495			
+0.0189	+0.0077 08/12/98	804659			
+0.0150	+0.0078 08/26/98	804916			
+0.0340	+0.0072 10/28/98	806238			

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 Bq/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		
			TERM	COLLECTED LAB NO	
3109 PM5 DECATUR 6.2 MILES S	GAMMA SCAN (GELI) BI-214  K-40  PB-212 PB-214	+0.0124	+0.0069	11/11/98	806497
		+0.0167	+0.0091	11/24/98	806759
		+0.0180	+0.0080	12/09/98	807028
		+0.0578	+0.0125	12/22/98	807311
		+0.1369	+0.0412	01/28/98	800614
		+0.2560	+0.0423	02/25/98	801189
		+0.3545	+0.0684	12/22/98	807311
		+0.0014	+0.0060	10/28/98	806238
		+0.0167	+0.0072	12/29/97	800096
		+0.0517	+0.0104	01/07/98	800190
		+0.0690	+0.0136	01/14/98	800298
		+0.0311	+0.0103	01/21/98	800418
		+0.0294	+0.0065	01/28/98	800614
		+0.0298	+0.0071	02/04/98	800755
		+0.0217	+0.0082	02/11/98	800872
		+0.0216	+0.0069	02/18/98	800995
		+0.0732	+0.0107	02/25/98	801189
		+0.0097	+0.0057	03/04/98	801287
		+0.0154	+0.0074	03/11/98	801424
		+0.0337	+0.0082	03/18/98	801552
		+0.0270	+0.0074	04/01/98	801854
		+0.0141	+0.0079	05/13/98	802751
		+0.0022	+0.0053	06/10/98	803316
		+0.0146	+0.0065	07/15/98	804092
		+0.0035	+0.0059	07/29/98	804362
		+0.0098	+0.0077	08/05/98	804495
		+0.0061	+0.0056	08/12/98	804659
		+0.0127	+0.0063	08/26/98	804916
		+0.0219	+0.0080	09/02/98	805043
		+0.0209	+0.0079	09/16/98	805315
		+0.0218	+0.0106	09/22/98	805459
		+0.0068	+0.0047	09/30/98	805604
+0.0476	+0.0075	10/28/98	806238		
+0.0220	+0.0065	11/04/98	806400		
+0.0256	+0.0098	11/11/98	806497		
+0.0302	+0.0105	11/24/98	806759		
+0.0177	+0.0077	12/09/98	807028		
+0.0941	+0.0139	12/22/98	807311		

TENNESSEE VALLEY AUTHORITY  
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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
3203 LM3	1.9 MILES NNE	GAMMA SCAN (GELI)			
		NO ACTIVITY DETECTED		12/29/97	800099
		NO ACTIVITY DETECTED		02/17/98	801001
		NO ACTIVITY DETECTED		03/03/98	801302
		NO ACTIVITY DETECTED		03/17/98	801558
		NO ACTIVITY DETECTED		04/07/98	801982
		NO ACTIVITY DETECTED		04/14/98	802104
		NO ACTIVITY DETECTED		04/21/98	802273
		NO ACTIVITY DETECTED		04/28/98	802499
		NO ACTIVITY DETECTED		05/05/98	802640
		NO ACTIVITY DETECTED		05/26/98	803044
		NO ACTIVITY DETECTED		06/02/98	803169
		NO ACTIVITY DETECTED		06/09/98	803322
		NO ACTIVITY DETECTED		06/23/98	803634
		NO ACTIVITY DETECTED		06/30/98	803783
		NO ACTIVITY DETECTED		07/14/98	804095
		NO ACTIVITY DETECTED		08/18/98	804776
		NO ACTIVITY DETECTED		08/25/98	804918
		NO ACTIVITY DETECTED		09/15/98	805328
		NO ACTIVITY DETECTED		09/22/98	805461
		NO ACTIVITY DETECTED		09/29/98	805610
		NO ACTIVITY DETECTED		10/06/98	805791
		NO ACTIVITY DETECTED		10/20/98	806040
		NO ACTIVITY DETECTED		10/27/98	806253
	BI-214	+0.0184	+0.0066	01/06/98	800203
		+0.0457	+0.0093	01/13/98	800300
		+0.0388	+0.0097	01/20/98	800424
		+0.0254	+0.0119	02/03/98	800768
		+0.0468	+0.0090	02/24/98	801192
		+0.0246	+0.0077	03/10/98	801426
		+0.0081	+0.0053	03/24/98	801727
		+0.0402	+0.0115	03/31/98	801867
		+0.0161	+0.0067	05/12/98	802757
		+0.0217	+0.0113	05/19/98	802939
		+0.0083	+0.0052	11/17/98	806625
		+0.0386	+0.0114	11/23/98	806765
		+0.0108	+0.0060	12/01/98	806914
		+0.0493	+0.0105	12/21/98	807317
	K-40	+0.2088	+0.0487	01/06/98	800203

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PC1/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3203 LM3  1.9 MILES NNE	GAMMA SCAN (GELI) K-40	+0.1239	+0.0516	01/20/98	800424	
		+0.4340	+0.1028	02/10/98	800874	
		+0.2246	+0.0434	03/24/98	801727	
		+0.3688	+0.0760	05/12/98	802757	
		+0.1866	+0.0530	12/01/98	806914	
		+0.2343	+0.0539	12/21/98	807317	
		PB-214	+0.0264	+0.0064	01/06/98	800203
			+0.0501	+0.0092	01/13/98	800300
			+0.0293	+0.0094	01/20/98	800424
			+0.0167	+0.0049	01/27/98	800617
			+0.0156	+0.0071	02/03/98	800768
			+0.0742	+0.0136	02/24/98	801192
			+0.0162	+0.0056	03/10/98	801426
			+0.0518	+0.0107	03/31/98	801867
			+0.0290	+0.0118	05/19/98	802939
	+0.0024		+0.0052	06/16/98	803477	
	+0.0152		+0.0052	07/07/98	803941	
	+0.0057		+0.0041	07/21/98	804219	
	+0.0238		+0.0073	07/28/98	804364	
	+0.0105		+0.0059	08/04/98	804501	
	+0.0155		+0.0070	08/11/98	804662	
	+0.0161	+0.0106	09/01/98	805049		
	+0.0134	+0.0066	09/08/98	805213		
	+0.0465	+0.0135	10/13/98	805920		
	+0.0466	+0.0101	11/10/98	806510		
	+0.0091	+0.0071	11/17/98	806625		
	+0.0373	+0.0110	11/23/98	806765		
	+0.0278	+0.0082	12/01/98	806914		
	+0.0175	+0.0065	12/08/98	807043		
	+0.0134	+0.0063	12/15/98	807146		
+0.0908	+0.0151	12/21/98	807317			
3204 LM-4 WB  0.9 MILES SE	GAMMA SCAN (GELI)	NO ACTIVITY DETECTED		01/06/98	800205	
		NO ACTIVITY DETECTED		01/20/98	800426	
		NO ACTIVITY DETECTED		02/10/98	800876	
		NO ACTIVITY DETECTED		03/25/98	801730	
		NO ACTIVITY DETECTED		03/31/98	801869	

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
3204 LM-4 WB	0.9 MILES SE	GAMMA SCAN (GELI)			
		NO ACTIVITY DETECTED		04/14/98	802106
		NO ACTIVITY DETECTED		04/22/98	802276
		NO ACTIVITY DETECTED		04/28/98	802501
		NO ACTIVITY DETECTED		05/05/98	802642
		NO ACTIVITY DETECTED		05/26/98	803046
		NO ACTIVITY DETECTED		06/03/98	803171
		NO ACTIVITY DETECTED		07/01/98	803786
		NO ACTIVITY DETECTED		07/15/98	804098
		NO ACTIVITY DETECTED		07/21/98	804221
		NO ACTIVITY DETECTED		07/29/98	804366
		NO ACTIVITY DETECTED		08/12/98	804665
		NO ACTIVITY DETECTED		08/26/98	804920
		NO ACTIVITY DETECTED		09/01/98	805051
		NO ACTIVITY DETECTED		09/15/98	805330
		NO ACTIVITY DETECTED		10/27/98	806255
		NO ACTIVITY DETECTED		11/18/98	806627
		NO ACTIVITY DETECTED		12/08/98	807045
	BI-214	+0.0232	+0.0085	12/29/97	800102
		+0.0293	+0.0088	01/14/98	800302
		+0.0171	+0.0074	02/03/98	800770
		+0.0381	+0.0090	02/17/98	801003
		+0.0681	+0.0138	02/25/98	801195
		+0.0158	+0.0076	03/11/98	801428
		+0.0066	+0.0051	08/04/98	804503
		+0.0176	+0.0078	08/18/98	804778
		+0.0283	+0.0077	09/09/98	805216
		+0.0111	+0.0070	09/29/98	805612
		+0.0144	+0.0066	10/13/98	805922
		+0.0172	+0.0060	11/04/98	806406
		+0.0187	+0.0074	12/02/98	806917
		+0.0294	+0.0124	12/21/98	807319
	K-40	+0.2527	+0.0468	01/14/98	800302
		+0.1992	+0.0409	02/03/98	800770
		+0.3615	+0.0762	02/17/98	801003
		+0.1919	+0.0512	02/25/98	801195
		+0.2187	+0.0509	03/11/98	801428
		+0.2742	+0.0703	06/23/98	803636
		+0.2722	+0.0605	09/29/98	805612

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 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PC1/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR	DATE	LAB NO
			TERM	COLLECTED	
3204 LM-4 WB 0.9 MILES SE	GAMMA SCAN (GELI) K-40	+0.2192	+0.0453	10/07/98	805794
		+0.3452	+0.0639	10/13/98	805922
	+0.2285	+0.0438	11/04/98	806406	
	PB-214	+0.3008	+0.0655	12/21/98	807319
		+0.0247	+0.0061	01/14/98	800302
		+0.0064	+0.0065	01/28/98	800620
		+0.0170	+0.0063	02/03/98	800770
		+0.0257	+0.0061	02/17/98	801003
		+0.0541	+0.0092	02/25/98	801195
		+0.0122	+0.0085	03/03/98	801304
		+0.0094	+0.0051	03/11/98	801428
		+0.0130	+0.0059	03/17/98	801560
		+0.0158	+0.0056	04/08/98	801984
		+0.0298	+0.0309	05/12/98	802759
		+0.0319	+0.0081	05/20/98	802942
		+0.0192	+0.0093	06/09/98	803324
		+0.0317	+0.0102	06/17/98	803480
		+0.0189	+0.0059	07/07/98	803943
		+0.0266	+0.0068	08/04/98	804503
		+0.0305	+0.0080	08/18/98	804778
		+0.0270	+0.0056	09/09/98	805216
		+0.0231	+0.0100	09/22/98	805463
		+0.0090	+0.0039	09/29/98	805612
		+0.0115	+0.0083	10/13/98	805922
		+0.0234	+0.0063	10/21/98	806042
		+0.0166	+0.0070	11/04/98	806406
		+0.0175	+0.0055	11/10/98	806512
		+0.0145	+0.0093	11/23/98	806767
		+0.0193	+0.0047	12/02/98	806917
		+0.0339	+0.0104	12/16/98	807148
+0.0532		+0.0121	12/21/98	807319	
3205 RM-3 WB 15 MILES NNW	GAMMA SCAN (GELI)	NO ACTIVITY DETECTED		01/27/98	800623
		NO ACTIVITY DETECTED		02/17/98	801005
		NO ACTIVITY DETECTED		02/24/98	801198
		NO ACTIVITY DETECTED		03/03/98	801306
		NO ACTIVITY DETECTED		03/10/98	801430

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 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
3205 RM-3 WB		15 MILES NNW			
	GAMMA SCAN (GELI)				
		NO ACTIVITY DETECTED		03/17/98	801562
		NO ACTIVITY DETECTED		03/24/98	801733
		NO ACTIVITY DETECTED		03/31/98	801871
		NO ACTIVITY DETECTED		04/14/98	802108
		NO ACTIVITY DETECTED		04/21/98	802279
		NO ACTIVITY DETECTED		04/28/98	802503
		NO ACTIVITY DETECTED		05/05/98	802644
		NO ACTIVITY DETECTED		05/12/98	802761
		NO ACTIVITY DETECTED		05/26/98	803048
		NO ACTIVITY DETECTED		06/02/98	803173
		NO ACTIVITY DETECTED		06/16/98	803483
		NO ACTIVITY DETECTED		06/23/98	803638
		NO ACTIVITY DETECTED		06/30/98	803789
		NO ACTIVITY DETECTED		07/21/98	804223
		NO ACTIVITY DETECTED		07/28/98	804368
		NO ACTIVITY DETECTED		08/04/98	804505
		NO ACTIVITY DETECTED		08/11/98	804668
		NO ACTIVITY DETECTED		08/25/98	804922
		NO ACTIVITY DETECTED		09/08/98	805219
		NO ACTIVITY DETECTED		09/15/98	805332
		NO ACTIVITY DETECTED		09/29/98	805614
		NO ACTIVITY DETECTED		10/13/98	805924
		NO ACTIVITY DETECTED		10/20/98	806044
		NO ACTIVITY DETECTED		11/03/98	806409
		NO ACTIVITY DETECTED		11/10/98	806514
		NO ACTIVITY DETECTED		12/08/98	807047
		NO ACTIVITY DETECTED		12/15/98	807150
	BI-214	+0.0325	+0.0090	12/29/97	800105
		+0.0286	+0.0078	01/06/98	800207
		+0.0337	+0.0127	01/13/98	800304
		+0.0786	+0.0225	02/10/98	800878
		+0.0076	+0.0065	05/19/98	802945
		+0.0088	+0.0062	07/07/98	803945
		+0.0355	+0.0094	08/18/98	804780
		+0.0173	+0.0080	11/17/98	806629
		+0.0163	+0.0085	11/23/98	806769
	K-40	+0.2876	+0.0490	01/06/98	800207
		+0.2545	+0.0456	02/03/98	800772

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHARCOAL FILTER  
 PCI/M3 - 0.037 BQ/M3  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE			
			TERM	COLLECTED LAB NO		
3205 RM-3 WB  15 MILES NNW	GAMMA SCAN (GELI) K-40	+0.2613	+0.0638	02/10/98	800878	
		+0.2104	+0.0464	04/07/98	801986	
		+0.2798	+0.0618	06/09/98	803326	
		+0.3003	+0.0662	07/07/98	803945	
		+0.2353	+0.0552	10/06/98	805797	
		+0.2258	+0.0499	11/17/98	806629	
		+0.4688	+0.0646	11/23/98	806769	
		+0.1788	+0.0412	12/01/98	806920	
		+0.3159	+0.0653	12/21/98	807321	
		PB-212	+0.0067	+0.0044	12/21/98	807321
			PB-214	+0.0322	+0.0079	12/29/97
		+0.0271		+0.0066	01/06/98	800207
		+0.0296	+0.0077	01/13/98	800304	
		+0.0466	+0.0130	01/20/98	800428	
		+0.0112	+0.0063	02/03/98	800772	
		+0.0723	+0.0130	02/10/98	800878	
		+0.0287	+0.0110	04/07/98	801986	
		+0.0082	+0.0053	07/14/98	804101	
		+0.0396	+0.0096	08/18/98	804780	
		+0.0216	+0.0070	09/01/98	805053	
		+0.0153	+0.0052	09/22/98	805465	
		+0.0073	+0.0061	10/06/98	805797	
		+0.0254	+0.0088	10/27/98	806257	
		+0.0234	+0.0085	11/23/98	806769	
		+0.0281	+0.0059	12/01/98	806920	

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 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN MILK  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO			
2122 SHADDON FARM	19.5 MILES SW	IODINE-131	+0.0259	+0.0934 01/07/98	800156			
			+0.0248	+0.0896 01/21/98	800374			
			+0.0918	+0.1025 02/18/98	800952			
			+0.0771	+0.1101 03/04/98	801253			
			+0.0636	+0.0909 03/18/98	801507			
			+0.0268	+0.0967 04/01/98	801820			
			-0.0210	+0.0497 04/15/98	802055			
			+0.0529	+0.1071 04/29/98	802419			
			-0.0129	+0.0410 05/13/98	802708			
			+0.0295	+0.1067 05/27/98	802996			
			-0.0561	+0.0775 06/10/98	803272			
			+0.0406	+0.0821 06/24/98	803587			
			+0.0416	+0.0843 07/08/98	803891			
			+0.0648	+0.0926 07/22/98	804172			
			+0.0255	+0.0920 08/05/98	804451			
			-0.0185	+0.0953 08/19/98	804728			
			-0.0525	+0.0724 09/02/98	804999			
			-0.0164	+0.0843 09/16/98	805281			
			+0.0256	+0.0924 09/30/98	805561			
			+0.0037	+0.0777 10/14/98	805873			
			+0.0437	+0.0885 10/28/98	806176			
			-0.0716	+0.0704 11/11/98	806463			
			+0.0273	+0.0986 11/23/98	806716			
			+0.0576	+0.0816 12/09/98	806995			
			+0.0115	+0.0416 12/21/98	807266			
			GAMMA SCAN (GELI)					
			AC-228		+1.4809	+3.0928 05/13/98	802708	
+4.9969	+4.2690 07/22/98	804172						
+3.9361	+4.3584 08/19/98	804728						
BI-214		+16.2340	+3.5651 01/07/98	800156				
		+36.7790	+5.6933 01/21/98	800374				
		+12.1390	+2.7115 02/18/98	800952				
		+14.3750	+3.2432 03/04/98	801253				
		+6.4971	+2.8962 03/18/98	801507				
		+4.4178	+4.3264 04/01/98	801820				
		+10.8410	+2.8646 04/15/98	802055				
		+12.2450	+8.4175 05/13/98	802708				

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN MILK  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
2122 SHADDON FARM 19.5 MILES SW	GAMMA SCAN (GELI) BI-214	+3.9567	+2.5888	05/27/98	802996	
		+4.8575	+2.6266	06/10/98	803272	
		+6.6164	+2.9435	07/08/98	803891	
		+4.4547	+2.8902	07/22/98	804172	
		+9.0131	+2.6419	08/05/98	804451	
		+6.9408	+3.0010	08/19/98	804728	
		+8.0411	+4.7347	09/02/98	804999	
		+13.6290	+3.4045	09/16/98	805281	
		+5.8915	+4.0555	09/30/98	805561	
		+9.9170	+3.5079	10/14/98	805873	
		+7.9292	+3.1868	10/28/98	806176	
		+9.0778	+2.7026	11/11/98	806463	
		+8.0788	+3.6185	11/23/98	806716	
		+3.9517	+2.4905	12/09/98	806995	
		+16.5880	+4.2787	12/21/98	807266	
		K-40	+1289.4000	+99.4980	01/07/98	800156
			+1302.7000	+92.9940	01/21/98	800374
	+1295.1000		+91.7570	02/18/98	800952	
	+1368.8000		+105.0000	03/04/98	801253	
	+666.1600		+102.4300	03/18/98	801507	
	+1394.5000		+90.5340	04/01/98	801820	
	+1363.2000		+92.7990	04/15/98	802055	
	+1367.9000		+86.3180	04/29/98	802419	
	+1423.9000		+95.9720	05/13/98	802708	
	+1443.2000		+99.0550	05/27/98	802996	
	+1366.3000		+113.4500	06/10/98	803272	
	+1335.5000		+98.0550	06/24/98	803587	
	+1440.2000		+98.3750	07/08/98	803891	
	+1390.2000		+90.9270	07/22/98	804172	
	+1404.3000		+90.4930	08/05/98	804451	
	+1404.4000		+95.9930	08/19/98	804728	
	+1396.9000	+81.9560	09/02/98	804999		
	+1318.0000	+98.1030	09/16/98	805281		
+1426.2000	+89.5980	09/30/98	805561			
+1380.5000	+88.2190	10/14/98	805873			
+1425.2000	+101.3100	10/28/98	806176			
+1350.5000	+102.1000	11/11/98	806463			
+1326.4000	+92.7160	11/23/98	806716			

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN MILK  
 PCI/L - 0.037 Bq/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
2122 SHADDON FARM 19.5 MILES SW	GAMMA SCAN (GELI)			
	K-40	+1356.0000	+89.8280	12/09/98 806995
		+1407.3000	+106.3000	12/21/98 807266
	PB-212	+1.4409	+2.7109	01/21/98 800374
		+3.1365	+2.3868	04/01/98 801820
		+1.3533	+2.8418	04/15/98 802055
		+0.9260	+1.9615	05/27/98 802996
		+3.3922	+2.6912	06/10/98 803272
		+3.0928	+2.6195	08/19/98 804728
		+2.8274	+1.9360	11/23/98 806716
		+0.8753	+2.4178	12/21/98 807266
	PB-214	+11.7610	+3.4932	01/07/98 800156
		+27.0840	+4.5378	01/21/98 800374
		+8.4239	+3.6642	02/18/98 800952
		+6.3398	+4.0664	03/04/98 801253
		+4.7853	+2.7983	03/18/98 801507
		+7.2234	+2.1760	04/01/98 801820
		+11.5370	+2.8734	04/15/98 802055
		+11.7400	+3.7319	05/13/98 802708
		+5.9709	+2.9951	05/27/98 802996
		+5.3215	+2.9995	07/08/98 803891
		+3.9639	+3.4226	07/22/98 804172
		+5.5758	+2.2462	08/05/98 804451
		+5.8299	+2.5684	08/19/98 804728
		+3.3670	+2.3489	09/02/98 804999
		+5.5275	+2.7148	09/16/98 805281
		+2.6866	+3.1325	09/30/98 805561
		+6.9804	+3.1247	10/14/98 805873
		+5.3881	+3.1038	10/28/98 806176
		+10.4070	+2.5059	11/11/98 806463
		+3.7509	+3.0053	11/23/98 806716
		+2.9573	+1.9546	12/09/98 806995
		+14.0760	+2.7837	12/21/98 807266
TL-208	+2.6405	+1.7709	02/18/98 800952	
	+0.3871	+1.0603	03/04/98 801253	
	+0.3397	+1.4050	04/01/98 801820	
	+0.9084	+1.6594	04/15/98 802055	
	+0.4327	+1.2802	10/14/98 805873	
	+1.4186	+1.6241	11/23/98 806716	

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN MILK  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION		ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
2122 SHADDON FARM	19.5 MILES SW	GAMMA SCAN (GELI) TL-208	+0.3304	+1.1679	12/21/98	807266
		SR 89	+0.6240	+1.1200	03/04/98	801253
			+0.5910	+1.2600	05/27/98	802996
			-0.0498	+1.0700	08/19/98	804728
			+0.3640	+0.8760	12/09/98	806995
2202 BILDERBACK FARM	15.0 MILES E	IODINE-131	+1.5500	+0.7430	03/04/98	801253
			+0.8190	+0.8150	05/27/98	802996
			+1.7000	+0.7120	08/19/98	804728
			+1.2400	+0.5790	12/09/98	806995

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 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
2202 BILDERBACK FARM 15.0 MILES E	IODINE-131	+0.0588	+0.0555	11/23/98	806728
		+0.0695	+0.0838	12/08/98	806997
		+0.0562	+0.0472	12/21/98	807279
	GAMMA SCAN (GELI)				
	AC-228	+2.8658	+2.4842	02/17/98	800964
		+8.6640	+3.3533	09/01/98	805011
		+11.7310	+7.3506	09/15/98	805283
	BI-214	+4.5520	+4.3399	10/13/98	805876
		+7.9777	+2.6861	01/06/98	800158
		+23.3400	+5.6156	01/20/98	800387
		+2.9058	+2.9506	02/03/98	800723
		+5.1373	+1.5965	02/17/98	800964
		+3.5252	+3.0378	03/17/98	801519
		+4.1530	+3.4590	03/31/98	801822
		+0.3485	+3.0241	04/14/98	802066
		+5.9572	+3.6123	05/12/98	802719
		+4.0292	+3.9580	06/09/98	803284
		+3.3237	+2.8261	06/23/98	803590
		+9.5956	+3.3871	07/07/98	803904
		+2.1863	+2.9458	07/21/98	804174
		+4.4297	+2.6973	08/04/98	804464
		+1.0733	+9.9875	08/18/98	804730
		+4.3187	+3.2806	09/01/98	805011
		+3.8585	+2.6976	09/15/98	805283
		+3.5041	+3.2194	09/29/98	805572
		+0.0045	+3.8478	10/13/98	805876
		+10.2560	+3.6061	10/27/98	806199
		+13.2400	+4.1530	11/10/98	806466
		+5.6681	+2.7463	11/23/98	806728
		+2.4728	+2.8531	12/21/98	807279
	K-40	+1325.7000	+87.0040	01/06/98	800158
		+1488.2000	+115.6300	01/20/98	800387
		+1387.4000	+97.0400	02/03/98	800723
		+1376.6000	+79.1460	02/17/98	800964
		+1401.0000	+89.2510	03/03/98	801255
		+1348.2000	+87.4120	03/17/98	801519
		+1324.3000	+97.2680	03/31/98	801822

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN MILK  
 PCI/L - 0.037 Bq/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
2202 BILDERBACK FARM 15.0 MILES E	GAMMA SCAN (GELI) K-40	+1403.0000	+97.9740	04/14/98	802066	
		+1483.1000	+111.6100	04/28/98	802432	
		+1327.2000	+86.7050	05/12/98	802719	
		+1226.6000	+106.8600	05/26/98	802999	
		+1337.1000	+106.4100	06/09/98	803284	
		+1375.7000	+84.9670	06/23/98	803590	
		+1346.8000	+86.5430	07/07/98	803904	
		+1413.7000	+86.8060	07/21/98	804174	
		+1385.1000	+104.8800	08/04/98	804464	
		+1374.7000	+88.5650	08/18/98	804730	
		+1351.1000	+95.7660	09/01/98	805011	
		+1454.2000	+98.0690	09/15/98	805283	
		+1394.7000	+85.6030	09/29/98	805572	
		+1447.2000	+124.9800	10/13/98	805876	
		+1402.1000	+105.3300	10/27/98	806199	
		+1462.7000	+95.8200	11/10/98	806466	
		+1423.3000	+104.6300	11/23/98	806728	
		+1451.5000	+118.3100	12/08/98	806997	
		+1427.5000	+97.5400	12/21/98	807279	
		PB-212	+2.6817	+1.5615	02/17/98	800964
		+1.7167	+2.1094	06/09/98	803284	
	PB-214	+5.8977	+4.0555	01/06/98	800158	
		+14.9460	+5.7727	01/20/98	800387	
		+2.2813	+4.0415	03/03/98	801255	
		+0.5677	+3.3251	03/31/98	801822	
		+3.8795	+3.6768	06/09/98	803284	
		+4.2925	+2.9601	06/23/98	803590	
		+1.4395	+2.8914	07/07/98	803904	
		+1.7804	+2.9100	08/04/98	804464	
		+4.8970	+3.1436	09/01/98	805011	
		+2.9254	+3.5352	10/27/98	806199	
		+4.5995	+3.0873	11/23/98	806728	
	TL-208	+1.3750	+0.8611	02/17/98	800964	
	SR 89					
			+1.1900	+1.1400	03/03/98	801255
			+2.4600	+1.7400	05/26/98	802999
		+0.4700	+0.9300	08/18/98	804730	

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 PCI/L - 0.037 BQ/L  
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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
2202 BILDERBACK FARM      15.0 MILES E	SR 89	+0.3490	+0.8880	12/08/98	806997
	SR 90				
2203 CRUMLEY FARM      16.0 MILES SSW	IODINE-131	-0.0194	+0.0457	01/07/98	800159
		+0.0390	+0.0553	01/21/98	800388
		-0.0130	+0.0414	02/04/98	800724
		-0.0181	+0.0426	02/18/98	800965
		+0.0090	+0.0574	03/04/98	801256
		+0.0490	+0.0992	03/18/98	801521
		+0.0660	+0.0796	04/01/98	801824
		+0.0277	+0.1002	04/15/98	802068
		+0.0080	+0.0515	04/29/98	802433
		+0.0366	+0.0635	05/13/98	802720
		-0.0193	+0.0995	05/27/98	803000
		+0.0041	+0.0856	06/10/98	803285
		+0.0217	+0.0785	06/24/98	803591
		+0.0106	+0.0396	07/08/98	803905
		+0.0552	+0.0576	07/22/98	804175
		+0.0075	+0.0484	08/05/98	804465
		-0.0195	+0.1005	08/19/98	804731
		+0.0072	+0.0464	09/02/98	805012
		-0.0115	+0.0367	09/16/98	805285
		+0.0573	+0.0597	09/30/98	805573
		+0.0001	+0.0631	10/14/98	805877
		+0.0072	+0.0461	10/28/98	806200
		-0.0111	+0.0354	11/11/98	806467
		+0.0293	+0.0490	11/24/98	806729
		+0.0666	+0.0628	12/09/98	806998
	-0.0531	+0.0689	12/22/98	807280	
	GAMMA SCAN (GELI)				
	81-214	+26.2400	+4.8833	01/07/98	800159

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
2203 CRUMLEY FARM 16.0 MILES SSW	GAMMA SCAN (GELI) BI-214	+12.2060	+4.4981	01/21/98	800388
		+24.1160	+4.6787	02/04/98	800724
		+10.7240	+3.8316	02/18/98	800965
		+13.3870	+5.6505	03/04/98	801256
		+5.0644	+2.7344	03/18/98	801521
		+3.4919	+2.0782	04/01/98	801824
		+5.8188	+3.4981	04/15/98	802068
		+1.4820	+8.2912	06/24/98	803591
		+6.7812	+3.8077	08/05/98	804465
		+4.0175	+3.7021	08/19/98	804731
		+5.6497	+3.6241	09/02/98	805012
		+2.4490	+2.7962	10/14/98	805877
		+13.0500	+3.7081	10/28/98	806200
		+7.2618	+3.8002	11/11/98	806467
	+14.0630	+4.9857	11/24/98	806729	
	+14.6050	+3.9488	12/22/98	807280	
	K-40	+1285.7000	+98.3340	01/07/98	800159
		+1273.6000	+187.8000	01/21/98	800388
		+1414.4000	+94.7260	02/04/98	800724
		+1403.7000	+110.9200	02/18/98	800965
		+1359.7000	+117.8500	03/04/98	801256
		+1365.7000	+100.2300	03/18/98	801521
		+1453.5000	+89.1550	04/01/98	801824
		+1368.1000	+83.7280	04/15/98	802068
		+1364.1000	+98.5600	04/29/98	802433
		+1388.5000	+97.6260	05/13/98	802720
		+1447.6000	+94.7590	05/27/98	803000
		+1379.6000	+96.4670	06/10/98	803285
		+1381.6000	+89.7860	06/24/98	803591
		+1455.5000	+95.4470	07/08/98	803905
		+1553.1000	+98.5440	07/22/98	804175
		+1445.0000	+106.5900	08/05/98	804465
		+1468.7000	+95.8870	08/19/98	804731
		+1434.3000	+82.2410	09/02/98	805012
		+1390.2000	+146.8900	09/16/98	805285
		+1446.7000	+85.9090	09/30/98	805573
+1376.1000		+93.1120	10/14/98	805877	
+1390.0000		+89.7060	10/28/98	806200	

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 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION		ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
2203 CRUMLEY FARM	16.0 MILES SSW	GAMMA SCAN (GELI) K-40	+1419.0000	+98.8450	11/11/98	806467	
			+1436.0000	+99.9040	11/24/98	806729	
			+1391.3000	+98.2260	12/09/98	806998	
			+1468.0000	+92.0960	12/22/98	807280	
		PB-212	+4.2373	+2.8514	04/15/98	802068	
			+0.9475	+1.6623	09/02/98	805012	
			+4.0729	+3.4847	11/24/98	806729	
			PB-214	+15.4330	+7.2049	01/07/98	800159
		+13.6150		+4.7474	01/21/98	800388	
		+8.9332		+3.1446	02/04/98	800724	
		+9.6383		+3.6787	02/18/98	800965	
		SR 89	+8.3410	+3.1872	03/04/98	801256	
			+4.3352	+2.5429	03/18/98	801521	
			+5.9846	+2.9734	04/01/98	801824	
			+5.8049	+2.4494	04/15/98	802068	
			+4.9157	+4.7078	08/05/98	804465	
			+4.1971	+2.0993	09/02/98	805012	
			+0.6942	+3.1268	09/16/98	805285	
			+14.5370	+3.8267	10/28/98	806200	
			+2.9013	+2.5749	11/11/98	806467	
			+14.7550	+4.7861	11/24/98	806729	
			+8.4932	+3.6943	12/22/98	807280	
			SR 90	+0.8990	+1.9600	03/04/98	801256
				+1.0400	+1.3300	05/27/98	803000
				-0.6129	+0.9380	08/19/98	804731
		+2.2800		+0.8460	12/09/98	806998	
		SR 90	+0.6500	+1.2200	03/04/98	801256	
			+0.6060	+0.8700	05/27/98	803000	
+1.5500	+0.6250		08/19/98	804731			
-0.3579	+0.5300		12/09/98	806998			
3115 LAYMAN FARM	1.3 MILES SSW	IODINE-131	-0.0186	+0.0439	01/06/98	800191	
			-0.0119	+0.0381	01/20/98	800419	

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE				
			TERM COLLECTED	LAB NO			
3115 LAYMAN FARM 1.3 MILES SSW	IODINE-131	+0.0159	+0.0595	02/03/98	800756		
		+0.0125	+0.0469	02/17/98	800996		
		+0.0791	+0.0954	03/03/98	801290		
		-0.0172	+0.0406	03/17/98	801553		
		+0.0001	+0.0671	03/31/98	801855		
		+0.0637	+0.0665	04/14/98	802099		
		+0.0001	+0.0778	04/28/98	802478		
		-0.0176	+0.0416	05/12/98	802752		
		+0.0757	+0.0790	05/26/98	803032		
		+0.0342	+0.0571	06/09/98	803317		
		+0.0221	+0.0735	06/23/98	803622		
		+0.0112	+0.0418	07/07/98	803936		
		-0.0511	+0.0706	07/21/98	804207		
		+0.0282	+0.1020	08/04/98	804496		
		+0.0044	+0.0934	08/18/98	804764		
		+0.0764	+0.0921	09/01/98	805044		
		+0.0230	+0.0762	09/15/98	805316		
		+0.0491	+0.0851	09/29/98	805605		
		-0.0141	+0.0728	10/13/98	805908		
		-0.0429	+0.0610	10/27/98	806239		
		+0.0738	+0.0890	11/10/98	806498		
		+0.0557	+0.0525	11/24/98	806760		
		+0.0049	+0.1031	12/08/98	807031		
		+0.0736	+0.0642	12/21/98	807312		
			GAMMA SCAN (GELI)				
			AC-228	+7.8723	+3.4042	02/03/98	800756
				+1.2086	+4.0340	04/14/98	802099
				+6.6154	+3.7062	08/04/98	804496
				+0.2920	+3.9002	09/01/98	805044
			BI-214	+17.8470	+3.6714	01/06/98	800191
				+219.2400	+13.5410	01/20/98	800419
				+3.6634	+3.8124	02/03/98	800756
				+84.4600	+8.3462	02/17/98	800996
				+252.6100	+15.9570	03/17/98	801553
				+5.3744	+2.9430	03/31/98	801855
	+111.3800	+9.1888		04/14/98	802099		
	+237.0900	+13.5060	05/12/98	802752			

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
3115 LAYMAN FARM 1.3 MILES SSW	GAMMA SCAN (GELI) BI-214	+1.8615	+2.6002	05/26/98	803032	
		+7.7675	+9.3477	06/23/98	803622	
		+3.4571	+8.6354	07/07/98	803936	
		+4.0529	+2.6002	07/21/98	804207	
		+4.1404	+2.4949	08/04/98	804496	
		+1.0720	+2.5583	09/01/98	805044	
		+1.9825	+3.1264	09/15/98	805316	
		+179.9900	+13.5900	09/29/98	805605	
		+0.8704	+2.1712	10/13/98	805908	
		+4.1191	+2.7186	10/27/98	806239	
		+22.5660	+4.3856	11/10/98	806498	
		+320.7100	+18.4650	11/24/98	806760	
		+6.2271	+2.6695	12/08/98	807031	
		+156.6900	+9.8254	12/21/98	807312	
		K-40	+1391.2000	+101.6100	01/06/98	800191
			+835.0600	+64.3740	01/20/98	800419
			+1723.4000	+105.1300	02/03/98	800756
	+1137.7000		+84.8990	02/17/98	800996	
	+1392.3000		+84.1980	03/03/98	801290	
	+822.9800		+70.7950	03/17/98	801553	
	+1408.9000		+97.1250	03/31/98	801855	
	+979.3700		+89.2460	04/14/98	802099	
	+1243.6000		+79.8570	04/28/98	802478	
	+905.5800		+67.5950	05/12/98	802752	
	+1236.7000		+83.6090	05/26/98	803032	
	+1476.8000		+93.2450	06/09/98	803317	
	+1333.2000		+79.3670	06/23/98	803622	
	+1319.2000		+89.8930	07/07/98	803936	
	+1375.2000		+81.2280	07/21/98	804207	
	+1389.9000		+87.5170	08/04/98	804496	
	+1340.3000		+84.5020	08/18/98	804764	
	+1384.3000	+109.5900	09/01/98	805044		
	+1345.8000	+89.7590	09/15/98	805316		
	+780.0100	+67.0680	09/29/98	805605		
+1374.4000	+93.6380	10/13/98	805908			
+1350.1000	+89.4270	10/27/98	806239			
+1433.0000	+93.8370	11/10/98	806498			
+817.8800	+63.6910	11/24/98	806760			

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STATION CODE/LOCATION/DESCRIPTION		ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO		
3115 LAYMAN FARM	1.3 MILES SSW	GAMMA SCAN (GELI) K-40	+1366.3000	+97.4070	12/08/98	807031		
			+788.6800	+70.2020	12/21/98	807312		
			PB-212	+0.1158	+3.1791	09/01/98	805044	
				+1.6660	+1.8393	11/10/98	806498	
			PB-214	+13.3610	+3.3007	01/06/98	800191	
				+203.9300	+11.6220	01/20/98	800419	
				+3.2368	+2.4318	02/03/98	800756	
				+87.3660	+6.7006	02/17/98	800996	
				+1.8684	+2.2823	03/03/98	801290	
				+248.0700	+14.2360	03/17/98	801553	
				+1.3013	+3.1021	03/31/98	801855	
				+108.2100	+8.4670	04/14/98	802099	
				+248.6900	+14.0210	05/12/98	802752	
				+5.3408	+3.2461	07/07/98	803936	
				+2.2395	+3.0045	08/04/98	804496	
				+3.7979	+3.0389	09/01/98	805044	
				+185.0100	+13.4830	09/29/98	805605	
				+4.2321	+3.5224	10/27/98	806239	
				+16.1670	+3.9192	11/10/98	806498	
				+302.9500	+16.8830	11/24/98	806760	
				+1.1750	+2.6537	12/08/98	807031	
				+142.2900	+7.9800	12/21/98	807312	
				TL-208	+2.2081	+3.0858	09/01/98	805044
				SR 89				
					+0.5390	+1.0700	03/03/98	801290
					-1.6499	+1.1000	05/26/98	803032
		+0.8900	+1.3800	08/18/98	804764			
		-0.1189	+0.9770	12/08/98	807031			
	SR 90							
		+1.1400	+0.6950	03/03/98	801290			
		+2.3200	+0.7650	05/26/98	803032			
		+1.2100	+0.8840	08/18/98	804764			
		+1.1300	+0.6350	12/08/98	807031			
3116 MULLINS FARM	3.7 M. ESE	IODINE-131	-0.0121	+0.0387	01/06/98	800193		

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STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO				
			TERM	COLLECTED					
3116 MULLINS FARM	3.7 M. ESE	IODINE-131	+0.0682	+0.0711	01/20/98	800421			
			-0.0219	+0.0516	02/03/98	800758			
			-0.0267	+0.0629	02/17/98	800998			
			+0.0187	+0.0701	03/03/98	801292			
			+0.0430	+0.0610	03/17/98	801555			
			+0.0639	+0.0603	03/31/98	801857			
			-0.0146	+0.0466	04/14/98	802101			
			+0.0384	+0.0544	04/28/98	802480			
			+0.0043	+0.0901	05/12/98	802754			
			+0.0820	+0.0989	05/26/98	803034			
			-0.0161	+0.0829	06/09/98	803319			
			+0.0117	+0.0438	06/23/98	803624			
			+0.0001	+0.0698	07/07/98	803938			
			+0.0478	+0.0829	07/21/98	804209			
			+0.0001	+0.0794	08/04/98	804498			
			+0.0259	+0.0858	08/18/98	804766			
			+0.0633	+0.0597	09/01/98	805046			
			+0.0115	+0.0431	09/15/98	805318			
			+0.0352	+0.0498	09/29/98	805607			
			+0.0316	+0.0448	10/13/98	805910			
			+0.0345	+0.0490	10/27/98	806241			
			+0.0129	+0.0483	11/10/98	806500			
			+0.0078	+0.0502	11/23/98	806762			
			+0.0863	+0.1041	12/08/98	807033			
			-0.0202	+0.0322	12/21/98	807314			
			GAMMA SCAN (GELI)						
			AC-228			+5.0948	+4.4064	01/06/98	800193
						+6.9959	+5.4800	04/14/98	802101
						+3.8974	+3.9076	06/09/98	803319
						+5.4596	+4.3751	07/07/98	803938
						+12.0300	+5.4243	12/08/98	807033
						+10.0500	+4.6180	12/21/98	807314
			BI-214			+5.0963	+2.7836	01/06/98	800193
+16.2670	+3.9724	01/20/98				800421			
+3.6794	+2.8904	02/03/98				800758			
+0.0180	+2.3727	02/17/98				800998			
+0.7373	+2.3300	03/03/98				801292			

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 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
3116 MULLINS FARM 3.7 M. ESE	GAMMA SCAN (GELI) BI-214	+4.0130	+4.3050	03/17/98	801555	
		+0.4812	+2.7065	04/14/98	802101	
		+0.5784	+3.0321	05/12/98	802754	
		+1.4943	+2.5660	05/26/98	803034	
		+1.1851	+2.5636	06/09/98	803319	
		+13.6820	+9.3288	06/23/98	803624	
		+3.8271	+2.7241	07/07/98	803938	
		+2.2045	+2.6102	10/13/98	805910	
		+9.2708	+3.1107	10/27/98	806241	
		+29.2480	+5.1511	11/10/98	806500	
		+7.8008	+3.0228	11/23/98	806762	
		+2.8346	+2.7349	12/08/98	807033	
		+3.8733	+2.4417	12/21/98	807314	
		K-40	+1337.9000	+90.1730	01/06/98	800193
			+1190.6000	+78.3640	01/20/98	800421
	+1361.6000		+88.5250	02/03/98	800758	
	+1214.7000		+70.1570	02/17/98	800998	
	+965.9400		+119.7000	03/03/98	801292	
	+1371.7000		+89.2840	03/17/98	801555	
	+1338.4000		+93.1680	03/31/98	801857	
	+1388.2000		+94.8010	04/14/98	802101	
	+1462.1000		+115.3000	04/28/98	802480	
	+1250.7000		+95.3600	05/12/98	802754	
	+1327.7000		+93.1750	05/26/98	803034	
	+1348.6000		+101.0300	06/09/98	803319	
	+1296.3000		+98.1850	06/23/98	803624	
	+1351.5000		+86.4200	07/07/98	803938	
	+1410.9000		+107.8900	07/21/98	804209	
	+1220.7000		+82.8740	08/04/98	804498	
	+1262.6000		+88.4220	08/18/98	804766	
	+1269.7000		+85.7250	09/01/98	805046	
	+1501.0000	+90.6630	09/15/98	805318		
	+1325.1000	+86.0470	09/29/98	805607		
+1307.4000	+97.1890	10/13/98	805910			
+1290.2000	+85.4780	10/27/98	806241			
+1347.2000	+92.6250	11/10/98	806500			
+1301.0000	+90.9110	11/23/98	806762			
+1431.0000	+95.1870	12/08/98	807033			

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN MILK  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR	DATE	LAB NO	
			TERM	COLLECTED		
3116 MULLINS FARM 3.7 M. ESE	GAMMA SCAN (GELI)					
	K-40	+1421.1000	+84.4560	12/21/98	807314	
	PB-212	+1.7107	+2.7903	05/26/98	803034	
		+2.8593	+2.7223	06/09/98	803319	
		+0.5693	+2.6478	06/23/98	803624	
		+2.2765	+1.8753	07/07/98	803938	
		+5.6386	+1.8731	11/23/98	806762	
	PB-214	+1.0551	+2.3012	01/06/98	800193	
		+12.9130	+2.9716	01/20/98	800421	
		+2.1427	+3.7698	02/03/98	800758	
		+7.5284	+4.8113	03/17/98	801555	
		+2.0499	+1.8294	06/09/98	803319	
		+5.5082	+2.9603	08/04/98	804498	
		+3.6370	+2.2952	10/27/98	806241	
		+21.5390	+3.7312	11/10/98	806500	
		+5.2240	+4.4227	11/23/98	806762	
		+5.2129	+3.8464	12/08/98	807033	
		+5.4282	+3.2530	12/21/98	807314	
	TL-208	+0.9146	+1.0625	01/06/98	800193	
		+0.8057	+1.2747	03/03/98	801292	
		+2.0011	+1.5296	05/12/98	802754	
		+1.0828	+1.5144	06/09/98	803319	
		+2.3555	+1.7667	06/23/98	803624	
		+2.1109	+1.2636	07/07/98	803938	
		+0.3160	+1.2555	10/13/98	805910	
		+1.5611	+1.0124	11/23/98	806762	
	SR 89		-0.1459	+1.1000	03/03/98	801292
			-0.7619	+1.5000	05/26/98	803034
			-0.3579	+1.1000	08/18/98	804766
			+0.9640	+0.9300	12/08/98	807033
SR 90		+1.7400	+0.7220	03/03/98	801292	
		+2.1200	+1.0000	05/26/98	803034	
		+1.9300	+0.7310	08/18/98	804766	
		+0.9750	+0.6000	12/08/98	807033	
3119 NORTON FARM	4.1 MILES ESE	IODINE-131				
		+0.0081	+0.0517	01/06/98	800194	

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN MILK  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR	DATE	LAB NO		
			TERM	COLLECTED			
3119 NORTON FARM 4.1 MILES ESE	IODINE-131	+0.0741	+0.0894	01/20/98	800422		
		-0.0125	+0.0397	02/03/98	800759		
		+0.0099	+0.0632	02/17/98	800999		
		-0.0207	+0.0489	03/03/98	801293		
		+0.0329	+0.0550	03/17/98	801556		
		+0.0341	+0.0569	03/31/98	801858		
		+0.0793	+0.0956	04/14/98	802102		
		+0.0493	+0.0855	04/28/98	802481		
		+0.0223	+0.0740	05/12/98	802755		
		-0.0212	+0.0501	05/26/98	803035		
		+0.0674	+0.0813	06/09/98	803320		
		+0.0102	+0.0651	06/23/98	803625		
		+0.0114	+0.0425	07/07/98	803939		
		+0.0339	+0.0480	07/21/98	804210		
		+0.0619	+0.0584	08/04/98	804499		
		+0.0373	+0.0623	08/18/98	804767		
		+0.0426	+0.0862	09/01/98	805047		
		+0.0296	+0.0495	09/15/98	805319		
		+0.0541	+0.0564	09/29/98	805608		
		+0.0081	+0.0522	10/13/98	805911		
		+0.0560	+0.0584	10/27/98	806242		
		+0.0569	+0.0594	11/10/98	806501		
		+0.0037	+0.0787	11/23/98	806763		
		+0.0129	+0.0484	12/08/98	807034		
		+0.0868	+0.0557	12/21/98	807315		
			GAMMA SCAN (GELI)				
			AC-228	+1.4643	+3.4679	01/06/98	800194
				+4.4771	+4.4033	02/17/98	800999
				+0.9753	+3.2994	03/03/98	801293
			BI-214	+7.1913	+4.7448	07/07/98	803939
				+5.7271	+2.9842	01/20/98	800422
				+2.7729	+3.0618	02/03/98	800759
				+6.8074	+3.2218	02/17/98	800999
	+6.8908	+3.7587		03/17/98	801556		
	+4.7650	+2.4167		03/31/98	801858		
	+2.8215	+2.1884		04/14/98	802102		
		+2.4396	+8.7812	05/26/98	803035		

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 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN MILK  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO					
3119 NORTON FARM	4.1 MILES ESE	GAMMA SCAN (GELI)								
						BI-214	+0.3106	+2.6845	09/01/98	805047
							+2.8843	+3.8821	09/29/98	805608
			+5.3122	+2.1539	12/21/98	807315				
		K-40	+1455.6000	+84.4040	01/06/98	800194				
			+1490.7000	+88.1310	01/20/98	800422				
			+1413.7000	+96.3290	02/03/98	800759				
			+1253.7000	+82.1620	02/17/98	800999				
			+1414.6000	+108.1700	03/03/98	801293				
			+1346.1000	+97.5520	03/17/98	801556				
			+1344.8000	+92.2260	03/31/98	801858				
			+1254.8000	+214.1300	04/14/98	802102				
			+1148.0000	+83.4500	04/28/98	802481				
			+1509.5000	+107.7400	05/12/98	802755				
			+1287.9000	+106.4700	05/26/98	803035				
			+1361.1000	+95.4380	06/09/98	803320				
			+1439.8000	+98.1170	06/23/98	803625				
			+1437.2000	+97.1630	07/07/98	803939				
			+1409.7000	+84.0400	07/21/98	804210				
			+1326.3000	+92.9980	08/04/98	804499				
			+1540.4000	+95.4200	08/18/98	804767				
			+1324.8000	+81.8770	09/01/98	805047				
			+1217.4000	+102.3100	09/15/98	805319				
			+1188.4000	+75.5940	09/29/98	805608				
			+1454.0000	+100.3000	10/13/98	805911				
			+1424.5000	+107.1300	10/27/98	806242				
			+1297.6000	+86.2310	11/10/98	806501				
			+1497.7000	+110.3900	11/23/98	806763				
			+1569.8000	+101.5600	12/08/98	807034				
			+1431.6000	+91.4400	12/21/98	807315				
		PB-212	+2.7746	+1.4531	01/06/98	800194				
			+0.4084	+1.5860	03/31/98	801858				
			+0.1643	+1.5298	08/18/98	804767				
			+3.2641	+2.7516	11/23/98	806763				
		+1.4318	+1.7458	12/08/98	807034					
	PB-214	+3.2409	+3.0405	01/20/98	800422					
		+1.6585	+2.1859	02/03/98	800759					
		+1.1729	+2.5563	02/17/98	800999					
		+1.1294	+1.6700	03/31/98	801858					

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 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN MILK  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3119 NORTON FARM 4.1 MILES ESE	GAMMA SCAN (GELI) PB-214	+4.1820	+2.4071	04/14/98	802102	
		+1.8574	+2.9934	10/27/98	806242	
	+1.8332	+2.1233	11/10/98	806501		
	+8.7642	+2.8293	12/21/98	807315		
	TL-208	+0.1518	+0.7825	01/06/98	800194	
		+0.6798	+1.0248	09/15/98	805319	
	SR 89		+1.4600	+1.3000	03/03/98	801293
			-1.2299	+1.3100	05/26/98	803035
			+0.3060	+1.1800	08/18/98	804767
			-0.4929	+0.9270	12/08/98	807034
	SR 90		+0.0979	+0.8140	03/03/98	801293
			+1.6300	+0.8740	05/26/98	803035
			+1.3200	+0.7660	08/18/98	804767
			+1.4200	+0.6050	12/08/98	807034

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 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN WET VEGETATION  
 PCI/KG - 0.037 BQ/KG (WET WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO		
			TERM	COLLECTED			
2122 SHADDON FARM 19.5 MILES SW	IODINE-131	-0.4499	+1.4100	01/21/98	800375		
		+2.3800	+3.4000	02/18/98	800953		
		-0.5199	+2.6900	03/18/98	801508		
		+1.8900	+3.8400	04/15/98	802056		
		+0.4300	+1.6200	05/13/98	802709		
		+0.3800	+1.4300	06/10/98	803273		
		+1.8300	+1.9000	07/08/98	803892		
		+2.4100	+2.5100	08/05/98	804452		
		-0.7099	+2.1300	09/02/98	805000		
		+0.8200	+2.9600	09/30/98	805562		
		-1.2199	+2.7000	10/28/98	806177		
		+0.6600	+2.2000	11/23/98	806718		
		+1.4900	+2.1200	12/21/98	807267		
		GAMMA SCAN (GELI)					
		BE-7		+2264.3000	+125.8900	01/21/98	800375
				+2523.1000	+144.4600	02/18/98	800953
				+735.8600	+45.1110	03/18/98	801508
				+463.4400	+47.5790	04/15/98	802056
				+374.9400	+35.6690	05/13/98	802709
				+1090.0000	+71.6630	06/10/98	803273
+647.7300	+43.3600			07/08/98	803892		
+832.7900	+73.9240			08/05/98	804452		
+396.1300	+39.5070			09/02/98	805000		
+439.2800	+48.8430			09/30/98	805562		
+360.1700	+42.0390			10/28/98	806177		
+1145.9000	+79.3870			11/23/98	806718		
+1723.7000	+122.2800			12/21/98	807267		
BI-214				+46.1030	+8.6172	01/21/98	800375
				+43.5860	+7.9438	02/18/98	800953
				+17.8470	+5.6620	03/18/98	801508
				+69.8780	+9.7029	04/15/98	802056
		+14.9870	+5.8711	05/13/98	802709		
		+28.1780	+4.9874	06/10/98	803273		
		+9.8869	+8.3689	07/08/98	803892		
		+39.8510	+10.0590	08/05/98	804452		
		+32.0770	+6.5493	09/02/98	805000		
+44.6300	+10.0900	09/30/98	805562				

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN WET VEGETATION  
 PCI/KG - 0.037 BQ/KG (WET WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
2122 SHADDON FARM 19.5 MILES SW	GAMMA SCAN (GELI) BI-214	+61.0950	+8.6667	10/28/98	806177
		+18.5980	+8.0031	11/23/98	806718
	+39.1740	+7.5614	12/21/98	807267	
	K-40	+4826.6000	+296.1700	01/21/98	800375
		+5229.8000	+295.4800	02/18/98	800953
		+4972.9000	+306.1200	03/18/98	801508
		+4173.5000	+232.1900	04/15/98	802056
		+4499.8000	+264.0900	05/13/98	802709
		+3522.3000	+186.7600	06/10/98	803273
		+6029.8000	+356.9600	07/08/98	803892
		+4536.4000	+314.1300	08/05/98	804452
		+7425.7000	+402.9300	09/02/98	805000
		+6533.3000	+358.6100	09/30/98	805562
		+6446.4000	+376.4700	10/28/98	806177
		+6430.7000	+403.9900	11/23/98	806718
		+5916.8000	+368.4100	12/21/98	807267
		PB-212	+0.6050	+4.0256	04/15/98
	+0.0167		+2.8876	06/10/98	803273
	+3.8718		+3.7720	08/05/98	804452
	PB-214	+3.9053	+4.9878	11/23/98	806718
		+7.5498	+3.8374	12/21/98	807267
		+49.4800	+7.2374	01/21/98	800375
		+35.9790	+8.0578	02/18/98	800953
		+2.4911	+5.2985	03/18/98	801508
		+69.2380	+8.7454	04/15/98	802056
		+6.0398	+6.0301	05/13/98	802709
		+30.7450	+5.2192	06/10/98	803273
		+4.4808	+4.6519	07/08/98	803892
		+32.2890	+9.2417	08/05/98	804452
		+42.4050	+9.2416	09/02/98	805000
		+44.0520	+7.8856	09/30/98	805562
		+54.3640	+11.2720	10/28/98	806177
	TL-208	+26.8430	+11.5340	11/23/98	806718
		+47.4600	+6.6171	12/21/98	807267
		+3.4163	+3.0278	11/23/98	806718
	SR 89	+5.7477	+3.8508	12/21/98	807267
+8.6800		+7.1800	03/18/98	801508	



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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN WET VEGETATION  
 PCI/KG - 0.037 BQ/KG (WET WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3115 LAYMAN FARM 1.3 MILES SSW	GAMMA SCAN (GELI) BI-214	+82.9460	+11.1570	01/20/98	800420	
		+20.4250	+5.3194	02/17/98	800997	
		+32.5830	+8.5630	03/17/98	801554	
		+142.6200	+11.6150	04/14/98	802100	
		+19.9300	+6.7802	05/12/98	802753	
		+34.2430	+8.4473	06/09/98	803318	
		+31.9620	+11.3670	07/07/98	803937	
		+60.7240	+9.8443	08/04/98	804497	
		+21.3880	+8.4030	09/01/98	805045	
		+19.0300	+8.3188	09/29/98	805606	
		+28.2150	+9.0520	10/27/98	806240	
		+43.5610	+26.3880	11/23/98	806761	
		+101.2400	+17.5940	12/21/98	807313	
		K-40	+5353.2000	+330.1400	01/20/98	800420
			+5236.9000	+308.8300	02/17/98	800997
	+6541.4000		+316.3000	03/17/98	801554	
	+6175.7000		+341.2500	04/14/98	802100	
	+5775.6000		+330.8900	05/12/98	802753	
	+4479.6000		+337.3400	06/09/98	803318	
	+6952.4000		+414.1800	07/07/98	803937	
	+6269.3000		+385.9100	08/04/98	804497	
	+7451.0000		+428.6200	09/01/98	805045	
	+7276.0000		+415.7400	09/29/98	805606	
	+7248.4000		+452.6100	10/27/98	806240	
	+6973.2000		+430.2000	11/23/98	806761	
	+5768.6000		+347.9600	12/21/98	807313	
	PB-212		+39.6050	+6.5372	07/07/98	803937
			+2.2096	+4.4425	08/04/98	804497
	PB-214	+63.8450	+10.1920	01/20/98	800420	
		+23.1180	+5.6435	02/17/98	800997	
		+42.3930	+7.8032	03/17/98	801554	
		+106.2300	+10.5940	04/14/98	802100	
		+21.6530	+7.9513	05/12/98	802753	
		+35.2460	+6.4904	06/09/98	803318	
		+18.2080	+7.4739	07/07/98	803937	
		+40.1450	+9.7096	08/04/98	804497	
		+25.9400	+6.6958	09/01/98	805045	
		+14.6050	+5.4066	09/29/98	805606	



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 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN WET VEGETATION  
 PCI/KG - 0.037 BQ/KG (WET WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3209 OWEN HENDERSON FARM 4.8 MILES WSW	GAMMA SCAN (GELI) BE-7	+1447.7000	+92.6800	05/12/98	802762	
		+994.7900	+65.4650	06/09/98	803327	
		+878.3600	+67.2230	07/07/98	803946	
		+1156.9000	+85.3460	08/04/98	804506	
		+469.0700	+42.6120	09/01/98	805054	
		+545.1100	+66.1340	09/29/98	805615	
		+384.5000	+49.7380	10/27/98	806258	
		+1315.0000	+104.2000	11/23/98	806770	
		+1860.8000	+110.2600	12/21/98	807322	
		BI-214	+70.0270	+12.7840	01/20/98	800429
			+40.5140	+5.1316	02/17/98	801006
			+24.9470	+8.6530	03/17/98	801563
			+59.7200	+7.3235	04/14/98	802109
			+57.3210	+12.3430	05/12/98	802762
			+42.9740	+8.8747	06/09/98	803327
			+22.9410	+7.1416	07/07/98	803946
			+36.2420	+9.1420	08/04/98	804506
			+84.2710	+14.7470	09/01/98	805054
	+30.3470		+9.3985	09/29/98	805615	
	+135.8800		+16.0830	10/27/98	806258	
	+35.2520		+13.7700	11/23/98	806770	
	+47.3730		+11.4690	12/21/98	807322	
	K-40		+4582.6000	+340.3600	01/20/98	800429
		+3337.5000	+203.1200	02/17/98	801006	
		+7148.4000	+377.3500	03/17/98	801563	
		+5349.0000	+270.3800	04/14/98	802109	
		+5351.5000	+1228.1000	05/12/98	802762	
		+3892.8000	+247.8300	06/09/98	803327	
		+6840.6000	+375.9000	07/07/98	803946	
		+5424.1000	+356.6800	08/04/98	804506	
		+7175.9000	+425.9600	09/01/98	805054	
		+5894.7000	+316.9600	09/29/98	805615	
		+6995.3000	+422.1800	10/27/98	806258	
		+6042.6000	+411.2700	11/23/98	806770	
		+4583.4000	+317.8500	12/21/98	807322	
		PB-212	+10.0410	+5.2450	08/04/98	804506
	+7.8048		+4.9078	10/27/98	806258	
	PB-214	+81.3920	+13.7540	01/20/98	800429	

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 PCI/KG - 0.037 BQ/KG (WET WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3209 OWEN HENDERSON FARM 4.8 MILES WSW	GAMMA SCAN (GELI) PB-214	+46.6350	+7.5103	02/17/98	801006	
		+29.2940	+6.9052	03/17/98	801563	
		+50.5400	+7.3729	04/14/98	802109	
		+61.3820	+11.2300	05/12/98	802762	
		+46.2760	+8.1808	06/09/98	803327	
		+34.2580	+7.9709	07/07/98	803946	
		+18.5430	+7.0825	08/04/98	804506	
		+51.0510	+12.7090	09/01/98	805054	
		+17.4930	+7.4575	09/29/98	805615	
		+115.2000	+10.6330	10/27/98	806258	
	TL-208	+36.2880	+19.2200	11/23/98	806770	
		+33.8700	+7.7922	12/21/98	807322	
		SR 89	+6.3642	+3.6074	09/01/98	805054
			-2.0399	+10.8200	03/17/98	801563
		SR 90	+12.2800	+12.9500	06/09/98	803327
	-10.8299		+50.2900	09/01/98	805054	
	+4.3700		+12.8700	11/23/98	806770	
	+33.2800		+5.5300	03/17/98	801563	
	+28.6200		+5.1800	06/09/98	803327	
	+23.5700	+5.5300	09/01/98	805054		
+10.9000	+4.0700	11/23/98	806770			

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN SOIL  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
2116 RM-2 DAYTON TN 15.0 MILES SW	GAMMA SCAN (GELI)			
	AC-228	+0.7576	+0.0539	07/07/98 803736
		+0.7343	+0.0624	06/30/98 803737
		+0.7502	+0.0547	07/07/98 803738
	BE-7	+0.1698	+0.0362	07/07/98 803736
		+0.5117	+0.0620	06/30/98 803737
	BI-212	+0.8813	+0.1053	07/07/98 803736
		+0.8415	+0.0820	06/30/98 803737
		+0.6793	+0.1845	07/07/98 803738
	BI-214	+0.7391	+0.0412	07/07/98 803736
		+0.6105	+0.0415	06/30/98 803737
		+0.6669	+0.0436	07/07/98 803738
	CS-137	+0.0508	+0.0078	07/07/98 803736
		+0.0590	+0.0071	06/30/98 803737
		+0.0498	+0.0096	07/07/98 803738
	K-40	+3.0861	+0.2031	07/07/98 803736
		+3.0370	+0.2644	06/30/98 803737
		+2.8639	+0.2620	07/07/98 803738
	PB-212	+0.8116	+0.0407	07/07/98 803736
		+0.7215	+0.0368	06/30/98 803737
		+0.7859	+0.0514	07/07/98 803738
	PB-214	+0.7922	+0.0413	07/07/98 803736
		+0.6710	+0.0363	06/30/98 803737
		+0.7642	+0.0451	07/07/98 803738
	RA-224	+0.8330	+0.1354	07/07/98 803736
		+0.7231	+0.1164	06/30/98 803737
	RA-226	+0.7391	+0.0412	07/07/98 803736
	+0.6105	+0.0415	06/30/98 803737	
	+0.6669	+0.0436	07/07/98 803738	
TL-208	+0.2438	+0.0160	07/07/98 803736	
	+0.2188	+0.0147	06/30/98 803737	
	+0.2505	+0.0168	07/07/98 803738	
SR 89				
		+0.3530	+0.3350	07/07/98 803736
		-0.0974	+0.3110	06/30/98 803737
		+0.0506	+0.3360	07/07/98 803738
SR 90				
		-0.0992	+0.1540	07/07/98 803736

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 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
2116 RM-2 DAYTON TN 15.0 MILES SW	SR 90	+0.1450	+0.1340	06/30/98	803737	
		+0.1750	+0.1520	07/07/98	803738	
3101 LM1 0.5 MILES SSW	GAMMA SCAN (GELI)					
	AC-228	+1.1219	+0.0683	06/30/98	803764	
	BI-212	+1.1177	+0.1170	06/30/98	803764	
	BI-214	+0.7452	+0.0397	06/30/98	803764	
	CS-137	+0.0863	+0.0118	06/30/98	803764	
	K-40	+13.1800	+0.6192	06/30/98	803764	
	PB-212	+1.1188	+0.0674	06/30/98	803764	
	PB-214	+0.8734	+0.0428	06/30/98	803764	
	RA-226	+0.7452	+0.0397	06/30/98	803764	
	TL-208	+0.3586	+0.0188	06/30/98	803764	
	SR 89					
			+0.0309	+0.3720	06/30/98	803764
	SR 90					
			+0.0854	+0.1110	06/30/98	803764
3102 LM2 0.5 MILES N	GAMMA SCAN (GELI)					
	AC-228	+1.4793	+0.0956	06/30/98	803768	
	BI-212	+1.5016	+0.1552	06/30/98	803768	
	BI-214	+1.2366	+0.0589	06/30/98	803768	
	CS-137	+0.5820	+0.0336	06/30/98	803768	
	K-40	+21.0670	+1.0167	06/30/98	803768	
	PB-212	+1.4389	+0.0617	06/30/98	803768	
	PB-214	+1.4069	+0.0720	06/30/98	803768	
	RA-224	+1.2703	+0.1966	06/30/98	803768	
	RA-226	+1.2366	+0.0589	06/30/98	803768	
	TL-208	+0.4926	+0.0330	06/30/98	803768	
	SR 89					
			+0.2600	+0.3490	06/30/98	803768
	SR 90					
		+0.0626	+0.1060	06/30/98	803768	
3106 PM2 SPRING CITY 7.0 MILES NW	GAMMA SCAN (GELI)					
	AC-228	+0.9249	+0.0632	06/30/98	803771	

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 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE			
			TERM	COLLECTED	LAB NO	
3106 PM2 SPRING CITY 7.0 MILES NW	GAMMA SCAN (GELI)					
	BI-212	+0.9422	+0.1016	06/30/98	803771	
	BI-214	+0.5350	+0.0323	06/30/98	803771	
	CS-137	+0.7796	+0.0401	06/30/98	803771	
	K-40	+10.1830	+0.5155	06/30/98	803771	
	PB-212	+0.8926	+0.0427	06/30/98	803771	
	PB-214	+0.5975	+0.0400	06/30/98	803771	
	RA-224	+0.9299	+0.1306	06/30/98	803771	
	RA-226	+0.5350	+0.0323	06/30/98	803771	
	TL-208	+0.2655	+0.0166	06/30/98	803771	
	SR 89					
			+0.8480	+0.5160	06/30/98	803771
	SR 90					
			-0.0510	+0.1500	06/30/98	803771
3107 PM3 10.4 MILES NNE	GAMMA SCAN (GELI)					
	AC-228	+0.7849	+0.0621	06/30/98	803774	
	BE-7	+0.1601	+0.0390	06/30/98	803774	
	BI-212	+0.9060	+0.0928	06/30/98	803774	
	BI-214	+0.8169	+0.0479	06/30/98	803774	
	CS-137	+0.2508	+0.0174	06/30/98	803774	
	K-40	+3.9115	+0.2456	06/30/98	803774	
	PB-212	+0.8118	+0.0455	06/30/98	803774	
	PB-214	+0.9035	+0.0457	06/30/98	803774	
	RA-224	+0.6404	+0.1712	06/30/98	803774	
	RA-226	+0.8169	+0.0479	06/30/98	803774	
	TL-208	+0.2585	+0.0199	06/30/98	803774	
	SR 89					
			+0.0839	+0.3720	06/30/98	803774
SR 90						
		+0.0665	+0.1120	06/30/98	803774	
3108 PM4 7.6 MILES NE/ENE	GAMMA SCAN (GELI)					
	AC-228	+1.0910	+0.0716	07/01/98	803778	
	BI-212	+1.0557	+0.1178	07/01/98	803778	

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 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3108 PM4 7.6 MILES NE/ENE	GAMMA SCAN (GELI)					
	BI-214	+0.6511	+0.0408	07/01/98	803778	
	CS-137	+0.0291	+0.0055	07/01/98	803778	
	K-40	+12.3420	+0.6093	07/01/98	803778	
	PB-212	+0.9752	+0.0614	07/01/98	803778	
	PB-214	+0.7187	+0.0397	07/01/98	803778	
	RA-226	+0.6511	+0.0408	07/01/98	803778	
	TL-208	+0.3129	+0.0189	07/01/98	803778	
	SR 89					
			-0.5809	+0.4750	07/01/98	803778
	SR 90					
		+0.3080	+0.1480	07/01/98	803778	
3109 PM5 DECATUR 6.2 MILES S	GAMMA SCAN (GELI)					
	AC-228	+1.1038	+0.0690	07/01/98	803781	
	BI-212	+1.1774	+0.0937	07/01/98	803781	
	BI-214	+0.7284	+0.0416	07/01/98	803781	
	CS-137	+0.3568	+0.0214	07/01/98	803781	
	K-40	+4.0890	+0.2423	07/01/98	803781	
	PB-212	+1.1159	+0.0560	07/01/98	803781	
	PB-214	+0.7655	+0.0438	07/01/98	803781	
	RA-224	+1.2228	+0.1688	07/01/98	803781	
	RA-226	+0.7284	+0.0416	07/01/98	803781	
	TL-208	+0.3462	+0.0195	07/01/98	803781	
SR 89						
		+0.4660	+0.4770	07/01/98	803781	
SR 90						
		+0.0327	+0.1270	07/01/98	803781	
3203 LM3 1.9 MILES NNE	GAMMA SCAN (GELI)					
	AC-228	+0.8537	+0.0666	06/30/98	803784	
	BI-212	+0.8854	+0.0795	06/30/98	803784	
	BI-214	+0.7680	+0.0429	06/30/98	803784	
	CS-137	+0.4580	+0.0282	06/30/98	803784	
K-40	+3.3809	+0.2379	06/30/98	803784		

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 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3203 LM3  1.9 MILES NNE	GAMMA SCAN (GELI)					
	PB-212	+0.8263	+0.0402	06/30/98	803784	
	PB-214	+0.8179	+0.0377	06/30/98	803784	
	RA-224	+1.0267	+0.1251	06/30/98	803784	
	RA-226	+0.7680	+0.0429	06/30/98	803784	
	TL-208	+0.2709	+0.0159	06/30/98	803784	
	SR 89					
			+0.6770	+0.3980	06/30/98	803784
	SR 90					
			-0.0796	+0.1030	06/30/98	803784
3204 LM-4 WB  0.9 MILES SE	GAMMA SCAN (GELI)					
	AC-228	+1.3044	+0.0868	07/01/98	803787	
	BI-212	+1.1653	+0.1274	07/01/98	803787	
	BI-214	+0.7096	+0.0416	07/01/98	803787	
	CS-137	+0.0400	+0.0074	07/01/98	803787	
	K-40	+25.5860	+1.0587	07/01/98	803787	
	PB-212	+1.1593	+0.0582	07/01/98	803787	
	PB-214	+0.8008	+0.0422	07/01/98	803787	
	RA-224	+1.5353	+0.2188	07/01/98	803787	
	RA-226	+0.7096	+0.0416	07/01/98	803787	
TL-208	+0.3492	+0.0259	07/01/98	803787		
SR 89						
		-0.0052	+0.4670	07/01/98	803787	
SR 90						
		+0.0748	+0.1250	07/01/98	803787	
3205 RM-3 WB  15 MILES NNW	GAMMA SCAN (GELI)					
	AC-228	+0.5418	+0.0428	06/30/98	803790	
	BE-7	+0.1089	+0.0346	06/30/98	803790	
	BI-212	+0.6424	+0.0712	06/30/98	803790	
	BI-214	+0.5105	+0.0345	06/30/98	803790	
	CS-137	+0.5629	+0.0324	06/30/98	803790	
	K-40	+4.8806	+0.3167	06/30/98	803790	
	PB-212	+0.5595	+0.0338	06/30/98	803790	

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 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION		ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE TERM COLLECTED LAB NO
3205 RM-3 WB	15 MILES NNW	GAMMA SCAN (GELI)		
		PB-214	+0.5495	+0.0333 06/30/98 803790
		RA-224	+0.7169	+0.1209 06/30/98 803790
		RA-226	+0.5105	+0.0345 06/30/98 803790
		TL-208	+0.1866	+0.0151 06/30/98 803790
		SR 89		
		SR 90	+0.4460	+0.6080 06/30/98 803790
			+0.0809	+0.1580 06/30/98 803790

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CORN  
 PCI/KG - 0.037 BQ/KG (WET WT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
2116 RM-2 DAYTON TN      15.0 MILES SW	GAMMA SCAN (GELI)			
	BI-214	+4.5053	+6.1142	07/21/98 804545
	K-40	+1751.4000	+130.2500	07/21/98 804545
	PB-214	+10.1960	+5.2679	07/21/98 804545
3172 2.0 MILES NW	GAMMA SCAN (GELI)			
	BI-214	+15.5080	+7.1050	07/07/98 804248
	K-40	+1887.0000	+154.2200	07/07/98 804248
	PB-214	+14.3080	+8.2572	07/07/98 804248

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN GREEN BEANS  
 PCI/KG - 0.037 BQ/KG (WET WT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE TERM COLLECTED LAB NO
2116 RM-2 DAYTON TN      15.0 MILES SW	GAMMA SCAN (GELI)		
	BI-214	+35.4370	+9.9570 08/04/98 802398
	K-40	+1700.4000	+174.7100 08/04/98 802398
	PB-214	+38.0360	+8.4528 08/04/98 802398
3172 2.0 MILES NW	GAMMA SCAN (GELI)		
	K-40	+2184.1000	+259.8200 06/30/98 804104

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN POTATOES  
 PCI/KG - 0.037 BQ/KG (WET WT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
2116 RM-2 DAYTON TN      15.0 MILES SW	GAMMA SCAN (GELI)			
	BI-214	+38.9850	+10.6860	08/18/98 802394
	K-40	+3620.9000	+258.1700	08/18/98 802394
3172 2.0 MILES NW	PB-214	+21.4180	+7.6043	08/18/98 802394
	GAMMA SCAN (GELI)			
	BI-214	+28.2720	+9.3054	07/07/98 804246
	K-40	+3828.5000	+276.8000	07/07/98 804246
	PB-214	+28.9590	+7.8758	07/07/98 804246

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN TOMATOES  
 PCI/KG - 0.037 BQ/KG (WET WT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
2116 RM-2 DAYTON TN      15.0 MILES SW	GAMMA SCAN (GELI)			
	BI-214	+10.4180	+8.3285	08/04/98 802400
	K-40	+2307.3000	+195.4600	08/04/98 802400
	PB-214	+13.2520	+7.1397	08/04/98 802400
3172 2.0 MILES NW	GAMMA SCAN (GELI)			
	BI-214	+13.0650	+10.0870	07/07/98 804249
	K-40	+2065.3000	+175.3500	07/07/98 804249
	PB-212	+5.3210	+4.8017	07/07/98 804249
	PB-214	+5.6340	+6.6979	07/07/98 804249

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN TURNIP GREENS  
 PCI/KG - 0.037 BQ/KG (WET WT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
2116 RM-2 DAYTON TN      15.0 MILES SW	GAMMA SCAN (GELI)			
	BI-214	+109.8000	+14.7640	11/03/98 806635
	K-40	+1917.9000	+174.6600	11/03/98 806635
	PB-214	+62.1390	+9.6888	11/03/98 806635
3172 2.0 MILES NW	GAMMA SCAN (GELI)			
	BI-214	+30.5020	+12.7490	10/20/98 806416
	K-40	+2339.1000	+227.3400	10/20/98 806416
	PB-214	+14.7160	+11.3950	10/20/98 806416

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTIN. SURFACE WATER(Total)  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
3133 TRM 529.3	GROSS BETA				
		+3.4967	+0.7445	01/06/98	800197
		+3.0039	+0.6298	02/03/98	800762
		+2.8493	+0.6319	03/03/98	801296
		+2.0288	+0.6099	03/31/98	801861
		+2.5983	+0.6028	04/28/98	802484
		+3.3962	+0.7028	05/26/98	803038
		+2.9768	+0.6640	06/23/98	803628
		+2.8460	+0.6764	07/21/98	804213
		+3.2831	+0.6615	08/18/98	804770
		+2.6250	+0.6194	09/15/98	805322
		+2.3335	+0.6214	10/13/98	805914
		+2.7330	+0.6151	11/10/98	806504
		+2.1307	+0.5815	12/08/98	807037
	GAMMA SCAN (GELI)				
		NO ACTIVITY DETECTED		02/03/98	800762
		NO ACTIVITY DETECTED		05/26/98	803038
		NO ACTIVITY DETECTED		06/23/98	803628
		NO ACTIVITY DETECTED		12/08/98	807037
	AC-228	+1.2359	+3.4496	03/31/98	801861
	+3.9234	+4.3318	04/28/98	802484	
BI-214	+8.4563	+3.2253	01/06/98	800197	
	+7.1035	+3.2736	03/03/98	801296	
	+14.0020	+3.2076	04/28/98	802484	
	+2.8851	+2.9940	08/18/98	804770	
	+3.9804	+3.0452	09/15/98	805322	
	+5.2522	+2.9404	10/13/98	805914	
	+10.3920	+4.0901	11/10/98	806504	
K-40	+33.1700	+21.8880	03/31/98	801861	
	+9.0375	+10.6970	07/21/98	804213	
	+10.0200	+16.7850	08/18/98	804770	
	+7.1939	+17.2860	09/15/98	805322	
PB-212	+0.4494	+1.8150	01/06/98	800197	
	+0.5620	+2.5008	04/28/98	802484	
PB-214	+0.9125	+2.1362	01/06/98	800197	
	+4.6539	+3.6834	03/03/98	801296	
	+2.9655	+3.1141	03/31/98	801861	
	+8.1955	+3.5863	04/28/98	802484	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTIN. SURFACE WATER(Total)  
 PCI/L - 0.037 Bq/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3133 TRM 529.3	GAMMA SCAN (GELI) PB-214	+2.7918	+3.3529	07/21/98	804213	
		+1.4783	+2.0891	09/15/98	805322	
	TL-208	+4.6482	+1.9941	11/10/98	806504	
		+2.1839	+1.0858	01/06/98	800197	
	SR 89	+0.5181	+1.2495	04/28/98	802484	
			-2.1999	+1.3300	03/03/98	801307
	SR 90		+1.0900	+1.3100	05/26/98	803049
			-0.6449	+1.6900	08/18/98	804781
			+1.4200	+1.5400	12/08/98	807048
			+1.1700	+0.5510	03/03/98	801307
			+0.2310	+0.6690	05/26/98	803049
			+0.1980	+0.4480	08/18/98	804781
	TRITIUM		+0.1390	+0.5460	12/08/98	807048
			+76.1900	+74.6700	03/03/98	801307
		-38.4999	+78.4700	05/26/98	803049	
		+126.9300	+81.4800	08/18/98	804781	
3134 TRM 517.9	GROSS BETA	+145.9800	+76.7800	12/08/98	807048	
			+2.2257	+0.6835	01/06/98	800199
		+3.7512	+0.6690	02/03/98	800764	
		+2.6967	+0.6164	03/03/98	801298	
		+2.0485	+0.6032	03/31/98	801863	
		+3.6964	+0.6657	04/28/98	802486	
		+2.4739	+0.6565	05/26/98	803040	
		+2.0742	+0.6140	06/23/98	803630	
		+1.8618	+0.6049	07/21/98	804215	
		+3.6758	+0.6830	08/18/98	804772	
		+2.6189	+0.6280	09/15/98	805324	
		+2.4758	+0.6280	10/13/98	805916	
		+3.3186	+0.6455	11/10/98	806506	
		+1.8540	+0.5650	12/08/98	807039	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTIN. SURFACE WATER(Total)  
 PCI/L - 0.037 Bq/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
3134 TRM 517.9	GAMMA SCAN (GELI)					
		NO ACTIVITY DETECTED		03/31/98	801863	
		NO ACTIVITY DETECTED		06/23/98	803630	
	AC-228	+9.4265	+6.2326	05/26/98	803040	
	BI-214	+11.8790	+3.9313	01/06/98	800199	
		+16.6440	+3.7974	02/03/98	800764	
		+2.2382	+3.3921	03/03/98	801298	
		+3.4002	+3.5145	04/28/98	802486	
		+2.3743	+2.9473	07/21/98	804215	
		+0.5042	+2.8055	10/13/98	805916	
		+27.9810	+6.9836	11/10/98	806506	
	K-40	+10.0810	+14.0790	02/03/98	800764	
		+27.3220	+16.7460	09/15/98	805324	
		+13.6170	+12.4440	10/13/98	805916	
		+12.7030	+16.0550	11/10/98	806506	
		+5.0878	+13.9360	12/08/98	807039	
	PB-212	+0.3450	+2.2899	08/18/98	804772	
	PB-214	+5.5866	+4.1803	01/06/98	800199	
		+10.1000	+3.6350	02/03/98	800764	
		+0.3411	+2.6624	04/28/98	802486	
	SR 89		+1.0900	+1.4100	03/03/98	801308
			+0.1340	+1.3100	05/26/98	803050
			-0.9129	+1.8300	08/18/98	804782
		+1.5200	+1.6400	12/08/98	807049	
SR 90		-0.1699	+0.5550	03/03/98	801308	
		+0.2800	+0.6660	05/26/98	803050	
		+0.7070	+0.4940	08/18/98	804782	
		+0.5590	+0.5860	12/08/98	807049	
TRITIUM		+119.3700	+75.5400	03/03/98	801308	
		-217.4399	+77.1600	05/26/98	803050	
		+74.8000	+80.0800	08/18/98	804782	
		+153.8500	+73.7200	12/08/98	807049	
3135 TRM 523.1	GROSS BETA					
		+1.3776	+0.6347	01/06/98	800200	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTIN. SURFACE WATER(Total)  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO		
			TERM	COLLECTED			
3135 TRM 523.1	GROSS BETA	+3.2346	+0.6367	02/03/98	800765		
		+2.0359	+0.5795	03/03/98	801299		
		+2.7367	+0.6374	03/31/98	801864		
		+1.2964	+0.5284	04/28/98	802487		
		+3.2846	+0.7066	05/26/98	803041		
		+3.0576	+0.6963	06/23/98	803631		
		+2.0535	+0.6078	07/21/98	804216		
		+3.0665	+0.6345	08/18/98	804773		
		+7.6132	+0.9160	09/15/98	805325		
		+2.7133	+0.6424	10/13/98	805917		
		+2.3841	+0.5922	11/10/98	806507		
		+2.0266	+0.5766	12/08/98	807040		
		GAMMA SCAN (GELI)	NO ACTIVITY DETECTED			06/23/98	803631
			NO ACTIVITY DETECTED			07/21/98	804216
			BI-214	+4.3754	+3.2265	01/06/98	800200
				+4.7669	+3.1951	02/03/98	800765
				+5.1594	+3.6320	03/03/98	801299
+2.7107	+2.6026			03/31/98	801864		
+10.2670	+3.3366			04/28/98	802487		
+1.2445	+1.7533			08/18/98	804773		
+2.6880	+3.1101			09/15/98	805325		
+1.0252	+9.0973			10/13/98	805917		
+29.3180	+5.0921			11/10/98	806507		
+0.2947	+3.3668			12/08/98	807040		
K-40	+4.0438			+11.7510	08/18/98	804773	
	+13.6940			+13.7890	10/13/98	805917	
	+9.8362			+11.2300	11/10/98	806507	
PB-212	+0.5426			+2.1900	03/31/98	801864	
	+3.6447			+2.7324	05/26/98	803041	
	+3.7542	+3.8997	12/08/98	807040			
PB-214	+6.0527	+3.9946	01/06/98	800200			
	+3.3406	+3.8723	02/03/98	800765			
	+1.9641	+3.3867	03/31/98	801864			
	+10.8250	+4.0590	04/28/98	802487			
	+0.5770	+2.7073	08/18/98	804773			
	+12.8650	+3.7501	11/10/98	806507			

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 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTIN. SURFACE WATER(Total)  
 PCI/L - 0.037 Bq/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		
			TERM	COLLECTED LAB NO	
3135 TRM 523.1	GAMMA SCAN (GELI) TL-208	+1.0340	+1.6377	04/28/98	802487
		SR 89			
		-0.4699	+1.5200	03/03/98	801309
		+1.7900	+1.2700	05/26/98	803051
		+1.1900	+2.0000	08/18/98	804783
		+2.3200	+1.6600	12/08/98	807050
	SR 90				
		+1.1700	+0.6210	03/03/98	801309
		-0.2119	+0.6390	05/26/98	803051
		+0.1980	+0.5230	08/18/98	804783
		-0.0696	+0.5780	12/08/98	807050
	TRITIUM				
		-68.5499	+75.6100	03/03/98	801309
		-37.5799	+77.5200	05/26/98	803051
	+177.3900	+81.7400	08/18/98	804783	
	+2.5700	+76.1000	12/08/98	807050	

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 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTINUOUS PUBLIC WATER  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO		
			TERM	COLLECTED			
2116 RM-2 DAYTON TN 15.0 MILES SW	GROSS BETA	+2.6117	+0.7145	01/20/98	800373		
		+3.8797	+0.6780	02/17/98	800950		
		+3.3932	+0.6598	03/17/98	801506		
		+2.8907	+0.6314	05/12/98	802707		
		+2.8539	+0.6426	06/09/98	803271		
		+2.6079	+0.6489	07/07/98	803890		
		+2.1629	+0.6258	08/04/98	804450		
		+1.9205	+0.5850	09/01/98	804998		
		+3.0476	+0.6392	09/29/98	805559		
		+2.4531	+0.6319	10/27/98	806175		
		+3.2209	+0.6264	11/23/98	806715		
		+4.2237	+0.7111	12/21/98	807265		
		GAMMA SCAN (GELI)	AC-228	+1.8623	+3.1914	05/12/98	802707
				+2.7354	+4.9151	08/04/98	804450
				+5.7597	+5.8293	09/01/98	804998
			BI-214	+24.4740	+5.1419	01/20/98	800373
				+9.6574	+3.2696	02/17/98	800950
				+23.9140	+3.9698	03/17/98	801506
	+9.1149			+2.9039	05/12/98	802707	
	+8.2474			+2.9028	06/09/98	803271	
	+4.9427			+3.2747	07/07/98	803890	
	+2.4480			+2.9969	08/04/98	804450	
	+9.1473			+3.7028	09/01/98	804998	
	+20.5000			+4.4637	10/27/98	806175	
+10.8210	+3.6773			11/23/98	806715		
K-40	+13.5330		+2.4810	12/21/98	807265		
	+10.8880		+18.8610	05/12/98	802707		
	+3.5250		+15.8020	06/09/98	803271		
	+36.5080	+25.3350	08/04/98	804450			
	+21.5590	+18.5960	09/01/98	804998			
	+4.7618	+22.6180	09/29/98	805559			
	+28.7360	+22.6750	12/21/98	807265			
	PB-212	+0.7173	+1.6711	08/04/98	804450		
+1.1656		+2.1159	09/01/98	804998			
+0.6525		+1.6693	10/27/98	806175			
+0.0371		+2.1109	12/21/98	807265			

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 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTINUOUS PUBLIC WATER  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
2116 RM-2 DAYTON TN 15.0 MILES SW	GAMMA SCAN (GELI) PB-214	+20.0030	+5.3189	01/20/98	800373	
		+4.6412	+3.4991	02/17/98	800950	
		+15.6080	+3.4995	03/17/98	801506	
		+0.7295	+4.7827	05/12/98	802707	
		+4.2931	+2.6342	08/04/98	804450	
		+2.3284	+1.9690	09/01/98	804998	
		+4.6739	+3.4752	10/27/98	806175	
		+6.1670	+3.3787	11/23/98	806715	
		+12.6260	+3.7996	12/21/98	807265	
		+2.2640	+1.3357	08/04/98	804450	
	TL-208	+0.7972	+1.5204	12/21/98	807265	
		SR 89				
			+0.1630	+1.1100	03/17/98	801599
			+1.9300	+1.6200	06/09/98	803363
			+1.8900	+1.7500	09/01/98	805090
	SR 90		-1.9099	+1.3200	12/21/98	807358
			+0.3600	+0.5360	03/17/98	801599
			-0.2129	+0.6200	06/09/98	803363
			-0.0950	+0.5530	09/01/98	805090
TRITIUM		+1.4800	+0.5930	12/21/98	807358	
		+124.1800	+75.4800	03/17/98	801599	
		-308.4999	+75.6000	06/09/98	803363	
		-15.1299	+76.2300	09/01/98	805090	
		+93.8900	+75.3100	12/21/98	807358	
2140 CF INDUSTRIES TRM 473.0	GROSS BETA	+1.5714	+0.6344	01/20/98	800377	
		+3.6809	+0.6563	02/17/98	800955	
		+3.2571	+0.6337	03/16/98	801510	
		+2.6441	+0.6037	04/09/98	802058	
		+2.6703	+0.6300	05/06/98	802711	
		+3.5674	+0.6780	06/09/98	803275	
		+2.4750	+0.6403	07/08/98	803895	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTINUOUS PUBLIC WATER  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO	
2140 CF INDUSTRIES	TRM 473.0	GROSS BETA				
			+2.8273	+0.6591	07/30/98	804454
			+2.2360	+0.5982	08/26/98	805002
			+2.9228	+0.6204	09/24/98	805564
			+2.4519	+0.6107	10/27/98	806179
			+2.3017	+0.5814	11/24/98	806720
			+3.4227	+0.6435	12/15/98	807270
		GAMMA SCAN (GELI)				
			NO ACTIVITY DETECTED		07/30/98	804454
		AC-228	+3.2250	+3.7346	05/06/98	802711
			+1.7634	+3.8615	12/15/98	807270
		BI-214	+20.8050	+3.5115	01/20/98	800377
			+26.4380	+4.7842	02/17/98	800955
			+16.4870	+3.7301	05/06/98	802711
			+1.8617	+2.7267	08/26/98	805002
			+4.7565	+3.8473	09/24/98	805564
			+22.4820	+4.4680	10/27/98	806179
			+14.7550	+3.5208	11/24/98	806720
			+12.9000	+3.5482	12/15/98	807270
		K-40	+9.2475	+12.3590	01/20/98	800377
	+16.3960	+24.4340	03/16/98	801510		
	+3.6012	+20.1960	04/09/98	802058		
	+14.9910	+23.5120	06/09/98	803275		
	+4.3235	+17.5240	07/08/98	803895		
	+1.6815	+12.4890	10/27/98	806179		
PB-212	+1.7191	+2.2950	02/17/98	800955		
	+0.8812	+1.8944	06/09/98	803275		
PB-214	+14.8770	+3.0361	01/20/98	800377		
	+18.1300	+4.0719	02/17/98	800955		
	+16.8950	+3.5421	05/06/98	802711		
	+4.7678	+4.3051	09/24/98	805564		
	+7.6074	+3.0570	10/27/98	806179		
	+1.3096	+2.7391	11/24/98	806720		
	+6.4686	+4.1560	12/15/98	807270		
TL-208	+1.0638	+0.7705	01/20/98	800377		
	+0.7818	+1.0743	02/17/98	800955		
	+0.0603	+1.2856	04/09/98	802058		
SR 89		+3.1900	+1.3400	03/16/98	801600	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTINUOUS PUBLIC WATER  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE			
			TERM COLLECTED	LAB NO		
2140 CF INDUSTRIES TRM 473.0	SR 89	+1.9100	+1.6900	06/09/98	803364	
		+2.3800	+1.8900	08/26/98	805091	
		+0.3030	+1.5800	12/15/98	807359	
	SR 90	-0.6019	+0.6300	03/16/98	801600	
		-0.3059	+0.6420	06/09/98	803364	
		-0.0753	+0.5500	08/26/98	805091	
		+0.7060	+0.6310	12/15/98	807359	
	TRITIUM	+73.5100	+74.4700	03/16/98	801600	
		-82.4999	+76.7200	06/09/98	803364	
		+68.1400	+77.7400	08/26/98	805091	
		+109.7400	+78.0000	12/15/98	807359	
	3133 TRM 529.3	GROSS BETA	+3.4967	+0.7445	01/06/98	800197
			+3.0039	+0.6298	02/03/98	800762
+2.8493			+0.6319	03/03/98	801296	
+2.0288			+0.6099	03/31/98	801861	
+2.5983			+0.6028	04/28/98	802484	
+3.3962			+0.7028	05/26/98	803038	
+2.9768			+0.6640	06/23/98	803628	
+2.8460			+0.6764	07/21/98	804213	
+3.2831			+0.6615	08/18/98	804770	
+2.6250			+0.6194	09/15/98	805322	
+2.3335			+0.6214	10/13/98	805914	
+2.7330			+0.6151	11/10/98	806504	
+2.1307			+0.5815	12/08/98	807037	
GAMMA SCAN (GELI)			NO ACTIVITY DETECTED		02/03/98	800762
			NO ACTIVITY DETECTED		05/26/98	803038
			NO ACTIVITY DETECTED		06/23/98	803628
			NO ACTIVITY DETECTED		12/08/98	807037
			AC-228	+1.2359	+3.4496	03/31/98
			+3.9234	+4.3318	04/28/98	802484

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTINUOUS PUBLIC WATER  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO	
			TERM	COLLECTED		
3133 TRM 529.3	GAMMA SCAN (GELI) BI-214	+8.4563	+3.2253	01/06/98	800197	
		+7.1035	+3.2736	03/03/98	801296	
		+14.0020	+3.2076	04/28/98	802484	
		+2.8851	+2.9940	08/18/98	804770	
		+3.9804	+3.0452	09/15/98	805322	
		+5.2522	+2.9404	10/13/98	805914	
		+10.3920	+4.0901	11/10/98	806504	
		K-40	+33.1700	+21.8880	03/31/98	801861
			+9.0375	+10.6970	07/21/98	804213
			+10.0200	+16.7850	08/18/98	804770
	PB-212	+7.1939	+17.2860	09/15/98	805322	
		+0.4494	+1.8150	01/06/98	800197	
	PB-214	+0.5620	+2.5008	04/28/98	802484	
		+0.9125	+2.1362	01/06/98	800197	
		+4.6539	+3.6834	03/03/98	801296	
		+2.9655	+3.1141	03/31/98	801861	
		+8.1955	+3.5863	04/28/98	802484	
		+2.7918	+3.3529	07/21/98	804213	
		+1.4783	+2.0891	09/15/98	805322	
		+4.6482	+1.9941	11/10/98	806504	
	TL-208	+2.1839	+1.0858	01/06/98	800197	
		+0.5181	+1.2495	04/28/98	802484	
	SR 89		-2.1999	+1.3300	03/03/98	801307
			+1.0900	+1.3100	05/26/98	803049
			-0.6449	+1.6900	08/18/98	804781
			+1.4200	+1.5400	12/08/98	807048
	SR 90		+1.1700	+0.5510	03/03/98	801307
		+0.2310	+0.6690	05/26/98	803049	
		+0.1980	+0.4480	08/18/98	804781	
		+0.1390	+0.5460	12/08/98	807048	
TRITIUM		+76.1900	+74.6700	03/03/98	801307	
		-38.4999	+78.4700	05/26/98	803049	

TENNESSEE VALLEY AUTHORITY  
ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
RADIOACTIVITY IN CONTINUOUS PUBLIC WATER  
PCI/L - 0.037 BQ/L  
12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION

ANALYSIS  
(NUCLIDE)

ACTIVITY

ERROR DATE  
TERM COLLECTED LAB NO

3133 TRM 529.3

TRITIUM

+126.9300  
+145.9800

+81.4800 08/18/98 804781  
+76.7800 12/08/98 807048

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTIN. WELL WATER(Total)  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE			
			TERM COLLECTED	LAB NO		
3121 WBN WELL #1 0.6 MILES S	GROSS BETA	+4.9701	+1.0219	03/03/98	801310	
		+6.3067	+1.2372	05/26/98	803052	
		+5.9477	+1.0935	08/18/98	804784	
		+7.1473	+2.2346	12/08/98	807051	
	GAMMA SCAN (GELI)	BI-214	+4.9315	+2.2963	03/03/98	801310
			+4.4529	+2.7754	05/26/98	803052
			+13.2174	+3.8290	12/08/98	807051
		K-40	+12.2270	+17.8460	08/18/98	804784
		PB-212	+1.4807	+1.6548	12/08/98	807051
		PB-214	+4.2140	+2.7606	03/03/98	801310
			+4.1138	+3.0000	05/26/98	803052
			+10.9621	+2.7818	12/08/98	807051
		TL-208	+0.4759	+0.8661	05/26/98	803052
			+0.6500	+1.2269	08/18/98	804784
	SR 89		+3.1100	+1.3100	03/03/98	801310
			+0.8700	+1.5000	05/26/98	803052
			+1.8800	+1.7100	08/18/98	804784
	SR 90		-0.8259	+0.5050	03/03/98	801310
			-0.2259	+0.4810	05/26/98	803052
			-0.4129	+0.4410	08/18/98	804784
TRITIUM		+213.3800	+78.4500	03/03/98	801310	
		+65.2400	+80.8000	05/26/98	803052	
		+101.8700	+80.7200	08/18/98	804784	
		+113.0700	+78.1500	12/08/98	807051	
	GROSS BETA					
3125 WBN WELL #5 ONSITE N	GROSS BETA	+2.7086	+0.6622	03/03/98	801311	
		+2.6148	+0.6611	05/26/98	803053	
		+3.5881	+0.6820	08/18/98	804785	
		+2.7083	+0.6190	12/08/98	807052	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CONTIN. WELL WATER(Total)  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
3125 WBN WELL #5 ONSITE N	GAMMA SCAN (GELI)			
	NO ACTIVITY DETECTED		08/18/98	804785
	AC-228	+9.1983	+4.0846	03/03/98 801311
	BI-214	+1.9281	+2.0206	05/26/98 803053
		+6.5572	+2.9652	12/08/98 807052
	PB-212	+1.5121	+1.6729	05/26/98 803053
	PB-214	+4.9769	+2.6983	12/08/98 807052
	SR 89			
		-0.3189	+1.3200	03/03/98 801311
		+2.6700	+1.7000	05/26/98 803053
		-1.7499	+2.0400	08/18/98 804785
		+3.2400	+1.7500	12/08/98 807052
	SR 90			
		+0.4230	+0.5260	03/03/98 801311
		-0.7109	+0.5340	05/26/98 803053
		+0.8130	+0.5540	08/18/98 804785
		-0.6189	+0.5550	12/08/98 807052
	TRITIUM			
		+38.1000	+73.9400	03/03/98 801311
		-112.7399	+76.4900	05/26/98 803053
	+5.2000	+77.8100	08/18/98 804785	
	+38.9300	+74.1400	12/08/98 807052	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN GRAB WELL WATER(Total)  
 PCI/L - 0.037 BQ/L  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO		
3115 LAYMAN FARM 1.3 MILES SSW	GROSS BETA	+1.4901	+0.5500	03/03/98	801288		
		+0.3485	+0.5060	05/26/98	803031		
		+1.7816	+0.5562	08/18/98	804763		
		+2.3003	+0.6038	12/08/98	807029		
	GAMMA SCAN (GEL1)	AC-228	+7.6638	+6.2997	08/18/98	804763	
			BI-214	+492.6800	+84.4290	03/03/98	801288
			+257.9500	+14.8550	05/26/98	803031	
			+434.1100	+21.3880	08/18/98	804763	
			+442.6400	+20.9380	12/08/98	807029	
		K-40	+23.0510	+16.3310	03/03/98	801288	
			PB-214	+484.4700	+22.5860	03/03/98	801288
			+258.3800	+15.1600	05/26/98	803031	
			+431.1400	+26.6850	08/18/98	804763	
			+445.6100	+23.2300	12/08/98	807029	
		SR 89		-0.5969	+1.3000	03/03/98	801288
				+0.3560	+1.2800	05/26/98	803031
			+2.0300	+1.8000	08/18/98	804763	
			+3.2800	+1.6000	12/08/98	807029	
	SR 90		+0.7180	+0.6750	03/03/98	801288	
			-0.0112	+0.6550	05/26/98	803031	
		-0.3459	+0.4700	08/18/98	804763		
		-0.2919	+0.5660	12/08/98	807029		
TRITIUM		+20.2200	+75.0800	03/03/98	801288		
		-200.4099	+75.4900	05/26/98	803031		
		+110.5200	+79.9500	08/18/98	804763		
		+123.2700	+76.1900	12/08/98	807029		

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CHANNEL CATFISH FLESH  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION		ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
2160 CHICKAMAUGA RES	TRM 471-530	GAMMA SCAN (GELI)				
		BI-214	+0.0851	+0.0165	04/14/98	802423
			+0.0478	+0.0128	10/20/98	806191
		CS-137	+0.0222	+0.0056	10/20/98	806191
		K-40	+11.5240	+0.6798	04/14/98	802423
			+10.2100	+0.6358	10/20/98	806191
		PB-214	+0.0903	+0.0136	04/14/98	802423
	+0.0417	+0.0106	10/20/98	806191		
2161 WATTS BAR RES	TRM 530-602	GAMMA SCAN (GELI)				
		BI-214	+0.0972	+0.0138	04/21/98	802427
			+0.1706	+0.0229	10/21/98	806195
		CS-137	+0.0386	+0.0064	04/21/98	802427
			+0.0549	+0.0086	10/21/98	806195
		K-40	+12.3310	+0.8636	04/21/98	802427
			+14.0100	+0.7602	10/21/98	806195
PB-214	+0.0900	+0.0258	04/21/98	802427		
	+0.1390	+0.0161	10/21/98	806195		
3261 DOWNSTREAM STATION 1	DOWNSTREAM	GAMMA SCAN (GELI)				
		BI-214	+0.0519	+0.0222	10/21/98	806259
		K-40	+13.6440	+0.7720	04/21/98	803794
			+10.2860	+0.6673	10/21/98	806259
	PB-214	+0.0556	+0.0232	10/21/98	806259	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CRAPPIE FLESH  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
2160 CHICKAMAUGA RES TRM 471-530	GAMMA SCAN (GELI)			
	BI-214	+0.0598	+0.0215	06/11/98 802426
		+0.0224	+0.0118	10/20/98 806194
	CS-137	+0.0388	+0.0070	10/20/98 806194
	K-40	+21.4150	+1.0716	06/11/98 802426
		+16.5290	+0.7689	10/20/98 806194
	PB-214	+0.1187	+0.0267	06/11/98 802426
	+0.0066	+0.0122	10/20/98 806194	
2161 WATTS BAR RES TRM 530-602	GAMMA SCAN (GELI)			
	BI-214	+0.1760	+0.0217	06/11/98 802429
		+0.0375	+0.0119	10/21/98 806197
	CS-137	+0.0773	+0.0109	06/11/98 802429
		+0.1070	+0.0128	10/21/98 806197
	K-40	+19.2740	+0.9475	06/11/98 802429
		+15.5840	+0.8428	10/21/98 806197
	PB-212	+0.0109	+0.0122	10/21/98 806197
PB-214	+0.1027	+0.0142	06/11/98 802429	
	+0.0536	+0.0115	10/21/98 806197	
	TL-208	+0.0100	+0.0065	10/21/98 806197

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN SMALLMOUTH BUFFALO FLESH  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION		ANALYSIS (NUCLIDE)	ACTIVITY	ERROR TERM	DATE COLLECTED	LAB NO
2160 CHICKAMAUGA RES	TRM 471-530	GAMMA SCAN (GELI)				
		BI-214	+0.0752	+0.0152	06/11/98	802425
			+0.0566	+0.0184	10/20/98	806193
		CS-137	+0.0471	+0.0072	06/11/98	802425
		K-40	+12.6090	+0.6202	06/11/98	802425
			+10.4540	+0.6868	10/20/98	806193
		PB-212	+0.0022	+0.0090	10/20/98	806193
		PB-214	+0.0515	+0.0132	06/11/98	802425
		+0.0729	+0.0199	10/20/98	806193	
2161 WATTS BAR RES	TRM 530-602	GAMMA SCAN (GELI)				
		BI-214	+0.1091	+0.0143	10/14/98	806196
		CS-137	+0.0266	+0.0042	06/11/98	802428
			+0.0273	+0.0068	10/14/98	806196
		K-40	+11.0910	+0.5394	06/11/98	802428
			+10.3030	+0.5565	10/14/98	806196
	PB-214	+0.0163	+0.0068	06/11/98	802428	
		+0.1153	+0.0210	10/14/98	806196	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN SEDIMENT  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
2155 TRM 496.5	GAMMA SCAN (GELI)				
	AC-228	+1.2507	+0.0805	05/05/98	802422
		+1.3832	+0.0882	10/15/98	806188
	BE-7	+0.2424	+0.0710	05/05/98	802422
		+0.9813	+0.2042	10/15/98	806188
	BI-212	+1.3495	+0.1302	05/05/98	802422
		+1.3947	+0.1371	10/15/98	806188
	BI-214	+0.8211	+0.0574	05/05/98	802422
		+1.0833	+0.0633	10/15/98	806188
	CO-60	+0.0332	+0.0074	10/15/98	806188
	CS-137	+0.6901	+0.0364	05/05/98	802422
		+0.7336	+0.0392	10/15/98	806188
	K-40	+13.6180	+0.6808	05/05/98	802422
		+14.3520	+0.6417	10/15/98	806188
	PB-212	+1.2326	+0.0691	05/05/98	802422
		+1.3231	+0.0707	10/15/98	806188
	PB-214	+0.9581	+0.0454	05/05/98	802422
		+1.2130	+0.0551	10/15/98	806188
	RA-226	+0.8211	+0.0574	05/05/98	802422
		+1.0833	+0.0633	10/15/98	806188
TL-208	+0.3873	+0.0199	05/05/98	802422	
	+0.4341	+0.0236	10/15/98	806188	
3140 TRM 532.1	GAMMA SCAN (GELI)				
	AC-228	+1.6402	+0.1226	05/06/98	802489
		+1.5749	+0.1025	10/15/98	806243
	BE-7	+0.3425	+0.0680	05/06/98	802489
	BI-212	+1.6719	+0.1523	05/06/98	802489
		+1.8916	+0.2786	10/15/98	806243
	BI-214	+0.9544	+0.0485	05/06/98	802489
		+1.2571	+0.0863	10/15/98	806243
	CS-137	+1.6647	+0.0763	05/06/98	802489
		+1.5718	+0.0808	10/15/98	806243
	K-40	+15.1070	+0.8180	05/06/98	802489
		+15.4880	+0.7724	10/15/98	806243
PB-212	+1.6052	+0.0704	05/06/98	802489	
	+1.5191	+0.1272	10/15/98	806243	
PB-214	+1.0850	+0.0571	05/06/98	802489	
	+1.3777	+0.0928	10/15/98	806243	

TENNESSEE VALLEY AUTHORITY  
 ENVIRONMENTAL RADIOLOGICAL MONITORING AND INSTRUMENTATION  
 WESTERN AREA RADIOLOGICAL LABORATORY

WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN SEDIMENT  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		
			TERM	COLLECTED	LAB NO
3140 TRM 532.1	GAMMA SCAN (GELI)				
	RA-224	+1.7043	+0.1925	05/06/98	802489
	RA-226	+0.9544	+0.0485	05/06/98	802489
		+1.2571	+0.0863	10/15/98	806243
	TL-208	+0.4931	+0.0276	05/06/98	802489
		+0.4854	+0.0371	10/15/98	806243
3141 TRM 527.4	GAMMA SCAN (GELI)				
	AC-228	+2.2316	+0.1313	05/06/98	802490
		+1.3661	+0.0779	10/15/98	806244
	BI-212	+2.3816	+0.2007	05/06/98	802490
		+1.4080	+0.1179	10/15/98	806244
	BI-214	+1.2454	+0.0566	05/06/98	802490
		+0.9143	+0.0479	10/15/98	806244
	CS-137	+0.0249	+0.0088	10/15/98	806244
	K-40	+14.7530	+0.7481	05/06/98	802490
		+12.8030	+0.5634	10/15/98	806244
	PB-212	+2.1452	+0.0933	05/06/98	802490
		+1.2966	+0.0728	10/15/98	806244
	PB-214	+1.4222	+0.0687	05/06/98	802490
		+1.0324	+0.0495	10/15/98	806244
	RA-224	+2.4351	+0.2306	05/06/98	802490
RA-226	+1.2454	+0.0566	05/06/98	802490	
	+0.9143	+0.0479	10/15/98	806244	
TL-208	+0.6799	+0.0386	05/06/98	802490	
	+0.4133	+0.0301	10/15/98	806244	
3142 TRM 518.0	GAMMA SCAN (GELI)				
	AC-228	+1.7959	+0.1254	05/06/98	802492
		+1.6636	+0.1048	10/15/98	806245
	BI-212	+2.0700	+0.1735	05/06/98	802492
		+1.6612	+0.1664	10/15/98	806245
	BI-214	+1.1714	+0.0655	05/06/98	802492
		+1.1279	+0.0533	10/15/98	806245
	CS-137	+0.0225	+0.0040	05/06/98	802492
		+0.0901	+0.0103	10/15/98	806245
	K-40	+14.2210	+0.6460	05/06/98	802492
	+14.0180	+0.6443	10/15/98	806245	
PB-212	+1.8580	+0.0776	05/06/98	802492	

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN SEDIMENT  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
3142 TRM 518.0	GAMMA SCAN (GELI)			
	PB-212	+1.5941	+0.0734	10/15/98 806245
	PB-214	+1.2405	+0.0546	05/06/98 802492
		+1.2638	+0.0603	10/15/98 806245
	RA-224	+1.9089	+0.1900	05/06/98 802492
		+1.7690	+0.2012	10/15/98 806245
	RA-226	+1.1714	+0.0655	05/06/98 802492
		+1.1279	+0.0533	10/15/98 806245
	TL-208	+0.5920	+0.0290	05/06/98 802492
		+0.5089	+0.0279	10/15/98 806245

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN SHORELINE SEDIMENT  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
3191 WATTS BAR RESORT TRM 530	GAMMA SCAN (GELI)				
	AC-228	+0.2136	+0.0224	05/19/98	802495
		+0.1362	+0.0197	11/23/98	806248
	BE-7	+0.1768	+0.0333	05/19/98	802495
		+0.1138	+0.0195	11/23/98	806248
	BI-212	+0.2550	+0.0496	05/19/98	802495
		+0.1486	+0.0469	11/23/98	806248
	BI-214	+0.1242	+0.0113	05/19/98	802495
		+0.1247	+0.0123	11/23/98	806248
	CS-137	+0.0138	+0.0050	11/23/98	806248
	K-40	+0.7305	+0.0728	05/19/98	802495
		+0.5816	+0.0705	11/23/98	806248
	PB-212	+0.1638	+0.0147	05/19/98	802495
		+0.1232	+0.0117	11/23/98	806248
	PB-214	+0.1571	+0.0138	05/19/98	802495
		+0.1375	+0.0106	11/23/98	806248
	RA-224	+0.2293	+0.0574	05/19/98	802495
RA-226	+0.1242	+0.0113	05/19/98	802495	
	+0.1247	+0.0123	11/23/98	806248	
TL-208	+0.0564	+0.0053	05/19/98	802495	
	+0.0324	+0.0055	11/23/98	806248	
3193 COTTON PORT MARINA TRM 513	GAMMA SCAN (GELI)				
	AC-228	+1.5976	+0.1515	05/20/98	802496
		+1.3976	+0.0867	11/24/98	806249
	BE-7	+0.3343	+0.0981	05/20/98	802496
	BI-212	+1.7078	+0.2097	05/20/98	802496
		+1.3366	+0.1770	11/24/98	806249
	BI-214	+0.6735	+0.0469	05/20/98	802496
		+0.5204	+0.0381	11/24/98	806249
	CS-137	+0.1001	+0.0116	11/24/98	806249
	K-40	+36.4990	+1.7213	05/20/98	802496
		+30.4590	+1.5324	11/24/98	806249
	PB-212	+1.3926	+0.0881	05/20/98	802496
		+1.4087	+0.0914	11/24/98	806249
	PB-214	+0.7446	+0.0409	05/20/98	802496
	+0.6071	+0.0503	11/24/98	806249	
RA-226	+0.6735	+0.0469	05/20/98	802496	
	+0.5204	+0.0381	11/24/98	806249	

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WATTS BAR NUCLEAR PLANT  
RADIOACTIVITY IN SHORELINE SEDIMENT  
PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
3193 COTTON PORT MARINA TRM 513	GAMMA SCAN (GELI) TL-208	+0.5159	+0.0339	05/20/98 802496
		+0.4656	+0.0344	11/24/98 806249

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN POND SEDIMENT  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE		LAB NO
			TERM	COLLECTED	
3303 LV-3 LOW VOL WASTE POND	GAMMA SCAN (GELI)				
	AC-228	+0.1176	+0.0366	09/18/98	802506
	BI-212	+0.1884	+0.0317	09/18/98	802506
	BI-214	+0.2084	+0.0178	09/18/98	802506
	K-40	+4.0185	+0.2525	09/18/98	802506
	PB-212	+0.1218	+0.0128	09/18/98	802506
	PB-214	+0.2267	+0.0155	09/18/98	802506
	TL-208	+0.0407	+0.0060	09/18/98	802506
3305 YP-5 YARD POND	GAMMA SCAN (GELI)				
	AC-228	+1.2052	+0.0817	09/18/98	802508
	BE-7	+0.3252	+0.0397	09/18/98	802508
	BI-212	+1.3572	+0.1328	09/18/98	802508
	BI-214	+0.7276	+0.0511	09/18/98	802508
	CS-137	+0.2638	+0.0173	09/18/98	802508
	K-40	+15.5280	+0.7430	09/18/98	802508
	PB-212	+1.2587	+0.0541	09/18/98	802508
	PB-214	+0.8242	+0.0465	09/18/98	802508
	RA-224	+1.4415	+0.1387	09/18/98	802508
	TL-208	+0.3703	+0.0223	09/18/98	802508
3313 YP-13 YARD POND	GAMMA SCAN (GELI)				
	AC-228	+1.1266	+0.0724	09/18/98	802518
	BE-7	+0.2112	+0.0338	09/18/98	802518
	BI-212	+0.9660	+0.1209	09/18/98	802518
	BI-214	+0.7527	+0.0477	09/18/98	802518
	CO-60	+0.0271	+0.0073	09/18/98	802518
	CS-137	+0.2233	+0.0160	09/18/98	802518
	K-40	+13.5050	+0.6151	09/18/98	802518
	PB-212	+1.0498	+0.0590	09/18/98	802518
	PB-214	+0.8044	+0.0412	09/18/98	802518
	RA-224	+1.1180	+0.1838	09/18/98	802518
TL-208	+0.3288	+0.0191	09/18/98	802518	
3316 YP-16 YARD POND	GAMMA SCAN (GELI)				
	AC-228	+1.0950	+0.0939	09/18/98	802521
	BI-212	+1.0805	+0.2090	09/18/98	802521
	BI-214	+0.8189	+0.0556	09/18/98	802521
	CO-60	+0.0724	+0.0133	09/18/98	802521

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN POND SEDIMENT  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
3316 YP-16 YARD POND	GAMMA SCAN (GELI)			
	CS-134	+0.0499	+0.0073	09/18/98 802521
	CS-137	+0.2658	+0.0217	09/18/98 802521
	K-40	+14.7740	+0.7143	09/18/98 802521
	PB-212	+1.0667	+0.0616	09/18/98 802521
	PB-214	+0.8954	+0.0516	09/18/98 802521
	TL-208	+0.3644	+0.0201	09/18/98 802521
3317 YP-17 YARD POND	GAMMA SCAN (GELI)			
	AC-228	+1.0752	+0.0635	09/18/98 802522
	BE-7	+0.4619	+0.0600	09/18/98 802522
	BI-212	+1.2688	+0.1397	09/18/98 802522
	BI-214	+0.7093	+0.0401	09/18/98 802522
	CO-58	+0.0320	+0.0063	09/18/98 802522
	CO-60	+0.0685	+0.0092	09/18/98 802522
	CS-134	+0.0425	+0.0052	09/18/98 802522
	CS-137	+0.1874	+0.0154	09/18/98 802522
	K-40	+11.1860	+0.5141	09/18/98 802522
	PB-212	+1.0812	+0.0512	09/18/98 802522
	PB-214	+0.8233	+0.0464	09/18/98 802522
	RA-224	+1.1028	+0.1386	09/18/98 802522
	SB-125	+0.1495	+0.0171	09/18/98 802522
	TL-208	+0.3415	+0.0190	09/18/98 802522

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WATTS BAR NUCLEAR PLANT  
 RADIOACTIVITY IN CLAM FLESH  
 PCI/GM - 0.037 BQ/G (DRY WEIGHT)  
 12/29/97 TO 12/27/98

STATION CODE/LOCATION/DESCRIPTION	ANALYSIS (NUCLIDE)	ACTIVITY	ERROR DATE	
			TERM	COLLECTED LAB NO
3143 DOWNSTREAM	GAMMA SCAN (GELI)			
	AC-228	+0.1314	+0.1558	10/17/98 806246
	BI-214	+1.0076	+0.1849	05/06/98 802493
		+1.7287	+0.1939	10/17/98 806246
	K-40	+2.2343	+1.0179	05/06/98 802493
		+1.1033	+0.7333	10/17/98 806246
	PB-214	+0.8737	+0.1639	05/06/98 802493
		+1.5769	+0.1640	10/17/98 806246
3144 UPSTREAM	GAMMA SCAN (GELI)			
	BI-214	+0.4234	+0.1528	05/06/98 802494
		+1.3290	+0.2115	10/14/98 806247
	K-40	+2.2501	+0.9162	10/14/98 806247
	PB-214	+0.3157	+0.1279	05/06/98 802494
		+1.3211	+0.1608	10/14/98 806247
	TL-208	+0.0692	+0.0450	10/14/98 806247