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Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397**
INDEPENDENT SPENT FUEL STORAGE INSTALLATION, DOCKET NO. 72-35
2007 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

References:
1. Columbia Generating Station Technical Specification 5.6.1
2. Independent Spent Fuel Storage Installation Technical Specification 5.4.b
3. EFSEC Resolution No. 260, January 13, 1992

Dear Sir or Madam:

In accordance with the requirements of References 1-3, the subject report with the data volume is submitted as an enclosure to this letter. If you have questions regarding this information, they may be directed to TE Northstrom at (509) 377-8462.

Respectfully,

Typed for D. Atkinson

DK Atkinson
Vice President, Nuclear Generation & Chief Nuclear Officer

Enclosure

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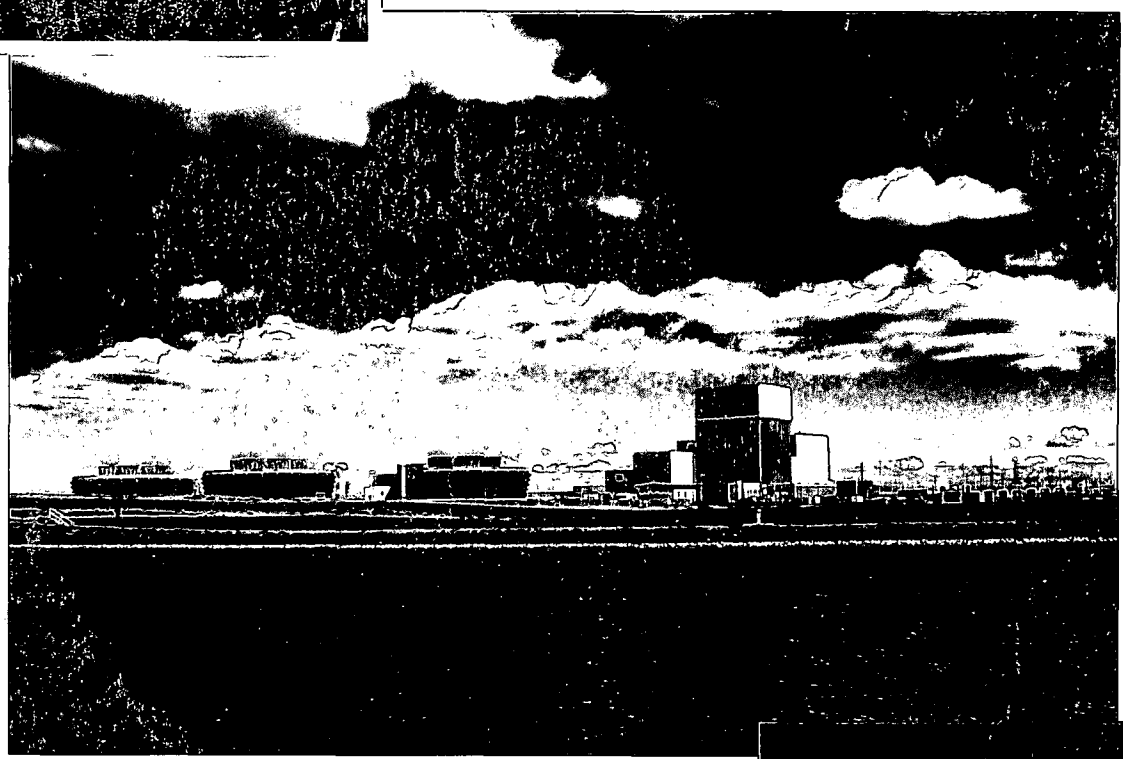
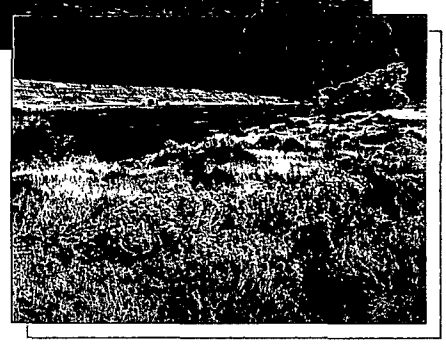
COLUMBIA GENERATING STATION

2007 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT





RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM FOR THE COLUMBIA GENERATION STATION

ENERGY NORTHWEST

COLUMBIA GENERATING STATION

2007 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT

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RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

Prepared by:

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1.0 EXECUTIVE SUMMARY

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The purpose of the Energy Northwest Radiological Environmental Monitoring Program (REMP) is to evaluate the radiological impact that Columbia Generating Station (CGS) operation may have on the environment. The program monitors direct radiation levels as well as airborne, waterborne, and ingestion pathways most likely to be affected by CGS operation. Sampling is performed as specified in the Offsite Dose Calculation Manual (ODCM) and agreements made with the State of Washington Energy Facility Site Evaluation Council (EFSEC). Sampling and analysis is performed by the Energy Northwest Environmental Services group with analysis performed at the APEL facility located in Richland, Washington. Direct radiation services are provided by Battelle PNNL.

Direct radiation levels are monitored continuously with thermoluminescent dosimeters (TLDs) that are collected on a quarterly and annual basis. Offsite direct radiation monitoring results are consistent with previous years and indicate that there was no measurable dose contribution from plant operations. No measurable increase in exposure rates was seen inside the CGS controlled area relative to previous years. Radiation exposure levels at the Independent Spent Fuel Storage Installation (ISFSI) were similar to previous years with exposure rates trending gradually down. No new spent fuel was moved to the ISFSI during 2007.

The inhalation pathway was monitored by collecting and analyzing air particulate and air iodine samples weekly from twelve different locations. Results in most all case were consistent with background levels and within the range seen in the historical trend. No radionuclides related to CGS operation were identified in any of the samples.

The ingestion pathway was monitored by collecting samples of water, milk, soil, sediment, fish, and garden produce throughout the year. Results indicate no radiological impact that could be attributed to CGS operation in any of these sample media. Activity that was identified in these samples was predominately of natural origin. Small amounts of Cs-137 were identified in some samples, however, the presence of this radionuclide in the environment is expected at low levels. Tritium was identified in some samples, but only in those where historically this isotope has been identified. The Cs-137 and tritium concentrations identified are consistent with levels known to exist in the surrounding environment. CGS did not make a radioactive discharge to the Columbia river in 2007 and has not done so since 1998.

No significant trends or changes in the environmental radiological levels in the vicinity of CGS were observed in 2007. The results seen in the 2007 samples are consistent with the results obtained in previous operational and preoperational years. No significant radiological impact to the environment due to CGS operation was identified.

2.0 DEFINITIONS

2.0 DEFINITIONS

Airborne Activity Sampling: Continuous sampling of air through the collection of particulates and radionuclides on filter media. Periodic soil samples are collected for gamma isotopic analysis to provide information on deposition to the soil from airborne releases.

Alpha Particle (α): A charged particle emitted from the nucleus of an atom having a mass and charge equal in magnitude of a helium nucleus.

Becquerel (Bq): One disintegration per second. One picocurie (pCi) equals 0.037 becquerel.

Beta Particle (β): Charged particle emitted from the nucleus of an atom with a mass and charge equal in magnitude to that of an electron.

Blank Sample: A sample of the same media as the field sample being analyzed but without any radionuclide(s) being measured. It enables correction for the inherent sample background.

CGS: Columbia Generating Station, formerly referred to as WNP-2.

Composite Sample: A series of single collected portions (aliquots) analyzed as one sample. The aliquots making up the sample are collected at time intervals that are very short compared to the composite period.

Control Station: A sampling station in a location not likely to be affected by plant effluents due to its distance and/or direction from the Columbia Generating Station.

Counting Error: An estimate of the two-sigma uncertainty associated with the sample results based on respective count times.

$$+/-2\sqrt{(SampleCPM / CountTime + BkgCpm / CountTime)}$$

Curie (Ci): A measure of radioactivity; equal to 3.7 x 10^{10} disintegrations per second, or 2.22 x 10^{12} disintegrations per minute.

Direct Radiation Monitoring: The measurement of radiation dose at various distances from the plant is assessed using thermoluminescent dosimeters and pressurized ionization chambers.

DOE: U.S. Department of Energy.

DOH: Washington State Department of Health.

EFSEC: Energy Facility Site Evaluation Council.

FFTF: Fast Flux Test Facility.

Flow Proportional Sampling: Sample collection volume or frequency determined as a function of the flow rate of the water being sampled.

Grab Sample: A single discrete sample drawn at one point in time.

IDC: Energy Northwest Industrial Development Complex, formerly referred to as the WNP-1 and WNP-4 sites.

Indicator Station: A sampling location that is likely to be affected by plant effluents due to its proximity and/or direction from the Columbia Generating Station.

Ingestion Pathway Monitoring: The ingestion pathway includes milk, soil, fish, and garden produce. Also sampled (under special circumstances) are other media such as vegetation and animal products such as eggs and meat when additional information about particular radionuclides is needed.

ISFSI: Independent Spent Fuel Storage Installation.

Lower Limit of Detection (LLD): The smallest concentration of radioactive material in a sample that will yield a net count (above system background) that will be detected with 95% probability with a 5% probability of a false conclusion that a blank observation represents "real" signal.

MAPEP: Mixed Analyte Performance Evaluation Program.

Mean: The average, i.e., the sum of results divided by the number of results.

Microcurie: 3.7 x 10^4 disintegrations per second, or 2.22 x10^6 disintegrations per minute.

Milliroentgen (mR): 1/1000 Roentgen; a unit of exposure to X or gamma radiation.

MDA: Minimum Detectable Activity.

NIST: National Institute of Standards and Technology.

NPDES: National Pollutant Discharge Elimination System.

NRC: U.S. Nuclear Regulatory Commission.

ODCM: Offsite Dose Calculation Manual. Licensing document that contains the offsite radiological requirements.

Picocurie (pCi): 1 x 10^{-12} Curie or 2.22 disintegrations per minute; one millionth of a microcurie.

REMP: Radiological Environmental Monitoring Program.

Range: The difference between the smallest and largest results.

Restricted Area: Any area to which access is controlled for purposes of protection of individuals from exposure to radiation and radioactive materials.

Roentgen: Unit of exposure to ionizing radiation in air.

Site Certification Agreement (SCA): The Columbia Generating Station licensing agreement with the State of Washington.

Spiked Sample: A sample that has had a known quantity of radionuclide(s) added for the purposes of assessing analytical performance.

Standard Deviation: A measure of the scatter of a set of observations (or samples) around their mean value. Indicated by "σ".

Standard Error of the Mean: An estimate of the uncertainty associated with the mean of observation (or sample) averages. Also known as the standard deviation.

$$SE = \sqrt{\frac{S^2}{n}}$$

where S^2, the variance is

$$S_m^2 = \frac{1}{(n-1)} \sum^n (Xi - X)^2$$

SWTF: Sanitary Waste Treatment Facility; sanitary waste processing facility for the Columbia Generating Station, Site-1 and Department of Energy's 400 Area.

TEDA: triethylene diamine

Thermoluminescent Dosimeter (TLD): A TLD is a phosphor that stores energy from exposure to radiation and emits that energy in the form of light when heated.

3.0 INTRODUCTION

3.0 INTRODUCTION

3.1 Site Description

The Columbia Generating Station (CGS) is a 1200 MWe commercial nuclear power plant that achieved initial criticality on January 19, 1984. The plant is located in a sparsely populated shrub-steppe region within the Department of Energy (DOE) Hanford Site in southeastern Washington. The plant is approximately three miles west of the Columbia River and is surrounded on all sides by uninhabited desert land. The nearest large population centers are Richland, Pasco and Kennewick, which are 12 miles south, 18 miles southeast, and 21 miles southeast, respectively. The nearest privately owned lands are located approximately four miles east-northeast of the plant, across the Columbia River. The site has a bimodal wind pattern with winds primarily from the northwest and south.[17] The primary region of focus for REMP sampling is the farming region east of the plant.

Naturally occurring radionuclides exist in detectable quantities throughout the world and are seen in many of the samples collected for the REMP. Some examples of naturally occurring radionuclides that are frequently seen in samples are K-40, Be-7, Ac-228 (present as a decay product of Ra-228), and Ra-226. Additionally, some relatively long lived anthropogenic radioisotopes, such as Sr-90 and Cs-137, are also periodically seen in some REMP samples; these radionuclides exist in measurable quantities throughout the world as a result of fallout from atmospheric nuclear weapons testing.[18]

Due to the location of CGS on the Hanford Site, there are other sources of reactor produced radionuclides in close proximity to the plant. Hanford related radionuclides, which are sometimes measured in CGS REMP samples, are distinguishable from those that may be present as a result of CGS activities by the absence of several characteristic shorter-lived radionuclides. The DOE has an active REMP program for the Hanford Site.

3.2 Program Background

The CGS REMP is designed to conform to the Nuclear Regulatory Commission (NRC) Regulatory Guides 4.1,[1] 4.8,[2] and the Radiological Assessment Branch Technical Position.[3] In addition, the REMP also meets the requirements of 10CFR72.44(d)(2) for coverage of the ISFSI.

The quality assurance aspects of the sampling program and the thermoluminescent dosimetry are conducted in accordance with Regulatory Guides 4.15[4] and 4.13.[5] The REMP also adheres to the requirements of the Washington Energy Facility Site Evaluation Council (EFSEC),[6] the Columbia Generating Station Technical Specifications[7] and the Offsite Dose Calculation Manual (ODCM).[8] These requirements cover the environmental sampling and sample analysis aspects of the program, and also the reporting and quality assurance requirements.

The preoperational phase of the program, which lasted from March 1978 until initial criticality in January 1984, provided a baseline of background environmental data. The variability in the background levels of radioactivity is due to differences in geologic composition, meteorological conditions, and seasonal changes.

The Energy Northwest Environmental Services Laboratory performed the analysis of REMP samples for 2007. The Pacific Northwest National Laboratory processed the thermoluminescent dosimeters used for the REMP in 2007.

In addition to evaluating the environmental concentrations against regulatory limits, the REMP also compares the results to state standards.[11, 12, 13] The results are also evaluated by comparing them to similar measurements made during the preoperational and previous operational periods and to the detection capabilities associated with the current methods of analysis.

3.3 Program Objectives

The REMP provides a mechanism for determining whether the levels of radioactivity in the plant environs are within established limits and to ensure that the accumulation of radionuclides in the environment will not become significant as a result of station operations.

While in-plant monitoring programs are used to ensure that 10 CFR 20[9] and 10 CFR 50[10] criteria for releases of radioactive effluents are met, the REMP provides verification of the effectiveness of these programs and confirms that the concentrations of radionuclides in the environment are not greater than anticipated.

4.0 PROGRAM DESCRIPTION

4.0 PROGRAM DESCRIPTION

The CGS ODCM defines the requirements for the REMP. The sampling plan presented in Table 4-1 shows which samples are required by the ODCM and the Site Certification Agreement (SCA). The table also provides a summary of the sample locations, collection frequency, and types of analyses performed. The methods of sampling and sampling frequencies utilized in the program have been determined by such factors as the half-lives and major exposure pathways for the radionuclides potentially released from the plant to the surrounding environment.

4.1 Sample Locations

Ninety-five sampling locations (referred to as 'stations') are included in the monitoring program. Eighty-five indicator and three control stations are located within a 10-mile radius of CGS. Three additional control stations and four indicator stations are located outside of a 10-mile radius from the plant. Sample stations are listed in Table 4-2.

The locations of most of the stations used for sampling have been selected on the basis of an exposure pathway analysis. The exposure pathway analysis was based on factors such as weather patterns, anticipated emissions, likely receptors, and land use in the surrounding areas. Additional samples are collected at locations as specified by EFSEC Resolution 260[6]. Samples for the REMP collected from stations in areas that are likely to be influenced by CGS are used as indicators. Other samples collected from stations in areas that are not likely to be influenced by CGS serve as controls. The results from the indicator stations are compared to the results at the control stations, and also to the results obtained during the previous operational and preoperational years of the program.

The REMP sampling locations listed in Tables 4-1 and 4-2 are shown in Figures 4-1 through 4-5. Figure 4-3 shows the relative locations of the storm drain outfall and pond (Station 101) and the Sanitary Waste Treatment Facility (Station 102). Also shown are the cooling tower sediment disposal area (Station 119B and Station 119-Control) and the spray pond drainfield (Station 120), which are special interest stations.

4.2 Independent Spent Fuel Storage Installation (ISFSI)

The Independent Spent Fuel Storage Installation (ISFSI) was constructed to provide additional storage capacity for spent fuel. The spent fuel is stored in HI-STORM dry storage casks, which are placed on one of two concrete pads, each measuring 30-feet wide by 135-feet long. The ISFSI is located approximately 500 meters north-northwest of the reactor building.

REMP monitoring of the ISFSI is performed with a set of quarterly and annual TLDs located at 10 stations on the isolation fence surrounding the pads. In addition, two other stations are located on other fence lines. Station 121 is located on a fence line approximately 200 meters north of the turbine building and Station 122 is located on the fence approximately 100 meters north of the ISFSI. Figure 4-4 shows the ISFSI location in relation to CGS. Figure 4-5 shows the location of the 10 TLD stations located around the ISFSI. This arrangement of TLDs in conjunction with the other monitoring activities that are conducted in support of CGS REMP, satisfies the monitoring requirements listed in 10 CFR 72.44(d)(2) for the ISFSI.

4.3 Land Use Census

A land use census for areas within five miles of CGS is performed annually. The objectives of the land use census are to identify the locations of the nearest milk animal, residence, and garden greater than 50 m^2 (approximately 500 ft^2) producing broadleaf vegetation. This information is used to determine whether any site located during the census has a calculated dose or dose commitment greater than the sites currently monitored for the same exposure pathway. If a new location with a higher dose commitment were found, routine sampling of that dose pathway would be initiated at that new site.

The results of the 2007 land use census within five miles of CGS are presented in Table 4-3. No significant changes from the 2006 land use census were observed.

4.4 Sampling Methods

Energy Northwest personnel collect environmental samples in accordance with the program plan in Table 4-1. Procedures for sample collection and TLD handling are contained in the department instruction manual. Samples that were collected for the REMP in 2007 were transported to the Energy Northwest Environmental Services Laboratory shortly after collection. Generic descriptions of the sample analysis methods that are employed for the analysis of CGS REMP samples are described in section 4.5. This section describes the sampling methods and sample locations.

4.4.1 Direct Radiation

Direct radiation dose levels are monitored with Harshaw Model 8807 thermoluminescent dosimeters (TLDs). Two sets of TLDs are placed in the field approximately three feet above the ground at each monitoring station. One set of TLDs is exchanged on a quarterly basis (Quarterly TLDs); the other is exchanged on an annual basis (Annual TLDs).

The locations of the TLD stations are listed in Table 4-2, and are shown in Figures 4-1 through 4-5. Station 9A in Sunnyside, serves as a control for CGS TLDs. Station 119-Control serves as the control for Station 119B (the cooling tower/system sediment disposal basin). The remaining TLDs deployed in the field serve as indicator TLDs.

The TLDs are arranged in a series of rings that encircle CGS. The innermost ring of TLD stations, which are located inside the fence line at distances that range from 0.3-0.8 miles from the reactor building centerline, are referred to as the 'S stations.' The next ring of TLDs, referred to as the "near plant" stations, are located at distances ranging from 1-2 miles from the reactor building. The outer ring of TLDs are located at distances that range from a little under three (3) miles out to around ten (10) miles. A Thermo MicroRem doserate meter is available as a backup device and to take real time readings as needed.

4.4.2 Airborne - Particulate/Iodine

Air particulate and air radioiodine (I-131) samples are obtained through the use of low volume (1.5 cfm), constant flow-rate sampling units at 12 locations. The samples drawn at Station 9A (Figure 4-2) are considered controls, the samples drawn at the other locations (Figure 4-1) are indicators. Air particulate samples are collected by drawing air through a 47-mm diameter glass fiber filter. Air iodine samples are collected by drawing air through Radeco CP-100 TEDA impregnated charcoal cartridges. The air particulate filter and charcoal cartridge are placed in tandem, particulate filter first, in a holder that attaches to the air inlet of the sampler unit. The sampler units are placed in

ventilated metal weatherproof housings mounted on elevated platforms at each air sample location. The filter media are changed weekly.

4.4.3 Water

There are nine locations where water sampling is performed for the REMP. They are categorized as follows:

- Intake-River/Drinking Water; two locations (Stations 26, and 29)
- Groundwater; three locations (Stations 52, 31, and 32)
- Plant Discharge Water; one location (Station 27)
- Storm Drain Water; one location (Station 101)
- Sanitary Wastewater; two locations (Stations 102A, and 102B)

The sample at Station 26 is drawn from the plant intake water which comes from the Columbia River. The station serves as a control location, as it is upstream of the plant discharge location, and also as a drinking water location as drinking water for CGS comes from this source. Station 29 is located at the Richland Water Treatment Plant, 11 miles downstream from the discharge and is the indicator station for both river and drinking water.

The ODCM requirement for a downstream water sample "near but beyond the mixing zone" is conservatively met by sampling water from Station 27, the cooling tower discharge line to the Columbia River. This sample reflects the radioactivity present in the plant discharge prior to any river dilution, rather than the concentrations that would be found after dilution in the mixing zone. The Station 27 sample is an indicator. Composite samplers are used to collect samples at Stations 26, 27, and 29. The samplers collect 25-ml aliquots of water at regular intervals. Samples are collected monthly at each of these stations and are analyzed for gamma, gross beta, and tritium.

Three wells within the vicinity of CGS are used as groundwater sampling locations. These include a deep well on the CGS site, Station 52 located 0.1 mile north of the reactor building, and two deep wells at the IDC (ENW Industrial Development Complex), Station 31 and Station 32 located 1.2 miles downgradient from CGS. Water from the CGS well can be used as a backup source for drinking water and fire protection. The IDC wells supply water for drinking and fire protection at the IDC site. All of these wells are considered indicator locations. Quarterly grab samples are collected from each of these wells and are analyzed for gamma emitting radionuclides and tritium.

Water samples are collected monthly from the storm drain outfall (Station 101) using a flow-proportional composite sampler. These samples are analyzed for gross beta, gamma, and tritium.

The SWTF receives sanitary waste water from CGS, the IDC (ENW Industrial Development Complex), the Kootenai Building, and the DOE 400 Area . Discharge standards and monitoring requirements for the SWTF are established in EFSEC Resolution No. 300[15]. A flow meter and composite sampler is located on the 400 Area sewer line just above the 400 Area/Plant Support Facility (PSF) intertie (Station 102A). The sampler collects aliquots of the effluent on a timed basis, the composite sample that is produced is analyzed monthly as required by EFSEC Resolution No. 300.[15] A portion of the water used in the 400 Area is drawn from aquifers that are known to be contaminated with tritium as a result of past DOE activities on the Hanford Site, consequently, the water sampled at

Station 102A has tritium concentrations normally above 2000 pCi/liter. Another automatic water sampler is located at the headworks of the SWTF (Station 102B) where a monthly composite sample is taken. Both sample locations are analyzed for gross alpha, gross beta, tritium, and gamma emitting radionuclides.

4.4.4 Soil

Annual soil samples are collected at the indicator Stations 1, 7, 21, and 23 as required by EFSEC Resolution 260[6]. A sample is also collected at the control location, Station 9A (Figure 4-2). Each sample is collected from an area of approximately one square foot to a depth of approximately one inch. About two kilograms of soil are collected for each sample.

Soil samples are analyzed for gamma activity. If the Cs-137 level in an indicator sample exceeds ten (10) times the level in the control sample, strontium analysis is required[6].

4.4.5 Sediment

River sediment samples are collected semiannually as required by the ODCM. The upstream sediment sample location (Station 33) is approximately two miles upriver from the plant discharge. The downstream sample (Station 34) is collected approximately one mile downstream from the plant discharge. Each sample consists of approximately two kilograms of the shallow surface sediment scooped from below the waterline.

Cooling tower sediment samples are collected and analyzed whenever additional cooling tower sediment is added to the disposal cells (Station 119B, Figure 4-3). Disposal in the Station 119B cells is made in accordance with EFSEC Resolution No. 299[16].

Wastewater sludge/sediment samples are collected annually at Station 102D (the SWTF). All sediment samples are analyzed for gamma activity.

4.4.6 Fish

Annual fish sampling is usually performed in late summer or fall. Fish samples collected from the Columbia River (Station 30 in Figure 4-1) are indicator samples, whereas fish collected on the Snake River (Stations 38 and 38A in Figure 4-2) serve as control samples.

Three categories of fish samples are collected; an anadromous species (either a salmon or steelhead), and two other species generally considered edible or potentially edible (such as carp, catfish, sucker, and whitefish) are collected at each location. Electro-shocking and netting is used for fish collection, except for the samples of the anadromous species, which are collected at the fish hatcheries.

4.4.7 Milk

Milk samples are collected monthly during the fall and winter months (October through December). During the spring and summer months when cows are likely to be grazing or on fresh feed, milk samples are collected twice each month. Enough raw milk is collected from each sampling location to obtain a one-gallon sample after the cream has been skimmed off. The milk samples are normally processed and analyzed within four days of the collection date.

Milk samples were collected in 2007 from two locations, Station 36, and Station 9B. Station 36 is in Franklin County and is the only dairy within a ten mile radius of CGS. Station 9B is in the Sunnyside/Grandview area (Figure 4-2). The Station 9B dairy location changed in 2006, with the Meeker dairy replaced by the Scheenstra dairy. The new location is only a short distance from the old location and serves as a better control as the dairy cows feed exclusively on material grown in the control location.

4.4.8 Garden Produce

Samples of local garden produce are collected monthly during the growing season when the produce is readily available. When possible, three types of produce samples (a root crop, fruit, and a leafy vegetable) are collected at each location. The indicator samples are collected from a region in the predominantly downwind direction (Station 37) where crops are irrigated with Columbia River water. The control samples are obtained from produce stands in the Sunnyside area (Station 9C in Figure 4-2), the direction least likely to be affected by plant effluents. Apples are collected in late summer or early fall from Station 91, the Rio Vista Farms orchard, which is irrigated with Columbia River water. A small garden is maintained by ENW REMP personnel next to the SWTF and has been designated as Station 102G. The garden supplied broadleaf samples for analysis in 2007.

4.5 Sample Analyses

General descriptions of the procedures used to analyze REMP samples are provided in the following sections. The REMP TLDs were processed by Battelle at the Pacific Northwest National Laboratory (PNNL). The REMP field samples were analyzed by Energy Northwest Environmental Services. Sample holding times prior to analysis are kept as short as possible in order to ensure that the LLD requirements for shorter lived radionuclides are met with reasonable counting times. In samples where very long lived isotopes are the only isotopes of concern, longer sample holding times are permitted. Sample count times were conservatively calculated to insure required *a priori* LLDs were achieved.

4.5.1 Analysis of TLDs

The REMP TLDs are measured at the Pacific Northwest National Laboratory (PNNL) on a Harshaw Model 8800 hot gas reader. The reader is calibrated weekly and immediately prior to processing the environmental TLDs. The reader is calibrated with TLDs that have been given a known exposure from a Cs-137 source. Each group of environmental TLDs is processed with blank (freshly annealed) TLDs and spiked TLDs that have been given a known exposure. Exposure received by the field TLDs during transport is monitored with a set of 'trip' control dosimeters that accompany the field dosimeters to and from the field locations and while they are in storage. Another set of TLDs, the building controls, are used to determine the exposure of the TLDs at the storage location. The TLD exposure during transport to and from the field was determined from the difference between the building control results and the trip control results.

4.5.2 Gross Beta Activity on Air Particulate Filters

Air particulate filters are counted directly in a gas flow proportional counter after a delay of several days to allow for the decay of radon and its progeny.

4.5.3 Measurement of Gamma Emitting Radionuclides

Shielded, high purity germanium (HPGe) detectors are used to assay environmental samples to quantitatively determine concentrations of gamma emitting radionuclides. All samples are counted in standardized, calibrated geometries.

- **Liquids** – Measured aliquots of the liquid samples are poured into appropriately sized Marinelli beakers. Results are reported in pCi/liter.

- **Solids** – Soil, sludge, and sediment samples are dried and if needed ground. Foodstuff, biota (fish), and vegetation, are chopped finely or pureed and then analyzed wet (no drying is done). For foodstuff (including fish), only the edible portion of the sample is used. Measured aliquots of the solid samples (0.5 or 1.0 liter depending on sample type and sample quantity) are placed into tared containers and weighed. Results are reported in pCi/kg.

- **Charcoal Cartridges** – As many as five charcoal cartridges may be counted simultaneously with one positioned on the face of the detector and up to four on the sides of the detector in a cartridge holder. Detector calibration files are maintained for both face mount and side mount positions. Sample volume for each group cartridge count is conservatively set to the lowest cartridge sample volume in the group. If I-131 is identified in the assay of a group, each charcoal cartridge in the group is assayed separately. Result are corrected for decay during the sample collection period. Results are reported in pCi/m^3.

- **Air Particulate Filters** – At the end of each quarter, air particulate filters are composited on a station by station basis. The filters are stacked in a Petri dish and assayed. Results are reported in pCi/m^3 and represent the total quarterly gamma activity collected at each station. Results are decay corrected to the mid point of the sample collection period.

4.5.4 Gross Alpha and Gross Beta Activity in Water

A measured aliquot of each sample is evaporated to a small volume then quantitatively transferred to a ribbed, stainless steel planchet. Final evaporation is done under a heat lamp. Residue mass is determined by weighing the planchet before and after mounting the sample. The planchet is counted for alpha and/or beta activity using an automatic gas flow proportional counter. Results are corrected for sample self-absorption using the sample residue mass values. Results are reported in pCi/liter.

4.5.5 Tritium in Water

The sample is distilled then 8.0mL of distillate is mixed with 12.0mL of scintillation cocktail. The mixture is counted in an automatic liquid scintillation analyzer. Results are reported in pCi/liter.

4.5.6 Strontium-89 and 90 in Soil

No Sr-89/90 measurements were performed on soil samples in 2007.

4.5.7 Low Level Iodine-131 in Milk and Water

Four liters of sample are first equilibrated with stable iodide carrier. A batch treatment with an anion exchange resin is used to remove iodine from the sample. The resin is then removed from the liquid sample and loaded into a small container and counted directly by gamma spectroscopy. Results are reported in pCi/liter.

4.6 Data Analysis Methods

Since mid-1984, the results of the REMP analyses have been presented as net results calculated from gross or total counts minus the observed background counts of the detection method. Counting results for low level samples are often within the counting error of the background determination; consequently results can range from negative to positive values in these samples. Though most of the REMP analytical results are below the detection limit, listing the actual calculated value, even when it is negative or below the detection limit, prevents positive biases and loss of individual results inherent in the use of "less than" (<) values. This is a normal practice in radiological environmental reporting. A listing of the Energy Northwest nominal target LLDs (*a priori)* for each sample type is provided in Table 4-4; the ODCM required LLDs are also included for a comparison. The actual, observed LLDs (*a posteriori*) may vary due to sample hold times and available sample volumes.

Plots of the sample results versus time are used to represent the results for analyses such as gross beta on air particulate filters, where the results are normally above the detection limit. In such cases, the indicator station results are plotted with the control station results for easy comparison. Other data analysis techniques are also used to evaluate whether trends that could be attributed to CGS operations are evident. REMP program data trending has been identified as an area for improvement.

Thermoluminescent dosimeter (TLD) data is presented in terms of the net mR/day exposure rate. These results are determined from the total exposure (in mR) calculated for each TLD minus the TLD background and any transit (or trip) exposure received during distribution and retrieval, and divided by the number of days the TLD was in the field. The total mR/standard quarter and mR/year values are also reported (See Tables 5-3, 5-4).

The quarterly TLD results are compared with the annual TLD results and expressed as a ratio by dividing the sum of the quarterly results over the annual results (See Table 5-5). The agreement between the two sets is usually within plus or minus ten percent (10%); occasionally fade can be more significant than expected in the annual set and the results may be lower than the sum of the quarterly data.

4.7 Changes to the Sampling Program in 2007

There were no changes made to the sampling program in 2007. Sampling of shallow wells around CGS was performed in 2007 as an Energy Northwest initiative and may continue in the future.

TABLE 4-1
RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM PLAN

	SAMPLE TYPE[a]	SAMPLE STATION[b] NUMBER	SAMPLING AND COLLECTION FREQUENCY[c]	TYPE AND FREQUENCY OF ANALYSIS
1.	**AIRBORNE**			
	Particulates and radioiodine (6/12)[d]	1, 4-8, 9A, 21, 23, 40, 48, and 57	Continuous sampling; weekly collection	Particulate: Weekly gross beta[e]; gamma isotopic[f] of quarterly composite Iodine: Weekly gamma analysis.
	Soil[g](0/5)	9A, 1, 7, 21 and 23	Annually	Gamma isotopic[f]; Sr-90[h]
2.	**DIRECT RADIATION**			
	TLD[i](34/72)	1-8, 9A, 10-25, 40-47, 49-51, 53-56, 65, 71-86 (1S-16S)[j], 119B, 119-Control, 120, 121-129, 136A-138A	Quarterly, annually	Thermoluminescent output; quarterly and annual processing.
	PIC	Various locations, as needed[k]	Continuous recording, as needed	Exposure rate accumulated in internal memory
3.	**WATERBORNE**			
	River/Drinking Water[l] (3/4)	26, 27 and 29	Composite aliquots[m]; monthly collection	Gamma isotopic[f], gross beta, quarterly; tritium composite; Sr-90[n]; I-131[o]
	Storm Drain Water (0/1)	101	Composite aliquots[m], monthly collection; grab samples	Gamma isotopic[f], tritium, gross beta
	Sanitary Waste Treatment Facility Water (0/2)	102A, 102B	Composite aliquots[m], monthly collection	Gamma isotopic[f], gross beta, gross alpha, tritium
	Ground Water (2/3)[p]	31, 32, and 52	Quarterly	Gamma isotopic[f]; tritium
	River Sediment (1/2)[q]	33 and 34	Semiannually	Gamma isotopic[f]
	Sanitary Waste Treatment Facility Sediment (0/1)	102D	Annually	Gamma Isotopic[f]
	Cooling Tower Sediment Disposal Area (0/1)	119B	Within 30 days following Cooling Tower cleaning event	Gamma Isotopic[f]
4.	**INGESTION**			
	Milk[r] (3/3)	9B[s], 36	Semimonthly during grazing season, monthly at other times	Gamma isotopic[f]; I-131; Sr-90[t]
	Fish[u] (2/2)	30, 38	Annually[v]	Gamma isotopic[f]
	Garden Produce[w] (1/4)	9C, 91,[x] 37, 102G[y]	Monthly during growing season in the Riverview area of Pasco and a control near Grandview; annual collection at Station 91.	Gamma isotopic[f]

FOOTNOTES:

(a) The fraction in parentheses for each sample type indicates the ratio of ODCM-required sample locations to the total number of sample locations currently being monitored in the surveillance program. The SCA also requires certain numbers of sampling stations for each type of media.

(b) The underlined sample location designates a control station.

(c) Deviations are permitted if samples are unobtainable due to hazardous conditions, seasonal availability, malfunction of automatic sampling equipment, or other legitimate reasons. Such deviations are documented in Section 5.

FOOTNOTES (cont):

(d) EFSEC Resolution 260 requires nine or more air sampling stations.

(e) If gross beta activity is greater than 10 times the mean of the result for the control, Station 9A, gamma isotopic analysis shall be performed on the individual sample.

(f) Gamma isotopic means identification and quantification of gamma-emitting radionuclides that may be attributable to the effluents of CGS.

(g) Soil samples are collected to satisfy the requirements of the SCA for CGS. EFSEC Resolution 260 requires that soil samples be collected at five air-sampling locations.

(h) Sr-90 analysis shall be performed on any indicator soil sample having cesium results greater than ten times the result for the control location.

(i) TLD an abbreviation for thermoluminescent dosimeter.

(j) TLD Stations 71-86 are not included among the 34 routine TLD stations required by the ODCM Table 6.3.1-1. Their alternate designations are 1S-16S. EFSEC Resolution 260 requires 25 or more TLD stations to be located within a 10-mile radius of the plant.

(k) Pressurized ion chambers (PICs) or similar are required by ODCM Table 6.3.1-1 1b to be maintained as a supplemental or backup system.

(l) The term "river/drinking water" is used throughout this report because the drinking water is taken from the Columbia River. Station 26, CGS makeup water intake from the Columbia River is both an upstream water sample and the drinking water sample location. Station 29 is a downstream drinking water sample. The Station 27 sample, which is drawn from the plant discharge line, is taken in place of a "downstream" water sample near but beyond the mixing zone. It reflects the radioactivity present in the plant discharge prior to any river dilution. EFSEC Resolution 26 requires two drinking water locations downstream from the plant discharge and requires sampling from the plant intake and discharge water. Only one drinking water station is now sampled after DOE closed the intake at the 300 Area (Station 28) in 1998.

(m) Composite samples are collected with equipment that collects an aliquot at time intervals that are short relative to the compositing period.

(n) When the gross beta activity in drinking water exceeds 8 pCi/liter, a Sr-90 analysis is performed.

(o) When the dose calculated via ODCM methodology for consumption of water exceeds 1 mrem per year, low level I-131 analyses are performed on the drinking water samples.

(p) EFSEC Resolution 260 requires sampling from wells used for fire protection and as backup drinking water sources.

(q) EFSEC Resolution 260 requires sediment sample collection upstream and downstream of the plant discharge.

(r) Milk samples will be obtained from farms or individual milk animals that are located in the most prevalent wind directions from CGS. EFSEC Resolution 260 requires at least three milk locations within the 10-mile radius of the plant and one in a control location, however, Energy Northwest currently has access to only one dairy within a 10-mile radius of the plant (Station 36) and one control location at 30 miles. Broadleaf vegetation can be sampled in lieu of milk if a representative milk sample is not available.

(s) Footnote removed.

(t) If Cs-134 or Cs-137 is measured in an individual milk sample in excess of 30 pCi/1iter, then the Sr-90 analysis will be performed.

(u) There are no species fished commercially in the Hanford Reach of the Columbia River. The most recreationally important species in the area are anadromous, which ascend rivers from the ocean for breeding. Anadromous fish species are normally obtained from hatcheries; Snake River samples are obtained from the Lyons Ferry Fish Hatchery, and Columbia River samples are obtained at the Ringold Fish Hatchery.

(v) If an impact is indicated, sampling will be conducted semiannually.

(w) Garden produce will routinely be obtained from farms or gardens using Columbia River water for irrigation when available. One sample of a root crop, leafy vegetable, and a fruit is collected each sample period, if available. The variety of the produce obtained will be dependent on seasonal availability.

(x) Station 91 is an apple orchard irrigated with Columbia River water. The apple crop from Station 91 is sampled annually.

(y) Station 102G was used to collect one sample. This station does not meet the ODCM criteria for a garden which requires sampling; it was used to provide a broadleaf sample that was grown inside the 5-mile radius from the plant.

TABLE 4-2
REMP SAMPLE STATIONS AND REQUIREMENTS

SECTOR[a]	STATION[b] NUMBER	DISTANCE[c]	ODCM[d]	STATE[e]	OTHER[f]
N (1)	52	0.07	GW		
	71(1S)	0.28			TLD
	47	0.70		TLD	
	57	0.70	AP/AI		
	18	1.16	TLD	TLD	
	53	7.54	TLD		
NNE (2)	72(2S)	0.32			TLD
	2	1.45	TLD	TLD	
	54	6.08	TLD		
NE (3)	101	0.19			SW
	73(3S)	0.54			TLD
	19	1.74	TLD	TLD	
	48	4.59	AP/AI		
	46	4.99	TLD		
ENE (4)	74(4S)	0.38			TLD
	21	1.45		TLD, AP/AI, SO	
	20	1.93	TLD	TLD	
	11	3.16		TLD	
	33	3.44		SE	
	45	4.45	TLD		
	44	5.90	TLD		
E (5)	75(5S)	0.37			TLD
	22	2.08	TLD		
	10	3.16	TLD	TLD	
	26	3.19	SW, DW	SW	
	27[g]	3.19	SW	DIS W	
	30	3.28	FI	FI	
	43	5.16	TLD		
ESE (6)	76(6S)	0.42			TLD
	31	1.06	GW	GW	
	32	1.27		GW	
	51	2.14	TLD		
	23	3.03		TLD, AP/AI, SO	
	34	3.32	SE	SE	
	8	4.39	TLD, AP/AI	TLD, AP/AI	
	91	4.30		GP	
	42	5.85	TLD		
	36[g]	7.33	MI	MI	

TABLE 4-2 (cont.)
REMP SAMPLE STATIONS AND REQUIREMENTS

SECTOR[a]	STATION[b] NUMBER	DISTANCE[c]	ODCM[d]	STATE[e]	OTHER[f]
ESE (6)(cont.)	5	7.72	TLD	AP/AI	
	38	26.50	FI	FI	
SE (7)	77(7S)	0.57			TLD
	24	1.87	TLD	TLD	
	3	2.06		TLD	
	41	5.79	TLD		
	40	6.51	TLD, AP/AI		
SSE (8)	119-Control	0.28		TLD	
	120	0.32			TLD, SE
	102B	0.50		SFW	
	102D	0.50			SFW, SE
	102G	0.56	GP		
	78(8S)	0.81			TLD
	25	1.50	TLD	TLD	
	55	6.05	TLD		
	4	9.57	TLD, AP/AI	TLD, AP/AI	
	29	11.57	DW	DW	
	37B	14.79		GP	
	37A	14.62	GP	GP	
S (9)	119B	0.31		TLD, SE	
	102A	0.67		SFW	
	79(9S)	0.76			TLD
	1	1.25	TLD	TLD, AP/AI, SO	
	6	7.72	TLD	AP/AI	
	65	8.87			TLD
SSW (10)	80(10S)	0.83			TLD
	50	1.26	TLD	TLD	
	56	6.65	TLD		
SW (11)	13	1.26	TLD	TLD	
	81(11S)	0.74			TLD
WSW (12)	82(12S)	0.57			TLD
	14	1.26	TLD	TLD	
	9A	28.35	TLD, AP/AI	TLD, AP/AI, SO	
	9B	32.82	MI, GP	MI, GP	
	9C	32.15	GP	GP	
W (13)	83(13S)	0.52			TLD
	15	1.24	TLD	TLD	
WNW (14)	84(14S)	0.55			TLD

TABLE 4-2 (cont.)
REMP SAMPLE STATIONS AND REQUIREMENTS

SECTOR[a]	STATION[b] NUMBER	DISTANCE[c]	ODCM[d]	STATE[e]	OTHER[f]
WNW(14) (cont.)	16	1.21	TLD	TLD	
	7	2.83	TLD	TLD, AP/AI, SO	
NW (15)	85 (15S)	0.43			TLD
	49	1.19	TLD	TLD	
NNW (16)	121	0.12		TLD	TLD
	122	0.31		TLD	TLD
	123	0.29		TLD	TLD
	124	0.28		TLD	TLD
	125	0.28		TLD	TLD
	126	0.28		TLD	TLD
	127	0.26		TLD	TLD
	128	0.25		TLD	TLD
	129	0.17		TLD	TLD
	136A	0.29		TLD	TLD
	137A	0.24		TLD	TLD
	138A	0.17		TLD	TLD
	86 (16S)	0.31			TLD
	17	1.19	TLD	TLD	
	12	6.74		TLD	

SAMPLE TYPE KEY:

AP/AI - Air Particulate/Air Iodine
Dis W - Discharge Water
GP - Garden/Orchard Produce
MI – Milk
SFW - Sanitation Facility Water
SW - Surface Water
VE - Vegetation
DW - Drinking Water
FI-Fish
GW - Ground Water
SE - Sediment
SO - Soil
TLD - Thermoluminescent Dosimeter

FOOTNOTES:

(a) The area in the vicinity of CGS is separated into 16 sectors for reporting purposes. The 16 sectors cover 360 degrees in equal 22.5 degree sections, beginning with sector 1 (N) at 348.75 to 11.25 degrees and continuing clockwise through sector 16 (NNW).

(b) The alternate designations for TLD Stations 71-86 are given in parentheses, i.e., 1S-16S.

(c) Distances are from GPS positions for each location as a radial distance from CGS reactor building.

(d) ODCM - Offsite Dose Calculation Manual Table 6.3.1-1 requirement.

(e) State of Washington EFSEC Resolution 260 requirements.

(f) OTHER –Special study stations. TLD Stations 121 through 138 satisfy ISFSI monitoring requirements 10CFR72.44(d)(2).

(g) Duplicate samples, i.e., samples drawn at the same time as the routine samples and submitted for analysis as a quality control check, are collected at this location. The station designation for the duplicate of Station 36 is Station 36D. For Location 27, a composite sample is collected and designated as location 72.

TABLE 4-3
2007 FIVE MILE LAND USE CENSUS RESULTS

SECTOR[a]	NEAREST RESIDENT[b]	GARDEN (>50M^2)	DAIRY ANIMALS	LIVESTOCK[b]
NE	4.47	none	none	none
ENE	4.01	none	none	4.96
E	4.59	none	none	none
ESE	4.24	none	none	none
SE	none	none	none	none

FOOTNOTES

(a) Within a five-mile radius of the plant, only 4.5 sq. miles of the land in the sixteen meteorological sectors is privately owned farmland. The remainder of the land is on the federally owned Hanford Site. Only those sectors containing points of interest are presented here.

(b) Estimated distances in miles from CGS Reactor Building based on GPS readings.

TABLE 4-4
COMPARISON OF LABORATORY NOMINAL LOWER LIMITS OF DETECTION WITH OFFSITE DOSE CALCULATION MANUAL REQUIREMENTS

MEDIA (UNITS)	ANALYSIS	ENERGY NORTHWEST LLDs[a]	ODCM REQUIRED LLDs
Air	Gross Beta	0.002	0.01
(pCi/m^3)	Gamma Spectrometry		
	Cs-134	0.001	0.05
	Cs-137	0.001	0.06
	I-131	0.03	0.07
Water:	Gross Beta	2.4	4
(pCi/liter)	Tritium	400	2000[b]
	Sr-90	1	---
	Gamma Spectrometry		
	I-131[c]	1	---
	Mn-54	10	15
	Fe-59	15	30
	Co-58	10	15
	Co-60	10	15
	Zn-65	15	30
	Zr-Nb-95	10	15
	Cs-134	10	15
	Cs-137	10	18
	Ba-La-140	10	15
Soil/Sediment:	Gamma Spectrometry		
(pCi/kg dry)	Mn-54	30	---
	Co-60	30	---
	Zn-65	50	---
	Cs-134	30	150
	Cs-137	30	180
	Sr-90	10	---
Fish:	Gamma Spectrometry		
(pCi/kg wet)	Mn-54	15	130
	Fe-59	30	260
	Co-58	15	130
	Co-60	15	130
	Zn-65	30	260
	Cs-134	15	130
	Cs-137	15	150
Milk:	Gamma Spectrometry		
(pCi/liter)	I-131[c]	0.5	1
	Cs-134	10	15
	Cs-137	10	18
	Ba-La-140	10	15
	Sr-90	1	---
Garden Produce:	Gamma Spectrometry		
(pCi/kg wet)	Cs-134	15	60
	Cs-137	15	80
	I-131	20	60

[a] These are the nominal target LLDs (a priori) for analyses performed in the Energy Northwest Environmental Services Laboratory and are based on conservative assumptions. These calculations included corrections for decay during the collection period and delay prior to analysis using factors that are normally encountered for the different media types. Actual LLDs (a posteriori) may be higher or lower for specific samples.

[b] If no drinking water pathway exists, a value of 3,000 pCi/liter may be used.

[c] This ENW I-131 LLD achieved by anion resin separation and does not represent a direct analysis of the sample media.

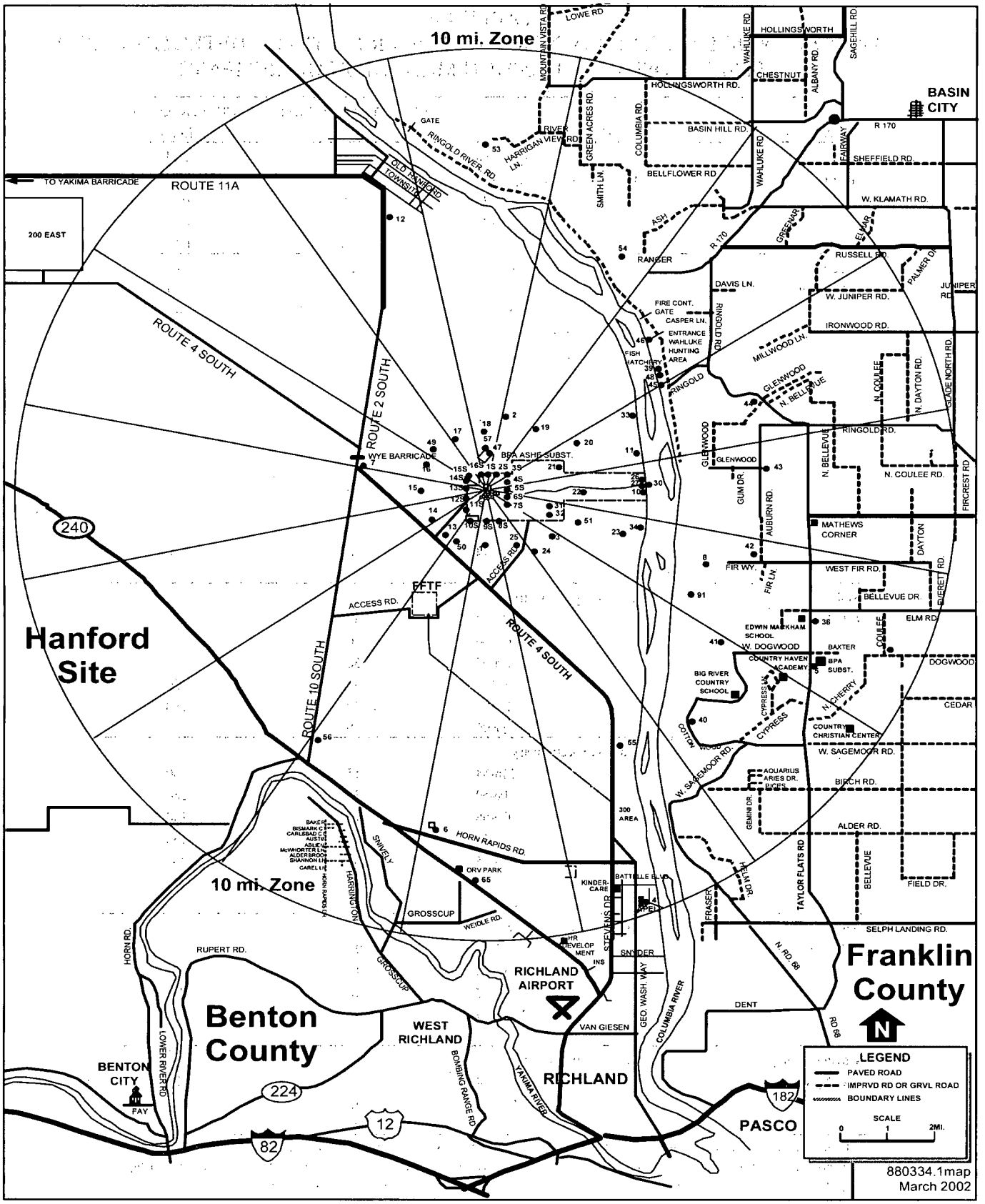

FIGURE 4-1 REMP SAMPLING LOCATIONS INSIDE THE 10 MILE RADIUS

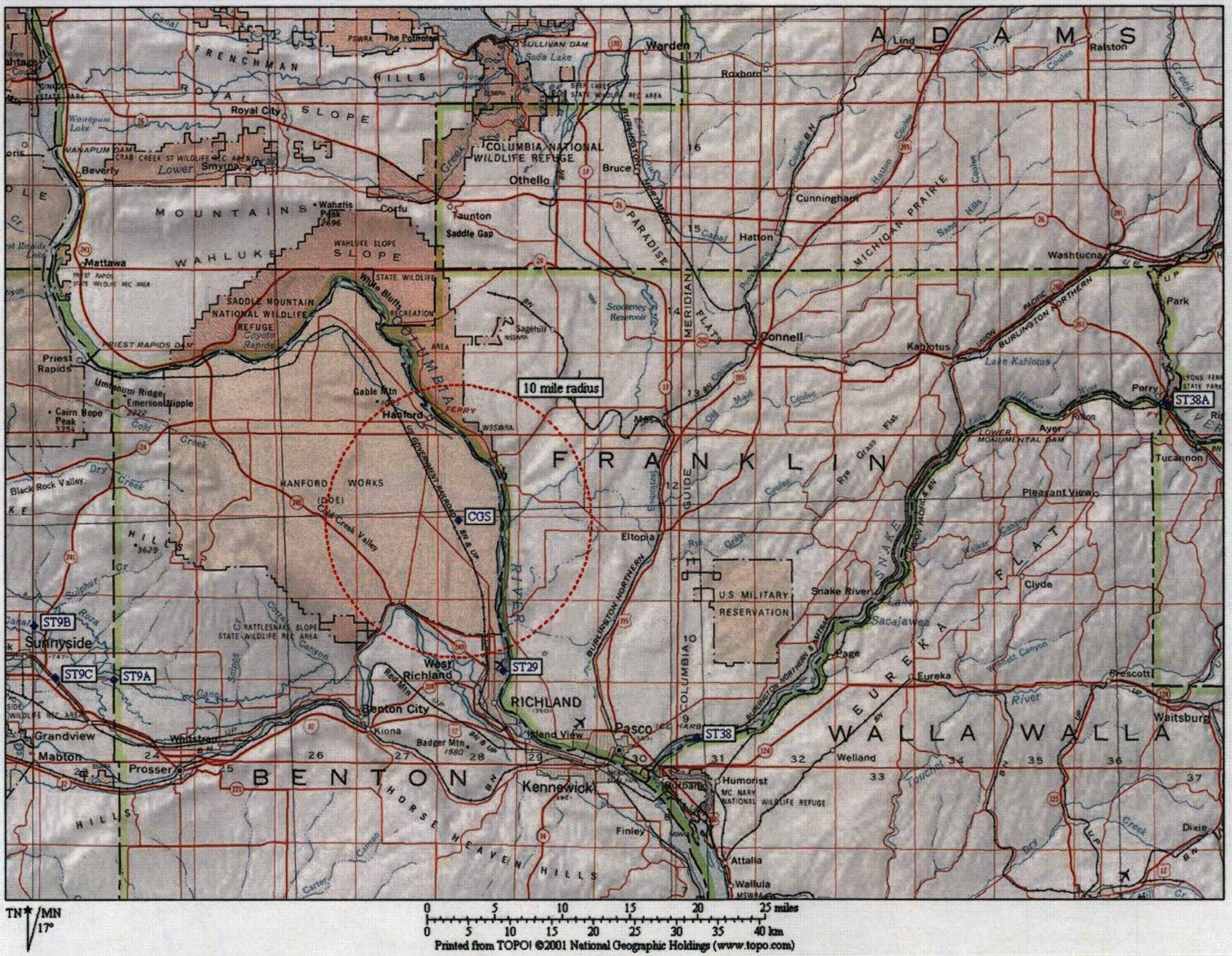

FIGURE 4-2 REMP SAMPLING LOCATIONS OUTSIDE THE 10-MILE RADIUS
(NOTE: Station 38A is the Lyons Ferry Hatchery)

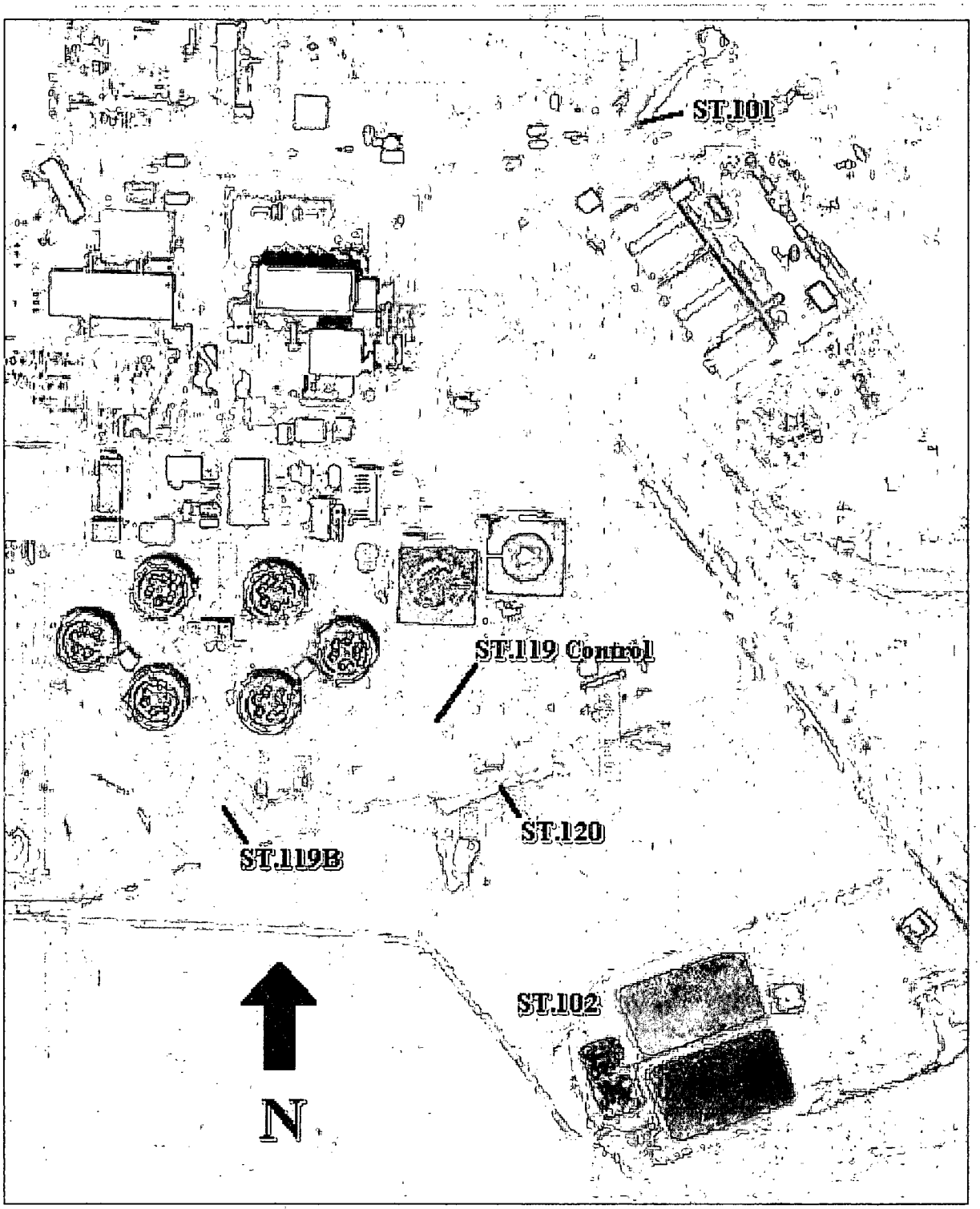

FIGURE 4-3 REMP NEAR PLANT SAMPLING LOCATIONS
STATION 102A (APPROXIMATELY 0.25 MI SOUTH). STATION 102 IN PICTURE IS BOTH 102B, 102D AND 102G.

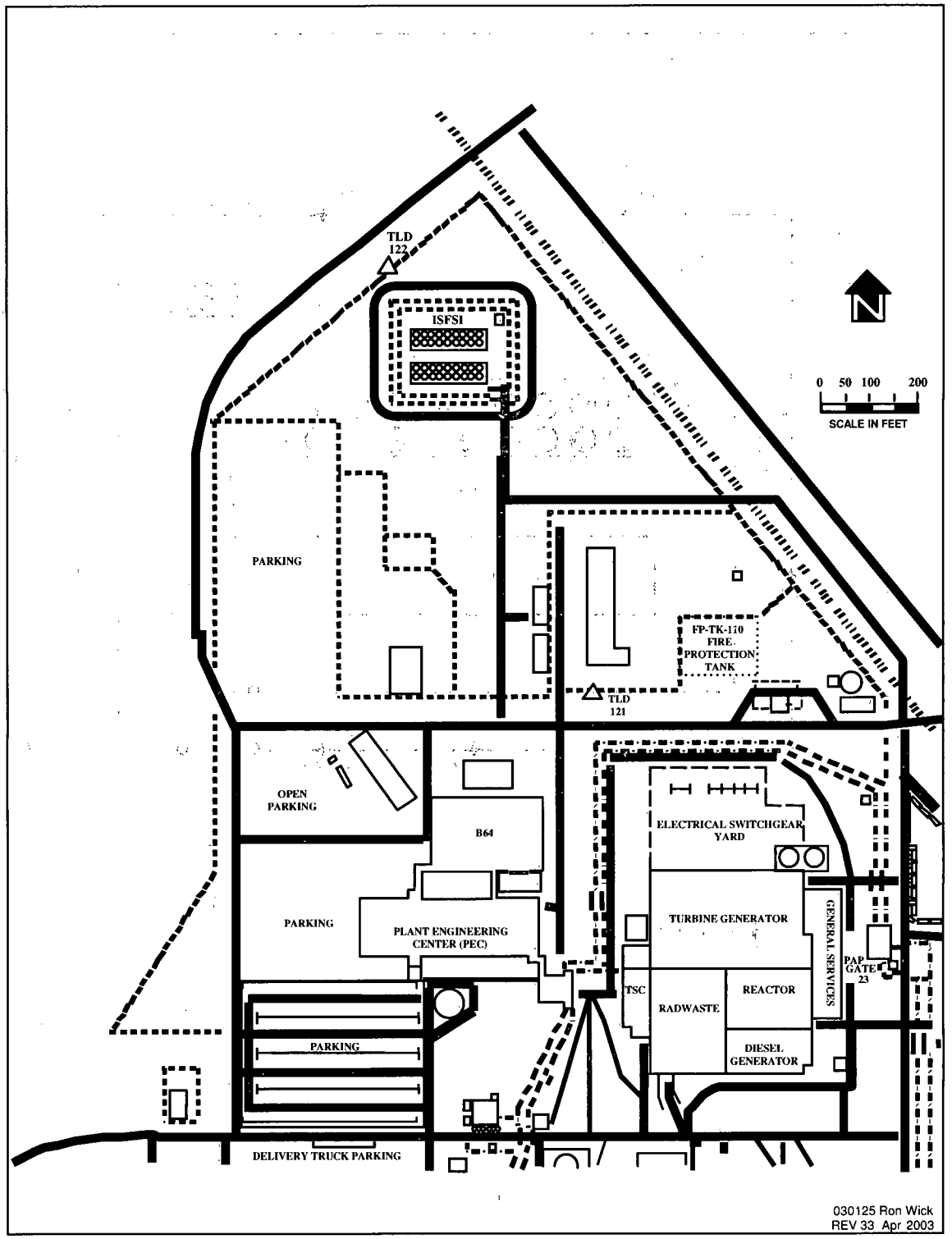

FIGURE 4-4 TLD STATIONS 121 AND 122

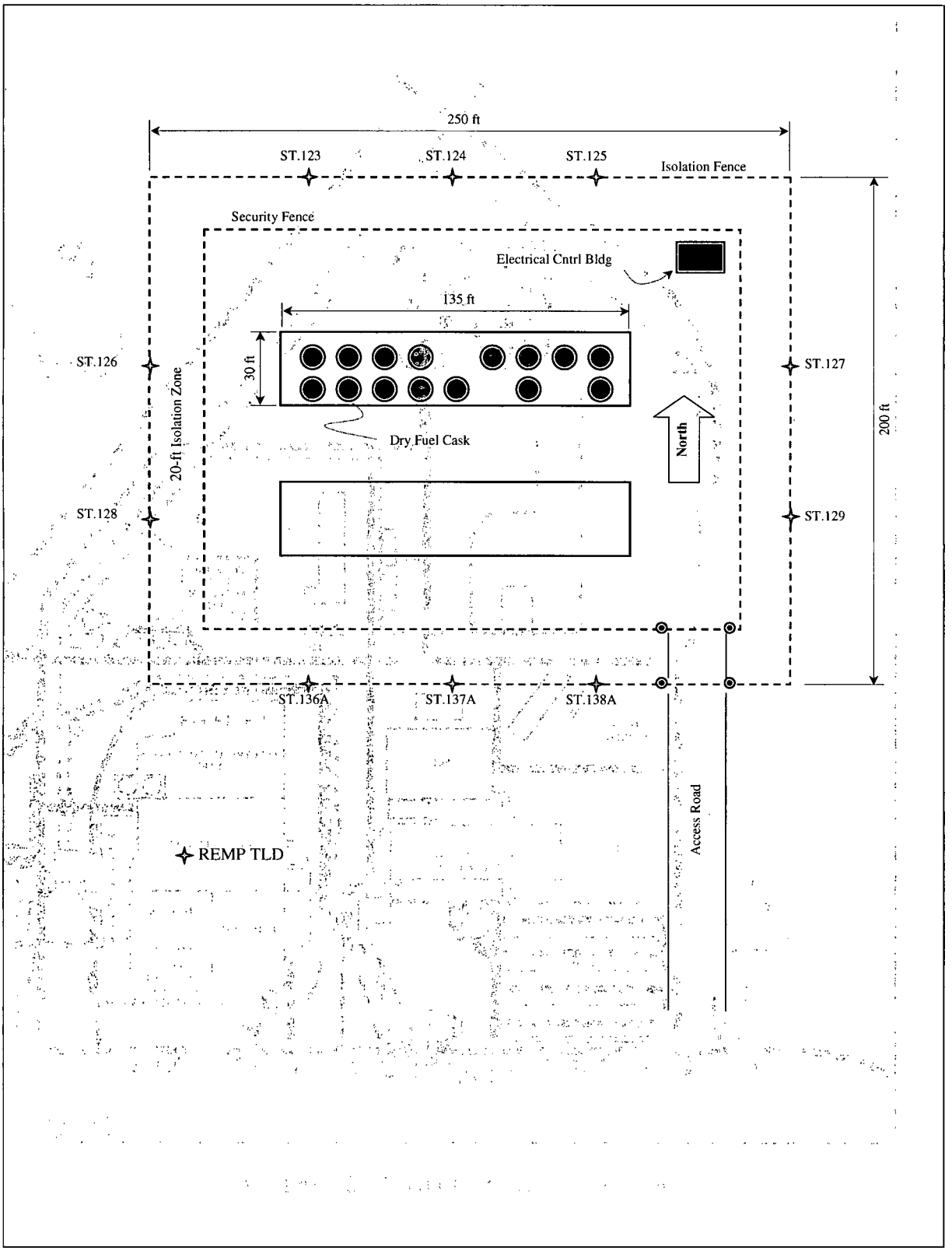

FIGURE 4-5 ISFSI TLD STATIONS LAYOUT

5.0 RESULTS AND DISCUSSION

5.0 RESULTS AND DISCUSSION

REMP samples were analyzed by the Energy Northwest Environmental Services Laboratory in 2007. The environmental TLDs were analyzed by Battelle at the Pacific Northwest National Laboratory (PNNL). Table 5-2 provides a summary of the REMP results for 2007; the results for naturally occurring radionuclides that are not related to CGS operations have not been included in the summary table. The lower limits of detection (LLDs) listed in Table 5-2 are the ODCM or EFSEC required detection limits and are not the method detection limits listed in Table 4-4. The data tables for the 2007 report are presented in Appendix A of this volume and summarize the analytical results in greater detail.

The analytical results for the REMP sampling locations during 2007 are very similar to the results reported for previous years. No significant trends indicating an environmental impact, unexpected changes in the environmental concentrations, or exposure levels at REMP monitoring stations were observed.

5.1 Direct Radiation

The environmental radiation exposure rates measured near the plant and at remote stations were consistent with exposure rates seen in previous years. Figure 5-1 presents a plot of the 2007 mean quarterly TLD results for each of the sixteen meteorological sectors nearest the plant. These "S" station locations are located 0.3-0.8 miles from the reactor and are all inside the property boundary. Figure 5-1 also shows the high, low, and mean result in each sector for 1984 through 2006. The TLDs in the N, NNE, and NNW sectors show higher exposures rates than other "S" stations as a result of being physically closer to the plant turbine building and the ISFSI. Results for the NNW sector were again above the long term average; this has been the case ever since spent fuel was moved to the ISFSI. TLDs in all other sectors show results below the preoperational and long term operational mean. A similar pattern has been observed since 2004.

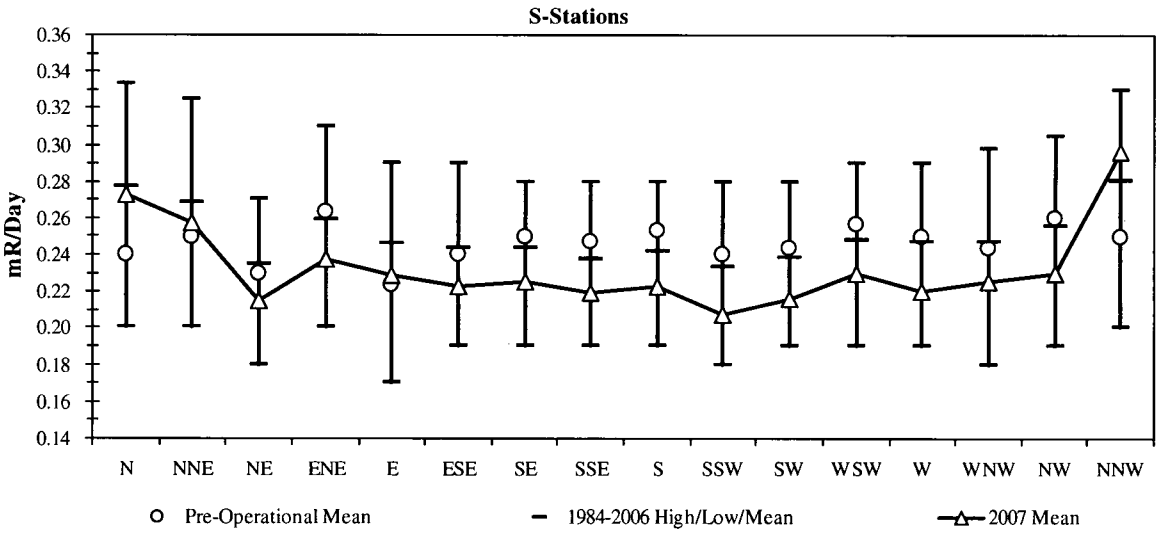

Figure 5-1 Site Boundary Quarterly TLDs 1984-2006 Hi/Low/Mean vs. 2007 Mean by Sector

Exposure rates for the near plant TLD locations are presented in Figure 5-2. These TLDs are located at distances between 0.9 and 2.1 miles from the reactor building. Results in all sectors, including the N, NNE, and NNW sectors, are below the preoperational and long term operational means. A similar pattern has been observed since 2003.

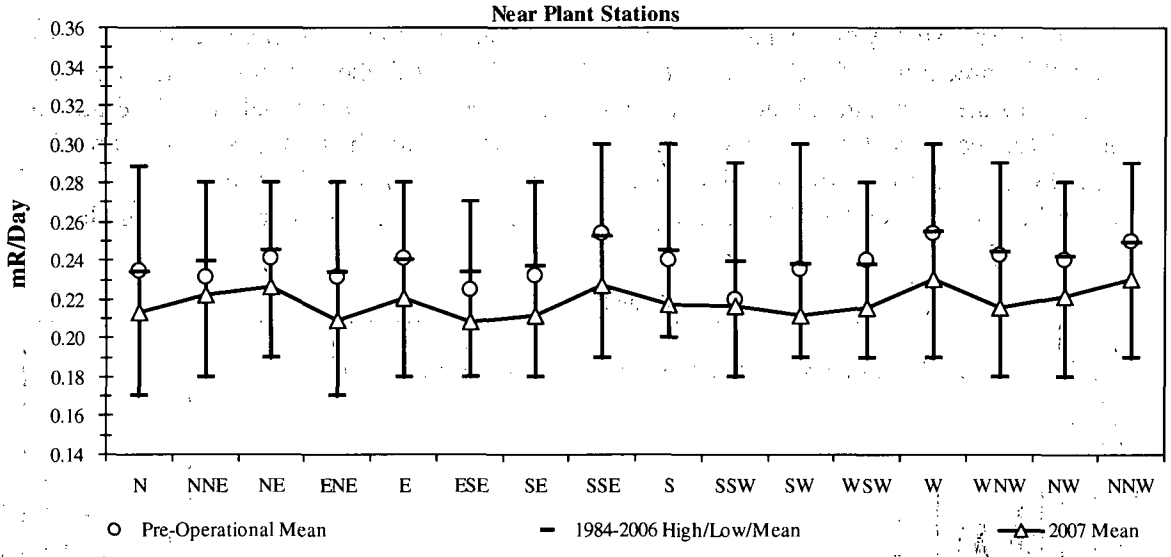

Figure 5-2 Near Plant Stations Quarterly TLDs 1984-2006 Hi/Low/Mean vs. 2007 Mean by Sector

Exposure rates for the remote TLD locations are presented in Figure 5-3. Station 46 in the Wahluke Reserve (NE sector) remained the remote location with the highest exposure rate. This has been the case since the preoperational measurement phase and is attributed to difference in the underlying rock and soil composition in this area. Remote location results for all sectors are below the preoperational and long term operational means. A similar pattern has been observed since 2004.

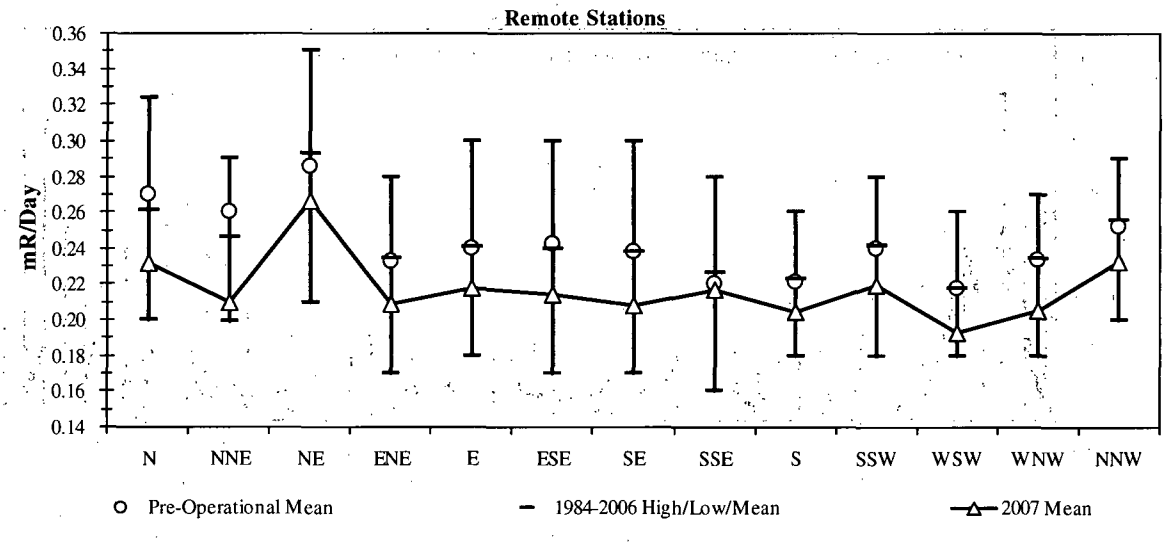

Figure 5-3 .Remote Quarterly TLDs 1984-2006 Hi/Low/Mean vs. 2007 Mean By Sector

Environmental radiation exposure rates for 2007, the preoperational phase, and the long term operational phase are summarized in Tables 5-3 and 5-4. Table 5-5 list a comparison of the 2007 annual and summed quarterly TLD results.

5.2 Airborne Particulate/Iodine

The 2007 mean weekly particulate filter gross beta results for the inner ring indicator stations (those within three miles of CGS) are plotted in Figure 5-4. With the exception of the week 3 results, results are within the ranges observed during the previous operational periods. Figure 5-5 is a plot of 2007 mean weekly particulate filter gross beta results for the remote stations (those beyond 3 miles of CGS). A similar trend to that seen with the near plant results is observed The control location (Station 9A) trend follow a nearly identical pattern to the remote and near-plant locations.

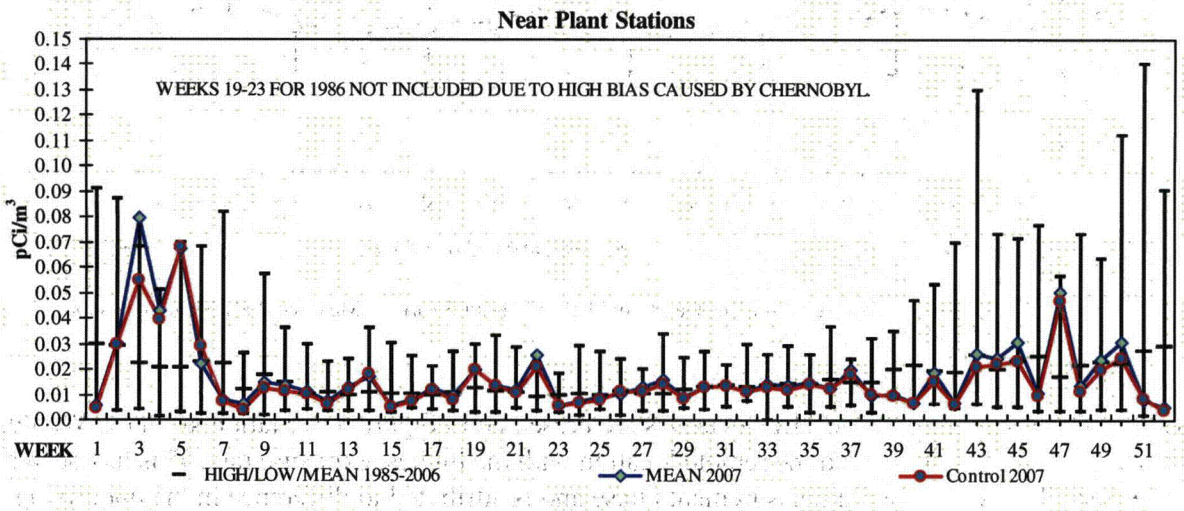

Figure 5-4 1985-2006 Weekly Hi/Low/Mean vs. 2007 Weekly Mean Gross Beta in Air - Near Plant Stations

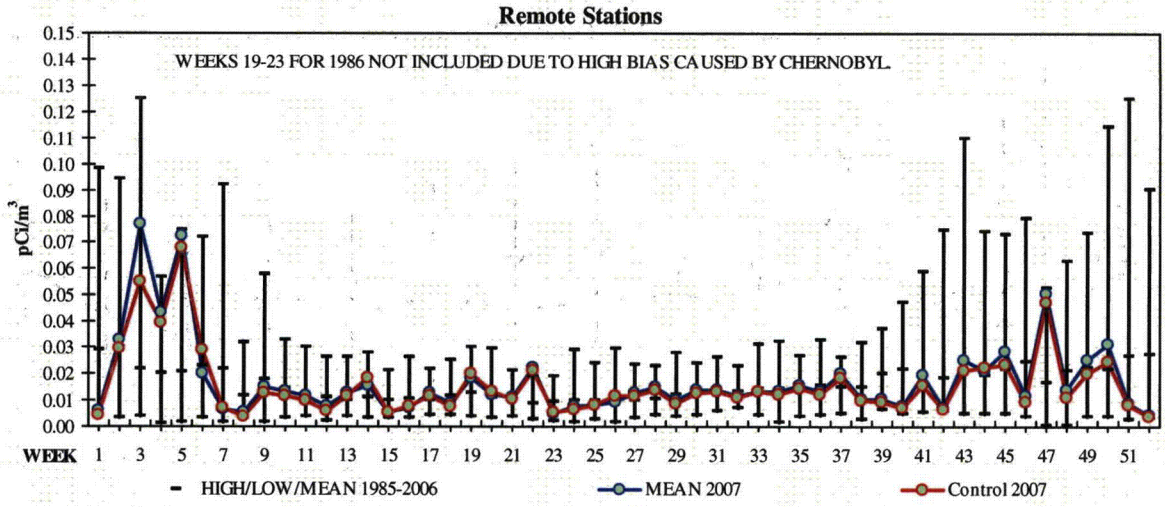

Figure 5-5 1985-2006 Weekly Hi/Low/Mean vs. 2007 Weekly Mean Gross Beta in Air - Remote Stations

A two times increase above the historic gross beta mean was seen in weeks 3, 4, 5, 22, and 47 for both the near plant and remote stations. The increases were seen across the board, being observed at all indicator locations as well as the control location. Only the week 3 mean was noticeably above the control value. This discrepancy is believed to be due to climatic difference between the indicator and control locations that occurred that week. As noted in previously reports, gross beta levels typically increase during periods of inversion occurring in the fall and winter months. Gross beta results plotted over a period of several years show a cyclical pattern of fall and winter increases. The week 22 (ending 6/5/07) increase is associated with unstable weather conditions with very hot conditions mid week followed by thunderstorms. There is no indication that any of the increases were due to CGS activities or effluents.

The quarterly particulate filter gamma isotopic results indicated only the presence of naturally occurring radionuclides (See Appendix A, Tables A-3.1, A-3.2) . Be-7 was positively identified in all samples at both the indicator and control locations.

The 2007 weekly iodine cartridge isotopic results showed no indication of I-131 in any of the samples with result in all cases being below the I-131 lower level of detection (See Appendix A, Tables A-3.1, A-3.2).

Based on these results, there is no evidence of any measurable impact from plant operations on the environment in the air particulate filter and charcoal cartridge results for 2007.

5.3 Water

Gross beta results for the plant intake and river/drinking water were within the normally observed ranges (See Appendix A, Tables A-5.1, A-5.2). All drinking and river water (Stations 26 and 29) gross beta results were less than 8 pCi/liter. State drinking water standard for Sr-90 [11] require a strontium analysis be performed when gross beta results are above the 8 pCi/liter level. The gross beta levels in the plant discharge water (Station 27) were on average 9.3 times higher than the levels seen in the intake water (Station 26). Higher activity is expected in the discharge water as natural radioactivity is concentrated due to evaporative loss and the scrubbing action of the cooling towers which incorporates atmospheric particulate material into the water. The Circulating Water cycles of concentration for the 2007 operation period was 9-10 which is in good agreement with the discharge/intake gross beta ratio. The discharge sample results are representative of the radioactivity present in plant discharges before any mixing with river water occurs. Gross beta results are plotted in figure 5-6.

Tritium levels in all river/drinking, plant discharge, and deep groundwater well samples were below the detection limit (See Appendix A, Tables A-6.1, A-6.2). This is consistent with the results seen in previous years. Tritium results are plotted in Figure 5.7

Gamma spectroscopy results of river/drinking, plant discharge water, and deep groundwater well samples showed no indication of radionuclides of interest being present in any of samples. Some naturally occurring radionuclides were identified as was expected. (See Appendix A, Tables A-7.1, A-7.2).

A number of shallow groundwater samples were collected in 2007, see Section 5.9.6 for results and discussion. There is no evidence of any measurable impact on the environment due to CGS plant operations in the river/drinking, plant discharge, or deep groundwater sample results for 2007.

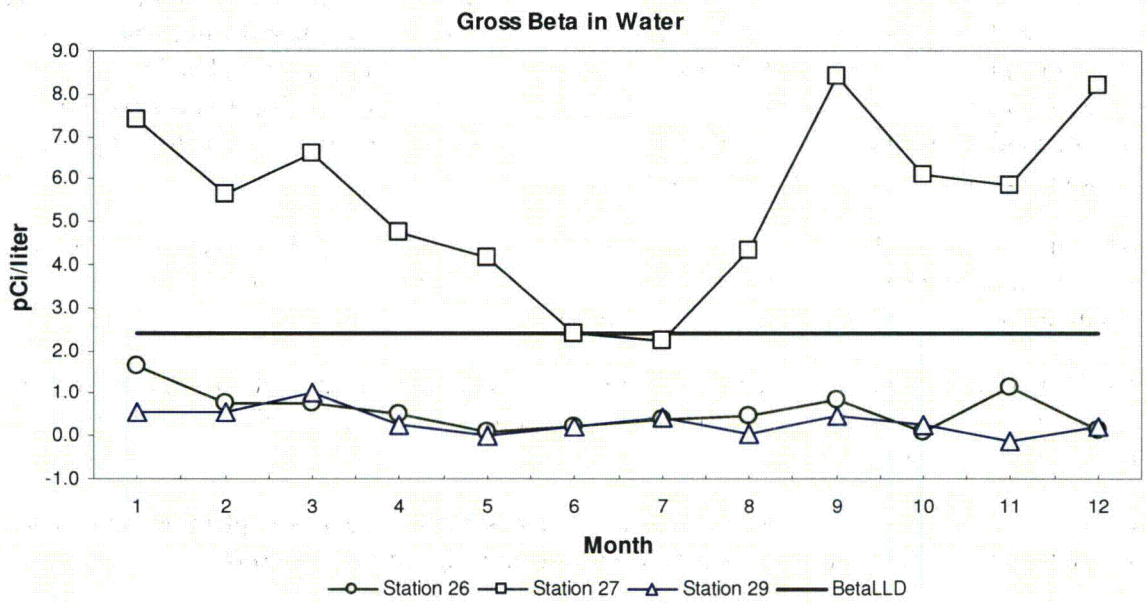

Figure 5-6 Gross Beta in River/Drinking (Stations 26 & 29) and Plant Discharge Water (Station 27) for 2007

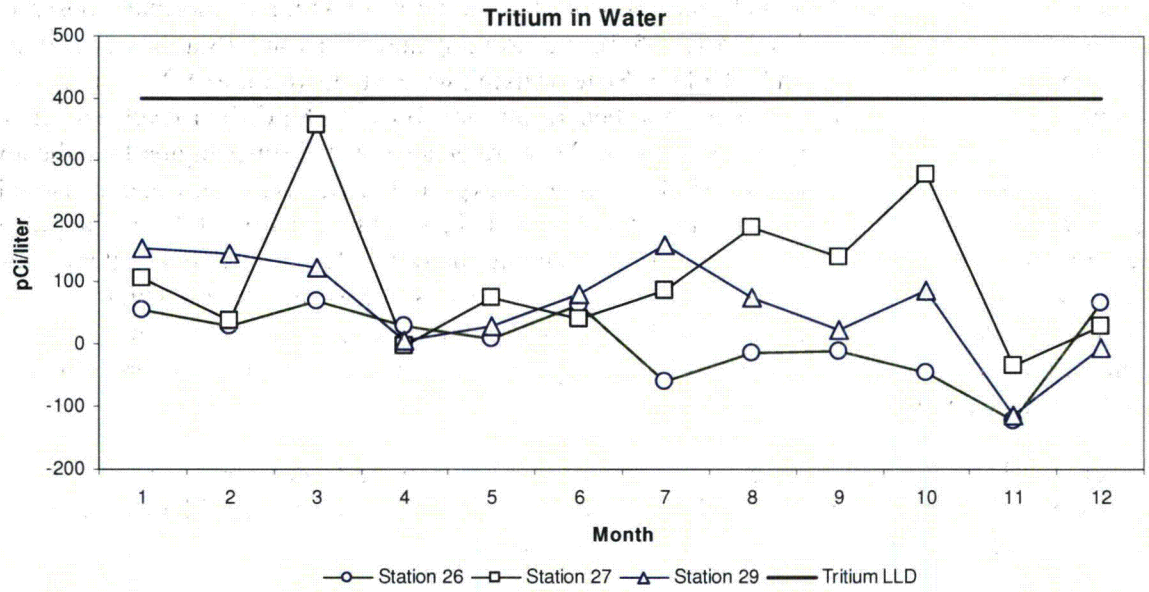

Figure 5-7 Tritium in River/Drinking (Stations 26 & 29) and Plant Discharge Water (Station 27) for 2007

5.4 Soil

Gamma spectroscopy analysis was performed on soil samples from 5 different locations in 2007 (See Appendix A, Tables A-8.1, A-8.2). Results indicated the presence of naturally occurring radionuclides (Be-7, K-40, Bi-214, and Ra-226) and Cs-137 in almost all samples. Cs-137 concentrations in all indicator locations were less than that observed the previous year; however, the control Cs-137 concentration was slightly higher. The Cs-137 concentrations identified are within the range considered normal background levels and consistent with Cs-137 concentrations found in Hanford site soils.[19,21] No indicator location had Cs-137 concentrations high enough above the control location to trigger a Sr-90 analysis as required by the ODCM.[8] The soil sample results did not indicate a measurable impact from CGS plant operation.

5.5 River Sediment

Gamma assays of river sediment identified several naturally occurring radionuclides (Be-7, K-40, Ra-226, and Bi-214) and Cs-137 (See Appendix A, Tables A-9.1, 9.2). Cs-137 was detected in both the upstream (Station 33) and downstream (Station 34) samples (relative to the cooling tower discharge point). Both the upstream and downstream results are consistent with results seen in previous years. Cs-137 activity in the ranges identified has been previously identified as a component of the Columbia River sediment originating from Hanford site activities[14], weapons testing fallout, and natural background.

5.6 Fish

The gamma spectroscopy results of fish samples collected in the Columbia River identified the presence of Cs-137 in two of the samples. Both sample results were < 10 pCi/kg Cs-137 and just above the detection limit (See Appendix A, Tables A-10.1, 10.2). These levels are substantially below the ODCM required detection and reporting limits. Cs-137 has not been identified in REMP fish samples for at least the last five years, however, this isotope has been identified in Columbia river fish by other studies.[22] No radionuclides were positively identified in fish samples collected from the control location on the Snake River.

5.7 Milk

There was no detectable I-131 activity identified in any of the milk samples collected in 2007 (See Appendix A, Tables A-11.1, A-11.2). Gamma spectroscopy results of milk radionuclides other than I-131 did not identify the presence of any radionuclides of interest above detection limits (See Appendix A, Tables A-12.1, A-12.2). Naturally occurring K-40 was identified in all milk samples.

5.8 Garden Produce

Gamma analysis was performed on nine different fruit and vegetable crops in 2007 (See Appendix A, Tables A-15.1, A-15.2, A-16.1, A-16.2, A-17.1, A-17.2). Results were below the detection limits for all radionuclides of interest with the exception of two positive Cs-137 results obtained on vegetables obtained from a small garden grown on Energy Northwest property (Station 102G). A vegetable sample from this site had a positive Cs-137 result in 2006 also. Investigation found the vegetables were grown in a tub using a commercial soil mix purchased from a local garden supply center. Analysis of the tub soil showed Cs-137 levels of 203 pCi/kg where a ground soil sample taken from the 102G site showed only 28 pCi/kg Cs-137. This indicates that the source of the Cs-137 is most probably from the commercial soil mix and not CGS operation. The site 102G garden tubs are to be filled with a new soil mix in 2008 that will be analyzed prior to use. Naturally occurring K-40 was identified in all samples as expected.

5.9 Special Interest Stations

The storm drain pond and the Sanitary Waste Treatment Facility (SWTF) were incorporated into the routine sampling schedule in 1992. In 1995, the cooling tower sediment disposal area was added. TLDs were placed around the spray pond drainfield (Station 120) in June 1995. TLDs were hung in the vicinity of the planned Independent Spent Fuel Storage Installation (ISFSI) during the first quarter of 1998 to collect background data and an additional ten TLDs were hung on the ISFSI fence after construction was completed in 2002. Discussions of the results from each of the locations are given in the following sections.

5.9.1 Storm Drain Pond (Station 101)

The storm drain pond is located approximately 1500 feet northeast of CGS. Water is sent to the pond through an 18-inch diameter pipe that discharges into a 300-foot long earthen channel that leads to a 100-foot diameter pond. The pond is a shallow, unlined percolation/evaporation basin. Water at the storm drain outfall is sampled using a flow proportional automatic sampler to collect monthly composite samples.

Monthly Samples were analyzed for tritium, gross beta, and gamma emitting radionuclides. Only natural occurring radionuclides were identified in the gamma spectroscopy results (See Appendix A Tables B-2.1, B-2.2). The August composite K-40 result was unusual as it was exceptionally high (1680 pCi/liter). Two of the samples had gross beta results above the detection limit; the February result was just above the detection limit and the August result almost 10 times higher than the detection limit (See Appendix A, Tables B-3.1, B-3.2). The high level of K-40 identified in the August sample would account for a higher gross beta result. Tritium was detected in one half of the ST 101 water samples with higher activity identified during the colder, wetter months (See Appendix A, Tables B-4.1, B-4.2). The source of the tritium in these samples is believed to be capture and condensation of tritium from CGS effluents during cooler, rainy periods. Tritium concentrations were consistent with levels seen in previous years.

5.9.2 Sanitary Waste Treatment Facility (Station 102)

The Sanitary Waste Treatment Facility (SWTF) is located approximately 0.5 miles south-southeast of the CGS. The facility processes the sanitary waste water from CGS, the ENW Industrial Development Complex (formerly referred to as WNP-1 and WNP-4), the Kootenai Building, and the DOE 400 Area (since April 1997). Discharge standards and monitoring requirements for the SWTF are established in EFSEC Resolution No. 300[15].

The monthly composite gross alpha and beta results for the 400 Area effluent (Station 102A) and the SWTF headworks (Station 102B) were lower than levels seen the previous year (See Appendix A, Tables B-5.1, B-5.2, B-6.1, B-6.2). The lower values mostly reflect a change in the background method used to calculate results. Low level gross beta was identified in all samples and gross alpha was not, this is the normal observation for these samples.

Gamma spectroscopy results of the monthly SWTF samples showed no radionuclides of interest were detected in any of the samples, though some naturally occurring radionuclides were identified (See Appendix A, Tables B-7.1, B-7.2). This is consistent with results from previous years. The annual sediment sample collected from the north stabilization pond (Station 102D) contained Cs-137 and Co-60 at concentrations that were similar to results seen in previous years (See Appendix A, Table B-9.1).

Tritium activity was identified in all SWTF Station 102A and 102B samples with the levels identified consistent with levels seen in previous years (See Appendix A, Tables B-8.1, B-8.2). Station 102A results remain elevated as the source of this sample is partly from an unconfined aquifer that is known to be contaminated with tritium as a result of past DOE activities on the Hanford site. Tritium activity coming from the DOE 400 area is the main source of the tritium identified in the station 102B samples, as this location contains water from all locations noted above, including the DOE 400 area.

5.9.3 Cooling Tower Sediment Disposal Area (Station 119)

EFSEC Resolution No. 299[16] authorized the onsite disposal of sediments from plant cooling systems containing very low levels of radionuclides. The disposal area for these sediments is located just south of the cooling towers. Resolution No. 299 requires the REMP to monitor the direct radiation dose using quarterly and annual TLDs in the vicinity of the disposal cells. Resolution 299 also requires the collection of a dry composite sediment sample from the disposal cell within thirty days following each cleaning to confirm that the disposal criteria outlined in the resolution have not been exceeded.

Cleaning of the cooling towers was done twice in 2007. An estimated 49.7 cubic meters of dry sediment was placed in the disposal area in June and an additional 3.5 cubic meters was added in November. Using analysis MDA values for those isotopes that were not positively identified, the following table summarizes the estimated quantity of radionuclide that were placed in the disposal area in 2007. The results are below the disposal concentration limits specified in EFSEC resolution 299.

	2007 Cooling Tower Sediment Disposal Data				
	Disposal Date:	May 07	May 07	Nov 07	
	Pit ID:	2005 Pit	2006 Pit	2006 Pit	
	Mass, kg:	13350.2	22945.7	2235.2	
	Density, g/cc:	0.73	0.73	0.64	
Nuclide	Limit (pCi/kg)	Analytical Result (pCi/kg)	Analytical Result (pCi/kg)	Analytical Result (pCi/kg)	Total Curies
Co-60	5.00E+03	3.01E+01	4.52E+01	5.32E+01	1.56E-06
Mn-54	3.00E+04	<2.02E+01	<2.13E+01	<2.82E+01	<8.21E-07
Zn-65	5.00E+04	<5.85E+01	<6.88E+01	<7.41E+01	<2.53E-06
Cs-134	1.00E+04	<1.95E+01	<1.79E+01	<2.33E+01	<7.234E-07
Cs-137	2.00E+04	1.79E+02	1.61E+02	1.96E+02	6.52E-06
					1.21E-05

These results are similar to that seen in past years, with Co-60 and Cs-137 identified above the detection limits. The Cs-137 activity levels are in a range similar to that seen in Columbia River sediment samples. The source of the Co-60 activity is most likely from capture and concentration from plant air emissions or from concentration of activity in Columbia River water. As the results for the other radionuclides are less than the detection limit, the reported quantities in the table for these radionuclides are conservative estimates. A more accurate method for determining the sample density was used in 2007 resulting in lower estimated activity per volume than that reported in previous years.

Measurements of direct radiation at the disposal basin were taken using TLDs. Two locations were used, an indicator location next to the collection area (Station 119B) and a control location approximately 100 yards to the east (Station 119-Control). The mean quarterly and annual TLD results agree well with results from previous operational years. The negligible difference between the indicator and the control TLD indicate that there was no significant measureable dose above background. (See Tables 5.3, 5.4 and Appendix A, Tables B-1.1, B-1.2)

5.9.4 Spray Pond Drain Field (Station 120)

There were no discharges to the Spray Pond Drain Field in 2007. The TLD results at Station 120 in 2007 are in agreement with those seen in previous operational years (See Table 5-3, 5-4 and Appendix A, Tables B-1.1, B-1.2).

5.9.5 Independent Spent Fuel Storage Installation

The Independent Spent Fuel Storage Installation (ISFSI) is in an area immediately north of the CGS. TLD station 121 is located approximately 0.1 mile north of the plant and is between the plant and the ISFSI. TLD station 122 is on the fence line approximately 0.3 mile north of the plant. Ten more TLD stations are located on the security fence surrounding the ISFSI. These stations are Stations 123-129 and Stations 136A-138A. Though the dose rate at the ISFSI security fence is elevated, access to the area directly outside the fence is restricted and requires radiological dosimetry and security notification to enter.

No new spent fuel storage casks were added to the ISFSI in 2007. The last spent fuel transfer was made in 2004 and most ISFSI security fence TLDs show a decreasing trend since that time (See Table 5-3, 5-4 and Appendix A, Tables B-1.1, B-1.2). The station 121 TLD result for the second quarter showed a sharp drop followed by a sharp rise in the third quarter. Station 121 is located between the ISFSI and the turbine building, a similar trend has been observed in previous outage years. This behavior appears to be due to changing turbine building radiation levels; during the second quarter CGS was shut down for the R-18 outage and during the third quarter it was operating at 100% power.

5.9.6 Miscellaneous Environmental Sample Results

As part of CGS response to the NEI groundwater initiative, water samples from six shallow wells around CGS were collected and analyzed for gamma emitters and tritium in 2007. No gamma emitting radionuclides of interest were identified in any of the samples (See Appendix A, Table B-10.1). Tritium results ranged from <LLD to 16800 pCi/liter (See Appendix A, Table B-10.2). The shallow aquifer directly below CGS is known to be contaminated with tritium as a result of past DOE activities on the Hanford site.[20] None of these wells are used as a drinking water source.

There were no significant (> 100 gallons) on site leaks or spills of contaminated water in 2007.

On 4/13/07, an estimated one million gallons of non-contaminated secondary plant cooling water escaped out of the cooling tower overflow weirs and flooded an area to the south and southeast of the cooling towers. The incident is documented in CR 2-07-03391. Because of the potential to leach contamination from onsite radioactive material storage locations, water and soil samples were taken the day after the incident and analyzed for radionuclide content. No radionuclides of interest were identified in the samples.

5.10 2007 Sample Deviations

Three sample deviations were encountered in 2007, all were the result of electrical problems connected with air sampling. For comparison, there were two deviations reported in 2006 and 12 in 2005. A summary of the sample deviations from 2007 are listed in Table 5-1. Only those incidences that resulted in a loss of a planned sample have been included.

Table 5-1: Sample Deviations for 2007

SAMPLE MEDIA	DATE	LOCATION	CR/AR ID	PROBLEM
Air Particulate/Iodine	1/23/07 - 1/30/07	Station 6	2-07-00924	Blown fuse. Sample volume unacceptable.
	8/14/07 – 8/21/07	Station 8	2-07-07783	Breaker did not reset. Sample volume unacceptable.
	11/13/07 – 11/20/07	Station 8	2-07-10105	Blown fuse. Sample volume unacceptable

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Environmental Direct Radiation (TLD) **Units: mR/period**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
TLD Quarterly	228	---	20.19 (224 / 224) (17.09-28.97)	86 NNW 0.3 miles	27.06 (4/4) (25.41-28.97)	17.62 (4/4) (17.34-17.84)	0
TLD Annual	57	---	80.06 (56 / 56) (70.14-108.66)	86 NNW 0.3 miles	108.66 (1/1)	70.90 (1/1)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: ISFSI Direct Radiation (TLD) **Units: mR/period**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
TLD Quarterly	48	---	75.07 (48 / 48) (31.59-157.35)	124 N 0.28 miles	155.09 (4 / 4) (151.20-157.35)	--- (0 / 0)	0
TLD Annual	12	---	303.75 (12 / 12) (140.45-604.94)	124 N 0.28 miles	604.94 (1 / 1)	--- (0 / 0)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: ST 119 Direct Radiation (TLD) **Units: mR/period**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
TLD Quarterly	8	---	21.41 (4 / 4) (20.20-22.89)	119B S 0.31 Miles	21.41 (4 / 4) (20.20-22.89)	21.19 (4 / 4) (19.48-22.55)	0
TLD Annual	2	---	79.94 (1 / 1)	119C SSE 0.3 Miles	79.94 (1 / 1)	83.87 (1 / 1)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: ST 120 Direct Radiation (TLD) **Units: mR/period**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
TLD Quarterly	4	---	21.57(4 / 4) (20.80-22.72)	120 SSE 0.3 Miles	21.57 (4 / 4) (20.80-22.72)	--- (0 / 0)	0
TLD Annual	1	---	82.60 (1 / 1)	120 SSE 0.3 Miles	82.60 (1 / 1)	--- (0 / 0)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Air Particulate/Air Radioiodine **Units: pCi/m^3**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Gross Beta	621	0.01	0.019 (569/569) (0.0022-0.94)	6 S 7.72 Miles	0.034 (52/52) (0.0038-0.94)	0.016 (52/52) (0.0039 - 0.068)	0
I-131	621	0.07	--- (0 / 569)	---	---	--- (0 / 52)	0
Cs-134	48	0.05	--- (0 / 44)	---	---	--- (0 / 4)	0
Cs-137	48	0.06	--- (0 / 44)	---	---	--- (0 / 4)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Water-River/Drinking **Units: pCi/L**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Gross Beta	24	4.0	---(0 / 24)[b]	---	---	--- (0 / 12)	0
H-3	8	2000	--- (0 / 8)[b]	---	---	--- (0 / 4)	0
Mn-54	24	15	--- (0 / 24)[b]	---	---	--- (0 / 12)	0
Fe-59	24	30	--- (0 / 24)[b]	---	---	--- (0 / 12)	0
Co-58	24	15	--- (0 / 24)[b]	---	---	--- (0 / 12)	0
Co-60	24	15	--- (0 / 24)[b]	---	---	--- (0 / 12)	0
Zn-65	24	30	--- (0 / 24)[b]	---	---	--- (0 / 12)	0
Zr-95	24	15	--- (0 / 24)[b]	---	---	--- (0 / 12)	0
Nb-95	24	15	--- (0 / 24)[b]	---	---	--- (0 / 12)	0
Cs-134	24	15	--- (0 / 24)[b]	---	---	--- (0 / 12)	0
Cs-137	24	18	--- (0 / 24)[b]	---	---	--- (0 / 12)	0
Ba/La-140	24	15	--- (0 / 24)[b]	---	---	--- (0 / 12)	0

a. (f) is the number of positive measurements / total measurements at specified location.

b. This includes the control sample for this group; the control (Station 26) is also a drinking water sample.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Water-Discharge **Units: pCi/L**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Gross Beta	12	4.0	5.51 (11 / 12) (2.24-8.41)	27 E 3.2 miles	5.51 (11 / 12) (2.24-8.41)	---(0 / 0)	0
H-3	4	2000	--- (0/ 4)	---	---	--- (0 / 0)	0
Mn-54	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Fe-59	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-58	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-60	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Zn-65	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Zr-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Nb-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-134	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-137	12	18	--- (0 / 12)	---	---	--- (0 / 0)	0
Ba/La-140	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Water- Deep Ground **Units: pCi/L**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
H-3	12	2000	--- (0 / 12)	---	---	--- (0 / 0)	0
Mn-54	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Fe-59	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-58	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-60	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Zn-65	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Zr-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Nb-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-134	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-137	12	18	--- (0 / 12)	---	---	--- (0 / 0)	0
Ba/La-140	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Water-SWTF (102B) **Units: pCi/L**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Gross Alpha	12	---	---(0 / 12)	---	---	--- (0 / 0)	0
Gross Beta	12	4.0	15.5 (12 / 12) (10.7-25.3)	102B SSE 0.5 miles	15.5 (12 / 12) (10.7-25.3)	--- (0 / 0)	0
H-3	12	2000	797 (12 / 12) (400-1110)	102B SSE 0.5 miles	797 (12 / 12) (400-1110)	--- (0 / 0)	0
Mn-54	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Fe-59	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-58	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-60	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Zn-65	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Zr-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Nb-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-134	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-137	12	18	--- (0 / 12)	---	---	--- (0 / 0)	0
Ba/La-140	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Water-FFTF Sewage (102A) **Units: pCi/L**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Gross Alpha	12	---	---(0 / 12)	---	---	--- (0 / 0)	0
Gross Beta	12	4.0	9.25 (12 / 12) (6.69-12.2)	102A SSE 0.7 miles	9.25 (12 / 12) (6.69-12.2)	--- (0 / 0)	0
H-3	12	2000	2410 (12 / 12) (2270-2560)	102A SSE 0.7 miles	2410 (12 / 12) (2270-2560)	--- (0 / 0)	0
Mn-54	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Fe-59	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-58	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-60	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Zn-65	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Zr-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Nb-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-134	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-137	12	18	--- (0 / 12)	---	---	--- (0 / 0)	0
Ba/La-140	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Stormwater Outfall (101) **Units: pCi/L**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Gross Beta	12	4.0	2.90 (2 / 12) (0.209-19.7)	101 ENE 0.2 miles	2.90 (2 / 12) (0.209-19.7)	--- (0 / 0)	0
H-3	12	2000	1790 (6 / 12) (69.3-8920)	101 ENE 0.2 miles	1790 (6 / 12) (69.3-8920)	--- (0 / 0)	0
Mn-54	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Fe-59	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-58	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Co-60	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Zn-65	12	30	--- (0 / 12)	---	---	--- (0 / 0)	0
Zr-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Nb-95	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-134	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0
Cs-137	12	18	--- (0 / 12)	---	---	--- (0 / 0)	0
Ba/La-140	12	15	--- (0 / 12)	---	---	--- (0 / 0)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: River Sediment **Units: pCi/kg**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Cs-134	4	150	--- (0 / 2)	---	---	--- (0 / 2)	0
Cs-137	4	180	137 (2 / 2) (130-144)	34 ESE 3.32 Miles	137 (2 / 2) (130-144)	106 (2 / 2) (75.5-137)	0
Co-60	4	---	--- (0 / 2)	---	---	--- (0 / 2)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Soil **Units: pCi/kg**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Cs-134	5	150	--- (0 / 4)	---	---	--- (0 / 1)	0
Cs-137	5	180	48.3 (4 / 4) (23.7-61.5)	23 ESE 3.03 Miles	61.5 (1 / 1)	101 (1 / 1)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Cooling Tower Sediment **Units: pCi/kg**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Co-60	3	---	42.8 (3 / 3) (30.1 – 53.2)	119 S 0.31 Miles	42.8 (3 / 3) (30.1 – 53.2)	--- (0 / 0)	0
Mn-54	3	---	--- (0 / 3)	---	---	--- (0 / 0)	0
Zn-65	3	---	--- (0 / 3)	---	---	--- (0 / 0)	0
Cs-134	3	150	--- (0 / 3)	---	---	--- (0 / 0)	0
Cs-137	3	180	179 (3 / 3) (161 – 196)	119 S 0.31 Miles	179 (3 / 3) (161 – 196)	--- (0 / 0)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Sanitary Waste Treatment Facility Sediment **Units: pCi/kg**

Analysis Type	Total Analyses Performed	Nominal Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Co-60	1	---	117 (1 / 1)	102D SSE 0.5 miles	117 (1 / 1)	--- (0 / 0)	0
Mn-54	1	---	--- (0 / 1)	---	---	--- (0 / 0)	0
Zn-65	1	---	--- (0 / 1)	---	---	--- (0 / 0)	0
Cs-134	1	150	--- (0 / 1)	---	---	--- (0 / 0)	0
Cs-137	1	180	130 (1/1)	102D SSE 0.5 miles	130 (1/1)	--- (0 / 0)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calender Year 2007**

Medium: Roots **Units: pCi/kg**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
I-131	8	60	--- (0 / 4)	---	---	--- (0 / 4)	0
Cs-134	8	60	--- (0 / 4)	---	---	--- (0 / 4)	0
Cs-137	8	80	--- (0 / 4)	---	---	--- (0 / 4)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Fruits **Units: pCi/kg**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
I-131	9	60	--- (0 / 5)	---	---	--- (0 / 4)	0
Cs-134	9	60	--- (0 / 5)	---	---	--- (0 / 4)	0
Cs-137	9	80	--- (0 / 5)	---	---	--- (0 / 4)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Vegetables **Units: pCi/kg**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
I-131	14	60	--- (0 / 8)	---	---	--- (0 / 6)	0
Cs-134	14	60	--- (0 / 8)	---	---	--- (0 / 6)	0
Cs-137	14	80	7.51 (2 / 8) (-1.76-49.4)	102g SSE 0.56 miles	29.16 (2/2) (8.92- 49.4)	--- (0 / 6)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Fish **Units: pCi/kg**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
Mn-54	6	130	--- (0 / 3)	---	---	--- (0 / 3)	0
Fe-59	6	260	--- (0 / 3)	---	---	--- (0 / 3)	0
Co-58	6	130	--- (0 / 3)	---	---	--- (0 / 3)	0
Co-60	6	130	--- (0 / 3)	---	---	--- (0 / 3)	0
Zn-65	6	260	--- (0 / 3)	---	---	--- (0 / 3)	0
Cs-134	6	130	--- (0 / 3)	---	---	--- (0 / 3)	0
Cs-137	6	150	5.16 (2 / 3) (-0.842-9.61)	30 E 3.28 Miles	5.16 (2/3) (6.72-9.61)	--- (0 / 3)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-2

RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM SUMMARY

COLUMBIA GENERATING STATION **DOCKET NO. 50-397**

Benton County, Washington **Calendar Year 2007**

Medium: Milk **Units: pCi/L**

Analysis Type	Total Analyses Performed	Lower Limit of Detection (LLD)	Indicator Locations Mean (f)[a] Range	Location With Highest Annual Mean		Control Locations Mean (f)[a] Range	Number of Nonroutine Measurements
				Location Information	Mean (f)[a] Range		
I-131	36	1.0	--- (0 / 18)	---	---	--- (0 / 18)	0
Cs-134	36	15	--- (0 / 18)	---	---	--- (0 / 18)	0
Cs-137	36	18	--- (0 / 18)	---	---	--- (0 / 18)	0
Ba/La-140	36	15	--- (0 / 18)	---	---	--- (0 / 18)	0

a. (f) is the number of positive measurements / total measurements at specified location.

TABLE 5-3
QUARTERLY TLD DATA SUMMARY FOR THE PREOPERATIONAL AND OPERATIONAL PERIODS
Results in mR/Standard Quarter

	Pre-Operational				1984-2006 Operational				2007 Operational			
Station	Min	Max	Std Dev	MEAN	Min	Max	Std Dev	MEAN	Min	Max	Std Dev	MEAN
1	19.16	23.73	2.07	21.90	18.25	27.38	1.74	22.37	19.32	20.15	0.36	19.84
2	17.34	22.81	2.09	21.10	16.43	25.55	1.64	21.84	18.63	21.40	1.18	20.29
3	18.25	21.90	1.46	20.42	16.43	24.64	1.76	21.16	18.38	19.24	0.36	18.84
4	15.51	23.73	2.65	19.96	14.60	22.81	1.78	19.72	17.40	18.93	0.67	18.03
5	18.25	22.81	1.74	20.76	16.43	23.73	1.75	20.27	18.12	18.80	0.30	18.43
6	18.25	21.90	1.50	20.19	16.43	23.73	1.61	20.46	17.65	18.62	0.45	18.31
7	19.16	22.81	1.69	21.33	16.43	24.64	1.75	21.40	18.04	19.42	0.71	18.73
8	21.90	25.55	1.50	23.84	15.51	27.38	2.10	23.48	20.57	22.19	0.69	21.23
9	15.51	21.90	2.00	19.85	16.43	23.73	1.77	19.88	17.39	17.88	0.21	17.62
10	19.16	22.81	1.38	20.99	16.43	24.64	1.70	21.22	18.74	19.72	0.45	19.05
11	19.16	22.81	1.38	21.44	16.43	24.64	1.57	21.68	19.43	20.36	0.44	19.92
12	20.99	24.64	1.60	23.04	18.25	26.46	1.78	23.36	20.37	21.92	0.66	21.24
13	19.16	22.81	1.54	21.44	17.34	27.38	1.87	21.71	18.89	19.78	0.47	19.31
14	19.16	24.64	2.07	21.90	17.34	25.55	1.57	21.71	19.14	20.27	0.48	19.68
15	20.99	25.55	1.37	23.15	17.34	27.38	1.77	23.29	20.69	21.33	0.30	21.03
16	20.08	23.73	1.52	22.13	16.43	26.46	1.85	22.27	19.26	20.14	0.47	19.67
17	19.16	23.73	1.62	22.81	17.34	26.46	1.71	22.68	20.26	22.02	0.88	21.00
18	20.08	23.73	1.27	22.13	16.43	25.55	1.77	22.18	19.95	20.77	0.39	20.44
19	20.08	23.73	1.24	22.01	17.34	25.55	1.65	22.37	19.36	21.63	0.96	20.63
20	19.16	23.73	1.76	21.44	17.34	25.55	1.68	22.05	19.05	20.23	0.49	19.57
21	19.16	21.90	1.25	20.68	15.51	23.73	1.50	20.53	18.20	19.27	0.44	18.69
22	19.16	23.73	1.58	22.01	16.43	25.55	1.57	21.94	19.38	20.68	0.55	20.15
23	20.08	23.73	1.49	21.60	17.34	25.55	1.69	21.41	18.39	20.07	0.73	19.17
24	20.99	23.73	1.09	21.90	17.34	50.50	3.43	22.47	19.04	21.01	0.90	19.85
25	20.99	24.64	1.46	23.15	17.34	27.38	1.98	23.04	20.06	21.58	0.78	20.76
40	17.34	21.90	1.70	19.94	15.51	24.64	1.75	20.39	17.14	18.88	0.74	17.91
41	20.08	25.55	2.00	23.73	17.34	27.38	2.09	22.78	19.69	20.96	0.59	20.09
42	20.08	23.73	1.61	22.36	17.34	26.46	1.97	22.36	18.69	20.13	0.59	19.37
43	20.99	24.64	1.49	23.12	16.43	27.38	2.29	22.81	19.99	21.20	0.51	20.62
44	19.16	22.81	1.34	21.12	15.51	24.64	1.96	21.13	17.52	19.39	0.92	18.35
45	19.16	22.81	1.37	21.25	16.43	25.55	1.83	21.50	17.97	19.60	0.70	18.91
46	22.81	28.29	2.10	26.10	19.16	31.94	2.21	26.76	22.49	25.36	1.27	24.33
47	17.34	20.99	1.73	19.85	15.51	26.28	1.82	20.44	18.03	19.01	0.50	18.53
49	21.90	21.90	-	21.90	16.43	25.55	1.62	22.08	19.39	21.28	0.79	20.24
50	20.08	20.08	-	20.08	16.43	26.46	1.82	21.86	18.98	20.63	0.70	19.73
51	19.16	21.90	1.18	20.53	16.43	24.64	1.68	21.34	18.25	19.73	0.64	19.04
53	24.64	24.64	-	24.64	18.25	29.57	2.06	23.79	20.63	21.61	0.50	21.14
54	23.73	23.73	-	23.73	18.18	26.46	1.94	22.43	18.20	19.82	0.80	19.11
55	20.99	20.99	-	20.99	16.43	25.55	1.58	21.60	19.32	21.32	0.90	20.01
56	21.90	21.90	-	21.90	16.43	25.55	1.82	22.06	19.58	20.71	0.53	20.00
65	-	-	-	-	17.73	22.72	1.35	20.12	18.55	19.89	0.64	18.94

TABLE 5-3 (cont)
QUARTERLY TLD DATA SUMMARY FOR THE PREOPERATIONAL AND OPERATIONAL PERIODS
Results in mR/Standard Quarter

	Pre-Operational				1984-2006 Operational				2007 Operational			
Station	Min	Max	Std Dev	MEAN	Min	Max	Std Dev	MEAN	Min	Max	Std Dev	MEAN
71(1S)	20.08	22.81	1.58	21.90	18.25	30.39	2.56	25.30	21.95	27.40	2.67	24.89
72(2S)	21.90	23.73	0.91	22.81	18.25	29.65	2.08	24.52	21.44	26.00	1.99	23.52
73(3S)	20.08	21.90	0.91	20.99	16.43	24.64	1.63	21.44	18.86	20.29	0.69	19.63
74(4S)	23.73	24.64	0.53	24.03	18.25	28.29	1.98	23.64	20.62	22.99	1.01	21.70
75(5S)	19.16	21.90	1.39	20.38	15.51	26.46	1.98	22.43	20.00	21.78	0.94	20.85
76(6S)	20.99	22.81	0.91	21.90	17.34	26.46	1.74	22.23	19.47	21.51	0.91	20.37
77(7S)	21.90	23.73	0.91	22.81	17.34	25.55	1.70	22.23	20.08	20.95	0.41	20.53
78(8S)	21.90	23.73	1.05	22.51	17.34	25.55	1.64	21.71	19.11	20.80	0.74	20.05
79(9S)	22.81	23.73	0.53	23.12	17.34	25.55	1.73	22.10	20.00	20.77	0.36	20.36
80(10S)	20.99	22.81	0.91	21.90	16.43	25.55	1.81	21.28	18.41	19.33	0.39	18.94
81(11S)	20.08	23.73	1.90	22.20	17.34	25.55	1.59	21.73	19.52	20.12	0.27	19.73
82(12S)	21.90	24.64	1.39	23.42	17.34	26.46	1.65	22.60	20.35	21.55	0.67	20.95
83(13S)	21.90	23.73	0.91	22.81	17.34	26.46	1.92	22.57	19.50	21.11	0.69	20.12
84(14S)	20.99	22.81	1.05	22.20	16.43	27.17	1.84	22.55	20.19	20.97	0.41	20.58
85(15S)	21.90	24.64	1.58	23.73	17.34	27.83	1.94	23.34	20.41	21.66	0.60	20.93
86(16S)	21.90	23.73	0.91	22.81	18.25	30.11	2.49	25.57	25.48	29.05	1.58	27.05
119B	-	-	-	-	19.36	25.64	1.55	22.27	20.25	22.71	1.03	21.40
119Ctrl	-	-	-	-	19.53	26.55	1.55	21.84	19.53	22.62	1.36	21.19
120East	-	-	-	-	19.78	31.12	2.14	22.58	20.86	22.53	0.84	21.57
121 (ISFSI)	-	-	-	-	20.81	110.77	22.47	74.13	45.93	130.27	36.01	93.13
122 (ISFSI)	-	-	-	-	19.62	39.25	6.47	26.94	31.68	35.91	1.81	33.82
123 (ISFSI)	-	-	-	-	24.99	159.27	50.52	99.34	114.70	126.57	5.79	120.51
124 (ISFSI)	-	-	-	-	26.89	201.05	65.92	126.04	151.61	157.36	2.47	155.09
125 (ISFSI)	-	-	-	-	26.46	131.76	38.98	89.44	101.75	109.43	4.24	105.70
126 (ISFSI)	-	-	-	-	26.00	80.22	17.37	58.52	59.40	70.21	4.82	64.87
127 (ISFSI)	-	-	-	-	28.97	65.28	11.39	50.17	48.10	58.87	4.42	53.86
128 (ISFSI)	-	-	-	-	25.64	86.73	20.99	58.56	63.71	75.07	5.27	70.21
129 (ISFSI)	-	-	-	-	30.16	69.86	14.38	51.73	51.76	65.84	5.80	58.89
136A (ISFSI)	-	-	-	-	28.99	66.80	14.13	48.53	42.05	61.28	8.10	52.35
137A (ISFSI)	-	-	-	-	29.47	75.39	16.73	52.34	45.69	60.53	7.23	52.60
138A (ISFSI)	-	-	-	-	28.28	82.41	16.31	49.85	33.04	47.98	6.38	39.78

Table 5-3 Notes:
The preoperational mean is from 1982-1983 data.
Station 65 was added in 1997.
Stations 119B, 119Ctrl, and 120 were added in 1995.
Stations 121 and 122 were added in 1998 for the ISFSI.
Stations 123-129 and 136A-138A were added in the 2nd quarter of 2002.

TABLE 5-4
ANNUAL TLD DATA SUMMARY FOR THE PREOPERATIONAL AND OPERATIONAL PERIODS
Results in mR/year

	Pre-Operational				1984-2006 Operational				2007
Station	Min	Max	Std Dev	MEAN	Min	Max	Std Dev	MEAN	Result
1	85.37	98.66	9.39	92.02	73.00	102.20	7.42	84.02	78.94
2	83.44	84.53	0.77	83.99	73.00	98.19	6.53	82.41	77.96
3	81.94	85.74	2.68	83.84	70.99	94.17	6.75	78.65	71.87
4	74.46	100.52	18.43	87.49	65.70	87.24	5.93	74.79	74.17
5	81.29	93.62	8.72	87.45	68.62	88.33	5.76	76.13	74.69
6	79.79	83.95	2.94	81.87	69.35	90.52	6.35	76.53	72.79
7	84.28	86.61	1.65	85.45	71.58	97.09	6.41	81.01	74.26
8	94.61	98.62	2.84	96.62	80.34	108.04	7.67	90.35	80.56
9	78.00	81.58	2.53	79.79	68.99	91.98	5.95	75.71	70.90
10	82.02	86.72	3.33	84.37	69.35	93.81	5.33	79.98	76.79
11	83.04	88.26	3.69	85.65	73.00	99.28	6.89	82.08	77.62
12	92.27	94.17	1.34	93.22	80.30	102.57	5.71	87.92	84.36
13	85.41	88.00	1.83	86.71	76.65	97.46	5.98	83.04	79.13
14	84.50	86.25	1.24	85.37	69.35	97.09	6.72	81.53	80.39
15	83.95	94.83	7.69	89.39	76.65	104.03	7.64	88.29	83.67
16	89.61	91.83	1.57	90.72	76.65	101.47	6.85	84.83	81.97
17	85.59	91.47	4.16	88.53	76.65	101.84	6.63	85.99	79.29
18	86.51	97.64	7.87	92.07	76.65	101.47	6.40	85.58	81.56
19	-	-	-	85.63	76.65	104.03	6.28	84.83	80.48
20	85.41	90.05	3.28	87.73	74.78	101.84	6.85	83.97	80.27
21	79.72	84.24	3.20	81.98	69.35	91.25	6.16	77.01	74.51
22	84.79	88.07	2.32	86.43	74.98	97.09	6.49	82.55	76.10
23	83.55	87.09	2.50	85.32	72.65	94.90	6.65	80.36	75.64
24	85.26	87.97	1.91	86.61	74.28	100.01	7.28	82.93	76.56
25	90.56	95.37	3.41	92.97	76.65	104.03	7.71	87.81	85.49
40	-	-	-	76.54	68.08	91.25	6.27	75.89	70.14
41	94.90	97.46	1.81	96.18	75.19	102.20	8.35	85.63	79.12
42	-	-	-	85.81	75.92	104.03	7.80	83.71	77.27
43	-	-	-	88.22	71.18	107.68	9.91	84.59	79.91
44	83.48	89.53	4.28	86.51	71.91	94.17	6.79	79.70	74.27
45	82.53	86.10	2.53	84.32	72.64	96.36	5.96	81.03	75.00
46	102.42	107.53	3.61	104.97	94.90	123.37	7.90	102.95	98.83
47	-	-	-	80.45	69.35	95.27	6.84	78.39	74.14
49	-	-	-	-	76.65	100.74	6.46	82.94	79.15
50	-	-	-	-	73.00	100.01	7.45	81.74	73.50
51	-	-	-	-	72.11	97.46	6.92	80.47	78.84
53	-	-	-	-	77.75	104.03	7.05	90.27	84.57
54	-	-	-	-	75.83	100.38	7.30	85.27	78.35
55	-	-	-	-	72.97	96.36	6.32	80.49	77.16
56	-	-	-	-	71.18	101.47	6.88	84.14	78.54
65	-	-	-	-	71.75	86.51	4.52	75.83	71.25

TABLE 5-4 (cont.)
ANNUAL TLD DATA SUMMARY FOR THE PREOPERATIONAL AND OPERATIONAL PERIODS

Results in mR/day

	Pre-Operational				1984-2006 Operational				2007
Station	Min	Max	Std Dev	MEAN	Min	Max	Std Dev	MEAN	Result
71(1S)	-	-	-	88.04	83.95	112.06	7.29	96.82	100.35
72(2S)	-	-	-	91.54	83.95	110.96	7.04	93.74	93.07
73(3S)	-	-	-	83.69	73.00	94.90	6.13	80.52	77.16
74(4S)	-	-	-	88.99	80.30	106.22	6.50	89.84	88.95
75(5S)	-	-	-	86.32	73.00	100.74	6.77	84.55	80.96
76(6S)	-	-	-	88.26	76.65	101.47	5.70	84.66	81.43
77(7S)	-	-	-	89.90	73.00	99.28	6.18	84.04	79.76
78(8S)	-	-	-	89.94	73.00	97.71	6.59	82.86	77.68
79(9S)	-	-	-	91.98	73.00	101.11	6.40	83.34	80.41
80(10S)	-	-	-	85.30	69.42	97.09	7.11	80.87	75.82
81(11S)	-	-	-	82.67	72.19	96.36	6.93	81.23	76.59
82(12S)	-	-	-	89.79	74.83	101.47	7.09	85.23	80.67
83(13S)	-	-	-	91.10	76.65	99.65	6.93	86.41	82.53
84(14S)	-	-	-	84.06	76.03	99.28	6.57	84.84	82.38
85(15S)	-	-	-	92.13	80.30	105.85	6.25	89.79	88.10
86(16S)	-	-	-	87.82	87.60	112.79	7.77	98.66	108.66
119B	-	-	-	-	75.92	107.68	9.76	83.22	79.94
119Ctrl	-	-	-	-	77.75	101.84	7.74	85.29	83.87
120East	-	-	-	-	78.11	112.79	10.92	87.99	82.60
121	-	-	-	-	177.76	365.37	68.17	289.17	377.80
122	-	-	-	-	76.29	144.07	28.07	103.14	140.45
123	-	-	-	-	126.22	567.27	215.08	392.59	514.43
124	-	-	-	-	128.66	700.28	273.82	477.35	604.94
125	-	-	-	-	119.59	499.10	170.12	347.09	426.50
126	-	-	-	-	123.06	288.46	74.15	228.72	260.40
127	-	-	-	-	120.60	235.81	50.42	194.81	219.11
128	-	-	-	-	112.96	302.81	89.27	226.58	288.64
129	-	-	-	-	121.78	244.35	58.81	197.45	229.78
136A	-	-	-	-	119.31	237.05	57.41	187.89	216.95
137A	-	-	-	-	124.36	262.61	68.68	204.00	212.80
138A	-	-	-	-	122.70	243.27	58.25	187.94	153.13

Table 5-4 Notes:

The preoperational mean is from 1982 - 1983 data.
There was only one annual exchange during the preoperational period.
Stations 49-56 were first monitored during the Fourth Quarter of 1983.
Station 65 was added in 1997.
Stations 119B, 119Ctrl, and 120 were added in 1995.
Station 121 and 122 were added in 1998 to gather baseline data for the ISFSI.
Stations 123-129 and 136A-138A were added in the 2nd quarter of 2002.

TABLE 5-5
2007 QUARTERLY TOTAL VERUS ANNUAL TLD DATA
Results in mR/Year

STATION	QUARTERLY TOTAL[a]	ANNUAL RESULTS	RATIO[b]
1	79.35	78.94	1.01
2	81.17	77.96	1.04
3	75.36	71.87	1.05
4	72.13	74.17	0.97
5	73.71	74.69	0.99
6	73.25	72.79	1.01
7	74.91	74.26	1.01
8	84.93	80.56	1.05
9	70.49	70.90	0.99
10	76.19	76.79	0.99
11	79.68	77.62	1.03
12	84.95	84.36	1.01
13	77.23	79.13	0.98
14	78.73	80.39	0.98
15	84.10	83.67	1.01
16	78.68	81.97	0.96
17	84.01	79.29	1.06
18	81.75	81.56	1.00
19	82.52	80.48	1.03
20	78.30	80.27	0.98
21	74.75	74.51	1.00
22	80.59	76.10	1.06
23	76.68	75.64	1.01
24	79.41	76.56	1.04
25	83.04	85.49	0.97
40	71.62	70.14	1.02
41	80.36	79.12	1.02
42	77.49	77.27	1.00
43	82.50	79.91	1.03
44	73.39	74.27	0.99
45	75.65	75.00	1.01
46	97.31	98.83	0.98
47	74.14	74.14	1.00
49	80.95	79.15	1.02
50	78.91	73.50	1.07
51	76.17	78.84	0.97
53	84.55	84.57	1.00
54	76.44	78.35	0.98
55	80.05	77.16	1.04
56	80.01	78.54	1.02
65	75.75	71.25	1.06
71(1S)	99.55	100.35	0.99

TABLE 5-5 (cont.)
2007 QUARTERLY TOTAL VERSUS ANNUAL TLD DATA
Results in mR/day

STATION	QUARTERLY TOTAL[a]	ANNUAL RESULTS	RATIO[b]
72 (2S)	94.08	93.07	1.01
73 (3S)	78.51	77.16	1.02
74 (4S)	86.82	88.95	0.98
75 (5S)	83.38	80.96	1.03
76 (6S)	81.46	81.43	1.00
77 (7S)	82.12	79.76	1.03
78 (8S)	80.21	77.68	1.03
79 (9S)	81.43	80.41	1.01
80 (10S)	75.75	75.82	1.00
81 (11S)	78.92	76.59	1.03
82 (12S)	83.79	80.67	1.04
83 (13S)	80.47	82.53	0.98
84 (14S)	82.31	82.38	1.00
85 (15S)	83.70	88.10	0.95
86 (16S)	108.21	108.66	1.00
119B[d]	85.61	79.94	1.07
119Ctrl[d]	84.76	83.87	1.01
120[d]	86.26	82.60	1.04
121 (ISFSI)[e]	372.53	377.80	0.99
122 (ISFSI)[e]	135.29	140.45	0.96
123 (ISFSI)[f]	482.05	514.43	0.94
124 (ISFSI)[f]	620.36	604.94	1.03
125 (ISFSI)[f]	422.82	426.50	0.99
126 (ISFSI)[f]	259.47	260.40	1.00
127 (ISFSI)[f]	215.42	219.11	0.98
128 (ISFSI)[f]	280.84	288.64	0.97
129 (ISFSI)[f]	235.57	229.78	1.03
136A (ISFSI)[f]	209.40	216.95	0.97
137A (ISFSI)[f]	210.39	212.80	0.99
138A (ISFSI)[f]	159.13	153.13	1.04

(a) Sum of the quarterly results.
(b) Quarterly result/Annual result.
(c) Station 65 added in 1997.
(d) Stations 119B, 119Ctrl, and 120 were added in 1995.
(e) Station 121 and 122 were added in 1998 to gather baseline data for the ISFSI.
(f) Stations 123-129 and 136A-138A were added in the 2nd quarter of 2002 for the ISFSI.

6.0 QUALITY ASSURANCE AND QUALITY CONTROL

6.0 QUALITY ASSURANCE AND QUALITY CONTROL

The REMP is designed to meet the quality assurance and quality control criteria of the NRC Regulatory Guide 4.15[4] and 10CFR50 Appendix B[10]. The contractors used for sample analysis, Energy Northwest Environmental Services and Battelle PNNL, maintain quality control programs to ensure that analytical results are accurate, precise, and defensible. The Energy Northwest Quality Department performs audits of the REMP records and activities bi-annually. The following sections summarize the quality assurance and quality control aspects of the TLD, sample collection, and sample analysis components of the REMP.

6.1 Quality Control for the Energy Northwest Environmental TLD Program

The Quality Control program for the Energy Northwest REMP TLDs covers the preparation, transportation, deployment, collection, storage, processing, and evaluation.

From the time the TLDs are annealed to the time they are placed in the field, they are stored and transported with control TLDs. Two sets of control TLDs are used, the building controls and the transportation (trip) controls. The building controls monitor the exposure that the TLDs receive while being transported to and from the TLD vendor and while in storage awaiting deployment and analysis. The trip controls accompany the field TLD set while they are being transported to and from the vendor and also while they are being deployed and collected in the field. The building controls and trip controls are stored in a low background lead shield while the field TLDs are deployed. If the trip control results are greater than the building control results, the difference between the two is subtracted from the field dosimeters to account for exposure during transit.

Reader QC dosimeters are prepared by Battelle at the Pacific Northwest National Laboratory and serve as indicators that the reader calibration is satisfactory and that the TLDs were processed correctly. These TLDs are annealed and then given a known exposure (typically 100 mR) to a cesium-137 source. The number of QC dosimeters used during each processing is generally 10% of the number of field dosimeters. Evaluation of the 2006 reader QC dosimeter results indicated satisfactory agreement for all four quarters and the annual processing results.

Spiked TLDs are submitted by Energy Northwest for processing along with the environmental TLDs. The processing results from these QA TLDs are used to demonstrate reader performance during environmental TLD processing. Quarterly spikes receive a target exposure of 22 mR and annual spikes receive a target exposure of 88 mR. The spiked dosimeters are processed with the field dosimeters to verify the accuracy and consistency of the environmental TLD evaluations. Results were on average +0.29% above the known exposure rate. Results are listed in Table 6-1.

6.2 Quality Control for the Environmental Sample Program

Quality control for the environmental sample program encompasses both the sample collection and sample analysis processes. All results are reviewed for correctness, reasonableness, and data entry errors. Sample results that are suspect are normally investigated. A crosscheck program utilizing blind samples supplied by an outside vendor is maintained for all the sample media routinely analyzed.

6.2.1 Quality Control Activities for Sample Collection

Duplicate samples are routinely collected and submitted for analysis. The duplicate samples are in some cases blind, and in others they may be of a known origin. Duplicate samples are used to assess the repeatability of the sample collection process and the precision of the analytical method. Chain of custody forms are kept through out the sampling and analysis process to maintain sample control and traceability.

6.2.2 Energy Northwest Environmental Services Quality Control

Laboratory Sample Preparations - Analytical balances used in the laboratory for sample preparations are calibrated every six months. Daily checks are performed prior to use on all analytical balances; these checks are documented on sample preparation forms and should span the range of intended use when checked. Devices used for volumetric measurements of samples are periodically verified for accuracy with reagent grade water.

Analytical Instruments – Analytical instruments used for determining radioactive emissions in samples are calibrated for efficiency annually using standard reference material traceable to the National Institute of Standards and Technology (NIST). Below is a summary of the routine QC practices for the different analytical instruments.

- Gas-flow Proportional Counter: QC and background checks are performed daily when in use. Control charts are maintained with two and three-sigma limits specified; the checks must fall within the two-sigma warning limits prior to use. End of batch performance checks are also performed.
- Gamma Spectrometers: Checked daily for efficiency, energy per channel relationship, peak resolution, and background when in use. The checks are performed and plotted for both a low and high energy peak. Efficiency checks are held within two-sigma control limits. Long duration background checks are performed periodically.
- Liquid Scintillation Counter: Background and performance checks are performed daily when in use. A QC check in the same matrix as the samples is performed and trended. Low level check standard are analyzed with each batch of samples analyzed.

6.3 Sample Batch Quality Control

Sample batches are analyzed along with sample blanks and known-addition samples (or spiked samples) as appropriate, and as dictated by the sample type, primary analytes of interest, and method being used. The following is a summary of sample batch QC activities.

Iodine-131 Cartridges - At least one blank charcoal cartridge was analyzed with each batch of samples assayed. At least one known-addition sample was analyzed with each batch. For the known-addition samples, the 356 keV peak of Ba-133 was evaluated as a proxy for I-131.

Gross Beta Filters - One or more blank filters were measured with each set of filters assayed. At least one unused blank AP filter and at least one known-addition AP filter (or spiked laboratory control sample) was analyzed with each batch.

Aqueous Samples – In most cases, samples collected from the control locations were analyzed as blanks. A known-addition sample was analyzed with each batch of samples.

Gross Beta in Water - Blank samples were prepared from reagent grade water and analyzed with each batch of samples. At least one known addition sample was analyzed with each batch of gross alpha and gross beta samples. At least one replicate sample is prepared and analyzed inside of each batch..

Tritium in Water - Blank and low level known addition samples were measured with each batch. At least one replicate sample was prepared and analyzed inside of each batch.

6.4 Laboratory Intercomparison Program Participation

Participation in laboratory intercomparison studies is mandatory for all laboratories performing analyses of CGS REMP samples. Intercomparison studies provide a consistent and effective means to evaluate laboratory performance on sample analyses. Results from studies should fall within the control limits specified for the study or corrective actions should be performed.

Energy Northwest participated in the following intercomparison programs in 2007:

- Analytics, Inc. Cross Check Program
- Environmental Resource Associates (ERA) MRAD and RadCheM Proficiency Testing Programs
- Department of Energy Mixed Analyte Performance Evaluation Program (MAPEP).

The results of Energy Northwest Environmental Services participation in intercomparison studies done in 2007 are shown in Table 6-2. Participation in the ERA and Analytic programs serves to meet the intercomparision program requirements specified in the ODCM. Participation in the MAPEP program is supplemental.

6.5 Problems Identified by Laboratory Quality Control Program

Results of the Fall 2007 ERA (MRAD 007) study identified a problem with the air filter radionuclide analysis used to analyze quarterly air filter composite samples. Investigation found an error in the calibration file used to analyze these samples. The issue was documented in CR/AR 00176386. An accurate calibration file was created using a NIST traceable source prepared by Analytics, Inc and all 2007 quarterly air filter composite samples were reanalyzed using this calibration file. The MRAD 007 air filter spectrums were also reanalyzed using the new calibration file with results shown in Table 6.2. All results were acceptable when analyzed with the new calibration file.

TABLE 6-1
2007 ENVIRONMENTAL SPIKED DOSIMETER RESULTS

DISTRIBUTION PERIOD	GIVEN EXPOSURE (mR)	REPORTED EXPOSURE (mR)	BIAS (%)
First Quarter	22	22.18	0.83%
		21.95	-0.23%
		22.45	2.05%
Second Quarter	22	21.00	-4.54%
		24.23	10.14%
		21.24	-3.44%
Third Quarter	22	22.13	0.58%
		21.47	-2.39%
		22.67	3.04%
Fourth Quarter	22	21.41	-2.66%
		22.45	2.05%
		21.95	-0.22%
Annual	88	88.18	0.20%
		86.60	-1.59%
		83.78	-4.80%

TABLE 6-2
ENW REMP PROGRAM CROSS CHECKS PERFORMANCE RESULTS

ERA MRAD- 006 Results Spring 2007					
Standard/Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation
Air Filter Radionuclides					
Americium-241	pCi/Filter	**69.4**	57.5	33.1 - 80.0	**Acceptable**
Cesium-134	pCi/Filter	**868**	1120	732 -1380	**Acceptable**
Cesium-137	pCi/Filter	**241**	255	192 - 336	**Acceptable**
Cobalt-60	pCi/Filter	**1150**	1300	1010 - 1620	**Acceptable**
Manganese-54	pCi/Filter	**< 11**	0.00		**Acceptable**
Zinc-65	pCi/Filter	**262**	245	208 -412	**Acceptalbe**
Air Filter Gross Alpha/Beta					
Gross Alpha	pCi/Filter	**28.7**	25.8	12.4 - 39.1	**Acceptable**
Gross Beta	pCi/Filter	**76.3**	79.5	48.8 - 116	**Acceptable**
Water Radionuclides					
Americium-241	pCi/L	**156**	179	123 - 243	**Acceptable**
Cesium-134	pCi/L	**1530**	1750	1290 - 2020	**Acceptable**
Cesium-137	pCi/L	**1860**	1850	1570 - 2220	**Acceptable**
Cobalt-60	pCi/L	**530**	536	467 - 631	**Acceptable**
Manganese-54	pCi/L	**<12**	0.0		**Acceptable**
Zinc-65	pCi/L	**1970**	1910	1600 - 2410	**Acceptable**
Water Gross Alpha/Beta					
Gross Alpha	pCi/L	**22.1**	47	22.0 - 68.5	**Acceptable**
Gross Beta	pCi/L	**12.5**	14.9	8.70 - 21.8	**Acceptable**
Water Tritium					
Tritium	pCi/L	**19736**	21400	13900 -31700	**Acceptable**
Soil Radionuclides					
Bismuth-212	pCi/kg	**1400**	2500	658 - 3730	**Acceptable**
Bismuth-214	pCi/kg	**3150**	3030	1850 - 4360	**Acceptable**
Cesium-134	pCi/kg	**6750**	7560	4850 - 9070	**Acceptable**
Cesium-137	pCi/kg	**4530**	4300	3290 - 5580	**Acceptable**
Cobalt-60	pCi/kg	**7380**	7330	5340 - 9820	**Acceptable**
Lead-212	pCi/kg	**1940**	1730	1120 - 2430	**Acceptable**
Lead-214	pCi/kg	**3370**	3330	1980 - 4980	**Acceptable**
Manganese-54	pCi/kg	**<33**	0.00		**Acceptable**
Potassium-40	pCi/kg	**11300**	11100	8050 - 15000	**Acceptable**
Thorium-234	pCi/kg	**2960**	3590	1140 - 6830	**Acceptable**
Zinc-65	pCi/kg	**5300**	4770	3770 - 6400	**Acceptable**
Vegetation Radionuclides					
Americium-241	pCi/kg	**4020**	3550	2020 - 4890	**Acceptable**
Cesium-134	pCi/kg	**571**	579	308 - 822	**Acceptable**
Cesium-137	pCi/kg	**3270**	2920	2150 - 4060	**Acceptable**
Cobalt-60	pCi/kg	**2760**	2600	1760 - 3720	**Acceptable**
Manganese-54	pCi/kg	**<35**	0.00		**Acceptable**
Potassium-40	pCi/kg	**40200**	37900	27200 - 53600	**Acceptable**
Zinc-65	pCi/kg	**471**	366	267 – 500	**Acceptable**

TABLE 6-2
ENW REMP PROGRAM CROSS CHECKS PERFORMANCE RESULTS

ERA MRAD-007 Results Fall 2007					
Standard/Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation
Air Filter Radionuclides					
Americium-241	pCi/Filter	**25**	21.1	12.3 - 29.1	**Acceptable**
Cesium-134	pCi/Filter	**797**	922	601 - 1130	**Acceptable**
Cesium-137	pCi/Filter	**933**	831	624 - 1100	**Acceptable**
Cobalt-60	pCi/Filter	**510**	505	391 - 631	**Acceptable**
Manganese-54	pCi/Filter	**<10**	0.00		**Acceptable**
Zinc-65	pCi/Filter	**1546**	1290	891 - 1790	**Acceptable**
Air Filter Gross Alpha/Beta					
Gross Alpha	pCi/Filter	**91.6**	80.0	41.4 - 121	**Acceptable**
Gross Beta	pCi/Filter	**73.9**	89.1	54.9 - 130	**Acceptable**
Water Radionuclides					
Americium-241	pCi/L	**<50**	40.8	27.9 - 55.1	**< Detection**
Cesium-134	pCi/L	**1200**	1260	931 - 1450	**Acceptable**
Cesium-137	pCi/L	**1360**	1280	1090 - 1540	**Acceptable**
Cobalt-60	pCi/L	**1790**	1750	1530 - 2060	**Acceptable**
Manganese-54	pCi/L	**<10**	0.00		**Acceptable**
Zinc-65	pCi/L	**1370**	1220	1030 - 1520	**Acceptable**
Water Gross Alpha/Beta					
Gross Alpha	pCi/L	**14.9**	27.1	12.0 - 40.1	**Acceptable**
Gross Beta	pCi/L	**14.4**	21.2	12.4 - 31.2	**Acceptable**
Water Tritium					
Tritium	pCi/L	**28626**	29100	19000 - 43100	**Acceptable**
Soil Radionuclides					
Actinium-228	pCi/kg	**1420**	1450	929 – 2040	**Acceptable**
Americium-241	pCi/kg	**870**	843	502 – 1090	**Acceptable**
Bismuth-212	pCi/kg	**778**	1540	405 – 2290	**Acceptable**
Bismuth-214	pCi/kg	**3610**	3410	2090 – 4910	**Acceptable**
Cesium-134	pCi/kg	**5920**	5990	3860 – 7190	**Acceptable**
Cesium-137	pCi/kg	**7300**	6950	5320 – 9040	**Acceptable**
Lead-212	pCi/kg	**1370**	1220	787 – 1720	**Acceptable**
Lead-214	pCi/kg	**3920**	3640	2170 – 5420	**Acceptable**
Manganese-54	pCi/kg	**<35**	0.00		**Acceptable**
Potassium-40	pCi/kg	**11000**	11200	8120 - 15100	**Acceptable**
Zinc-65	pCi/kg	**1790**	1620	1280 – 2170	**Acceptable**
Vegetation Radionuclides					
Americium-241	pCi/kg	**2260**	2460	1400 – 3390	**Acceptable**
Cesium-134	pCi/kg	**392**	477	274 – 658	**Acceptable**
Cesium-137	pCi/kg	**992**	1080	792 – 1500	**Acceptable**
Cobalt-60	pCi/kg	**2580**	3000	2030 – 4290	**Acceptable**
Manganese-54	pCi/kg	**<45**	0.00		**Acceptable**
Potassium-40	pCi/kg	**21000**	24600	17700 - 34700	**Acceptable**
Zinc-65	pCi/kg	**2420**	2600	1870 – 3560	**Acceptable**

TABLE 6-2
ENW REMP PROGRAM CROSS CHECKS PERFORMANCE RESULTS

2007 Analytics Crosscheck Results I-131 Charcoal Cartridge						
Sample ID	**Analysis**	**Result**	**Uncertainty**	**Ref Value**	**Uncertainty**	**Result/Ref Value**
E5521-723	I-131	65.1	5.9	69.8	2.33	0.93
Notes:						

ERA MRAD-71 Results Fall 2007 I-131 in Milk						
Analyte	**Units**	**Result**	**Ref Value**	**Flag**	**(%) Bias**	**Acceptance Range**
I-131	pCi/L	24.8	28.9	A	-14.2%	24.0 – 33.8
Notes: I-131 crosscheck standard spiked into milk sample then extract using ENW methodology.						

TABLE 6-2
ENW REMP PROGRAM CROSS CHECKS PERFORMANCE RESULTS

MAPEP-07 Results Spring 2007

MAPEP-07-MaW17: **Radiological Water Standard** Units: (Bq/L)

Analyte	Result	Ref Value	Flag	(%) Bias	Acceptance Range
Americium-241	NR	1.71			1.20 - 2.22
Cesium-134	68.7	83.5	A	-17.7	58.5 - 108.6
Cesium-137	162	163	A	-0.6	114.1 - 211.9
Cobalt-57	145	143.72	A	0.9	100.6 - 186.8
Cobalt-60	27.6	26.9	A	2.6	18.8 - 35
Hydrogen-3	290	283	A	2.5	198.1 - 367.9
Manganese-54	130	123.8	A	6	86.7 - 160.9
Zinc-65	127	114.8	A	10.6	80.4 - 149.2

Notes: Am-241 concentration below lower level of detection.

MAPEP-07-GrF17: **Gross Alpha/Beta Air Filter** Units: Bq/sample

Analyte	Result	Ref Value	Flag	(%) Bias	Acceptance Range
Gross alpha	0.167	0.601	A	-72.2	>0.0 - 1.202
Gross beta	0.407	0.441	A	-7.7	0.221 - 0.662

Notes:

MAPEP-07-RdF17: **Radiological Air Filter** Units: Bq/sample

Analyte	Result	Ref Value	Flag	(%) Bias	Acceptance Range
Americium-241	NR	0.0977			0.0684 - 0.127
Cesium-134	3.64	4.196	A	-13.3	2.9372 - 5.4548
Cesium-137	2.39	2.5693	A	-7.1	1.7985 - 3.3401
Cobalt-57	3.37	2.8876	A	16.7	2.0213 - 3.7539
Cobalt-60	2.82	2.9054	A	-3.1	2.0338 - 3.777
Manganese-54	3.60	3.5185	A	2.3	2.4630 - 4.5741
Zinc-65	2.02	2.6828	W	-24.3	1.8780 - 3.4876

NOTES: Results here from reanalysis using new efficiency file

MAPEP-07-GrW17: **Gross Alpha/Beta Water** Units: Bq/L

Analyte	Result	Ref Value	Flag	(%) Bias	Acceptance Range
Gross alpha	0.074	0.327	A	-77.4	>0.0 - 0.654
Gross beta	0.57	0.851	A	-33	0.426 - 1.277

Notes: Gross alpha activity just above detection limit, high counting uncertainty.

MAPEP-07-MaS17: **Radiological Soil Standard** Units: Bq/kg

Analyte	Result	Ref Value	Flag	(%) Bias	Acceptance Range
Americium-241	NR	34.8	A		24.4 - 45.2
Cesium-134	293	327.4	A	-10.5	229.2 - 425.6
Cesium-137	858	799.7	A	7.3	559.8 - 1039.6
Cobalt-57	494	471.2	A	4.8	329.8 - 612.6
Cobalt-60	276	274.7	A	0.5	192.3 - 357.1
Manganese-54	738	685.2	A	7.7	479.6 - 890.8
Potassium-40	921	602	N	53	421 - 783
Zinc-65	594	536.8	A	10.7	375.8 - 697.8

Notes: K-40 value high due to K-40 present in fill media used, natural product.

7.0 REFERENCES

7.0 REFERENCES

1. U.S. Nuclear Regulatory Commission, "Programs For Monitoring Radioactivity in the Environs of Nuclear Power Plants," Regulatory Guide 4.1, Revision 1, April 1975.

2. U.S. Nuclear Regulatory Commission, "Environmental Technical Specifications For Nuclear Power Plants," Regulatory Guide 4.8, December 1975.

3. U.S. Nuclear Regulatory Commission, "An Acceptable Radiological Environmental Monitoring Program," Assessment Branch Technical Position Revision 1, November 1979.

4. U.S. Nuclear Regulatory Commission, "Quality Assurance For Radiological Environmental Monitoring Program (Normal Operations), Effluent Streams and the Environment," Regulatory Guide 4.15, Revision 1, February 1979.

5. U.S. Nuclear Regulatory Commission, "Performance, Testing and Procedural Specifications For Thermoluminescence Dosimetry-Environmental Applications," Regulatory Guide 4.13, Revision 1, July 1977.

6. Energy Facility Site Evaluation Council, Resolution No. 260, January 1992.

7. Energy Northwest Nuclear Columbia Generating Station, Operating License NPF-21, "Technical Specifications" Sections 5.5.1, 5.5.4, and 5.6.2

8. Columbia Generating Station Offsite Dose Calculation Manual (ODCM).

9. Code of Federal Regulations, Title 10 Part 20, "Standards for Protection against Radiation."

10. Code of Federal Regulations, Title 10 Part 50, "Domestic Licensing of Production and Utilization Facilities."

11. Washington Administrative Code 246-290, "Group A Public Water Systems."

12. Washington Administrative Code 173-200, "Water Quality Standards for Ground Water of the State of Washington."

13. Washington Administrative Code 173-201A, "Water Quality Standards for Surface Waters of the State of Washington."

14. Robertson, D. E., and J. J. Fix, "Association of Hanford Origin Radionuclides With Columbia River Sediment," BNWL-2305, August 1977.

15. Energy Facility Site Evaluation Council, Resolution No. 300, approved September 10, 2001.

16. Energy Facility Site Evaluation Council, Resolution No. 299, approved August 13, 2001.

17. Energy Northwest, "Columbia Generating Station Final Safety Analysis Report," Section 2.3.1.1.

18. Eisenbud, M., Gesell, T., "*Environmental Radioactivity*", Academic Press, Inc., San Diego, CA, 1997.

19. PNNL, 2007, *Hanford Site Environmental Monitoring Report for Calendar Year 2006*, PNNL-16623, Pacific Northwest National Laboratory, Richland, WA.

20. PNNL, 2007, *Summary of Hydrogeology and Evaluation of Existing Groundwater Monitoring Wells for Outfalls 002 and 003 at the Columbia generating Station*, PNWD-3845, Pacific Northwest National Laboratory, Richland, WA.

21. US DOE, 1995, *Hanford Site Background: Evaluation of Exist Soil radionuclide Data*, DOE/RL-95-55, US Dept. of Energy, Richland, WA.

22. PNNL, 2006, *Hanford Site Environmental Monitoring Report for Calendar Year 2005*, PNNL-15892, Pacific Northwest National Laboratory, Richland, WA.

8.0 ERRATA

8.0 ERRATA

Revisions to the Columbia Generating Stations 2006 Annual Radiological Environmental Monitoring Report are listed below.

On page 2 of Table 5-4, Annual TLD Data Summary for the Preoperational and Operational Periods, an error was identified in the 2006 Operational Results column for the ISFSI TLDs. The historical data presented below is correct for these TLD stations, however, data in italics has been changed from that reported in the 2006 report.

	PREOPERATIONAL[a]			1984 - 2005 OPERATIONAL			2006 OPERATIONAL
STATION	LOW	HIGH	MEAN	LOW	HIGH	MEAN	RESULT
121 (ISFSI)	-	-	(f)	120.09	120.09	120.09	*305.07*
122 (ISFSI)	-	-	(f)	106.22	106.22	106.22	*136.31*
123 (ISFSI)	-	-	(g)	177.76	365.37	287.18	*534.31*
124 (ISFSI)	-	-	(g)	76.29	144.07	98.99	*643.11*
125 (ISFSI)	-	-	(g)	126.22	567.27	357.16	*444.80*
126 (ISFSI)	-	-	(g)	128.66	700.28	435.90	*268.59*
127 (ISFSI)	-	-	(g)	119.59	499.10	322.66	*219.27*
128 (ISFSI)	-	-	(g)	123.06	288.46	218.75	*282.33*
129 (ISFSI)	-	-	(g)	120.60	235.81	188.69	*234.24*
136A (ISFSI)	-	-	(g)	112.96	302.81	212.64	*222.06*
137A (ISFSI)	-	-	(g)	121.78	244.35	188.25	*240.13*
138A (ISFSI)	-	-	(g)	119.31	237.05	179.35	*204.38*

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APPENDIX A

2007 ANNUAL RADIOLOGICAL ENVIRONMENTAL OPERATING REPORT COLUMBIA GENERATING STATION

DATA TABLES A and B

Covers Sample Collection Period January 2007 to December 2007

RADIOLOGICAL
ENVIRONMENTAL
MONITORING PROGRAM

Prepared by:

Energy Northwest - Environmental Services Staff
Richland, WA

APPENDIX A - TABLE OF CONTENTS
TABLE A: ROUTINE RESULTS

APPENDIX A - TABLE OF CONTENTS

TABLE B: SPECIAL INTEREST SAMPLE RESULTS

FORWARD

Since mid-1984, the results of the REMP analyses have been presented as net results calculated from gross or total counts minus the observed background counts of the detection method. Counting results for low level samples are often within the counting error of the background determination; consequently results can range from negative to positive values in these samples. Though most of the analytical results presented in this Appendix are below the detection limit, listing the actual calculated value, even when it is negative or below the detection limit, prevents positive biases and loss of individual results inherent in the use of "less than" (<) values. It is standard practice to report radiological environmental data in this manner.

Most results listed in this Appendix are accompanied by a plus or minus ($\pm$) error value. In most cases the error value represents the two sigma counting uncertainty determined for that particular analysis. These error values are in the same units as the listed activity values. The two sigma error value represents the range that a recount of the same sample would be expect to fall within 95% of the time, based on the statistics encountered in the original count.

Included for the first time in the 2007 report are also the analysis specific, minimum detectable activity (MDA) values. Though similar in concept to the LLD, these value are based on the statistics encountered in the specific sample count itself and not a blank determination. As such, they are a *a posteriori* (after the fact) determination where the LLD is a *a priori* (before the fact) determination. These values were included as they represent the level of activity that would have needed to be present in the sample for a positive identification to be made.

TABLE A-1.1

2007 QUARTERLY & ANNUAL TLD RESULTS

Results in milli-Roentgen (mR)

Station ID	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual
1	19.95	19.82	20.09	20.61	78.94
2	20.64	18.58	21.34	19.48	77.96
3	18.90	18.33	19.19	18.94	71.87
4	17.61	18.08	17.35	19.09	74.17
5	18.75	18.07	18.20	18.68	74.69
6	18.37	17.61	18.57	18.70	72.79
7	19.37	18.15	19.19	18.19	74.26
8	20.88	20.52	22.13	21.41	80.56
9	17.84	17.34	17.62	17.70	70.90
10	18.78	18.69	18.86	19.88	76.79
11	19.38	19.62	20.16	20.52	77.62
12	20.32	21.08	21.46	22.10	84.36
13	18.87	18.84	19.72	19.80	79.13
14	19.43	19.09	20.22	19.99	80.39
15	20.81	20.64	21.27	21.39	83.67
16	19.22	19.21	19.96	20.30	81.97
17	20.22	20.20	21.96	21.64	79.29
18	20.71	19.90	20.25	20.90	81.56
19	19.31	20.46	20.95	21.81	80.48
20	19.46	19.45	20.18	19.21	80.27
21	18.58	18.15	18.61	19.43	74.51
22	19.33	20.28	20.14	20.85	76.10
23	19.36	18.34	20.02	18.96	75.64
24	18.98	20.05	19.21	21.18	76.56
25	20.08	20.00	21.21	21.76	85.49
40	17.95	17.56	17.09	19.04	70.14
41	19.63	19.86	19.75	21.13	79.12
42	19.29	18.64	20.08	19.48	77.27
43	19.93	20.47	21.14	20.95	79.91
44	17.47	18.80	17.59	19.55	74.27
45	17.92	18.80	19.18	19.76	75.00
46	22.42	24.83	24.50	25.57	98.83
47	18.14	17.98	18.96	19.06	74.14
49	19.33	19.90	20.27	21.45	79.15
50	18.93	19.82	19.37	20.80	73.50
51	18.20	18.80	19.28	19.89	78.84
53	20.57	20.74	21.55	21.70	84.57
54	18.15	19.77	18.62	19.91	78.35
55	19.47	19.83	19.27	21.49	77.16

TABLE A-1.1

2007 QUARTERLY & ANNUAL TLD RESULTS

Results in milli-Roentgen (mR)

Station ID	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual
56	19.52	20.04	19.57	20.88	78.54
65	18.50	18.69	18.52	20.05	71.25
71	23.25	21.89	27.32	27.109	100.35
72	22.47	21.38	25.93	24.307	93.07
73	19.19	18.81	20.07	20.457	77.16
74	21.22	20.56	22.93	22.108	88.95
75	19.94	20.03	21.72	21.707	80.96
76	20.59	19.42	21.45	19.997	81.43
77	20.23	20.03	20.89	20.976	79.76
78	19.06	20.41	19.78	20.970	77.68
79	19.94	20.08	20.48	20.936	80.41
80	18.85	18.36	19.27	19.270	75.82
81	19.62	19.47	19.55	20.287	76.59
82	20.30	20.32	21.45	21.728	80.67
83	19.87	19.45	21.05	20.101	82.53
84	20.21	20.14	20.91	21.060	82.38
85	20.39	20.36	21.60	21.358	88.10
86	26.07	25.41	28.97	27.775	108.66

TABLE A-1.2

2007 QUARTERLY & ANNUAL TLD RESULTS- SUMMARY

Results in milli-Roentgen (mR)

Location	Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
Quarterly Indicator TLDs	20.19	17.09	28.97	224	224
Quarterly Control TLDs	17.62	17.34	17.84	4	4
Annual Indicator TLDs	80.06	70.14	108.66	56	56
Annual Control TLDs	70.90	70.90	70.90	1	1

Table A-2.1

GROSS BETA ON AIR PARTICULATE FILTERS

Results in pCi/ cubic meter

Collection Period		Station 01		Station 04		Station 05	
		Activity	Uncertainy	Result	Uncertainy	Result	Uncertainy
01/02/07 -	01/08/07	6.13E-03	5.41E-04	7.89E-03	6.05E-04	5.87E-03	5.27E-04
01/08/07 -	01/16/07	3.25E-02	1.08E-03	4.36E-02	1.26E-03	3.00E-02	1.04E-03
01/16/07 -	01/23/07	9.01E-02	1.98E-03	9.90E-02	2.08E-03	7.34E-02	1.77E-03
01/23/07 -	01/30/07	4.84E-02	1.42E-03	5.40E-02	1.50E-03	3.76E-02	1.24E-03
01/30/07 -	02/06/07	7.43E-02	1.78E-03	9.30E-02	2.01E-03	6.57E-02	1.67E-03
02/06/07 -	02/13/07	2.42E-02	9.89E-04	2.04E-02	9.06E-04	1.73E-02	8.34E-04
02/13/07 -	02/20/07	8.55E-03	5.86E-04	7.15E-03	5.38E-04	5.06E-03	4.53E-04
02/20/07 -	02/27/07	7.10E-03	5.30E-04	6.50E-03	5.08E-04	5.29E-03	4.59E-04
02/27/07 -	03/06/07	1.68E-02	8.21E-04	1.39E-02	7.46E-04	1.38E-02	7.46E-04
03/06/07 -	03/13/07	1.40E-02	7.56E-04	1.44E-02	7.60E-04	1.34E-02	7.31E-04
03/13/07 -	03/20/07	1.18E-02	6.89E-04	1.24E-02	7.08E-04	1.15E-02	6.85E-04
03/20/07 -	03/27/07	9.01E-03	6.01E-04	8.39E-03	5.78E-04	6.78E-03	5.22E-04
03/27/07 -	04/03/07	1.30E-02	7.21E-04	1.27E-02	7.10E-04	1.19E-02	6.93E-04
04/03/07 -	04/10/07	1.89E-02	8.73E-04	1.48E-02	7.75E-04	1.56E-02	7.90E-04
04/10/07 -	04/17/07	5.72E-03	4.80E-04	5.95E-03	4.91E-04	5.36E-03	4.65E-04
04/17/07 -	04/24/07	1.02E-02	6.37E-04	7.19E-03	5.34E-04	6.53E-03	5.13E-04
04/24/07 -	05/01/07	1.59E-02	7.99E-04	1.36E-02	7.40E-04	1.36E-02	7.39E-04
05/01/07 -	05/08/07	1.42E-02	7.55E-04	1.04E-02	6.45E-04	8.55E-03	5.88E-04
05/08/07 -	05/15/07	2.39E-02	9.15E-04	1.77E-02	7.83E-04	1.86E-02	8.06E-04
05/15/07 -	05/22/07	1.63E-02	7.53E-04	1.31E-02	6.72E-04	1.15E-02	6.29E-04
05/22/07 -	05/29/07	1.58E-02	7.39E-04	1.06E-02	6.06E-04	1.09E-02	6.14E-04
05/29/07 -	06/05/07	3.23E-02	1.07E-03	2.23E-02	8.81E-04	2.01E-02	8.33E-04
06/05/07 -	06/12/07	7.09E-03	4.91E-04	5.87E-03	4.48E-04	5.03E-03	4.19E-04
06/12/07 -	06/19/07	6.81E-03	6.62E-04	8.04E-03	5.27E-04	7.17E-03	4.98E-04
06/19/07 -	06/26/07	1.19E-02	6.43E-04	7.78E-03	5.18E-04	8.83E-03	5.57E-04
06/26/07 -	07/03/07	1.06E-02	6.06E-04	9.30E-03	5.64E-04	1.01E-02	5.89E-04
07/03/07 -	07/10/07	1.41E-02	6.97E-04	1.25E-02	6.57E-04	1.26E-02	6.58E-04
07/10/07 -	07/17/07	1.68E-02	7.65E-04	1.42E-02	7.02E-04	1.39E-02	6.97E-04
07/17/07 -	07/24/07	1.03E-02	5.95E-04	9.26E-03	5.66E-04	8.20E-03	5.30E-04
07/24/07 -	07/31/07	1.40E-02	7.00E-04	1.21E-02	6.47E-04	1.37E-02	6.91E-04
07/31/07 -	08/07/07	1.50E-02	7.19E-04	1.29E-02	6.67E-04	1.37E-02	6.87E-04
08/07/07 -	08/14/07	1.15E-02	6.31E-04	1.13E-02	6.27E-04	1.10E-02	6.15E-04
08/14/07 -	08/21/07	1.47E-02	7.13E-04	1.32E-02	6.76E-04	1.10E-02	6.16E-04
08/21/07 -	08/28/07	1.61E-02	7.46E-04	1.23E-02	6.53E-04	1.11E-02	6.16E-04
08/28/07 -	09/04/07	1.66E-02	7.61E-04	1.40E-02	6.94E-04	1.28E-02	6.59E-04
09/04/07 -	09/11/07	1.29E-02	6.68E-04	1.22E-02	6.50E-04	1.29E-02	6.68E-04
09/11/07 -	09/18/07	2.18E-02	8.74E-04	1.79E-02	7.89E-04	1.98E-02	8.33E-04
09/18/07 -	09/25/07	9.56E-03	5.73E-04	9.41E-03	5.70E-04	1.09E-02	6.13E-04
09/25/07 -	10/02/07	9.32E-03	5.65E-04	9.92E-03	5.87E-04	1.08E-02	6.14E-04
10/02/07 -	10/09/07	7.06E-03	4.95E-04	7.54E-03	5.08E-04	8.02E-03	5.25E-04
10/09/07 -	10/16/07	1.84E-02	7.97E-04	1.68E-02	7.61E-04	2.04E-02	8.38E-04
10/16/07 -	10/23/07	6.42E-03	4.75E-04	7.36E-03	5.04E-04	7.43E-03	5.05E-04
10/23/07 -	10/30/07	2.63E-02	9.58E-04	2.31E-02	8.97E-04	2.04E-02	8.40E-04
10/30/07 -	11/06/07	2.38E-02	9.07E-04	2.16E-02	8.66E-04	1.12E-02	6.17E-04
11/06/07 -	11/13/07	2.98E-02	1.02E-03	2.77E-02	9.85E-04	2.68E-02	9.70E-04
11/13/07 -	11/20/07	1.05E-02	6.02E-04	1.06E-02	6.04E-04	1.00E-02	5.86E-04
11/20/07 -	11/27/07	5.08E-02	1.35E-03	4.45E-02	1.26E-03	4.53E-02	1.27E-03
11/27/07 -	12/04/07	1.36E-02	6.83E-04	1.24E-02	6.53E-04	1.37E-02	6.87E-04
12/04/07 -	12/11/07	2.30E-02	8.93E-04	2.30E-02	8.92E-04	2.10E-02	8.54E-04
12/11/07 -	12/18/07	2.90E-02	1.01E-03	2.65E-02	9.61E-04	2.60E-02	9.52E-04
12/18/07 -	12/24/07	9.33E-03	6.12E-04	9.21E-03	6.07E-04	7.02E-03	5.31E-04
12/24/07 -	01/01/08	4.35E-03	3.66E-04	4.44E-03	3.67E-04	3.67E-03	3.34E-04

NVS = Valid sample not obtained due to sampler failure

Table A-2.1

GROSS BETA ON AIR PARTICULATE FILTERS

Results in pCi/ cubic meter

Collection Period	Station 06		Station 07		Station 08	
	Result	Uncertainy	Result	Uncertainy	Result	Uncertainy
01/02/07 - 01/08/07	5.63E-03	5.11E-04	5.28E-03	5.00E-04	4.87E-03	4.84E-04
01/08/07 - 01/16/07	2.68E-02	9.78E-04	2.92E-02	1.02E-03	2.81E-02	9.99E-04
01/16/07 - 01/23/07	6.36E-02	1.64E-03	7.21E-02	1.75E-03	6.56E-02	1.67E-03
01/23/07 - 01/30/07	NVS		3.89E-02	1.26E-03	3.55E-02	1.20E-03
01/30/07 - 02/06/07	7.31E-02	1.76E-03	6.45E-02	1.65E-03	5.64E-02	1.54E-03
02/06/07 - 02/13/07	2.29E-02	9.61E-04	2.11E-02	9.21E-04	1.79E-02	8.48E-04
02/13/07 - 02/20/07	6.23E-03	5.01E-04	6.90E-03	5.24E-04	6.90E-03	5.26E-04
02/20/07 - 02/27/07	5.00E-03	4.50E-04	6.75E-03	5.21E-04	4.56E-03	4.27E-04
02/27/07 - 03/06/07	1.67E-02	8.16E-04	1.59E-02	7.95E-04	1.29E-02	7.18E-04
03/06/07 - 03/13/07	1.27E-02	7.15E-04	1.42E-02	7.55E-04	1.13E-02	6.73E-04
03/13/07 - 03/20/07	1.15E-02	6.80E-04	1.15E-02	6.78E-04	1.27E-02	7.15E-04
03/20/07 - 03/27/07	7.88E-03	5.59E-04	7.66E-03	5.53E-04	8.18E-03	5.71E-04
03/27/07 - 04/03/07	1.25E-02	7.05E-04	1.30E-02	7.23E-04	1.49E-02	7.70E-04
04/03/07 - 04/10/07	1.50E-02	7.76E-04	1.77E-02	8.43E-04	1.61E-02	8.04E-04
04/10/07 - 04/17/07	5.84E-03	4.84E-04	7.26E-03	5.37E-04	6.05E-03	4.92E-04
04/17/07 - 04/24/07	7.36E-03	5.41E-04	7.02E-03	5.34E-04	8.06E-03	5.70E-04
04/24/07 - 05/01/07	1.19E-02	6.90E-04	1.11E-02	6.71E-04	1.19E-02	6.91E-04
05/01/07 - 05/08/07	8.56E-03	5.88E-04	7.83E-03	5.61E-04	8.08E-03	5.72E-04
05/08/07 - 05/15/07	1.87E-02	8.06E-04	1.87E-02	8.07E-04	1.91E-02	8.16E-04
05/15/07 - 05/22/07	1.26E-02	6.61E-04	1.30E-02	6.69E-04	1.16E-02	6.35E-04
05/22/07 - 05/29/07	1.11E-02	6.24E-04	1.11E-02	6.21E-04	9.87E-03	5.83E-04
05/29/07 - 06/05/07	2.25E-02	8.83E-04	2.27E-02	8.89E-04	2.31E-02	8.96E-04
06/05/07 - 06/12/07	4.46E-03	3.91E-04	4.60E-03	4.00E-04	5.11E-03	4.22E-04
06/12/07 - 06/19/07	7.39E-03	5.03E-04	7.22E-03	5.03E-04	9.56E-03	5.76E-04
06/19/07 - 06/26/07	8.54E-03	5.49E-04	8.70E-03	5.48E-04	7.54E-03	5.10E-04
06/26/07 - 07/03/07	9.79E-03	5.80E-04	1.09E-02	6.14E-04	9.94E-03	5.83E-04
07/03/07 - 07/10/07	1.35E-02	6.83E-04	1.25E-02	6.54E-04	1.26E-02	6.60E-04
07/10/07 - 07/17/07	1.57E-02	7.35E-04	1.41E-02	7.00E-04	1.40E-02	6.99E-04
07/17/07 - 07/24/07	9.89E-03	5.84E-04	4.20E-03	3.80E-04	8.59E-03	5.45E-04
07/24/07 - 07/31/07	1.20E-02	6.44E-04	1.22E-02	6.55E-04	1.06E-02	6.05E-04
07/31/07 - 08/07/07	1.19E-02	6.39E-04	1.38E-02	6.88E-04	1.25E-02	6.54E-04
08/07/07 - 08/14/07	1.10E-02	6.16E-04	1.10E-02	6.19E-04	9.59E-03	5.77E-04
08/14/07 - 08/21/07	1.36E-02	6.87E-04	1.45E-02	7.07E-04	NVS	
08/21/07 - 08/28/07	1.31E-02	6.73E-04	1.17E-02	6.33E-04	1.10E-02	6.65E-04
08/28/07 - 09/04/07	1.43E-02	7.00E-04	1.50E-02	7.18E-04	1.41E-02	7.55E-04
09/04/07 - 09/11/07	1.28E-02	6.64E-04	1.13E-02	6.26E-04	1.08E-02	6.11E-04
09/11/07 - 09/18/07	1.92E-02	8.18E-04	1.90E-02	8.16E-04	1.66E-02	7.67E-04
09/18/07 - 09/25/07	8.51E-03	5.45E-04	9.34E-03	5.68E-04	7.32E-03	5.07E-04
09/25/07 - 10/02/07	1.01E-02	5.92E-04	1.09E-02	6.14E-04	8.82E-03	5.52E-04
10/02/07 - 10/09/07	5.70E-03	4.41E-04	5.79E-03	4.50E-04	6.07E-03	4.59E-04
10/09/07 - 10/16/07	1.50E-02	7.18E-04	1.83E-02	7.98E-04	1.41E-02	7.00E-04
10/16/07 - 10/23/07	6.22E-03	4.65E-04	7.06E-03	4.96E-04	4.97E-03	4.16E-04
10/23/07 - 10/30/07	2.17E-02	8.68E-04	2.42E-02	9.18E-04	1.85E-02	8.02E-04
10/30/07 - 11/06/07	1.96E-02	8.22E-04	2.19E-02	8.70E-04	1.87E-02	8.03E-04
11/06/07 - 11/13/07	2.55E-02	9.42E-04	3.08E-02	1.04E-03	2.03E-02	8.39E-04
11/13/07 - 11/20/07	9.06E-03	5.57E-04	1.04E-02	5.99E-04	NVS	
11/20/07 - 11/27/07	5.66E-02	1.44E-03	4.78E-02	1.31E-03	3.97E-02	1.19E-03
11/27/07 - 12/04/07	1.38E-02	6.88E-04	1.23E-02	6.53E-04	9.67E-03	5.77E-04
12/04/07 - 12/11/07	2.49E-02	9.32E-04	2.23E-02	8.80E-04	2.06E-02	8.44E-04
12/11/07 - 12/18/07	3.38E-02	1.09E-03	2.71E-02	9.73E-04	2.58E-02	9.48E-04
12/18/07 - 12/24/07	9.86E-03	6.27E-04	8.99E-03	5.99E-04	8.52E-03	5.84E-04
12/24/07 - 01/01/08	3.77E-03	3.35E-04	5.47E-03	4.05E-04	2.99E-03	2.99E-04

NVS = Valid sample not obtained due to sampler failure

Table A-2.1

GROSS BETA ON AIR PARTICULATE FILTERS

Results in pCi/ cubic meter

Collection Period		Station 09		Station 21		Station 23	
		Result	Uncertainty	Result	Uncertainty	Result	Uncertainty
01/02/07 -	01/08/07	4.50E-03	4.62E-04	5.72E-03	5.18E-04	5.34E-03	5.02E-04
01/08/07 -	01/16/07	2.95E-02	1.03E-03	2.98E-02	1.03E-03	2.83E-02	1.00E-03
01/16/07 -	01/23/07	5.51E-02	1.52E-03	8.11E-02	1.87E-03	7.57E-02	1.80E-03
01/23/07 -	01/30/07	3.93E-02	1.27E-03	4.22E-02	1.32E-03	3.78E-02	1.24E-03
01/30/07 -	02/06/07	6.83E-02	1.70E-03	6.69E-02	1.68E-03	6.25E-02	1.62E-03
02/06/07 -	02/13/07	2.91E-02	1.09E-03	2.17E-02	9.36E-04	2.25E-02	9.55E-04
02/13/07 -	02/20/07	7.18E-03	5.36E-04	7.24E-03	5.37E-04	8.31E-03	5.78E-04
02/20/07 -	02/27/07	3.91E-03	3.98E-04	5.18E-03	4.52E-04	6.91E-03	5.25E-04
02/27/07 -	03/06/07	1.27E-02	7.10E-04	1.45E-02	7.59E-04	1.42E-02	7.53E-04
03/06/07 -	03/13/07	1.16E-02	6.85E-04	1.24E-02	7.11E-04	1.36E-02	7.40E-04
03/13/07 -	03/20/07	1.03E-02	6.45E-04	1.14E-02	6.75E-04	1.18E-02	6.85E-04
03/20/07 -	03/27/07	6.05E-03	4.93E-04	6.61E-03	5.13E-04	8.33E-03	5.78E-04
03/27/07 -	04/03/07	1.19E-02	6.95E-04	1.22E-02	6.99E-04	1.35E-02	7.36E-04
04/03/07 -	04/10/07	1.83E-02	8.60E-04	1.58E-02	8.01E-04	1.66E-02	8.18E-04
04/10/07 -	04/17/07	5.32E-03	4.61E-04	4.57E-03	4.31E-04	5.22E-03	4.58E-04
04/17/07 -	04/24/07	7.54E-03	5.54E-04	6.71E-03	5.16E-04	6.78E-03	5.23E-04
04/24/07 -	05/01/07	1.18E-02	6.91E-04	1.14E-02	6.74E-04	1.30E-02	7.19E-04
05/01/07 -	05/08/07	7.92E-03	5.64E-04	7.64E-03	5.56E-04	8.83E-03	5.95E-04
05/08/07 -	05/15/07	2.03E-02	8.42E-04	1.84E-02	8.00E-04	2.00E-02	8.32E-04
05/15/07 -	05/22/07	1.36E-02	6.88E-04	1.33E-02	6.79E-04	1.28E-02	6.68E-04
05/22/07 -	05/29/07	1.06E-02	6.07E-04	1.17E-02	6.33E-04	1.05E-02	6.01E-04
05/29/07 -	06/05/07	2.11E-02	8.52E-04	2.41E-02	9.17E-04	2.37E-02	9.09E-04
06/05/07 -	06/12/07	5.69E-03	4.42E-04	5.49E-03	4.36E-04	5.55E-03	4.37E-04
06/12/07 -	06/19/07	6.67E-03	4.81E-04	8.17E-03	5.31E-04	8.06E-03	5.26E-04
06/19/07 -	06/26/07	8.11E-03	5.29E-04	9.28E-03	5.68E-04	7.55E-03	5.12E-04
06/26/07 -	07/03/07	1.16E-02	6.31E-04	1.12E-02	6.19E-04	9.59E-03	5.76E-04
07/03/07 -	07/10/07	1.15E-02	6.30E-04	1.31E-02	6.71E-04	1.29E-02	6.65E-04
07/10/07 -	07/17/07	1.41E-02	6.99E-04	1.55E-02	7.31E-04	1.79E-02	7.90E-04
07/17/07 -	07/24/07	8.85E-03	5.49E-04	1.07E-02	6.08E-04	8.91E-03	5.53E-04
07/24/07 -	07/31/07	1.31E-02	6.72E-04	1.25E-02	6.54E-04	1.26E-02	6.60E-04
07/31/07 -	08/07/07	1.36E-02	6.87E-04	1.44E-02	7.07E-04	1.25E-02	6.58E-04
08/07/07 -	08/14/07	1.13E-02	6.23E-04	1.18E-02	6.39E-04	1.13E-02	6.24E-04
08/14/07 -	08/21/07	1.34E-02	6.79E-04	1.30E-02	6.69E-04	1.48E-02	7.17E-04
08/21/07 -	08/28/07	1.23E-02	6.51E-04	1.25E-02	6.57E-04	1.55E-02	7.31E-04
08/28/07 -	09/04/07	1.44E-02	7.09E-04	1.50E-02	7.24E-04	1.44E-02	7.03E-04
09/04/07 -	09/11/07	1.25E-02	6.56E-04	1.29E-02	6.67E-04	1.23E-02	6.52E-04
09/11/07 -	09/18/07	1.82E-02	8.00E-04	2.02E-02	8.40E-04	1.92E-02	8.20E-04
09/18/07 -	09/25/07	1.03E-02	5.93E-04	7.75E-03	5.13E-04	1.12E-02	6.18E-04
09/25/07 -	10/02/07	9.65E-03	5.78E-04	1.16E-02	6.36E-04	9.68E-03	5.80E-04
10/02/07 -	10/09/07	6.97E-03	4.92E-04	7.53E-03	5.10E-04	7.07E-03	4.93E-04
10/09/07 -	10/16/07	1.57E-02	7.38E-04	2.02E-02	8.38E-04	2.02E-02	8.36E-04
10/16/07 -	10/23/07	6.58E-03	4.78E-04	6.96E-03	4.88E-04	6.51E-03	4.71E-04
10/23/07 -	10/30/07	2.10E-02	8.54E-04	2.70E-02	9.74E-04	2.49E-02	9.33E-04
10/30/07 -	11/06/07	2.21E-02	8.76E-04	2.51E-02	9.31E-04	2.49E-02	9.29E-04
11/06/07 -	11/13/07	2.34E-02	9.04E-04	3.21E-02	1.06E-03	2.90E-02	1.01E-03
11/13/07 -	11/20/07	9.52E-03	5.70E-04	1.12E-02	6.20E-04	1.03E-02	5.99E-04
11/20/07 -	11/27/07	4.71E-02	1.30E-03	4.89E-02	1.33E-03	4.91E-02	1.33E-03
11/27/07 -	12/04/07	1.13E-02	6.25E-04	1.33E-02	6.78E-04	1.44E-02	7.03E-04
12/04/07 -	12/11/07	2.00E-02	8.32E-04	2.42E-02	9.17E-04	2.43E-02	9.19E-04
12/11/07 -	12/18/07	2.47E-02	9.25E-04	3.20E-02	1.06E-03	3.08E-02	1.04E-03
12/18/07 -	12/24/07	8.48E-03	5.85E-04	1.13E-02	6.72E-04	9.04E-03	6.00E-04
12/24/07 -	01/01/08	3.94E-03	3.46E-04	5.44E-03	4.02E-04	4.70E-03	3.75E-04

NVS = Valid sample not obtained due to sampler failure

Table A-2.1

GROSS BETA ON AIR PARTICULATE FILTERS

Results in pCi/ cubic meter

Collection Period		Station 40		Station 48		Station 57	
		Result	Uncertainy	Result	Uncertainy	Result	Uncertainy
01/02/07 -	01/08/07	5.89E-03	5.24E-04	6.76E-03	5.66E-04	5.39E-03	5.02E-04
01/08/07 -	01/16/07	3.11E-02	1.06E-03	3.71E-02	1.16E-03	3.17E-02	1.06E-03
01/16/07 -	01/23/07	6.88E-02	1.71E-03	9.26E-02	2.01E-03	7.79E-02	1.83E-03
01/23/07 -	01/30/07	4.00E-02	1.28E-03	5.17E-02	1.47E-03	4.68E-02	1.39E-03
01/30/07 -	02/06/07	6.45E-02	1.65E-03	8.30E-02	1.89E-03	6.93E-02	1.71E-03
02/06/07 -	02/13/07	1.67E-02	8.19E-04	2.42E-02	9.91E-04	2.32E-02	9.67E-04
02/13/07 -	02/20/07	6.13E-03	4.98E-04	8.41E-03	5.78E-04	8.26E-03	5.76E-04
02/20/07 -	02/27/07	5.21E-03	4.58E-04	6.56E-03	5.17E-04	6.66E-03	5.18E-04
02/27/07 -	03/06/07	1.41E-02	7.54E-04	1.73E-02	8.32E-04	1.43E-02	7.56E-04
03/06/07 -	03/13/07	1.32E-02	7.28E-04	1.50E-02	7.77E-04	1.38E-02	7.47E-04
03/13/07 -	03/20/07	1.05E-02	6.53E-04	1.29E-02	7.23E-04	1.19E-02	6.86E-04
03/20/07 -	03/27/07	7.95E-03	5.63E-04	9.05E-03	6.02E-04	6.84E-03	5.22E-04
03/27/07 -	04/03/07	1.18E-02	6.90E-04	1.42E-02	7.54E-04	1.30E-02	7.20E-04
04/03/07 -	04/10/07	1.60E-02	8.03E-04	1.57E-02	7.94E-04	1.79E-02	8.51E-04
04/10/07 -	04/17/07	5.52E-03	4.69E-04	5.77E-03	4.81E-04	5.01E-03	4.52E-04
04/17/07 -	04/24/07	7.71E-03	5.56E-04	7.68E-03	5.56E-04	8.48E-03	5.84E-04
04/24/07 -	05/01/07	1.30E-02	7.26E-04	1.23E-02	7.04E-04	1.28E-02	7.13E-04
05/01/07 -	05/08/07	9.34E-03	6.10E-04	8.65E-03	5.88E-04	8.78E-03	5.94E-04
05/08/07 -	05/15/07	1.77E-02	7.85E-04	1.69E-02	7.67E-04	1.84E-02	8.01E-04
05/15/07 -	05/22/07	1.24E-02	6.53E-04	1.34E-02	6.83E-04	1.30E-02	6.70E-04
05/22/07 -	05/29/07	1.07E-02	6.09E-04	1.21E-02	6.50E-04	1.17E-02	6.36E-04
05/29/07 -	06/05/07	2.35E-02	9.06E-04	2.29E-02	8.91E-04	2.48E-02	9.33E-04
06/05/07 -	06/12/07	4.83E-03	4.09E-04	5.86E-03	4.51E-04	5.87E-03	4.52E-04
06/12/07 -	06/19/07	4.33E-03	3.85E-04	8.98E-03	5.58E-04	7.02E-03	4.89E-04
06/19/07 -	06/26/07	8.59E-03	5.46E-04	7.77E-03	5.18E-04	8.73E-03	5.54E-04
06/26/07 -	07/03/07	1.04E-02	5.98E-04	8.38E-03	5.78E-04	1.01E-02	5.92E-04
07/03/07 -	07/10/07	1.29E-02	6.67E-04	1.45E-02	7.10E-04	1.37E-02	6.89E-04
07/10/07 -	07/17/07	1.67E-02	7.64E-04	1.61E-02	7.49E-04	1.56E-02	7.39E-04
07/17/07 -	07/24/07	1.08E-02	6.13E-04	1.21E-02	6.45E-04	1.04E-02	6.00E-04
07/24/07 -	07/31/07	1.64E-02	7.54E-04	1.94E-02	8.22E-04	1.44E-02	7.05E-04
07/31/07 -	08/07/07	1.58E-02	7.40E-04	1.70E-02	7.67E-04	1.38E-02	6.90E-04
08/07/07 -	08/14/07	1.30E-02	6.70E-04	1.50E-02	7.22E-04	1.20E-02	6.42E-04
08/14/07 -	08/21/07	1.40E-02	6.99E-04	1.64E-02	7.54E-04	1.48E-02	7.19E-04
08/21/07 -	08/28/07	1.34E-02	6.79E-04	1.82E-02	7.93E-04	1.20E-02	6.43E-04
08/28/07 -	09/04/07	2.06E-02	8.48E-04	1.90E-02	8.10E-04	1.46E-02	7.11E-04
09/04/07 -	09/11/07	1.49E-02	7.17E-04	1.60E-02	7.43E-04	1.37E-02	6.92E-04
09/11/07 -	09/18/07	2.13E-02	8.62E-04	2.61E-02	9.55E-04	2.02E-02	8.40E-04
09/18/07 -	09/25/07	1.27E-02	6.63E-04	1.49E-02	7.12E-04	1.10E-02	6.15E-04
09/25/07 -	10/02/07	1.14E-02	6.30E-04	1.39E-02	6.92E-04	1.06E-02	6.07E-04
10/02/07 -	10/09/07	7.77E-03	5.23E-04	1.14E-02	6.30E-04	8.16E-03	5.28E-04
10/09/07 -	10/16/07	2.25E-02	8.85E-04	2.74E-02	9.77E-04	1.82E-02	7.93E-04
10/16/07 -	10/23/07	8.95E-03	5.58E-04	8.96E-03	5.60E-04	8.47E-03	5.40E-04
10/23/07 -	10/30/07	2.95E-02	1.02E-03	3.70E-02	1.15E-03	3.00E-02	1.03E-03
10/30/07 -	11/06/07	2.51E-02	9.34E-04	3.19E-02	1.06E-03	2.69E-02	9.65E-04
11/06/07 -	11/13/07	3.23E-02	1.07E-03	3.94E-02	1.18E-03	3.30E-02	1.08E-03
11/13/07 -	11/20/07	1.33E-02	6.77E-04	1.53E-02	7.25E-04	1.19E-02	6.40E-04
11/20/07 -	11/27/07	5.20E-02	1.37E-03	6.68E-02	1.57E-03	5.65E-02	1.43E-03
11/27/07 -	12/04/07	1.53E-02	7.27E-04	1.92E-02	8.18E-04	1.63E-02	7.50E-04
12/04/07 -	12/11/07	2.60E-02	9.50E-04	3.42E-02	1.10E-03	2.62E-02	9.54E-04
12/11/07 -	12/18/07	3.14E-02	1.05E-03	4.35E-02	1.25E-03	3.57E-02	1.12E-03
12/18/07 -	12/24/07	8.07E-03	5.69E-04	1.11E-02	6.69E-04	2.23E-03	3.77E-04
12/24/07 -	01/01/08	4.06E-03	3.48E-04	7.07E-03	4.58E-04	6.12E-03	4.29E-04

NVS = Valid sample not obtained due to sampler failure

Table A-2.2

GROSS BETA ON AIR PARTICULATE FILTERS - SUMMARY

Results in pCi/ cubic meter

LOCATION	Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
Gross Beta Indicators	1.90E-02	2.23E-03	9.37E-01	569	569
Gross Beta Controls	1.58E-02	3.91E-03	6.83E-02	52	52

TABLE A-3.1

GAMMA SPECTROMETRY RESULTS OF AIR PARTICULATE FILTERS

Results in pCi/cubic meter, results decay corrected for decay during sample collection period

Location and Quarter Station 1 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.13E-02	±	9.10E-03	6.67E-03
K-40	+	9.04E-03	±	4.40E-03	5.97E-03
MN-54		-3.15E-05	±	1.98E-04	3.66E-04
FE-59		-3.73E-04	±	1.45E-03	2.55E-03
CO-60		1.63E-04	±	2.82E-04	4.82E-04
ZN-65		5.89E-06	±	6.30E-04	1.17E-03
NB-95		-4.60E-05	±	6.27E-04	1.14E-03
CS-134		5.44E-05	±	1.64E-04	2.54E-04
CS-137		-2.75E-06	±	2.59E-04	4.69E-04
RA-226		1.44E-03	±	4.26E-03	7.22E-03
RU-106		-1.37E-03	±	1.45E-02	2.75E-02

Location and Quarter Station 1 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.07E-01	±	1.33E-02	1.17E-02
K-40		-1.82E-03	±	8.33E-03	1.10E-02
MN-54		2.43E-04	±	3.68E-04	6.18E-04
FE-59		-2.86E-04	±	1.55E-03	2.81E-03
CO-60		1.32E-04	±	3.84E-04	6.85E-04
ZN-65		-2.96E-04	±	9.11E-04	1.61E-03
NB-95		-1.07E-04	±	7.59E-04	1.33E-03
CS-134		-5.38E-09	±	4.26E-04	7.07E-04
CS-137		-1.52E-04	±	4.01E-04	6.91E-04
RA-226		6.89E-03	±	6.14E-03	9.98E-03
RU-106		-6.56E-03	±	3.21E-02	5.70E-02

Location and Quarter Station 1 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.37E-01	±	1.31E-02	8.93E-03
K-40		2.06E-04	±	4.37E-03	9.59E-03
MN-54		8.73E-06	±	3.73E-04	6.79E-04
FE-59		5.18E-04	±	1.57E-03	2.77E-03
CO-60		4.36E-05	±	2.98E-04	5.64E-04
ZN-65		-3.80E-04	±	1.03E-03	1.78E-03
NB-95		1.14E-03	±	1.04E-03	1.64E-03
CS-134		-1.77E-04	±	3.90E-04	6.62E-04
CS-137		-6.05E-05	±	3.20E-04	5.70E-04
RA-226		9.53E-03	±	6.44E-03	1.03E-02
RU-106		4.13E-03	±	2.31E-02	4.23E-02

Location and Quarter Station 1 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	7.57E-02	±	1.14E-02	8.74E-03
K-40		1.30E-03	±	4.58E-03	8.54E-03
MN-54		1.64E-04	±	3.15E-04	4.74E-04
FE-59		8.63E-04	±	1.96E-03	2.93E-03
CO-60		-2.17E-04	±	4.62E-04	7.07E-04
ZN-65		-1.32E-04	±	8.19E-04	1.31E-03
NB-95		4.51E-04	±	9.99E-04	1.54E-03
CS-134		-6.62E-05	±	3.15E-04	5.06E-04
CS-137		-2.67E-05	±	3.27E-04	5.32E-04
RA-226		6.08E-03	±	5.76E-03	8.91E-03
RU-106		-1.41E-03	±	1.86E-02	3.01E-02

Location and Quarter Station 4 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.39E-02	±	9.60E-03	7.55E-03
K-40	+	8.38E-03	±	4.39E-03	6.12E-03
MN-54		2.61E-04	±	2.58E-04	4.08E-04
FE-59		-4.15E-04	±	1.40E-03	2.45E-03
CO-60		-9.27E-05	±	3.46E-04	6.15E-04
ZN-65		1.96E-04	±	6.34E-04	1.13E-03
NB-95		-3.44E-05	±	7.01E-04	1.26E-03
CS-134		3.29E-05	±	2.57E-04	4.54E-04
CS-137		-2.59E-05	±	2.55E-04	4.57E-04
RA-226		3.96E-03	±	4.49E-03	7.37E-03
RU-106		-3.75E-05	±	2.14E-02	3.94E-02

Location and Quarter Station 4 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	9.26E-02	±	1.25E-02	1.11E-02
K-40		1.30E-03	±	5.00E-03	1.03E-02
MN-54		1.86E-04	±	3.73E-04	6.40E-04
FE-59		-1.13E-04	±	1.70E-03	3.10E-03
CO-60		7.73E-05	±	2.69E-04	4.99E-04
ZN-65		5.28E-06	±	9.27E-04	1.70E-03
NB-95		7.94E-04	±	8.43E-04	1.35E-03
CS-134		-3.21E-05	±	2.43E-04	4.39E-04
CS-137		5.28E-05	±	2.99E-04	5.36E-04
RA-226		4.58E-03	±	5.61E-03	9.27E-03
RU-106		-3.20E-03	±	2.77E-02	5.04E-02

Location and Quarter Station 4 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.18E-01	±	1.31E-02	1.06E-02
K-40		-6.30E-04	±	5.56E-03	1.01E-02
MN-54		9.71E-05	±	2.66E-04	4.74E-04
FE-59		-6.26E-05	±	1.72E-03	3.13E-03
CO-60		-9.22E-05	±	4.03E-04	7.29E-04
ZN-65		2.08E-04	±	6.81E-04	1.23E-03
NB-95		3.36E-04	±	7.60E-04	1.33E-03
CS-134		6.05E-06	±	3.09E-04	5.55E-04
CS-137		-1.01E-04	±	3.46E-04	6.05E-04
RA-226		6.74E-03	±	5.18E-03	8.49E-03
RU-106		3.10E-03	±	2.47E-02	4.52E-02

Location and Quarter Station 4 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	6.67E-02	±	1.11E-02	8.95E-03
K-40		-1.41E-04	±	3.94E-03	7.71E-03
MN-54		-7.72E-05	±	3.97E-04	6.37E-04
FE-59		-7.45E-04	±	1.98E-03	3.09E-03
CO-60		-3.52E-07	±	4.66E-04	7.71E-04
ZN-65		-1.71E-04	±	8.52E-04	1.36E-03
NB-95		2.82E-04	±	1.08E-03	1.71E-03
CS-134		-2.10E-05	±	2.70E-04	4.40E-04
CS-137		1.14E-04	±	2.40E-04	3.63E-04
RA-226		5.70E-04	±	5.55E-04	9.72E-03
RU-106		9.34E-03	±	2.58E-02	4.00E-02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

1st Q 1/2/07 to 4/3/07 - 2nd Q 4/3/07 to 7/3/07 - 3rd Q 7/3/07 to 9/4/07 - 4th Q 9/4/07 to 1/1/08

TABLE A-3.1

GAMMA SPECTROMETRY RESULTS OF AIR PARTICULATE FILTERS

Results in pCi/cubic meter, results decay corrected for decay during sample collection period

Location and Quarter Station 5 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	7.20E-02	±	9.86E-03	7.88E-03
K-40		-1.50E-03	±	6.97E-03	1.01E-02
MN-54		1.88E-04	±	3.43E-04	5.85E-04
FE-59		-4.08E-04	±	1.64E-03	2.90E-03
CO-60		1.30E-04	±	3.64E-04	6.49E-04
ZN-65		-2.67E-04	±	8.69E-04	1.54E-03
NB-95		1.11E-04	±	1.08E-03	1.39E-03
CS-134		2.19E-05	±	1.86E-04	3.46E-04
CS-137		-3.85E-05	±	3.53E-04	6.30E-04
RA-226		5.15E-03	±	5.34E-03	8.75E-03
RU-106		2.54E-03	±	2.52E-02	4.62E-02

Location and Quarter Station 5 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	7.46E-02	±	1.10E-02	1.00E-02
K-40		-3.17E-03	±	1.23E-02	1.06E-02
MN-54		-2.57E-05	±	4.02E-04	7.23E-04
FE-59		4.25E-04	±	1.61E-03	2.88E-03
CO-60		-1.15E-04	±	4.13E-04	7.38E-04
ZN-65		-1.64E-04	±	8.15E-04	1.47E-03
NB-95		0.00E+00	±	1.05E-03	1.75E-03
CS-134		7.00E-05	±	2.99E-04	5.25E-04
CS-137		-1.21E-04	±	3.81E-04	6.61E-04
RA-226		6.38E-03	±	5.78E-03	9.40E-03
RU-106		1.97E-03	±	2.68E-02	4.91E-02

Location and Quarter Station 5 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.26E-01	±	1.27E-02	8.51E-03
K-40		1.22E-03	±	5.07E-03	1.04E-02
MN-54		2.08E-04	±	3.68E-04	6.26E-04
FE-59		-4.73E-04	±	1.81E-03	3.21E-03
CO-60		-1.07E-04	±	4.15E-04	7.44E-04
ZN-65		-1.28E-04	±	8.34E-04	1.51E-03
NB-95		2.13E-04	±	9.97E-04	1.77E-03
CS-134		2.25E-05	±	4.55E-04	7.93E-04
CS-137		-1.43E-04	±	4.01E-04	6.92E-04
RA-226	+	1.05E-02	±	6.34E-03	9.88E-03
RU-106		1.75E-03	±	2.51E-03	3.92E-03

Location and Quarter Station 5 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.05E-02	±	1.01E-02	6.49E-03
K-40		-5.92E-04	±	5.87E-03	9.23E-03
MN-54		2.74E-04	±	3.41E-04	3.97E-04
FE-59		-4.50E-04	±	1.80E-03	2.87E-03
CO-60		5.41E-05	±	3.84E-04	6.16E-04
ZN-65		-2.52E-04	±	9.06E-04	1.43E-03
NB-95		1.03E-05	±	9.87E-04	1.62E-03
CS-134		-1.63E-04	±	3.94E-04	6.24E-04
CS-137		2.95E-04	±	3.00E-04	3.39E-04
RA-226		6.36E-03	±	6.08E-03	9.45E-03
RU-106		9.22E-05	±	3.24E-04	1.05E-03

Location and Quarter Station 6 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	6.61E-02	±	8.69E-03	6.71E-03
K-40	+	2.27E-02	±	5.93E-03	4.51E-03
MN-54		-1.06E-04	±	3.49E-04	6.08E-04
FE-59		-1.33E-04	±	1.46E-03	2.62E-03
CO-60		-3.67E-05	±	3.09E-04	5.71E-04
ZN-65		-4.64E-05	±	7.53E-04	1.37E-03
NB-95		1.20E-06	±	6.97E-04	1.28E-03
CS-134		2.10E-05	±	2.34E-04	4.21E-04
CS-137		5.48E-05	±	2.58E-04	4.59E-04
RA-226		7.74E-03	±	5.26E-03	7.78E-03
RU-106		7.24E-03	±	1.91E-02	3.37E-02

Location and Quarter Station 6 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.64E-02	±	1.12E-02	9.17E-03
K-40		-5.24E-03	±	2.87E-02	1.03E-02
MN-54		-9.06E-06	±	3.40E-04	6.24E-04
FE-59		2.29E-04	±	1.62E-03	2.94E-03
CO-60		-6.40E-06	±	4.10E-04	7.63E-04
ZN-65		-1.50E-04	±	9.50E-04	1.71E-03
NB-95		0.00E+00	±	1.00E-03	1.67E-03
CS-134		1.41E-04	±	2.87E-04	4.90E-04
CS-137		-7.16E-05	±	2.69E-04	4.80E-04
RA-226		8.76E-03	±	6.61E-03	1.03E-02
RU-106		-2.46E-03	±	1.93E-02	3.64E-02

Location and Quarter Station 6 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.25E-01	±	1.33E-02	1.04E-02
K-40		-1.73E-03	±	6.58E-03	9.48E-03
MN-54		-4.96E-05	±	3.69E-04	6.64E-04
FE-59		-4.49E-04	±	1.87E-03	3.30E-03
CO-60		-1.27E-05	±	3.66E-04	6.89E-04
ZN-65		-3.11E-04	±	7.94E-04	1.40E-03
NB-95		1.24E-04	±	1.10E-03	1.61E-03
CS-134		-4.77E-05	±	3.45E-04	6.08E-04
CS-137		-6.89E-05	±	3.13E-04	5.56E-04
RA-226	+	1.26E-02	±	6.58E-03	9.91E-03
RU-106		1.36E-04	±	2.11E-02	4.02E-02

Location and Quarter Station 6 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.96E-02	±	1.11E-02	7.43E-03
K-40		-1.54E-03	±	6.80E-03	8.32E-03
MN-54		1.33E-04	±	3.25E-04	5.00E-04
FE-59		1.26E-04	±	2.22E-04	7.86E-04
CO-60		-6.54E-05	±	3.44E-04	5.45E-04
ZN-65		2.37E-04	±	8.09E-04	1.27E-03
NB-95		-6.31E-05	±	8.88E-04	1.45E-03
CS-134		-5.08E-05	±	2.91E-04	4.68E-04
CS-137		1.18E-06	±	3.13E-04	5.15E-04
RA-226		-2.31E-03	±	7.54E-03	9.03E-03
RU-106		4.65E-03	±	2.48E-02	3.95E-02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-3.1

GAMMA SPECTROMETRY RESULTS OF AIR PARTICULATE FILTERS

Results in pCi/cubic meter, results decay corrected for decay during sample collection period

Location and Quarter Station 7 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	7.36E-02	±	1.08E-02	9.81E-03
K-40		-1.01E-03	±	5.72E-03	9.71E-03
MN-54		1.31E-04	±	3.98E-04	6.94E-04
FE-59		-7.65E-05	±	1.56E-03	2.84E-03
CO-60		1.16E-04	±	4.48E-04	7.99E-04
ZN-65		3.11E-04	±	4.25E-04	6.99E-04
NB-95		0.00E+00	±	1.13E-03	1.89E-03
CS-134		5.74E-05	±	2.72E-04	4.82E-04
CS-137		-5.27E-06	±	3.75E-04	6.71E-04
RA-226	+	1.77E-02	±	9.77E-03	9.83E-03
RU-106		2.05E-03	±	2.81E-03	4.57E-03

Location and Quarter Station 7 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	7.60E-02	±	1.13E-02	1.07E-02
K-40		-4.49E-03	±	2.01E-02	1.05E-02
MN-54		0.00E+00	±	6.01E-04	1.00E-03
FE-59		-5.79E-04	±	1.99E-03	3.48E-03
CO-60		1.05E-04	±	3.48E-04	6.29E-04
ZN-65		-1.92E-04	±	9.08E-04	1.62E-03
NB-95		0.00E+00	±	1.18E-03	1.97E-03
CS-134		-1.73E-04	±	3.83E-04	6.51E-04
CS-137		-1.70E-04	±	3.62E-04	6.19E-04
RA-226		5.52E-03	±	5.51E-03	9.17E-03
RU-106		-1.02E-02	±	2.79E-02	4.89E-02

Location and Quarter Station 7 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.30E-01	±	1.37E-02	1.06E-02
K-40		-2.99E-03	±	1.03E-02	9.90E-03
MN-54		-2.62E-06	±	3.68E-04	6.72E-04
FE-59		-3.74E-04	±	1.75E-03	3.12E-03
CO-60		1.12E-04	±	3.17E-04	5.72E-04
ZN-65		5.62E-06	±	8.60E-04	1.59E-03
NB-95		2.14E-04	±	7.52E-04	1.18E-03
CS-134		-9.39E-05	±	3.79E-04	6.58E-04
CS-137		-2.46E-05	±	1.06E-04	2.51E-04
RA-226	+	1.18E-02	±	6.11E-03	9.39E-03
RU-106		6.23E-03	±	2.36E-02	4.25E-02

Location and Quarter Station 7 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	7.91E-02	±	1.15E-02	9.02E-03
K-40		-2.42E-03	±	1.21E-02	9.92E-03
MN-54		4.85E-05	±	1.80E-04	2.74E-04
FE-59		-3.03E-04	±	1.76E-03	2.83E-03
CO-60		5.80E-06	±	1.27E-05	1.67E-04
ZN-65		-2.53E-04	±	9.70E-04	1.54E-03
NB-95		-8.44E-05	±	1.04E-03	1.69E-03
CS-134		9.17E-05	±	3.31E-04	5.28E-04
CS-137		-3.99E-05	±	3.38E-04	5.48E-04
RA-226		7.92E-03	±	6.01E-03	9.18E-03
RU-106		-4.25E-03	±	2.44E-02	3.90E-02

Location and Quarter Station 8 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	6.94E-02	±	8.41E-03	6.51E-03
K-40	+	1.92E-02	±	4.39E-03	1.84E-03
MN-54		-1.06E-04	±	3.39E-04	5.88E-04
FE-59		-2.55E-04	±	1.27E-03	2.25E-03
CO-60		-6.00E-05	±	3.08E-04	5.59E-04
ZN-65		-1.83E-04	±	7.64E-04	1.35E-03
NB-95		9.15E-05	±	6.90E-04	1.23E-03
CS-134		-5.86E-05	±	2.47E-04	4.31E-04
CS-137		1.46E-04	±	2.60E-04	4.41E-04
RA-226		3.18E-03	±	4.38E-03	7.24E-03
RU-106		-7.56E-03	±	2.48E-02	4.35E-02

Location and Quarter Station 8 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.98E-02	±	1.22E-02	1.11E-02
K-40		-2.44E-03	±	1.03E-02	1.09E-02
MN-54		-6.18E-05	±	3.86E-04	6.89E-04
FE-59		-3.06E-04	±	1.60E-03	2.88E-03
CO-60		7.34E-05	±	3.57E-04	6.55E-04
ZN-65		3.30E-04	±	7.80E-04	1.37E-03
NB-95		3.42E-04	±	7.92E-04	1.39E-03
CS-134		-1.37E-04	±	3.55E-04	6.09E-04
CS-137		-1.03E-04	±	3.34E-04	5.85E-04
RA-226		7.65E-03	±	5.74E-03	9.20E-03
RU-106		9.41E-03	±	2.76E-02	4.85E-02

Location and Quarter Station 8 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.08E-01	±	1.34E-02	1.12E-02
K-40		1.08E-03	±	5.41E-03	1.12E-02
MN-54		7.94E-06	±	3.94E-04	7.20E-04
FE-59		4.41E-04	±	1.41E-03	2.53E-03
CO-60		1.00E-04	±	3.85E-04	6.99E-04
ZN-65		3.05E-04	±	8.09E-04	1.43E-03
NB-95		0.00E+00	±	1.21E-03	2.02E-03
CS-134		-5.80E-05	±	3.36E-04	5.93E-04
CS-137		-1.18E-04	±	4.20E-04	7.31E-04
RA-226		1.00E-02	±	7.30E-03	1.14E-02
RU-106		1.18E-02	±	2.57E-02	4.48E-02

Location and Quarter Station 8 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	6.93E-02	±	1.07E-02	8.44E-03
K-40		-3.45E-04	±	4.90E-03	8.76E-03
MN-54		-5.13E-05	±	3.41E-04	5.47E-04
FE-59		7.88E-06	±	1.57E-03	2.58E-03
CO-60		3.37E-05	±	8.98E-05	2.24E-04
ZN-65		-4.38E-06	±	4.24E-04	6.95E-04
NB-95		4.27E-05	±	1.04E-03	1.71E-03
CS-134		-1.52E-04	±	3.76E-04	5.94E-04
CS-137		-1.28E-04	±	3.97E-04	6.29E-04
RA-226		3.31E-03	±	7.20E-03	1.12E-02
RU-106		4.12E-04	±	2.59E-02	4.24E-02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

1st Q 1/2/07 to 4/3/07 - 2nd Q 4/3/07 to 7/3/07 - 3rd Q 7/3/07 to 9/4/07 - 4th Q 9/4/07 to 1/1/08

TABLE A-3.1

GAMMA SPECTROMETRY RESULTS OF AIR PARTICULATE FILTERS

Results in pCi/cubic meter, results decay corrected for decay during sample collection period

Location and Quarter Station 9 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	6.62E-02	±	8.02E-03	6.05E-03
K-40	+	1.32E-02	±	4.76E-03	5.75E-03
MN-54		2.11E-04	±	1.89E-04	2.85E-04
FE-59		-4.12E-04	±	1.29E-03	2.25E-03
CO-60		7.92E-05	±	3.07E-04	5.52E-04
ZN-65		-7.73E-05	±	7.02E-04	1.27E-03
NB-95		-1.25E-06	±	5.37E-04	9.95E-04
CS-134		-7.43E-05	±	2.47E-04	4.30E-04
CS-137		4.03E-05	±	2.43E-04	4.34E-04
RA-226		3.44E-03	±	4.73E-03	7.83E-03
RU-106		-6.21E-04	±	1.91E-02	3.54E-02

Location and Quarter Station 9 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.55E-02	±	1.13E-02	9.33E-03
K-40		-2.97E-03	±	1.03E-02	9.98E-03
MN-54		2.09E-04	±	3.16E-04	5.31E-04
FE-59		3.27E-04	±	1.52E-03	2.75E-03
CO-60		1.92E-04	±	3.75E-04	6.49E-04
ZN-65		-1.41E-05	±	7.70E-04	1.44E-03
NB-95		9.60E-05	±	1.29E-03	1.48E-03
CS-134		-2.36E-04	±	4.21E-04	7.08E-04
CS-137		-4.95E-06	±	2.87E-04	5.27E-04
RA-226		6.72E-03	±	5.93E-03	9.81E-03
RU-106		-1.23E-02	±	3.11E-02	5.40E-02

Location and Quarter Station 9 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.37E-01	±	1.38E-02	9.99E-03
K-40		-9.47E-04	±	6.07E-03	1.02E-02
MN-54		-7.59E-05	±	3.52E-04	6.29E-04
FE-59		7.81E-04	±	8.24E-04	2.99E-03
CO-60		1.45E-04	±	2.31E-04	3.80E-04
ZN-65		-1.41E-04	±	8.02E-04	1.46E-03
NB-95		2.44E-05	±	1.04E-03	1.80E-03
CS-134		-1.22E-04	±	3.34E-04	5.76E-04
CS-137		1.10E-04	±	2.56E-04	4.45E-04
RA-226		4.46E-04	±	6.64E-03	1.14E-02
RU-106		-4.50E-04	±	2.87E-02	5.26E-02

Location and Quarter Station 9 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.00E-02	±	1.07E-02	7.94E-03
K-40		-3.51E-03	±	1.74E-02	9.29E-03
MN-54		-1.67E-04	±	4.23E-04	6.64E-04
FE-59		-1.12E-04	±	1.46E-03	2.38E-03
CO-60		4.44E-05	±	4.25E-04	6.87E-04
ZN-65		-2.83E-04	±	9.88E-04	1.56E-03
NB-95		-1.01E-04	±	9.74E-04	1.58E-03
CS-134		-1.16E-04	±	3.13E-04	4.93E-04
CS-137		4.86E-05	±	3.00E-04	4.82E-04
RA-226	+	1.06E-02	±	5.76E-03	8.47E-03
RU-106		9.28E-03	±	2.57E-02	3.98E-02

Location and Quarter Station 21 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	6.52E-02	±	7.86E-03	6.01E-03
K-40	+	1.32E-02	±	4.52E-03	5.11E-03
MN-54		6.50E-05	±	2.87E-04	5.09E-04
FE-59		3.81E-04	±	1.20E-03	2.10E-03
CO-60		4.21E-05	±	6.82E-05	1.65E-04
ZN-65		-2.31E-04	±	6.83E-04	1.20E-03
NB-95		-1.23E-04	±	6.52E-04	1.16E-03
CS-134		-5.20E-05	±	2.56E-04	4.49E-04
CS-137		-6.18E-06	±	1.99E-04	3.68E-04
RA-226		7.20E-03	±	5.17E-03	7.87E-03
RU-106		-1.74E-04	±	1.94E-02	3.61E-02

Location and Quarter Station 21 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	9.14E-02	±	1.34E-02	1.30E-02
K-40		-3.65E-03	±	1.51E-02	1.08E-02
MN-54		2.11E-06	±	3.14E-04	5.84E-04
FE-59		-3.60E-04	±	1.68E-03	3.02E-03
CO-60		-8.71E-05	±	4.06E-04	7.34E-04
ZN-65		-1.92E-04	±	9.34E-04	1.67E-03
NB-95		3.95E-04	±	1.04E-03	1.82E-03
CS-134		1.14E-04	±	2.82E-04	5.03E-04
CS-137		-1.39E-04	±	3.72E-04	6.42E-04
RA-226		9.43E-03	±	6.06E-03	9.54E-03
RU-106		-1.66E-02	±	3.35E-02	5.73E-02

Location and Quarter Station 21 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.46E-01	±	1.44E-02	1.04E-02
K-40		2.65E-04	±	4.65E-03	9.97E-03
MN-54		3.14E-05	±	3.02E-04	5.55E-04
FE-59		-5.34E-04	±	1.99E-03	3.50E-03
CO-60		-8.57E-05	±	4.54E-04	8.17E-04
ZN-65		2.76E-04	±	8.64E-04	1.53E-03
NB-95		3.25E-04	±	1.40E-03	1.77E-03
CS-134		6.17E-05	±	2.52E-04	4.47E-04
CS-137		8.56E-05	±	2.36E-04	4.19E-04
RA-226		6.22E-03	±	5.99E-03	9.78E-03
RU-106		-3.30E-03	±	2.47E-02	4.52E-02

Location and Quarter Station 21 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	9.55E-02	±	1.17E-02	8.20E-03
K-40		6.90E-04	±	4.73E-03	8.89E-03
MN-54		-1.00E-04	±	3.42E-04	5.39E-04
FE-59		3.37E-04	±	1.54E-03	2.44E-03
CO-60		1.48E-04	±	3.87E-04	5.94E-04
ZN-65		2.52E-04	±	6.80E-04	1.04E-03
NB-95		4.70E-04	±	9.92E-04	1.53E-03
CS-134		-3.92E-05	±	3.02E-04	4.90E-04
CS-137		-6.42E-05	±	3.07E-04	4.91E-04
RA-226		-1.50E-03	±	8.26E-03	1.10E-02
RU-106		-7.69E-03	±	3.00E-02	4.76E-02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-3.1

GAMMA SPECTROMETRY RESULTS OF AIR PARTICULATE FILTERS

Results in pCi/cubic meter, results decay corrected for decay during sample collection period

Location and Quarter Station 23 1st Q 07

Nuclide	RQ	Activity	Error	MDA
BE-7	+	8.19E-02 ±	8.86E-03	6.39E-03
K-40	+	1.45E-02 ±	5.18E-03	6.45E-03
MN-54		-2.36E-05 ±	2.90E-04	5.23E-04
FE-59		-3.33E-05 ±	1.18E-03	2.15E-03
CO-60		-5.69E-05 ±	2.88E-04	5.25E-04
ZN-65		1.71E-06 ±	6.17E-04	1.14E-03
NB-95		-2.17E-04 ±	6.87E-04	1.20E-03
CS-134		-5.15E-05 ±	2.57E-04	4.51E-05
CS-137		8.66E-05 ±	2.50E-04	4.35E-04
RA-226		3.43E-04 ±	5.45E-03	9.28E-03
RU-106		1.30E-04 ±	2.17E-02	3.98E-02

Location and Quarter Station 23 2nd Q 07

Nuclide	RQ	Activity	Error	MDA
BE-7	+	8.00E-02 ±	1.21E-02	1.18E-02
K-40		-3.59E-03 ±	1.41E-02	1.05E-02
MN-54		1.28E-04 ±	3.17E-04	5.56E-04
FE-59		-3.15E-04 ±	2.00E-03	3.57E-03
CO-60		1.32E-04 ±	3.93E-04	6.99E-04
ZN-65		-2.80E-04 ±	9.02E-04	1.59E-03
NB-95		0.00E+00 ±	1.21E-03	2.01E-03
CS-134		1.14E-04 ±	2.52E-04	4.36E-04
CS-137		1.46E-06 ±	3.45E-04	6.22E-04
RA-226		5.72E-03 ±	6.58E-03	1.05E-02
RU-106		-5.69E-04 ±	2.42E-02	4.52E-02

Location and Quarter Station 23 3rd Q 07

Nuclide	RQ	Activity	Error	MDA
BE-7	+	1.28E-01 ±	1.36E-02	1.05E-02
K-40		-2.97E-03 ±	1.13E-02	1.05E-02
MN-54		4.85E-07 ±	2.87E-04	5.40E-04
FE-59		1.08E-04 ±	1.83E-03	3.33E-03
CO-60		-4.42E-05 ±	4.27E-04	7.81E-04
ZN-65		-3.56E-04 ±	1.11E-03	1.94E-03
NB-95		4.73E-04 ±	1.44E-03	1.70E-03
CS-134		2.15E-04 ±	3.03E-04	5.04E-04
CS-137		-6.77E-05 ±	3.05E-04	5.43E-04
RA-226		6.79E-03 ±	5.83E-03	9.62E-03
RU-106		3.17E-03 ±	2.69E-02	4.90E-02

Location and Quarter Station 23 4th Q 07

Nuclide	RQ	Activity	Error	MDA
BE-7	+	8.79E-02 ±	1.19E-02	8.99E-03
K-40		5.61E-05 ±	4.63E-03	8.86E-03
MN-54		-7.62E-06 ±	3.91E-04	6.42E-04
FE-59		-4.35E-04 ±	1.85E-03	2.95E-03
CO-60		1.70E-04 ±	3.53E-04	5.26E-04
ZN-65		1.00E-05 ±	8.19E-04	1.34E-03
NB-95		2.74E-04 ±	8.66E-04	1.35E-03
CS-134		-1.58E-04 ±	3.29E-04	5.12E-04
CS-137		4.24E-06 ±	2.79E-04	4.57E-04
RA-226		8.65E-03 ±	6.08E-03	9.23E-03
RU-106		9.93E-03 ±	2.44E-02	3.73E-02

Location and Quarter Station 40 1st Q 07

Nuclide	RQ	Activity	Error	MDA
BE-7	+	6.58E-02 ±	8.44E-03	6.99E-03
K-40	+	1.49E-02 ±	4.72E-03	5.14E-03
MN-54		5.98E-07 ±	2.75E-04	5.04E-04
FE-59		-4.55E-05 ±	9.10E-04	1.70E-03
CO-60		-6.98E-05 ±	3.51E-04	6.30E-04
ZN-65		1.85E-04 ±	6.04E-04	1.08E-03
NB-95		-1.95E-05 ±	5.51E-04	1.01E-03
CS-134		-1.33E-04 ±	2.59E-04	4.40E-04
CS-137		-1.25E-05 ±	2.38E-04	4.32E-04
RA-226		4.50E-03 ±	5.56E-03	9.16E-03
RU-106		7.88E-03 ±	1.52E-02	2.63E-02

Location and Quarter Station 40 2nd Q 07

Nuclide	RQ	Activity	Error	MDA
BE-7	+	8.95E-02 ±	1.20E-02	9.89E-03
K-40		5.22E-03 ±	6.66E-03	1.06E-02
MN-54		1.54E-04 ±	4.18E-04	7.26E-04
FE-59		6.55E-04 ±	1.81E-03	3.18E-03
CO-60		2.53E-04 ±	2.61E-04	4.82E-04
ZN-65		-2.37E-04 ±	9.12E-04	1.62E-03
NB-95		1.44E-04 ±	1.19E-03	1.73E-03
CS-134		-1.22E-04 ±	3.45E-04	5.96E-04
CS-137		2.38E-04 ±	2.98E-04	4.88E-04
RA-226		6.66E-03 ±	6.33E-03	1.03E-02
RU-106		-5.38E-03 ±	2.45E-02	4.45E-02

Location and Quarter Station 40 3rd Q 07

Nuclide	RQ	Activity	Error	MDA
BE-7	+	1.62E-01 ±	1.47E-02	9.59E-03
K-40		3.99E-03 ±	4.56E-03	8.77E-03
MN-54		2.31E-04 ±	3.53E-04	5.92E-04
FE-59		-3.99E-04 ±	1.79E-03	3.19E-03
CO-60		9.05E-05 ±	4.36E-04	7.84E-04
ZN-65		-3.94E-04 ±	9.75E-04	1.69E-03
NB-95		0.00E+00 ±	0.00E+00	2.22E-03
CS-134		-1.42E-04 ±	3.99E-04	6.83E-04
CS-137		-4.33E-05 ±	3.91E-04	6.93E-04
RA-226		1.72E-03 ±	5.77E-03	9.83E-03
RU-106		6.15E-03 ±	2.69E-02	4.82E-02

Location and Quarter Station 40 4th Q 07

Nuclide	RQ	Activity	Error	MDA
BE-7	+	9.20E-02 ±	1.15E-02	7.62E-03
K-40		-1.23E-03 ±	6.99E-03	9.05E-03
MN-54		1.62E-05 ±	2.94E-04	4.79E-04
FE-59		-4.31E-04 ±	1.80E-03	2.87E-03
CO-60		1.83E-05 ±	6.22E-05	2.90E-04
ZN-65		-2.62E-05 ±	7.58E-04	1.24E-03
NB-95		7.21E-04 ±	9.88E-04	1.46E-03
CS-134		9.14E-05 ±	2.43E-04	3.70E-04
CS-137		4.21E-05 ±	3.01E-04	4.85E-04
RA-226		7.00E-03 ±	8.23E-03	1.08E-02
RU-106		5.44E-03 ±	2.12E-02	3.30E-02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-3.1

GAMMA SPECTROMETRY RESULTS OF AIR PARTICULATE FILTERS

Results in pCi/cubic meter, results decay corrected for decay during sample collection period

Location and Quarter Station 48 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	9.05E-01	±	1.02E-01	7.25E-02
K-40		-1.12E-02	±	5.22E-02	9.11E-02
MN-54		1.54E-05	±	3.94E-03	7.15E-03
FE-59		-4.31E-03	±	1.62E-02	2.85E-02
CO-60		1.80E-03	±	3.88E-03	6.76E-03
ZN-65		-3.06E-03	±	9.88E-03	1.73E-02
NB-95		5.40E-03	±	8.28E-03	1.39E-02
CS-134		1.65E-03	±	2.85E-03	4.83E-03
CS-137		-1.12E-04	±	2.72E-03	5.01E-03
RA-226		9.26E-03	±	6.16E-03	9.72E-03
RU-106		-2.82E-02	±	2.65E-01	4.84E-01

Location and Quarter Station 48 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.44E-02	±	1.25E-02	1.19E-02
K-40		-1.54E-03	±	7.87E-03	1.09E-02
MN-54		1.48E-04	±	3.63E-04	6.31E-04
FE-59		-3.29E-04	±	1.70E-03	3.07E-03
CO-60		2.67E-04	±	3.24E-04	5.25E-04
ZN-65		-2.03E-04	±	9.97E-04	1.77E-03
NB-95		1.00E-04	±	1.40E-03	1.94E-03
CS-134		-1.26E-04	±	3.46E-04	5.96E-04
CS-137		1.24E-04	±	3.20E-04	5.55E-04
RA-226		8.16E-03	±	5.80E-03	9.25E-03
RU-106		2.81E-03	±	2.50E-02	4.59E-02

Location and Quarter Station 48 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.78E-01	±	1.55E-02	1.01E-02
K-40		-1.66E-03	±	7.73E-03	1.05E-02
MN-54		1.13E-04	±	3.37E-04	5.94E-04
FE-59		-3.19E-04	±	1.71E-03	3.08E-03
CO-60		2.19E-04	±	2.13E-04	4.04E-04
ZN-65		-1.30E-04	±	7.88E-04	1.44E-03
NB-95		1.77E-04	±	1.26E-03	1.60E-03
CS-134		6.12E-06	±	2.80E-04	5.07E-04
CS-137		8.87E-05	±	2.81E-04	4.96E-04
RA-226	+	1.01E-02	±	6.41E-03	9.53E-03
RU-106		-3.26E-03	±	2.39E-02	4.39E-02

Location and Quarter Station 48 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.28E-01	±	1.31E-02	7.34E-03
K-40		-1.74E-03	±	6.84E-03	8.04E-03
MN-54		-1.13E-04	±	3.43E-04	5.37E-04
FE-59		2.46E-04	±	1.38E-03	2.20E-03
CO-60		2.07E-04	±	1.91E-04	3.27E-04
ZN-65		3.09E-04	±	7.32E-04	1.11E-03
NB-95		1.78E-05	±	1.01E-03	1.65E-03
CS-134		-1.06E-04	±	3.75E-04	6.01E-04
CS-137		-4.58E-05	±	3.11E-04	5.01E-04
RA-226		6.38E-04	±	6.55E-04	1.05E-02
RU-106		-7.24E-03	±	2.42E-02	3.77E-02

Location and Quarter Station 57 1st Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	7.44E-02	±	9.14E-03	7.53E-03
K-40	+	1.22E-02	±	4.60E-03	5.60E-03
MN-54		-2.44E-07	±	2.59E-04	4.81E-04
FE-59		-1.47E-04	±	1.17E-03	2.11E-03
CO-60		5.64E-05	±	2.76E-04	5.05E-04
ZN-65		2.80E-04	±	3.67E-04	6.00E-04
NB-95		1.10E-04	±	6.05E-04	1.08E-03
CS-134		-4.79E-06	±	2.33E-04	4.18E-04
CS-137		-5.30E-05	±	2.52E-04	4.46E-04
RA-226		3.75E-03	±	4.80E-03	7.91E-03
RU-106		6.41E-04	±	1.56E-03	2.75E-03

Location and Quarter Station 57 2nd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.93E-02	±	1.23E-02	1.11E-02
K-40		-1.91E-04	±	5.01E-03	1.02E-02
MN-54		1.03E-05	±	3.33E-04	6.13E-04
FE-59		-1.02E-05	±	1.39E-03	2.64E-03
CO-60		1.52E-04	±	1.49E-04	3.29E-04
ZN-65		2.38E-05	±	9.81E-04	1.79E-03
NB-95		0.00E+00	±	0.00E+00	1.83E-03
CS-134		1.04E-06	±	3.06E-04	5.51E-04
CS-137		4.03E-05	±	2.77E-04	5.01E-04
RA-226		5.54E-03	±	5.88E-03	9.84E-03
RU-106		8.59E-03	±	2.64E-02	4.67E-02

Location and Quarter Station 57 3rd Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.35E-01	±	1.38E-02	1.02E-02
K-40		-3.17E-03	±	1.19E-02	1.04E-02
MN-54		1.40E-04	±	3.19E-04	5.56E-04
FE-59		2.10E-04	±	1.82E-03	3.30E-03
CO-60		-7.30E-05	±	4.21E-04	7.64E-04
ZN-65		-2.10E-04	±	8.41E-04	1.51E-03
NB-95		3.74E-04	±	1.53E-03	1.99E-03
CS-134		-1.11E-04	±	3.45E-04	5.97E-04
CS-137		-6.33E-05	±	3.17E-04	5.64E-04
RA-226		8.06E-03	±	5.85E-03	9.30E-03
RU-106		-1.97E-04	±	2.24E-02	4.24E-02

Location and Quarter Station 57 4th Q 07

Nuclide	RQ	Activity		Error	MDA
BE-7	+	8.13E-02	±	1.16E-02	8.81E-03
K-40		-1.31E-03	±	7.35E-03	9.32E-03
MN-54		-8.42E-06	±	3.04E-04	4.97E-04
FE-59		-7.80E-04	±	2.08E-03	3.26E-03
CO-60		-1.18E-04	±	3.96E-04	6.17E-04
ZN-65		4.86E-05	±	8.30E-04	1.35E-03
NB-95		-2.73E-05	±	8.92E-04	1.46E-03
CS-134		6.04E-05	±	2.59E-04	4.13E-04
CS-137		8.67E-05	±	2.82E-04	4.41E-04
RA-226		2.21E-03	±	6.25E-03	1.04E-02
RU-106		-2.39E-03	±	2.63E-02	4.27E-02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-3.2

GAMMA SPECTROMETRY RESULTS OF AIR PARTICULATE FILTERS SUMMARY

Results in pCi/liter, corrected for decay during collection period

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
BE-7	Ind	1.14E-01	6.52E-02	9.05E-01	1.06E-02	44	44
BE-7	Cntl	9.21E-02	6.62E-02	1.37E-01	8.33E-03	4	4
CO-60	Ind	7.63E-05	-2.17E-04	1.80E-03	7.26E-04	44	0
CO-60	Cntl	1.15E-04	4.44E-05	1.92E-04	5.67E-04	4	0
CS-134	Ind	1.26E-05	-1.77E-04	1.65E-03	6.10E-04	44	0
CS-134	Cntl	-1.37E-04	-2.36E-04	-7.43E-05	5.52E-04	4	0
CS-137	Ind	-1.24E-05	-1.70E-04	2.95E-04	6.28E-04	44	0
CS-137	Cntl	4.85E-05	-4.95E-06	1.10E-04	4.72E-04	4	0
FE-59	Ind	-2.20E-04	-4.31E-03	8.63E-04	3.39E-03	44	0
FE-59	Cntl	1.46E-04	-4.12E-04	7.81E-04	2.59E-03	4	0
K-40	Ind	1.53E-03	-1.12E-02	2.27E-02	1.08E-02	44	8
K-40	Cntl	1.44E-03	-3.51E-03	1.32E-02	8.80E-03	4	1
MN-54	Ind	5.07E-05	-1.13E-04	2.74E-04	7.28E-04	44	0
MN-54	Cntl	4.44E-05	-1.67E-04	2.11E-04	5.27E-04	4	0
NB-95	Ind	2.82E-04	-2.17E-04	5.40E-03	1.85E-03	44	0
NB-95	Cntl	4.55E-06	-1.01E-04	9.60E-05	1.46E-03	4	0
RA-226	Ind	6.19E-03	-2.31E-03	1.77E-02	9.45E-03	44	5
RA-226	Cntl	5.30E-03	4.46E-04	1.06E-02	9.37E-03	4	1
RU-106	Ind	-5.37E-05	-2.82E-02	1.18E-02	4.89E-02	44	0
RU-106	Cntl	-1.02E-03	-1.23E-02	9.28E-03	4.55E-02	4	0
ZN-65	Ind	-1.20E-04	-3.06E-03	3.30E-04	1.76E-03	44	0
ZN-65	Cntl	-1.29E-04	-2.83E-04	-1.41E-05	1.43E-03	4	0

Ind = Indicator Stations Cntl = Control Stations

TABLE A-4.1

GAMMA SPECTROMETRY RESULTS OF I-131 ON CHARCOAL FILTERS

Results in pCi/cubic meter, corrected for decay during collection period

Collection Period	Station 1 RQ	Activity	±	Error	MDA	Station 9 RQ	Activity	±	Error	MDA
1/2/2007 - 1/8/2007		3.03E-04	±	1.00E-02	1.74E-02		3.40E-03	±	9.15E-03	1.55E-02
1/8/2007 - 1/16/2007		-1.81E-03	±	9.88E-03	1.68E-02		2.40E-03	±	1.05E-02	1.78E-02
1/16/2007 - 1/23/2007		1.79E-05	±	1.01E-02	1.74E-02		3.68E-03	±	8.58E-03	1.45E-02
1/23/2007 - 1/30/2007		-4.29E-05	±	9.63E-03	1.67E-02		-1.31E-03	±	9.97E-03	1.71E-02
1/30/2007 - 2/6/2007		-1.04E-03	±	9.57E-03	1.65E-02		-1.04E-03	±	9.57E-03	1.65E-02
2/6/2007 - 2/13/2007		2.69E-03	±	8.50E-03	1.45E-02		8.08E-04	±	4.38E-03	8.64E-03
2/13/2007 - 2/20/2007		6.24E-06	±	8.18E-03	1.43E-02		-2.33E-03	±	8.91E-03	1.52E-02
2/20/2007 - 2/27/2007		-1.60E-03	±	9.47E-03	1.62E-02		-1.60E-03	±	9.47E-03	1.62E-02
2/27/2007 - 3/6/2007		1.34E-03	±	9.41E-03	1.61E-02		9.35E-04	±	1.00E-02	1.72E-02
3/6/2007 - 3/13/2007		-1.38E-03	±	8.78E-03	1.51E-02		-1.38E-03	±	8.78E-03	1.51E-02
3/13/2007 - 3/20/2007		-3.20E-04	±	9.94E-03	1.71E-02		-3.20E-04	±	9.94E-03	1.71E-02
3/20/2007 - 3/27/2007		-2.89E-03	±	1.01E-02	1.72E-02		1.81E-03	±	9.20E-03	1.58E-02
3/27/2007 - 4/3/2007		3.99E-03	±	8.83E-03	1.49E-02		3.31E-03	±	8.61E-03	1.46E-02
4/3/2007 - 4/10/2007		3.14E-03	±	8.97E-03	1.52E-02		-1.50E-03	±	9.07E-03	1.55E-02
4/10/2007 - 4/17/2007		2.45E-03	±	7.82E-03	1.33E-02		2.19E-03	±	8.16E-03	1.40E-02
4/17/2007 - 4/24/2007		-2.50E-03	±	9.39E-03	1.60E-02		-7.26E-04	±	9.53E-03	1.64E-02
4/24/2007 - 5/1/2007		-2.19E-03	±	9.09E-03	1.55E-02		7.86E-03	±	8.06E-03	1.11E-02
5/1/2007 - 5/8/2007		2.34E-03	±	8.70E-03	1.49E-02		1.34E-03	±	8.71E-03	1.50E-02
5/8/2007 - 5/15/2007		2.09E-03	±	9.01E-03	1.54E-02		1.01E-04	±	8.37E-03	1.46E-02
5/15/2007 - 5/22/2007		4.76E-03	±	7.95E-03	1.33E-02		2.72E-03	±	7.50E-03	1.28E-02
5/22/2007 - 5/29/2007		-2.40E-03	±	8.84E-03	1.51E-02		-5.27E-03	±	9.59E-03	1.60E-02
5/29/2007 - 6/5/2007		-1.40E-04	±	8.74E-03	1.52E-02		-4.65E-03	±	9.27E-03	1.56E-02
6/5/2007 - 6/12/2007		1.49E-03	±	9.08E-03	1.56E-02		5.09E-04	±	8.54E-03	1.48E-02
6/12/2007 - 6/19/2007		2.73E-03	±	1.60E-02	2.75E-02		-3.13E-03	±	9.98E-03	1.69E-02
6/19/2007 - 6/26/2007		-1.12E-04	±	9.29E-03	1.61E-02		6.62E-03	±	8.96E-03	1.48E-02
6/26/2007 - 7/3/2007		-1.63E-03	±	8.47E-03	1.45E-02		-3.26E-03	±	9.51E-03	1.62E-02
7/3/2007 - 7/10/2007		1.19E-03	±	8.05E-03	1.39E-02		-1.14E-03	±	8.64E-03	1.49E-02
7/10/2007 - 7/17/2007		-1.32E-03	±	9.39E-03	1.61E-02		-4.74E-03	±	1.00E-02	1.68E-02
7/17/2007 - 7/24/2007		-2.53E-03	±	9.61E-03	1.64E-02		-2.53E-03	±	9.61E-03	1.64E-02
7/24/2007 - 7/31/2007		9.02E-04	±	7.80E-03	1.35E-02		3.00E-03	±	8.47E-03	1.44E-02
7/31/2007 - 8/7/2007		-2.13E-03	±	8.19E-03	1.40E-02		3.31E-03	±	7.42E-03	1.26E-02
8/7/2007 - 8/14/2007		5.07E-03	±	8.32E-03	1.39E-02		8.63E-04	±	9.45E-03	1.63E-02
8/14/2007 - 8/21/2007		2.95E-03	±	9.48E-03	1.53E-02		-3.26E-03	±	9.98E-03	1.69E-02
8/21/2007 - 8/28/2007		2.95E-04	±	9.01E-03	1.55E-02		4.58E-04	±	8.39E-03	1.45E-02
8/28/2007 - 9/4/2007		2.10E-03	±	7.38E-03	1.26E-02		3.57E-03	±	7.50E-03	1.27E-02
9/4/2007 - 9/11/2007		-2.66E-03	±	9.04E-03	1.54E-02		-2.37E-03	±	1.01E-02	1.72E-02
9/11/2007 - 9/18/2007		-5.72E-04	±	8.48E-03	1.47E-02		-7.15E-05	±	9.13E-03	1.58E-02
9/18/2007 - 9/25/2007		1.58E-03	±	8.72E-03	1.49E-02		5.44E-04	±	9.25E-03	1.60E-02
9/25/2007 - 10/2/2007		-5.91E-04	±	7.33E-03	1.27E-02		3.22E-03	±	6.26E-03	1.06E-02
10/2/2007 - 10/9/2007		2.30E-03	±	6.97E-03	1.19E-02		-2.36E-03	±	9.93E-03	1.69E-02
10/9/2007 - 10/16/2007		-3.20E-03	±	8.96E-03	1.52E-02		6.36E-04	±	8.23E-03	1.43E-02
10/16/2007 - 10/23/2007		-3.12E-04	±	8.49E-03	1.47E-02		-1.70E-03	±	8.26E-03	1.42E-02
10/23/2007 - 10/30/2007		3.95E-03	±	7.65E-03	1.29E-02		1.47E-03	±	8.93E-03	1.53E-02
10/30/2007 - 11/6/2007		1.38E-04	±	8.83E-03	1.52E-02		-3.52E-03	±	1.01E-02	1.70E-02
11/6/2007 - 11/13/2007		3.73E-03	±	7.99E-03	1.35E-02		4.95E-03	±	7.06E-03	1.17E-02
11/13/2007 - 11/20/2007		-7.44E-04	±	8.10E-03	1.32E-02		4.23E-03	±	8.15E-03	1.29E-02
11/20/2007 - 11/27/2007		8.33E-04	±	5.84E-03	9.51E-03		-2.07E-03	±	6.70E-03	1.08E-02
11/27/2007 - 12/4/2007		4.30E-03	±	5.74E-03	8.84E-03		-1.23E-03	±	5.94E-03	9.61E-03
12/4/2007 - 12/11/2007		5.06E-04	±	6.46E-03	1.06E-02		3.45E-03	±	6.19E-03	9.73E-03
12/11/2007 - 12/18/2007		-2.05E-04	±	5.19E-03	8.50E-03		3.27E-03	±	6.90E-03	1.09E-02
12/18/2007 - 12/24/2007		5.08E-04	±	9.78E-03	1.60E-02		1.20E-05	±	8.23E-03	1.36E-02
12/24/2007 - 1/1/2008		5.18E-03	±	6.38E-03	9.81E-03		2.39E-03	±	4.23E-03	6.10E-03

NVS = Valid sample not obtained due to sampler failure.

TABLE A-4.1

GAMMA SPECTROMETRY RESULTS OF I-131 ON CHARCOAL FILTERS

Results in pCi/cubic meter, corrected for decay during collection period

Collection Period		Station 4				Station 21			
		RQ	Activity	Error	MDA	RQ	Activity	Error	MDA
1/2/2007 -	1/8/2007		-4.49E-03 ±	1.00E-02	1.69E-02		-4.49E-03 ±	1.00E-02	1.69E-02
1/8/2007 -	1/16/2007		2.52E-03 ±	8.53E-03	1.45E-02		-1.81E-03 ±	9.88E-03	1.68E-02
1/16/2007 -	1/23/2007		3.68E-03 ±	8.58E-03	1.45E-02		1.79E-05 ±	1.01E-02	1.74E-02
1/23/2007 -	1/30/2007		-1.31E-03 ±	9.97E-03	1.71E-02		2.36E-03 ±	9.48E-03	1.61E-02
1/30/2007 -	2/6/2007		-2.58E-03 ±	9.95E-03	1.69E-02		-2.58E-03 ±	9.95E-03	1.69E-02
2/6/2007 -	2/13/2007		8.08E-04 ±	4.38E-03	8.64E-03		8.08E-04 ±	4.38E-03	8.64E-03
2/13/2007 -	2/20/2007		-2.33E-03 ±	8.91E-03	1.52E-02		-2.33E-03 ±	8.91E-03	1.52E-02
2/20/2007 -	2/27/2007		-3.35E-03 ±	8.59E-03	1.37E-02		-3.35E-03 ±	8.59E-03	1.37E-02
2/27/2007 -	3/6/2007		9.35E-04 ±	1.00E-02	1.72E-02		4.07E-03 ±	9.07E-03	1.53E-02
3/6/2007 -	3/13/2007		1.66E-03 ±	8.50E-03	1.46E-02		-1.38E-03 ±	8.78E-03	1.51E-02
3/13/2007 -	3/20/2007		2.41E-03 ±	7.53E-03	1.29E-02		2.41E-03 ±	7.53E-03	1.29E-02
3/20/2007 -	3/27/2007		1.81E-03 ±	9.20E-03	1.58E-02		-2.89E-03 ±	1.01E-02	1.72E-02
3/27/2007 -	4/3/2007		-1.19E-04 ±	9.31E-03	1.61E-02		-1.19E-04 ±	9.31E-03	1.61E-02
4/3/2007 -	4/10/2007		-1.50E-03 ±	9.07E-03	1.55E-02		3.42E-04 ±	8.59E-03	1.49E-02
4/10/2007 -	4/17/2007		1.30E-03 ±	8.21E-03	1.42E-02		2.45E-03 ±	7.82E-03	1.33E-02
4/17/2007 -	4/24/2007		-2.50E-03 ±	9.39E-03	1.60E-02		-7.26E-04 ±	9.53E-03	1.64E-02
4/24/2007 -	5/1/2007		-2.19E-03 ±	9.09E-03	1.55E-02		7.86E-03 ±	8.06E-03	1.11E-02
5/1/2007 -	5/8/2007		2.34E-03 ±	8.70E-03	1.49E-02		1.34E-03 ±	8.71E-03	1.50E-02
5/8/2007 -	5/15/2007		2.09E-03 ±	9.01E-03	1.54E-02		1.01E-04 ±	8.37E-03	1.46E-02
5/15/2007 -	5/22/2007		4.76E-03 ±	7.95E-03	1.33E-02		2.72E-03 ±	7.50E-03	1.28E-02
5/22/2007 -	5/29/2007		-5.27E-03 ±	9.59E-03	1.60E-02		-2.40E-03 ±	8.84E-03	1.51E-02
5/29/2007 -	6/5/2007		-1.40E-04 ±	8.74E-03	1.52E-02		-4.65E-03 ±	9.27E-03	1.56E-02
6/5/2007 -	6/12/2007		1.49E-03 ±	9.08E-03	1.56E-02		5.09E-04 ±	8.54E-03	1.48E-02
6/12/2007 -	6/19/2007		1.46E-03 ±	8.56E-03	1.47E-02		-3.13E-03 ±	9.98E-03	1.69E-02
6/19/2007 -	6/26/2007		3.37E-03 ±	8.96E-03	1.52E-02		6.62E-03 ±	8.96E-03	1.48E-02
6/26/2007 -	7/3/2007		-1.63E-03 ±	8.47E-03	1.45E-02		-3.26E-03 ±	9.51E-03	1.62E-02
7/3/2007 -	7/10/2007		1.19E-03 ±	8.05E-03	1.39E-02		-1.14E-03 ±	8.64E-03	1.49E-02
7/10/2007 -	7/17/2007		-1.32E-03 ±	9.39E-03	1.61E-02		-4.74E-03 ±	1.00E-02	1.68E-02
7/17/2007 -	7/24/2007		6.44E-05 ±	8.27E-03	1.43E-02		-2.53E-03 ±	9.61E-03	1.64E-02
7/24/2007 -	7/31/2007		9.02E-04 ±	7.80E-03	1.35E-02		3.00E-03 ±	8.47E-03	1.44E-02
7/31/2007 -	8/7/2007		-2.13E-03 ±	8.19E-03	1.40E-02		3.31E-03 ±	7.42E-03	1.26E-02
8/7/2007 -	8/14/2007		5.07E-03 ±	8.32E-03	1.39E-02		8.63E-04 ±	9.45E-03	1.63E-02
8/14/2007 -	8/21/2007		2.95E-03 ±	9.48E-03	1.53E-02		-3.26E-03 ±	9.98E-03	1.69E-02
8/21/2007 -	8/28/2007		2.95E-04 ±	9.01E-03	1.55E-02		4.58E-04 ±	8.39E-03	1.45E-02
8/28/2007 -	9/4/2007		2.10E-03 ±	7.38E-03	1.26E-02		3.57E-03 ±	7.50E-03	1.27E-02
9/4/2007 -	9/11/2007		-2.66E-03 ±	9.04E-03	1.54E-02		-2.37E-03 ±	1.01E-02	1.72E-02
9/11/2007 -	9/18/2007		-5.72E-04 ±	8.48E-03	1.47E-02		-7.15E-05 ±	9.13E-03	1.58E-02
9/18/2007 -	9/25/2007		1.58E-03 ±	8.72E-03	1.49E-02		5.44E-04 ±	9.25E-03	1.60E-02
9/25/2007 -	10/2/2007		-5.91E-04 ±	7.33E-03	1.27E-02		3.22E-03 ±	6.26E-03	1.06E-02
10/2/2007 -	10/9/2007		2.30E-03 ±	6.97E-03	1.19E-02		-2.36E-03 ±	9.93E-03	1.69E-02
10/9/2007 -	10/16/2007		-3.20E-03 ±	8.96E-03	1.52E-02		6.36E-04 ±	8.23E-03	1.43E-02
10/16/2007 -	10/23/2007		-3.12E-04 ±	8.49E-03	1.47E-02		-1.70E-03 ±	8.26E-03	1.42E-02
10/23/2007 -	10/30/2007		3.95E-03 ±	7.65E-03	1.29E-02		1.47E-03 ±	8.93E-03	1.53E-02
10/30/2007 -	11/6/2007		1.38E-04 ±	8.83E-03	1.52E-02		-3.52E-03 ±	1.01E-02	1.70E-02
11/6/2007 -	11/13/2007		3.73E-03 ±	7.99E-03	1.35E-02		4.95E-03 ±	7.06E-03	1.17E-02
11/13/2007 -	11/20/2007		-7.44E-04 ±	8.10E-03	1.32E-02		4.23E-03 ±	8.15E-03	1.29E-02
11/20/2007 -	11/27/2007		8.33E-04 ±	5.84E-03	9.51E-03		-2.07E-03 ±	6.70E-03	1.08E-02
11/27/2007 -	12/4/2007		4.30E-03 ±	5.74E-03	8.84E-03		-1.23E-03 ±	5.94E-03	9.61E-03
12/4/2007 -	12/11/2007		5.06E-04 ±	6.46E-03	1.06E-02		3.45E-03 ±	6.19E-03	9.73E-03
12/11/2007 -	12/18/2007		-2.05E-04 ±	5.19E-03	8.50E-03		3.27E-03 ±	6.90E-03	1.09E-02
12/18/2007 -	12/24/2007		5.08E-04 ±	9.78E-03	1.60E-02		1.20E-05 ±	8.23E-03	1.36E-02
12/24/2007 -	1/1/2008		5.18E-03 ±	6.38E-03	9.81E-03		2.39E-03 ±	4.23E-03	6.10E-03

NVS = Valid sample not obtained due to sampler failure.

TABLE A-4.1

GAMMA SPECTROMETRY RESULTS OF I-131 ON CHARCOAL FILTERS

Results in pCi/cubic meter, corrected for decay during collection period

Collection Period		Station 5 RQ	Activity	±	Error	MDA	Station 23 RQ	Activity	±	Error	MDA
1/2/2007 -	1/8/2007		3.40E-03	±	9.15E-03	1.55E-02		3.03E-04	±	1.00E-02	1.74E-02
1/8/2007 -	1/16/2007		2.52E-03	±	8.53E-03	1.45E-02		-1.81E-03	±	9.88E-03	1.68E-02
1/16/2007 -	1/23/2007		3.68E-03	±	8.58E-03	1.45E-02		1.07E-04	±	1.08E-02	1.85E-02
1/23/2007 -	1/30/2007		-1.31E-03	±	9.97E-03	1.71E-02		2.36E-03	±	9.48E-03	1.61E-02
1/30/2007 -	2/6/2007		-2.58E-03	±	9.95E-03	1.69E-02		5.08E-03	±	8.25E-03	1.38E-02
2/6/2007 -	2/13/2007		2.69E-03	±	8.50E-03	1.45E-02		2.69E-03	±	8.50E-03	1.45E-02
2/13/2007 -	2/20/2007		6.24E-06	±	8.18E-03	1.43E-02		6.24E-06	±	8.18E-03	1.43E-02
2/20/2007 -	2/27/2007		7.49E-04	±	8.70E-03	1.50E-02		-3.35E-03	±	8.59E-03	1.37E-02
2/27/2007 -	3/6/2007		1.34E-03	±	9.41E-03	1.61E-02		4.07E-03	±	9.07E-03	1.53E-02
3/6/2007 -	3/13/2007		-1.38E-03	±	8.78E-03	1.51E-02		1.66E-03	±	8.50E-03	1.46E-02
3/13/2007 -	3/20/2007		2.41E-03	±	7.53E-03	1.29E-02		-2.48E-03	±	8.77E-03	1.49E-02
3/20/2007 -	3/27/2007		1.79E-03	±	9.62E-03	1.65E-02		1.81E-03	±	9.20E-03	1.58E-02
3/27/2007 -	4/3/2007		3.99E-03	±	8.83E-03	1.49E-02		-1.19E-04	±	9.31E-03	1.61E-02
4/3/2007 -	4/10/2007		3.42E-04	±	8.59E-03	1.49E-02		3.14E-03	±	8.97E-03	1.52E-02
4/10/2007 -	4/17/2007		1.30E-03	±	8.21E-03	1.42E-02		2.19E-03	±	8.16E-03	1.40E-02
4/17/2007 -	4/24/2007		-2.50E-03	±	9.39E-03	1.60E-02		5.44E-04	±	9.83E-03	1.69E-02
4/24/2007 -	5/1/2007		-2.19E-03	±	9.09E-03	1.55E-02		-1.46E-04	±	8.84E-03	1.53E-02
5/1/2007 -	5/8/2007		2.34E-03	±	8.70E-03	1.49E-02		1.34E-03	±	8.71E-03	1.50E-02
5/8/2007 -	5/15/2007		2.09E-03	±	9.01E-03	1.54E-02		-2.01E-03	±	9.48E-03	1.62E-02
5/15/2007 -	5/22/2007		4.76E-03	±	7.95E-03	1.33E-02		-5.95E-04	±	1.00E-02	1.72E-02
5/22/2007 -	5/29/2007		7.76E-04	±	9.33E-03	1.61E-02		7.76E-04	±	9.33E-03	1.61E-02
5/29/2007 -	6/5/2007		-1.40E-04	±	8.74E-03	1.52E-02		4.97E-03	±	8.71E-03	1.46E-02
6/5/2007 -	6/12/2007		1.49E-03	±	9.08E-03	1.56E-02		-6.19E-04	±	9.67E-03	1.58E-02
6/12/2007 -	6/19/2007		1.46E-03	±	8.56E-03	1.47E-02		-5.81E-04	±	9.19E-03	1.59E-02
6/19/2007 -	6/26/2007		3.37E-03	±	8.96E-03	1.52E-02		-1.12E-04	±	9.29E-03	1.61E-02
6/26/2007 -	7/3/2007		-1.63E-03	±	8.47E-03	1.45E-02		8.11E-04	±	5.79E-03	1.07E-02
7/3/2007 -	7/10/2007		1.19E-03	±	8.05E-03	1.39E-02		-5.11E-03	±	9.46E-03	1.58E-02
7/10/2007 -	7/17/2007		-1.32E-03	±	9.39E-03	1.61E-02		-3.20E-04	±	9.53E-03	1.65E-02
7/17/2007 -	7/24/2007		6.44E-05	±	8.27E-03	1.43E-02		3.13E-03	±	8.62E-03	1.46E-02
7/24/2007 -	7/31/2007		-4.08E-03	±	9.04E-03	1.52E-02		9.02E-04	±	7.80E-03	1.35E-02
7/31/2007 -	8/7/2007		-2.13E-03	±	8.19E-03	1.40E-02		9.61E-04	±	8.00E-03	1.39E-02
8/7/2007 -	8/14/2007		5.07E-03	±	8.32E-03	1.39E-02		-2.35E-03	±	1.02E-02	1.74E-02
8/14/2007 -	8/21/2007		2.95E-03	±	9.48E-03	1.53E-02		-3.26E-03	±	9.98E-03	1.69E-02
8/21/2007 -	8/28/2007		2.95E-04	±	9.01E-03	1.55E-02		6.15E-03	±	9.57E-03	1.59E-02
8/28/2007 -	9/4/2007		2.10E-03	±	7.38E-03	1.26E-02		-1.98E-03	±	8.74E-03	1.50E-02
9/4/2007 -	9/11/2007		-2.66E-03	±	9.04E-03	1.54E-02		3.25E-03	±	9.42E-03	1.60E-02
9/11/2007 -	9/18/2007		-5.72E-04	±	8.48E-03	1.47E-02		1.40E-03	±	8.42E-03	1.45E-02
9/18/2007 -	9/25/2007		1.58E-03	±	8.72E-03	1.49E-02		-2.58E-03	±	9.25E-03	1.58E-02
9/25/2007 -	10/2/2007		-5.91E-04	±	7.33E-03	1.27E-02		1.04E-03	±	7.15E-03	1.24E-02
10/2/2007 -	10/9/2007		2.30E-03	±	6.97E-03	1.19E-02		-4.10E-03	±	9.01E-03	1.52E-02
10/9/2007 -	10/16/2007		-3.20E-03	±	8.96E-03	1.52E-02		2.86E-03	±	7.90E-03	1.34E-02
10/16/2007 -	10/23/2007		-3.12E-04	±	8.49E-03	1.47E-02		5.77E-04	±	9.25E-03	1.60E-02
10/23/2007 -	10/30/2007		3.95E-03	±	7.65E-03	1.29E-02		5.97E-03	±	6.25E-03	1.01E-02
10/30/2007 -	11/6/2007		1.38E-04	±	8.83E-03	1.52E-02		4.00E-05	±	9.23E-03	1.60E-02
11/6/2007 -	11/13/2007		3.73E-03	±	7.99E-03	1.35E-02		4.65E-03	±	7.67E-03	1.28E-02
11/13/2007 -	11/20/2007		-7.44E-04	±	8.10E-03	1.32E-02		6.92E-03	±	7.85E-03	1.20E-02
11/20/2007 -	11/27/2007		8.33E-04	±	5.84E-03	9.51E-03		-3.24E-03	±	7.97E-03	1.28E-02
11/27/2007 -	12/4/2007		4.30E-03	±	5.74E-03	8.84E-03		-4.16E-05	±	6.62E-03	1.09E-02
12/4/2007 -	12/11/2007		5.06E-04	±	6.46E-03	1.06E-02		-2.13E-03	±	7.12E-03	1.15E-02
12/11/2007 -	12/18/2007		-2.05E-04	±	5.19E-03	8.50E-03		-2.18E-03	±	7.51E-03	1.21E-02
12/18/2007 -	12/24/2007		5.08E-04	±	9.78E-03	1.60E-02		-1.62E-03	±	9.76E-03	1.59E-02
12/24/2007 -	1/1/2008		5.18E-03	±	6.38E-03	9.81E-03		-1.17E-03	±	6.50E-03	1.05E-02

NVS = Valid sample not obtained due to sampler failure.

TABLE A-4.1

GAMMA SPECTROMETRY RESULTS OF I-131 ON CHARCOAL FILTERS

Results in pCi/cubic meter, corrected for decay during collection period

Collection Period		Station 6				Station 40			
		RQ	Activity	Error	MDA	RQ	Activity	Error	MDA
1/2/2007 -	1/8/2007		3.40E-03 ±	9.15E-03	1.55E-02		3.03E-04 ±	1.00E-02	1.74E-02
1/8/2007 -	1/16/2007		2.40E-03 ±	1.05E-02	1.78E-02		2.40E-03 ±	1.05E-02	1.78E-02
1/16/2007 -	1/23/2007		1.79E-05 ±	1.01E-02	1.74E-02		1.07E-04 ±	1.08E-02	1.85E-02
1/23/2007 -	1/30/2007		NSV ±				-4.29E-05 ±	9.63E-03	1.67E-02
1/30/2007 -	2/6/2007		-1.04E-03 ±	9.57E-03	1.65E-02		5.08E-03 ±	8.25E-03	1.38E-02
2/6/2007 -	2/13/2007		-5.11E-03 ±	1.06E-02	1.78E-02		-5.11E-03 ±	1.06E-02	1.78E-02
2/13/2007 -	2/20/2007		-6.21E-04 ±	8.04E-03	1.40E-02		-6.21E-04 ±	8.04E-03	1.40E-02
2/20/2007 -	2/27/2007		-1.60E-03 ±	9.47E-03	1.62E-02		-3.35E-03 ±	8.59E-03	1.37E-02
2/27/2007 -	3/6/2007		9.35E-04 ±	1.00E-02	1.72E-02		4.07E-03 ±	9.07E-03	1.53E-02
3/6/2007 -	3/13/2007		1.66E-03 ±	8.50E-03	1.46E-02		-1.05E-03 ±	9.75E-03	1.67E-02
3/13/2007 -	3/20/2007		-2.48E-03 ±	8.77E-03	1.49E-02		-2.48E-03 ±	8.77E-03	1.49E-02
3/20/2007 -	3/27/2007		1.79E-03 ±	9.62E-03	1.65E-02		-2.89E-03 ±	1.01E-02	1.72E-02
3/27/2007 -	4/3/2007		3.31E-03 ±	8.61E-03	1.46E-02		3.99E-03 ±	8.83E-03	1.49E-02
4/3/2007 -	4/10/2007		3.42E-04 ±	8.59E-03	1.49E-02		3.14E-03 ±	8.97E-03	1.52E-02
4/10/2007 -	4/17/2007		2.19E-03 ±	8.16E-03	1.40E-02		2.45E-03 ±	7.82E-03	1.33E-02
4/17/2007 -	4/24/2007		-2.50E-03 ±	9.39E-03	1.60E-02		5.44E-04 ±	9.83E-03	1.69E-02
4/24/2007 -	5/1/2007		-2.19E-03 ±	9.09E-03	1.55E-02		-1.46E-04 ±	8.84E-03	1.53E-02
5/1/2007 -	5/8/2007		2.34E-03 ±	8.70E-03	1.49E-02		1.18E-04 ±	1.00E-02	1.73E-02
5/8/2007 -	5/15/2007		2.09E-03 ±	9.01E-03	1.54E-02		-2.01E-03 ±	9.48E-03	1.62E-02
5/15/2007 -	5/22/2007		4.76E-03 ±	7.95E-03	1.33E-02		-5.95E-04 ±	1.00E-02	1.72E-02
5/22/2007 -	5/29/2007		7.76E-04 ±	9.33E-03	1.61E-02		7.76E-04 ±	9.33E-03	1.61E-02
5/29/2007 -	6/5/2007		-1.40E-04 ±	8.74E-03	1.52E-02		4.97E-03 ±	8.71E-03	1.46E-02
6/5/2007 -	6/12/2007		1.49E-03 ±	9.08E-03	1.56E-02		-6.31E-04 ±	9.86E-03	1.61E-02
6/12/2007 -	6/19/2007		1.46E-03 ±	8.56E-03	1.47E-02		-1.04E-03 ±	1.64E-02	2.83E-02
6/19/2007 -	6/26/2007		3.37E-03 ±	8.96E-03	1.52E-02		6.62E-03 ±	8.96E-03	1.48E-02
6/26/2007 -	7/3/2007		-1.63E-03 ±	8.47E-03	1.45E-02		8.11E-04 ±	5.79E-03	1.07E-02
7/3/2007 -	7/10/2007		1.19E-03 ±	8.05E-03	1.39E-02		-5.11E-03 ±	9.46E-03	1.58E-02
7/10/2007 -	7/17/2007		-1.32E-03 ±	9.39E-03	1.61E-02		-3.20E-04 ±	9.53E-03	1.65E-02
7/17/2007 -	7/24/2007		6.44E-05 ±	8.27E-03	1.43E-02		3.13E-03 ±	8.62E-03	1.46E-02
7/24/2007 -	7/31/2007		3.00E-03 ±	8.47E-03	1.44E-02		-4.08E-03 ±	9.04E-03	1.52E-02
7/31/2007 -	8/7/2007		-2.13E-03 ±	8.19E-03	1.40E-02		9.61E-04 ±	8.00E-03	1.39E-02
8/7/2007 -	8/14/2007		5.07E-03 ±	8.32E-03	1.39E-02		-2.35E-03 ±	1.02E-02	1.74E-02
8/14/2007 -	8/21/2007		2.95E-03 ±	9.48E-03	1.53E-02		8.67E-04 ±	9.38E-03	1.61E-02
8/21/2007 -	8/28/2007		2.95E-04 ±	9.01E-03	1.55E-02		6.15E-03 ±	9.57E-03	1.59E-02
8/28/2007 -	9/4/2007		2.10E-03 ±	7.38E-03	1.26E-02		-1.98E-03 ±	8.74E-03	1.50E-02
9/4/2007 -	9/11/2007		-2.66E-03 ±	9.04E-03	1.54E-02		3.25E-03 ±	9.42E-03	1.60E-02
9/11/2007 -	9/18/2007		-5.72E-04 ±	8.48E-03	1.47E-02		1.40E-03 ±	8.42E-03	1.45E-02
9/18/2007 -	9/25/2007		1.58E-03 ±	8.72E-03	1.49E-02		-2.58E-03 ±	9.25E-03	1.58E-02
9/25/2007 -	10/2/2007		-5.91E-04 ±	7.33E-03	1.27E-02		1.04E-03 ±	7.15E-03	1.24E-02
10/2/2007 -	10/9/2007		2.30E-03 ±	6.97E-03	1.19E-02		-4.10E-03 ±	9.01E-03	1.52E-02
10/9/2007 -	10/16/2007		-3.20E-03 ±	8.96E-03	1.52E-02		2.86E-03 ±	7.90E-03	1.34E-02
10/16/2007 -	10/23/2007		-3.12E-04 ±	8.49E-03	1.47E-02		5.77E-04 ±	9.25E-03	1.60E-02
10/23/2007 -	10/30/2007		3.95E-03 ±	7.65E-03	1.29E-02		5.97E-03 ±	6.25E-03	1.01E-02
10/30/2007 -	11/6/2007		1.38E-04 ±	8.83E-03	1.52E-02		4.00E-05 ±	9.23E-03	1.60E-02
11/6/2007 -	11/13/2007		3.73E-03 ±	7.99E-03	1.35E-02		4.65E-03 ±	7.67E-03	1.28E-02
11/13/2007 -	11/20/2007		-7.44E-04 ±	8.10E-03	1.32E-02		6.92E-03 ±	7.85E-03	1.20E-02
11/20/2007 -	11/27/2007		8.33E-04 ±	5.84E-03	9.51E-03		-3.24E-03 ±	7.97E-03	1.28E-02
11/27/2007 -	12/4/2007		4.30E-03 ±	5.74E-03	8.84E-03		-4.16E-05 ±	6.62E-03	1.09E-02
12/4/2007 -	12/11/2007		5.06E-04 ±	6.46E-03	1.06E-02		-2.13E-03 ±	7.12E-03	1.15E-02
12/11/2007 -	12/18/2007		-2.05E-04 ±	5.19E-03	8.50E-03		-2.18E-03 ±	7.51E-03	1.21E-02
12/18/2007 -	12/24/2007		5.08E-04 ±	9.78E-03	1.60E-02		-1.62E-03 ±	9.76E-03	1.59E-02
12/24/2007 -	1/1/2008		5.18E-03 ±	6.38E-03	9.81E-03		-1.17E-03 ±	6.50E-03	1.05E-02

NVS = Valid sample not obtained due to sampler failure.

TABLE A-4.1

GAMMA SPECTROMETRY RESULTS OF I-131 ON CHARCOAL FILTERS

Results in pCi/cubic meter, corrected for decay during collection period

Collection Period		Station 7 RQ	Activity	±	Error	MDA	Station 48 RQ	Activity	±	Error	MDA
1/2/2007 -	1/8/2007		3.03E-04	±	1.00E-02	1.74E-02		3.40E-03	±	9.15E-03	1.55E-02
1/8/2007 -	1/16/2007		2.40E-03	±	1.05E-02	1.78E-02		2.52E-03	±	8.53E-03	1.45E-02
1/16/2007 -	1/23/2007		1.07E-04	±	1.08E-02	1.85E-02		1.07E-04	±	1.08E-02	1.85E-02
1/23/2007 -	1/30/2007		-4.29E-05	±	9.63E-03	1.67E-02		-4.29E-05	±	9.63E-03	1.67E-02
1/30/2007 -	2/6/2007		5.08E-03	±	8.25E-03	1.38E-02		-2.58E-03	±	9.95E-03	1.69E-02
2/6/2007 -	2/13/2007		-5.11E-03	±	1.06E-02	1.78E-02		2.69E-03	±	8.50E-03	1.45E-02
2/13/2007 -	2/20/2007		-6.21E-04	±	8.04E-03	1.40E-02		6.24E-06	±	8.18E-03	1.43E-02
2/20/2007 -	2/27/2007		7.49E-04	±	8.70E-03	1.50E-02		-1.60E-03	±	9.47E-03	1.62E-02
2/27/2007 -	3/6/2007		1.34E-03	±	9.41E-03	1.61E-02		4.07E-03	±	9.07E-03	1.53E-02
3/6/2007 -	3/13/2007		-1.05E-03	±	9.75E-03	1.67E-02		1.66E-03	±	8.50E-03	1.46E-02
3/13/2007 -	3/20/2007		-3.20E-04	±	9.94E-03	1.71E-02		-3.20E-04	±	9.94E-03	1.71E-02
3/20/2007 -	3/27/2007		1.79E-03	±	9.62E-03	1.65E-02		1.81E-03	±	9.20E-03	1.58E-02
3/27/2007 -	4/3/2007		3.31E-03	±	8.61E-03	1.46E-02		3.31E-03	±	8.61E-03	1.46E-02
4/3/2007 -	4/10/2007		3.14E-03	±	8.97E-03	1.52E-02		-1.50E-03	±	9.07E-03	1.55E-02
4/10/2007 -	4/17/2007		1.30E-03	±	8.21E-03	1.42E-02		2.19E-03	±	8.16E-03	1.40E-02
4/17/2007 -	4/24/2007		-7.26E-04	±	9.53E-03	1.64E-02		5.44E-04	±	9.83E-03	1.69E-02
4/24/2007 -	5/1/2007		7.86E-03	±	8.06E-03	1.11E-02		-1.46E-04	±	8.84E-03	1.53E-02
5/1/2007 -	5/8/2007		1.34E-03	±	8.71E-03	1.50E-02		1.18E-04	±	1.00E-02	1.73E-02
5/8/2007 -	5/15/2007		1.01E-04	±	8.37E-03	1.46E-02		-2.01E-03	±	9.48E-03	1.62E-02
5/15/2007 -	5/22/2007		2.72E-03	±	7.50E-03	1.28E-02		-5.95E-04	±	1.00E-02	1.72E-02
5/22/2007 -	5/29/2007		-2.40E-03	±	8.84E-03	1.51E-02		-5.27E-03	±	9.59E-03	1.60E-02
5/29/2007 -	6/5/2007		-4.65E-03	±	9.27E-03	1.56E-02		4.97E-03	±	8.71E-03	1.46E-02
6/5/2007 -	6/12/2007		5.09E-04	±	8.54E-03	1.48E-02		-6.19E-04	±	9.67E-03	1.58E-02
6/12/2007 -	6/19/2007		-3.13E-03	±	9.98E-03	1.69E-02		-5.81E-04	±	9.19E-03	1.59E-02
6/19/2007 -	6/26/2007		-1.12E-04	±	9.29E-03	1.61E-02		6.62E-03	±	8.96E-03	1.48E-02
6/26/2007 -	7/3/2007		-3.26E-03	±	9.51E-03	1.62E-02		8.11E-04	±	5.79E-03	1.07E-02
7/3/2007 -	7/10/2007		-1.14E-03	±	8.64E-03	1.49E-02		-5.11E-03	±	9.46E-03	1.58E-02
7/10/2007 -	7/17/2007		-4.74E-03	±	1.00E-02	1.68E-02		-3.20E-04	±	9.53E-03	1.65E-02
7/17/2007 -	7/24/2007		6.44E-05	±	8.27E-03	1.43E-02		3.13E-03	±	8.62E-03	1.46E-02
7/24/2007 -	7/31/2007		9.02E-04	±	7.80E-03	1.35E-02		-4.08E-03	±	9.04E-03	1.52E-02
7/31/2007 -	8/7/2007		3.31E-03	±	7.42E-03	1.26E-02		9.61E-04	±	8.00E-03	1.39E-02
8/7/2007 -	8/14/2007		8.63E-04	±	9.45E-03	1.63E-02		-2.35E-03	±	1.02E-02	1.74E-02
8/14/2007 -	8/21/2007		-3.26E-03	±	9.98E-03	1.69E-02		8.67E-04	±	9.38E-03	1.61E-02
8/21/2007 -	8/28/2007		4.58E-04	±	8.39E-03	1.45E-02		6.15E-03	±	9.57E-03	1.59E-02
8/28/2007 -	9/4/2007		3.57E-03	±	7.50E-03	1.27E-02		-1.98E-03	±	8.74E-03	1.50E-02
9/4/2007 -	9/11/2007		-2.37E-03	±	1.01E-02	1.72E-02		3.25E-03	±	9.42E-03	1.60E-02
9/11/2007 -	9/18/2007		-7.15E-05	±	9.13E-03	1.58E-02		1.40E-03	±	8.42E-03	1.45E-02
9/18/2007 -	9/25/2007		5.44E-04	±	9.25E-03	1.60E-02		-2.58E-03	±	9.25E-03	1.58E-02
9/25/2007 -	10/2/2007		3.22E-03	±	6.26E-03	1.06E-02		1.04E-03	±	7.15E-03	1.24E-02
10/2/2007 -	10/9/2007		-2.36E-03	±	9.93E-03	1.69E-02		-4.10E-03	±	9.01E-03	1.52E-02
10/9/2007 -	10/16/2007		6.36E-04	±	8.23E-03	1.43E-02		2.86E-03	±	7.90E-03	1.34E-02
10/16/2007 -	10/23/2007		-1.70E-03	±	8.26E-03	1.42E-02		5.77E-04	±	9.25E-03	1.60E-02
10/23/2007 -	10/30/2007		1.47E-03	±	8.93E-03	1.53E-02		5.97E-03	±	6.25E-03	1.01E-02
10/30/2007 -	11/6/2007		-3.52E-03	±	1.01E-02	1.70E-02		4.00E-05	±	9.23E-03	1.60E-02
11/6/2007 -	11/13/2007		4.95E-03	±	7.06E-03	1.17E-02		4.65E-03	±	7.67E-03	1.28E-02
11/13/2007 -	11/20/2007		4.23E-03	±	8.15E-03	1.29E-02		6.92E-03	±	7.85E-03	1.20E-02
11/20/2007 -	11/27/2007		-2.07E-03	±	6.70E-03	1.08E-02		-3.24E-03	±	7.97E-03	1.28E-02
11/27/2007 -	12/4/2007		-1.23E-03	±	5.94E-03	9.61E-03		-4.16E-05	±	6.62E-03	1.09E-02
12/4/2007 -	12/11/2007		3.45E-03	±	6.19E-03	9.73E-03		-2.13E-03	±	7.12E-03	1.15E-02
12/11/2007 -	12/18/2007		3.27E-03	±	6.90E-03	1.09E-02		-2.18E-03	±	7.51E-03	1.21E-02
12/18/2007 -	12/24/2007		1.20E-05	±	8.23E-03	1.36E-02		-1.62E-03	±	9.76E-03	1.59E-02
12/24/2007 -	1/1/2008		2.39E-03	±	4.23E-03	6.10E-03		-1.17E-03	±	6.50E-03	1.05E-02

NVS = Valid sample not obtained due to sampler failure.

TABLE A-4.1

GAMMA SPECTROMETRY RESULTS OF I-131 ON CHARCOAL FILTERS

Results in pCi/cubic meter, corrected for decay during collection period

Collection Period		Station 8					Station 57				
		RQ	Activity		Error	MDA	RQ	Activity		Error	MDA
1/2/2007 -	1/8/2007		-4.49E-03	±	1.00E-02	1.69E-02		-4.49E-03	±	1.00E-02	1.69E-02
1/8/2007 -	1/16/2007		2.52E-03	±	8.53E-03	1.45E-02		-1.81E-03	±	9.88E-03	1.68E-02
1/16/2007 -	1/23/2007		3.68E-03	±	8.58E-03	1.45E-02		1.79E-05	±	1.01E-02	1.74E-02
1/23/2007 -	1/30/2007		-1.31E-03	±	9.97E-03	1.71E-02		2.36E-03	±	9.48E-03	1.61E-02
1/30/2007 -	2/6/2007		-1.04E-03	±	9.57E-03	1.65E-02		5.08E-03	±	8.25E-03	1.38E-02
2/6/2007 -	2/13/2007		-5.11E-03	±	1.06E-02	1.78E-02		8.08E-04	±	4.38E-03	8.64E-03
2/13/2007 -	2/20/2007		-6.21E-04	±	8.04E-03	1.40E-02		-2.33E-03	±	8.91E-03	1.52E-02
2/20/2007 -	2/27/2007		7.49E-04	±	8.70E-03	1.50E-02		7.49E-04	±	8.70E-03	1.50E-02
2/27/2007 -	3/6/2007		9.35E-04	±	1.00E-02	1.72E-02		1.34E-03	±	9.41E-03	1.61E-02
3/6/2007 -	3/13/2007		-1.05E-03	±	9.75E-03	1.67E-02		-1.05E-03	±	9.75E-03	1.67E-02
3/13/2007 -	3/20/2007		2.41E-03	±	7.53E-03	1.29E-02		-2.48E-03	±	8.77E-03	1.49E-02
3/20/2007 -	3/27/2007		1.79E-03	±	9.62E-03	1.65E-02		-2.89E-03	±	1.01E-02	1.72E-02
3/27/2007 -	4/3/2007		3.99E-03	±	8.83E-03	1.49E-02		-1.19E-04	±	9.31E-03	1.61E-02
4/3/2007 -	4/10/2007		-1.50E-03	±	9.07E-03	1.55E-02		3.42E-04	±	8.59E-03	1.49E-02
4/10/2007 -	4/17/2007		1.30E-03	±	8.21E-03	1.42E-02		2.45E-03	±	7.82E-03	1.33E-02
4/17/2007 -	4/24/2007		-7.26E-04	±	9.53E-03	1.64E-02		5.44E-04	±	9.83E-03	1.69E-02
4/24/2007 -	5/1/2007		7.86E-03	±	8.06E-03	1.11E-02		-1.46E-04	±	8.84E-03	1.53E-02
5/1/2007 -	5/7/2007		1.18E-04	±	1.00E-02	1.73E-02		1.18E-04	±	1.00E-02	1.73E-02
5/8/2007 -	5/15/2007		1.01E-04	±	8.37E-03	1.46E-02		-2.01E-03	±	9.48E-03	1.62E-02
5/15/2007 -	5/22/2007		2.72E-03	±	7.50E-03	1.28E-02		-5.95E-04	±	1.00E-02	1.72E-02
5/22/2007 -	5/29/2007		-5.27E-03	±	9.59E-03	1.60E-02		-2.40E-03	±	8.84E-03	1.51E-02
5/29/2007 -	6/5/2007		-4.65E-03	±	9.27E-03	1.56E-02		4.97E-03	±	8.71E-03	1.46E-02
6/5/2007 -	6/12/2007		5.09E-04	±	8.54E-03	1.48E-02		-6.19E-04	±	9.67E-03	1.58E-02
6/12/2007 -	6/19/2007		-3.13E-03	±	9.98E-03	1.69E-02		-5.81E-04	±	9.19E-03	1.59E-02
6/19/2007 -	6/26/2007		3.37E-03	±	8.96E-03	1.52E-02		-1.12E-04	±	9.29E-03	1.61E-02
6/26/2007 -	7/3/2007		-3.26E-03	±	9.51E-03	1.62E-02		8.11E-04	±	5.79E-03	1.07E-02
7/3/2007 -	7/10/2007		-1.14E-03	±	8.64E-03	1.49E-02		-5.11E-03	±	9.46E-03	1.58E-02
7/10/2007 -	7/17/2007		-4.74E-03	±	1.00E-02	1.68E-02		-3.20E-04	±	9.53E-03	1.65E-02
7/17/2007 -	7/24/2007		-2.53E-03	±	9.61E-03	1.64E-02		3.13E-03	±	8.62E-03	1.46E-02
7/24/2007 -	7/31/2007		-4.08E-03	±	9.04E-03	1.52E-02		3.00E-03	±	8.47E-03	1.44E-02
7/31/2007 -	8/7/2007		3.31E-03	±	7.42E-03	1.26E-02		9.61E-04	±	8.00E-03	1.39E-02
8/7/2007 -	8/14/2007		8.63E-04	±	9.45E-03	1.63E-02		-2.35E-03	±	1.02E-02	1.74E-02
8/14/2007 -	8/21/2007		NVS	±				8.67E-04	±	9.38E-03	1.61E-02
8/21/2007 -	8/28/2007		5.36E-04	±	9.84E-03	1.71E-02		6.15E-03	±	9.57E-03	1.59E-02
8/28/2007 -	9/4/2007		3.57E-03	±	7.50E-03	1.27E-02		-1.98E-03	±	8.74E-03	1.50E-02
9/4/2007 -	9/11/2007		3.25E-03	±	9.42E-03	1.60E-02		-2.37E-03	±	1.01E-02	1.72E-02
9/11/2007 -	9/18/2007		-7.15E-05	±	9.13E-03	1.58E-02		1.40E-03	±	8.42E-03	1.45E-02
9/18/2007 -	9/25/2007		5.44E-04	±	9.25E-03	1.60E-02		-2.58E-03	±	9.25E-03	1.58E-02
9/25/2007 -	10/2/2007		3.22E-03	±	6.26E-03	1.06E-02		1.04E-03	±	7.15E-03	1.24E-02
10/2/2007 -	10/9/2007		-2.36E-03	±	9.93E-03	1.69E-02		-4.10E-03	±	9.01E-03	1.52E-02
10/9/2007 -	10/16/2007		6.36E-04	±	8.23E-03	1.43E-02		2.86E-03	±	7.90E-03	1.34E-02
10/16/2007 -	10/23/2007		-1.70E-03	±	8.26E-03	1.42E-02		5.77E-04	±	9.25E-03	1.60E-02
10/23/2007 -	10/30/2007		1.47E-03	±	8.93E-03	1.53E-02		5.97E-03	±	6.25E-03	1.01E-02
10/30/2007 -	11/6/2007		-3.52E-03	±	1.01E-02	1.70E-02		4.00E-05	±	9.23E-03	1.60E-02
11/6/2007 -	11/13/2007		4.95E-03	±	7.06E-03	1.17E-02		4.65E-03	±	7.67E-03	1.28E-02
11/13/2007 -	11/20/2007		NVS	±				6.92E-03	±	7.85E-03	1.20E-02
11/20/2007 -	11/27/2007		-2.07E-03	±	6.70E-03	1.08E-02		-3.24E-03	±	7.97E-03	1.28E-02
11/27/2007 -	12/4/2007		-1.23E-03	±	5.94E-03	9.61E-03		-4.16E-05	±	6.62E-03	1.09E-02
12/4/2007 -	12/11/2007		3.45E-03	±	6.19E-03	9.73E-03		-2.13E-03	±	7.12E-03	1.15E-02
12/11/2007 -	12/18/2007		3.27E-03	±	6.90E-03	1.09E-02		-2.18E-03	±	7.51E-03	1.21E-02
12/18/2007 -	12/24/2007		1.20E-05	±	8.23E-03	1.36E-02		-2.37E-03	±	1.43E-02	2.32E-02
12/24/2007 -	1/1/2008		2.39E-03	±	4.23E-03	6.10E-03		-1.17E-03	±	6.50E-03	1.05E-02

NVS = Valid sample not obtained due to sampler failure.

TABLE A-4.2

I-131 ON CHARCOAL FILTERS - SUMMARY

Results in pCi/cubic meter, corrected for decay during collection period

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
I-131	Ind	4.69E-04	-5.27E-03	7.86E-03	1.46E-02	569	0
I-131	Cntl	4.14E-04	-5.27E-03	7.86E-03	1.45E-02	52	0

Ind = Indicator Stations Cntl = Control Station

Table A-5.1

GROSS BETA IN WATER

Results in pCi/ liter

Collection Period	ST 26 River/Drinking Cntl RQ	Activity	±	Error	ST 29 River/Drinking Ind RQ	Activity	±	Error	ST 27 CW Discharge RQ	Activity	±	Error
01/03/07 - 02/05/07		1.65E+00	±	1.36E+00		5.62E-01	±	1.04E+00	+	7.38E+00	±	1.50E+00
02/05/07 - 03/05/07		7.50E-01	±	1.43E+00		5.51E-01	±	1.72E+00	+	5.65E+00	±	2.70E+00
03/05/07 - 04/02/07		7.81E-01	±	7.61E-01		1.01E+00	±	8.12E-01	+	6.58E+00	±	3.00E+00
04/02/07 - 05/02/07		5.14E-01	±	7.23E-01		2.71E-01	±	6.83E-01	+	4.76E+00	±	2.45E+00
05/02/07 - 06/04/07		1.01E-01	±	6.83E-01		2.91E-02	±	7.10E-01	+	4.17E+00	±	2.46E+00
06/04/07 - 07/02/07		2.01E-01	±	6.78E-01		2.25E-01	±	6.99E-01	+	2.39E+00	±	1.64E+00
07/02/07 - 08/01/07		3.97E-01	±	6.98E-01		4.15E-01	±	6.99E-01		2.24E+00	±	1.93E+00
08/01/07 - 09/05/07		4.66E-01	±	7.05E-01		5.67E-02	±	6.13E-01	+	4.32E+00	±	2.67E+00
09/05/07 - 10/01/07		8.67E-01	±	8.01E-01		4.74E-01	±	7.38E-01	+	8.41E+00	±	3.26E+00
10/01/07 - 11/05/07		9.84E-02	±	6.41E-01		2.44E-01	±	6.46E-01	+	6.11E+00	±	2.87E+00
11/05/07 - 12/03/07		1.16E+00	±	7.99E-01		-1.32E-01	±	5.97E-01	+	5.84E+00	±	2.71E+00
12/03/07 - 01/02/08		1.20E-01	±	5.84E-01		2.21E-01	±	6.62E-01	+	8.21E+00	±	2.94E+00

TABLE A-5.2

GROSS BETA IN WATER - SUMMARY

Results in pCi/ liter

Location	Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
ST 26 Control	5.92E-01	9.84E-02	1.65E+00	12	0
ST 29 Indicator	3.27E-01	-1.32E-01	1.01E+00	12	0
ST 27 Discharge	5.51E+00	2.24E+00	8.41E+00	12	11

RQ = Results Qualifier. If blank, result is less than detection lomit. If "+", result is above detection limit.

TABLE A-6.1

TRITIUM IN WATER

Results in pCi/liter

Location	Description	Collection Period			RQ	Activity		Error
26	River/Drinking Control	1/3/2007	-	04/02/07		5.09E+01	±	1.30E+02
		04/02/07	-	07/02/07		3.47E+01	±	1.30E+02
		07/02/07	-	10/01/07		-2.83E+01	±	1.33E+02
		10/01/07	-	01/02/08		-3.32E+01	±	1.05E+02
29	River/Drinking Indicator	1/3/2007	-	04/02/07		1.43E+02	±	1.34E+02
		04/02/07	-	07/02/07		3.89E+01	±	1.39E+02
		07/02/07	-	10/01/07		8.61E+01	±	1.35E+02
		10/01/07	-	01/02/08		-1.03E+01	±	1.11E+02
27	Plant Discharge	1/3/2007	-	04/02/07		1.67E+02	±	1.34E+02
		04/02/07	-	07/02/07		3.83E+01	±	1.32E+02
		07/02/07	-	10/01/07		1.40E+02	±	1.37E+02
		10/01/07	-	01/02/08		9.10E+01	±	1.11E+02
31	Ground Water Well 1	03/05/07				-4.39E+01	±	1.28E+02
		06/04/07				8.78E+01	±	1.36E+02
		09/05/07				-3.38E+00	±	1.27E+02
		12/03/07				-1.35E+02	±	9.42E+01
32	Ground Water Well 2	03/05/07				-2.25E+01	±	1.32E+02
		06/04/07				-2.87E+01	±	1.28E+02
		09/05/07				-3.49E+01	±	1.24E+02
		12/03/07				-1.50E+02	±	9.32E+01
52	Ground Water Well 3	03/05/07				-5.63E+00	±	1.43E+02
		06/04/07				1.18E+01	±	1.30E+02
		09/05/07				1.18E+01	±	1.28E+02
		12/03/07				3.97E+02	±	1.09E+02

TABLE A-6.2

TRITIUM IN WATER - Summary

Results in pCi/liter

Location Description	Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
River/Drinking Control	6.01E+00	-3.32E+01	5.09E+01	4	0
River/Drinking Indicator	6.43E+01	-1.03E+01	1.43E+02	4	0
Discharge Indicator	1.09E+02	3.83E+01	1.67E+02	4	0
Ground Water Indicator	7.04E+00	-1.50E+02	3.97E+02	12	0

RQ= results Qualifier. If blank, result is less than detection limit. If "+", result is above the detection limit.

TABLE A-7.1

GAMMA SPECTROMETRY RESULTS OF WATER

STATION 26 - River/Drinking Control

Results in pCi/liter, corrected for decay during collection period

Collection Period				1/3/2007	2/5/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		-4.49E+00	±	7.82E+00	1.27E+01
K-40		-2.67E+01	±	2.86E+01	1.83E+01
CR-51		3.52E+00	±	8.59E+00	1.40E+01
MN-54		6.48E-01	±	6.46E-01	1.02E+00
CO-58		-1.33E-01	±	7.63E-01	1.25E+00
FE-59		1.65E+00	±	1.49E+00	2.31E+00
CO-60		1.09E-01	±	6.81E-01	1.11E+00
ZN-65		7.61E-01	±	1.43E+00	2.30E+00
NB-95		3.91E-01	±	8.78E-01	1.42E+00
ZR-95		4.27E-01	±	1.41E+00	2.29E+00
CS-134		4.12E-01	±	6.26E-01	1.01E+00
CS-137		-2.54E-01	±	7.20E-01	1.17E+00
BALA-140		1.07E+00	±	1.65E+00	2.61E+00
RA-226	+	5.91E+01	±	1.78E+01	2.20E+01

Collection Period				2/5/2007	3/5/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		-1.15E+00	±	7.45E+00	1.22E+01
K-40		1.62E+01	±	1.25E+01	1.65E+01
CR-51		4.25E+00	±	9.31E+00	1.51E+01
MN-54		6.22E-03	±	6.75E-01	1.11E+00
CO-58		-2.59E-01	±	8.20E-01	1.33E+00
FE-59		3.89E-02	±	1.63E+00	2.68E+00
CO-60		-2.56E-01	±	6.76E-01	1.09E+00
ZN-65		-1.04E-01	±	1.44E+00	2.36E+00
NB-95		4.98E-04	±	1.01E+00	1.65E+00
ZR-95		-2.78E-01	±	1.51E+00	2.47E+00
CS-134		1.75E-01	±	6.09E-01	9.91E-01
CS-137		1.88E-01	±	6.96E-01	1.13E+00
BALA-140		-1.65E-01	±	2.25E+00	3.68E+00
RA-226	+	4.77E+01	±	1.81E+01	2.86E+01

Collection Period				3/5/2007	4/2/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		1.56E+00	±	7.19E+00	1.17E+01
K-40		1.29E+01	±	9.47E+00	1.76E+01
CR-51		-1.34E+00	±	8.88E+00	1.46E+01
MN-54		1.28E-01	±	6.63E-01	1.08E+00
CO-58		-1.02E-01	±	7.44E-01	1.22E+00
FE-59		3.24E-01	±	1.72E+00	2.80E+00
CO-60		5.06E-01	±	6.07E-01	9.48E-01
ZN-65		2.71E-01	±	1.51E+00	2.46E+00
NB-95		3.86E-03	±	9.19E-01	1.51E+00
ZR-95		-2.19E-01	±	1.45E+00	2.36E+00
CS-134		5.28E-02	±	7.09E-01	1.16E+00
CS-137		4.02E-02	±	7.13E-01	1.17E+00
BALA-140		2.45E-01	±	1.89E+00	3.08E+00
RA-226	+	4.76E+01	±	1.59E+01	2.49E+01

Collection Period				4/2/2007	5/2/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		1.11E+00	±	5.43E+00	8.86E+00
K-40		6.40E+00	±	1.06E+01	1.61E+01
CR-51		0.00E+00	±	0.00E+00	1.51E+01
MN-54		-3.45E-02	±	6.26E-01	1.03E+00
CO-58		1.16E-01	±	6.29E-01	1.02E+00
FE-59		4.99E-01	±	1.47E+00	2.38E+00
CO-60		1.39E-01	±	5.77E-01	9.34E-01
ZN-65		4.53E-02	±	1.23E+00	2.01E+00
NB-95		8.74E-02	±	8.67E-01	1.42E+00
ZR-95		5.47E-01	±	1.24E+00	2.00E+00
CS-134		2.05E-01	±	5.74E-01	9.32E-01
CS-137		5.95E-02	±	6.24E-01	1.02E+00
BALA-140		-4.07E-01	±	2.50E+00	4.07E+00
RA-226		1.67E+01	±	1.47E+01	2.37E+01

Collection Period				5/2/2007	6/4/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		1.06E+00	±	1.04E+01	1.70E+01
K-40		6.85E+00	±	1.38E+01	2.63E+01
CR-51		-5.03E+00	±	1.38E+01	2.24E+01
MN-54		-2.25E-01	±	9.73E-01	1.58E+00
CO-58		-3.61E-01	±	1.11E+00	1.79E+00
FE-59		-6.77E-01	±	2.42E+00	3.90E+00
CO-60		2.87E-01	±	9.34E-01	1.49E+00
ZN-65		8.64E-01	±	2.28E+00	3.65E+00
NB-95		7.40E-01	±	1.30E+00	2.06E+00
ZR-95		2.07E-01	±	2.17E+00	3.55E+00
CS-134		3.97E-02	±	1.03E+00	1.69E+00
CS-137		-1.01E-01	±	1.02E+00	1.66E+00
BALA-140		1.04E+00	±	2.81E+00	4.47E+00
RA-226	+	5.24E+01	±	2.74E+01	4.31E+01

Collection Period				6/4/2007	7/2/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		-5.93E-01	±	7.08E+00	1.16E+01
K-40		-2.18E+00	±	9.82E+00	1.78E+01
CR-51		-1.75E+00	±	8.85E+00	1.45E+01
MN-54		1.77E-02	±	6.15E-01	1.01E+00
CO-58		-2.94E-02	±	8.05E-01	1.32E+00
FE-59		-5.01E-01	±	1.80E+00	2.93E+00
CO-60		2.86E-01	±	6.94E-01	1.12E+00
ZN-65		2.48E-02	±	1.53E+00	2.51E+00
NB-95		4.16E-01	±	8.96E-01	1.45E+00
ZR-95		5.41E-01	±	1.36E+00	2.21E+00
CS-134		-1.61E-02	±	6.36E-01	1.05E+00
CS-137		2.26E-01	±	7.01E-01	1.14E+00
BALA-140		8.72E-01	±	1.75E+00	2.80E+00
RA-226	+	5.18E+01	±	1.60E+01	2.31E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-7.1

GAMMA SPECTROMETRY RESULTS OF WATER

STATION 26 - River/Drinking Control

Results in pCi/liter, corrected for decay during collection period

Collection Period				7/2/2007		8/1/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		-2.59E+00	±	7.93E+00		1.29E+01
K-40	+	1.70E+01	±	1.04E+01		1.63E+01
CR-51		2.36E+00	±	9.74E+00		1.59E+01
MN-54		1.23E-01	±	6.91E-01		1.13E+00
CO-58		2.39E-01	±	7.71E-01		1.25E+00
FE-59		-5.10E-01	±	1.90E+00		3.10E+00
CO-60		2.70E-01	±	6.67E-01		1.07E+00
ZN-65		-9.75E-01	±	1.60E+00		2.56E+00
NB-95		5.50E-01	±	1.05E+00		1.69E+00
ZR-95		-6.09E-01	±	1.55E+00		2.52E+00
CS-134		1.99E-01	±	6.44E-01		1.05E+00
CS-137		-6.53E-02	±	7.33E-01		1.20E+00
BALA-140		5.34E-01	±	2.58E+00		4.19E+00
RA-226	+	4.89E+01	±	1.86E+01		2.94E+01

Collection Period				8/1/2007		9/5/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		2.47E-01	±	8.25E+00		1.36E+01
K-40		1.20E+01	±	9.90E+00		1.85E+01
CR-51		-2.67E+00	±	1.16E+01		1.90E+01
MN-54		9.95E-03	±	7.13E-01		1.17E+00
CO-58		-2.17E-02	±	8.86E-01		1.46E+00
FE-59		-9.95E-01	±	2.10E+00		3.37E+00
CO-60		-9.41E-02	±	7.79E-01		1.27E+00
ZN-65		5.57E-01	±	1.51E+00		2.44E+00
NB-95		2.30E-01	±	1.15E+00		1.88E+00
ZR-95		7.52E-01	±	1.63E+00		2.62E+00
CS-134		-2.75E-01	±	7.04E-01		1.14E+00
CS-137		2.32E-01	±	7.46E-01		1.21E+00
BALA-140		2.14E-01	±	2.77E+00		4.53E+00
RA-226	+	4.72E+01	±	1.90E+01		3.01E+01

Collection Period				9/5/2007		10/1/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		2.00E+00	±	6.20E+00		1.01E+01
K-40		3.29E+00	±	1.26E+01		1.83E+01
CR-51		6.71E-01	±	7.99E+00		1.31E+01
MN-54		-2.05E-01	±	6.67E-01		1.08E+00
CO-58		-1.92E-01	±	7.55E-01		1.23E+00
FE-59		7.24E-01	±	1.42E+00		2.27E+00
CO-60		4.10E-01	±	3.21E-01		5.84E-01
ZN-65		2.64E-02	±	1.16E+00		1.90E+00
NB-95		5.31E-01	±	7.24E-01		1.15E+00
ZR-95		5.91E-01	±	1.11E+00		1.78E+00
CS-134		9.36E-02	±	5.92E-01		9.68E-01
CS-137		-5.73E-02	±	6.04E-01		9.89E-01
BALA-140		-9.73E-02	±	1.35E+00		2.21E+00
RA-226	+	5.11E+01	±	1.72E+01		2.54E+01

Collection Period				10/1/2007		11/5/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		-2.20E+00	±	6.86E+00		1.12E+01
K-40	+	2.71E+01	±	1.26E+01		1.78E+01
CR-51		2.35E+00	±	7.49E+00		1.22E+01
MN-54		-3.38E-01	±	6.92E-01		1.11E+00
CO-58		-1.69E-01	±	7.28E-01		1.18E+00
FE-59		1.30E+00	±	1.30E+00		2.58E+00
CO-60		-1.03E-01	±	6.72E-01		1.10E+00
ZN-65		-8.10E-02	±	1.34E+00		2.19E+00
NB-95		2.68E-02	±	8.26E-01		1.36E+00
ZR-95		-1.96E-01	±	1.32E+00		2.15E+00
CS-134		-1.56E-01	±	6.48E-01		1.06E+00
CS-137		1.28E-01	±	5.78E-01		9.40E-01
BALA-140		-5.80E-01	±	1.72E+00		2.76E+00
RA-226	+	4.66E+01	±	1.83E+01		2.67E+01

Collection Period				11/5/2007		12/3/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		-7.91E-01	±	6.76E+00		1.11E+01
K-40		8.96E+00	±	1.25E+01		1.84E+01
CR-51		1.08E+00	±	7.66E+00		1.25E+01
MN-54		-4.36E-01	±	7.21E-01		1.15E+00
CO-58		-3.24E-02	±	5.95E-01		9.76E-01
FE-59		-5.93E-01	±	1.55E+00		2.50E+00
CO-60		2.26E-01	±	6.29E-01		1.01E+00
ZN-65		-8.16E-02	±	1.83E+00		3.01E+00
NB-95		8.36E-02	±	8.55E-01		1.40E+00
ZR-95		-1.02E-03	±	1.30E+00		2.14E+00
CS-134		3.71E-02	±	4.53E-01		7.42E-01
CS-137		2.12E-01	±	5.90E-01		9.53E-01
BALA-140		-3.35E-01	±	1.33E+00		2.14E+00
RA-226	+	5.07E+01	±	1.50E+01		2.29E+01

Collection Period				12/3/2007		1/2/2008
Nuclide	RQ	Activity		Error		MDA
BE-7		4.08E-01	±	6.60E+00		1.08E+01
K-40		-5.19E+00	±	1.46E+01		1.98E+01
CR-51		-7.60E-01	±	7.43E+00		1.22E+01
MN-54		2.04E-01	±	6.22E-01		1.01E+00
CO-58		4.49E-02	±	7.27E-01		1.19E+00
FE-59		-1.24E-01	±	1.39E+00		2.27E+00
CO-60		3.50E-01	±	4.67E-01		7.17E-01
ZN-65		6.74E-01	±	1.33E+00		2.13E+00
NB-95		-1.74E-01	±	9.39E-01		1.53E+00
ZR-95		-2.37E-02	±	1.36E+00		2.24E+00
CS-134		-2.50E-01	±	6.46E-01		1.05E+00
CS-137		4.12E-01	±	6.89E-01		9.35E-01
BALA-140		-1.90E-01	±	1.52E+00		2.48E+00
RA-226	+	3.00E+01	±	1.54E+01		2.43E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-7.1

GAMMA SPECTROMETRY RESULTS OF WATER

STATION 29 - River/Drinking Indicator

Results in pCi/liter, corrected for decay during collection period

Collection Period		1/3/2007		2/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-1.29E-01 ±	7.34E+00	1.21E+01
K-40	+	2.31E+01 ±	1.20E+01	1.65E+01
CR-51		-5.11E-01 ±	1.04E+01	1.71E+01
MN-54		2.63E-02 ±	1.38E-01	2.49E-01
CO-58		3.65E-01 ±	7.97E-01	1.29E+00
FE-59		-9.95E-01 ±	1.89E+00	3.04E+00
CO-60		1.73E-01 ±	4.99E-01	5.48E-01
ZN-65		1.02E+00 ±	1.35E+00	2.13E+00
NB-95		1.20E-02 ±	1.11E+00	1.82E+00
ZR-95		3.67E-01 ±	1.37E+00	2.23E+00
CS-134		-2.43E-01 ±	6.66E-01	1.08E+00
CS-137		9.68E-03 ±	7.35E-01	1.21E+00
BALA-140		8.31E-01 ±	2.30E+00	3.71E+00
RA-226	+	5.37E+01 ±	1.92E+01	2.35E+01

Collection Period		2/5/2007		3/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-3.26E+00 ±	7.66E+00	1.24E+01
K-40		1.36E+01 ±	1.14E+01	1.60E+01
CR-51		-3.25E+00 ±	1.02E+01	1.66E+01
MN-54		-1.02E-01 ±	6.50E-01	1.06E+00
CO-58		5.21E-03 ±	7.89E-01	1.30E+00
FE-59		1.62E-01 ±	1.89E+00	3.10E+00
CO-60		-3.47E-02 ±	6.31E-01	1.03E+00
ZN-65		-7.76E-01 ±	1.63E+00	2.62E+00
NB-95		-2.54E-01 ±	1.03E+00	1.67E+00
ZR-95		-3.60E-01 ±	1.50E+00	2.45E+00
CS-134		-3.41E-01 ±	6.81E-01	1.10E+00
CS-137		5.35E-02 ±	7.24E-01	1.19E+00
BALA-140		-7.47E-01 ±	2.26E+00	3.64E+00
RA-226	+	5.15E+01 ±	1.84E+01	2.90E+01

Collection Period		3/5/2007		4/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-2.24E+00 ±	7.92E+00	1.29E+01
K-40		7.47E+00 ±	8.63E+00	1.67E+01
CR-51		-2.22E-01 ±	9.76E+00	1.60E+01
MN-54		9.02E-03 ±	6.72E-01	1.10E+00
CO-58		1.95E-01 ±	7.36E-01	1.20E+00
FE-59		3.56E-01 ±	1.71E+00	2.79E+00
CO-60		2.66E-01 ±	6.24E-01	1.00E+00
ZN-65		6.28E-01 ±	1.33E+00	2.14E+00
NB-95		2.53E-02 ±	1.04E+00	1.70E+00
ZR-95		3.13E-01 ±	1.33E+00	2.17E+00
CS-134		-2.19E-01 ±	6.68E-01	1.09E+00
CS-137		1.85E-01 ±	7.19E-01	1.17E+00
BALA-140		1.54E-01 ±	2.08E+00	3.41E+00
RA-226	+	5.20E+01 ±	1.61E+01	2.09E+01

Collection Period		4/2/2007		5/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		8.54E-01 ±	7.55E+00	1.24E+01
K-40		4.46E+00 ±	9.56E+00	1.82E+01
CR-51		2.56E-01 ±	9.75E+00	1.60E+01
MN-54		-1.39E-01 ±	7.16E-01	1.17E+00
CO-58		5.84E-02 ±	7.85E-01	1.29E+00
FE-59		1.20E+00 ±	1.63E+00	2.58E+00
CO-60		4.80E-01 ±	6.22E-01	9.76E-01
ZN-65		3.43E-01 ±	1.37E+00	2.23E+00
NB-95		-5.15E-01 ±	1.07E+00	1.74E+00
ZR-95		2.91E-01 ±	1.38E+00	2.26E+00
CS-134		-2.98E-01 ±	6.63E-01	1.07E+00
CS-137		-5.72E-02 ±	7.26E-01	1.19E+00
BALA-140		-5.83E-01 ±	2.29E+00	3.71E+00
RA-226	+	3.73E+01 ±	1.45E+01	2.26E+01

Collection Period		5/2/2007		6/4/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		1.75E+00 ±	1.13E+01	1.85E+01
K-40		-8.94E-01 ±	1.27E+01	2.49E+01
CR-51		-9.60E-01 ±	1.45E+01	2.38E+01
MN-54		2.81E-01 ±	9.51E-01	1.53E+00
CO-58		-3.79E-01 ±	1.10E+00	1.77E+00
FE-59		-5.67E-02 ±	2.38E+00	3.90E+00
CO-60		-2.85E-01 ±	9.43E-01	1.51E+00
ZN-65		5.53E-01 ±	1.99E+00	3.20E+00
NB-95		-6.39E-01 ±	1.58E+00	2.55E+00
ZR-95		8.80E-01 ±	2.02E+00	3.23E+00
CS-134		-1.12E-01 ±	9.63E-01	1.57E+00
CS-137		-2.04E-03 ±	9.55E-01	1.57E+00
BALA-140		1.83E-02 ±	3.29E+00	5.41E+00
RA-226	+	5.97E+01 ±	2.86E+01	3.48E+01

Collection Period		6/4/2007		7/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		2.06E+00 ±	7.68E+00	1.25E+01
K-40	+	1.95E+01 ±	9.74E+00	1.77E+01
CR-51		-4.38E+00 ±	1.00E+01	1.63E+01
MN-54		-4.07E-01 ±	7.58E-01	1.22E+00
CO-58		8.19E-02 ±	7.88E-01	1.29E+00
FE-59		-1.22E+00 ±	1.89E+00	3.03E+00
CO-60		-1.33E-03 ±	6.42E-01	1.05E+00
ZN-65		-9.12E-01 ±	1.62E+00	2.60E+00
NB-95		8.91E-02 ±	1.05E+00	1.72E+00
ZR-95		2.70E-01 ±	1.42E+00	2.32E+00
CS-134		-1.86E-02 ±	6.72E-01	1.10E+00
CS-137		5.59E-02 ±	7.57E-01	1.24E+00
BALA-140		9.11E-01 ±	2.15E+00	3.45E+00
RA-226	+	5.14E+01 ±	1.59E+01	2.30E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-7.1

GAMMA SPECTROMETRY RESULTS OF WATER

STATION 29 - River/Drinking Indicator

Results in pCi/liter, corrected for decay during collection period

Collection Period		7/2/2007		8/1/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-7.04E-01 ±	7.94E+00	1.30E+01
K-40		1.18E+01 ±	1.24E+01	1.83E+01
CR-51		3.53E-01 ±	8.17E+00	1.34E+01
MN-54		-1.94E-01 ±	6.95E-01	1.13E+00
CO-58		7.61E-01 ±	9.43E-01	1.19E+00
FE-59		-9.35E-01 ±	2.12E+00	3.42E+00
CO-60		3.96E-01 ±	6.56E-01	1.04E+00
ZN-65		-5.13E-01 ±	1.58E+00	2.55E+00
NB-95		-1.89E-01 ±	1.16E+00	1.89E+00
ZR-95		-2.79E-01 ±	1.49E+00	2.42E+00
CS-134		1.92E-01 ±	6.25E-01	1.02E+00
CS-137		-4.34E-01 ±	6.79E-01	1.09E+00
BALA-140		5.56E-01 ±	3.16E+00	5.14E+00
RA-226	+	5.01E+01 ±	1.54E+01	2.35E+01

Collection Period		8/1/2007		9/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-3.39E+00 ±	9.12E+00	1.48E+01
K-40		3.39E-01 ±	9.63E+00	1.89E+01
CR-51		9.03E-02 ±	1.27E+01	2.09E+01
MN-54		-5.22E-01 ±	8.25E-01	1.32E+00
CO-58		-1.83E-01 ±	8.96E-01	1.46E+00
FE-59		-1.21E+00 ±	2.27E+00	3.64E+00
CO-60		7.02E-02 ±	6.85E-01	1.12E+00
ZN-65		-3.11E-01 ±	1.61E+00	2.61E+00
NB-95		3.07E-01 ±	1.22E+00	1.99E+00
ZR-95		-7.82E-01 ±	1.88E+00	3.05E+00
CS-134		-1.37E-01 ±	7.11E-01	1.16E+00
CS-137		2.75E-01 ±	7.49E-01	1.21E+00
BALA-140		-4.03E-01 ±	3.35E+00	5.46E+00
RA-226	+	4.18E+01 ±	1.69E+01	2.47E+01

Collection Period		9/5/2007		10/1/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-2.98E+00 ±	7.25E+00	1.18E+01
K-40	+	3.09E+01 ±	1.23E+01	1.77E+01
CR-51		5.30E-01 ±	8.97E+00	1.47E+01
MN-54		1.49E-01 ±	6.78E-01	1.10E+00
CO-58		-4.88E-01 ±	8.16E-01	1.31E+00
FE-59		1.08E+00 ±	1.66E+00	2.64E+00
CO-60		-8.31E-02 ±	7.11E-01	1.16E+00
ZN-65		2.91E-01 ±	9.49E-01	1.52E+00
NB-95		1.52E-01 ±	9.77E-01	1.60E+00
ZR-95		-6.41E-01 ±	1.47E+00	2.36E+00
CS-134		-1.66E-01 ±	6.60E-01	1.07E+00
CS-137		-7.85E-02 ±	6.79E-01	1.11E+00
BALA-140		1.13E+00 ±	1.54E+00	2.37E+00
RA-226	+	3.67E+01 ±	1.60E+01	2.52E+01

Collection Period		10/1/2007		11/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		3.66E+00 ±	5.59E+00	8.96E+00
K-40	+	3.53E+01 ±	1.13E+01	1.62E+01
CR-51		-3.18E+00 ±	8.65E+00	1.41E+01
MN-54		5.58E-02 ±	6.19E-01	1.01E+00
CO-58		-1.44E-01 ±	7.45E-01	1.21E+00
FE-59		-2.16E-01 ±	1.65E+00	2.70E+00
CO-60		-4.37E-02 ±	8.67E-01	1.42E+00
ZN-65		-4.25E-01 ±	1.41E+00	2.28E+00
NB-95		9.61E-02 ±	8.97E-01	1.47E+00
ZR-95		7.95E-01 ±	1.26E+00	2.01E+00
CS-134		1.53E-01 ±	5.06E-01	8.22E-01
CS-137		-1.57E-01 ±	6.85E-01	1.12E+00
BALA-140		-6.08E-01 ±	1.76E+00	2.83E+00
RA-226	+	5.29E+01 ±	1.69E+01	2.60E+01

Collection Period		11/5/2007		12/3/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		1.74E-01 ±	7.20E+00	1.18E+01
K-40	+	2.45E+01 ±	1.07E+01	1.74E+01
CR-51		-7.33E-01 ±	8.54E+00	1.40E+01
MN-54		1.63E-01 ±	6.64E-01	1.08E+00
CO-58		-2.21E-02 ±	7.10E-01	1.17E+00
FE-59		-1.77E-01 ±	1.86E+00	3.05E+00
CO-60		2.37E-01 ±	5.84E-01	9.34E-01
ZN-65		-9.77E-03 ±	1.45E+00	2.38E+00
NB-95		2.93E-01 ±	8.89E-01	1.44E+00
ZR-95		-3.82E-02 ±	1.33E+00	2.18E+00
CS-134		4.98E-02 ±	6.10E-01	1.00E+00
CS-137		1.90E-01 ±	5.91E-01	9.56E-01
BALA-140		-1.37E-01 ±	1.50E+00	2.45E+00
RA-226	+	6.34E+01 ±	1.85E+01	2.65E+01

Collection Period		12/3/2007		1/2/2008
Nuclide	RQ	Activity	Error	MDA
BE-7		3.07E+00 ±	6.77E+00	1.10E+01
K-40		9.66E+00 ±	1.22E+01	1.83E+01
CR-51		4.76E-02 ±	7.09E+00	1.16E+01
MN-54		1.64E-01 ±	6.62E-01	1.08E+00
CO-58		-4.39E-01 ±	8.12E-01	1.31E+00
FE-59		-2.66E-01 ±	1.70E+00	2.78E+00
CO-60		9.58E-02 ±	5.99E-01	9.74E-01
ZN-65		-1.76E-02 ±	1.11E+00	1.83E+00
NB-95		1.72E-01 ±	8.89E-01	1.45E+00
ZR-95		9.31E-01 ±	1.34E+00	2.13E+00
CS-134		-1.43E-01 ±	6.39E-01	1.04E+00
CS-137		-1.69E-01 ±	7.43E-01	1.21E+00
BALA-140		9.51E-03 ±	1.59E+00	2.61E+00
RA-226	+	3.80E+01 ±	1.77E+01	2.80E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-7.1

GAMMA SPECTROMETRY RESULTS OF WATER

STATION 27 - Plant Discharge Indicator

Results in pCi/liter, corrected for decay during collection period

Collection Period		1/3/2007		2/5/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		2.79E+00 ±	7.27E+00	1.18E+01
K-40		2.81E+00 ±	9.92E+00	1.88E+01
CR-51		-9.21E-01 ±	9.08E+00	1.49E+01
MN-54		-1.23E-01 ±	6.78E-01	1.11E+00
CO-58		1.29E-02 ±	7.50E-01	1.23E+00
FE-59		5.02E-03 ±	1.67E+00	2.74E+00
CO-60		2.78E-01 ±	6.25E-01	1.00E+00
ZN-65		-7.72E-01 ±	1.65E+00	2.65E+00
NB-95		2.87E-01 ±	9.12E-01	1.48E+00
ZR-95		4.17E-01 ±	1.40E+00	2.28E+00
CS-134		-3.28E-01 ±	6.91E-01	1.12E+00
CS-137		3.07E-01 ±	6.86E-01	1.11E+00
BALA-140		1.93E-01 ±	1.89E+00	3.09E+00
RA-226	+	5.66E+01 ±	1.82E+01	2.85E+01

Collection Period		2/5/2007		3/5/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		8.03E+00 ±	7.61E+00	1.21E+01
K-40	+	1.84E+01 ±	1.07E+01	1.57E+01
CR-51		2.17E+00 ±	9.56E+00	1.56E+01
MN-54		2.45E-02 ±	6.49E-01	1.07E+00
CO-58		1.18E-01 ±	7.77E-01	1.27E+00
FE-59		-9.91E-01 ±	1.94E+00	3.12E+00
CO-60		1.61E-02 ±	6.47E-01	1.06E+00
ZN-65		4.48E-01 ±	1.34E+00	2.17E+00
NB-95		5.96E-01 ±	1.02E+00	1.64E+00
ZR-95		-5.34E-01 ±	1.47E+00	2.38E+00
CS-134		-1.16E-02 ±	6.35E-01	1.04E+00
CS-137		2.89E-01 ±	7.15E-01	1.16E+00
BALA-140		-1.19E+00 ±	2.42E+00	3.88E+00
RA-226	+	5.45E+01 ±	1.83E+01	2.87E+01

Collection Period		3/5/2007		4/2/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		4.22E+00 ±	7.80E+00	1.26E+01
K-40	+	2.25E+01 ±	9.45E+00	1.71E+01
CR-51		4.65E+00 ±	9.61E+00	1.56E+01
MN-54		-7.74E-02 ±	7.17E-01	1.17E+00
CO-58		1.60E-01 ±	7.58E-01	1.23E+00
FE-59		8.69E-01 ±	1.77E+00	2.85E+00
CO-60		4.47E-03 ±	6.88E-01	1.13E+00
ZN-65		8.83E-01 ±	1.40E+00	2.23E+00
NB-95		1.38E-01 ±	9.94E-01	1.63E+00
ZR-95		4.27E-01 ±	1.37E+00	2.22E+00
CS-134		1.58E-01 ±	6.50E-01	1.06E+00
CS-137		-3.71E-01 ±	7.77E-01	1.26E+00
BALA-140		1.75E-02 ±	1.83E+00	3.01E+00
RA-226	+	5.27E+01 ±	1.87E+01	2.94E+01

Collection Period		4/2/2007		5/2/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		4.67E+00 ±	7.38E+00	1.19E+01
K-40	+	3.22E+01 ±	1.18E+01	1.67E+01
CR-51		-4.42E+00 ±	1.01E+01	1.64E+01
MN-54		-4.18E-03 ±	5.51E-01	9.07E-01
CO-58		-2.66E-01 ±	8.08E-01	1.31E+00
FE-59		-3.44E-01 ±	1.81E+00	2.94E+00
CO-60		-1.31E-01 ±	5.87E-01	9.51E-01
ZN-65		-4.86E-01 ±	1.42E+00	2.30E+00
NB-95		-4.26E-01 ±	8.98E-01	1.44E+00
ZR-95		1.46E-01 ±	1.38E+00	2.26E+00
CS-134		-1.52E-01 ±	5.94E-01	9.67E-01
CS-137		3.94E-01 ±	6.41E-01	1.03E+00
BALA-140		5.94E-01 ±	2.64E+00	4.28E+00
RA-226	+	4.32E+01 ±	1.43E+01	2.21E+01

Collection Period		5/2/2007		6/4/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		8.10E-01 ±	6.05E+00	1.08E+01
K-40		-5.93E-01 ±	1.26E+01	2.49E+01
CR-51		-1.20E+00 ±	1.32E+01	2.15E+01
MN-54		7.28E-01 ±	8.13E-01	1.24E+00
CO-58		8.30E-03 ±	7.16E-01	1.18E+00
FE-59		-1.50E-01 ±	2.36E+00	3.86E+00
CO-60		6.27E-01 ±	8.07E-01	1.22E+00
ZN-65		3.49E-01 ±	1.39E+00	2.27E+00
NB-95		-4.75E-01 ±	1.30E+00	2.09E+00
ZR-95		-1.40E+00 ±	2.12E+00	3.34E+00
CS-134		2.79E-01 ±	8.65E-01	1.40E+00
CS-137		3.11E-01 ±	9.12E-01	1.47E+00
BALA-140		1.91E-01 ±	3.15E+00	5.15E+00
RA-226	+	5.50E+01 ±	2.62E+01	3.79E+01

Collection Period		6/4/2007		7/2/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		8.83E-01 ±	7.75E+00	1.27E+01
K-40		9.30E+00 ±	1.04E+01	1.66E+01
CR-51		3.51E+00 ±	9.40E+00	1.53E+01
MN-54		7.47E-02 ±	7.14E-01	1.17E+00
CO-58		-2.37E-01 ±	8.51E-01	1.38E+00
FE-59		-1.23E+00 ±	1.86E+00	2.98E+00
CO-60		1.61E-01 ±	6.85E-01	1.11E+00
ZN-65		5.42E-01 ±	1.45E+00	2.35E+00
NB-95		9.21E-01 ±	9.57E-01	1.52E+00
ZR-95		-2.28E-01 ±	1.47E+00	2.40E+00
CS-134		-5.10E-02 ±	6.69E-01	1.10E+00
CS-137		-4.07E-01 ±	7.72E-01	1.25E+00
BALA-140		-8.79E-01 ±	2.24E+00	3.60E+00
RA-226	+	5.31E+01 ±	1.48E+01	2.16E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-7.1

GAMMA SPECTROMETRY RESULTS OF WATER

STATION 27 - Plant Discharge Indicator

Results in pCi/liter, corrected for decay during collection period

Collection Period		7/2/2007		8/1/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-2.56E+00 ±	8.06E+00	1.31E+01
K-40	+	3.07E+01 ±	1.13E+01	1.66E+01
CR-51		5.04E+00 ±	1.04E+01	1.70E+01
MN-54		-2.50E-01 ±	7.23E-01	1.17E+00
CO-58		-2.68E-01 ±	8.75E-01	1.42E+00
FE-59		7.86E-01 ±	1.76E+00	2.83E+00
CO-60		6.92E-01 ±	7.16E-01	1.12E+00
ZN-65		-1.10E+00 ±	1.63E+00	2.61E+00
NB-95		-2.10E-01 ±	1.12E+00	1.83E+00
ZR-95		4.22E-01 ±	1.58E+00	2.58E+00
CS-134		-2.52E-01 ±	6.91E-01	1.12E+00
CS-137		3.12E-01 ±	7.13E-01	1.15E+00
BALA-140		1.25E+00 ±	2.36E+00	3.75E+00
RA-226	+	4.94E+01 ±	1.87E+01	2.95E+01

Collection Period		8/1/2007		9/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		5.66E+00 ±	9.03E+00	1.46E+01
K-40	+	2.39E+01 ±	1.14E+01	1.73E+01
CR-51		-4.34E-01 ±	1.24E+01	2.04E+01
MN-54		2.54E-01 ±	7.04E-01	1.14E+00
CO-58		4.14E-01 ±	8.37E-01	1.34E+00
FE-59		1.61E-01 ±	2.19E+00	3.59E+00
CO-60		-6.79E-02 ±	8.08E-01	1.32E+00
ZN-65		-9.72E-01 ±	1.73E+00	2.77E+00
NB-95		1.99E-01 ±	1.29E+00	2.11E+00
ZR-95		3.65E-01 ±	1.73E+00	2.82E+00
CS-134		-9.44E-02 ±	7.13E-01	1.17E+00
CS-137		3.14E-01 ±	7.59E-01	1.23E+00
BALA-140		1.52E+00 ±	3.41E+00	5.45E+00
RA-226	+	4.86E+01 ±	1.96E+01	3.09E+01

Collection Period		9/5/2007		10/1/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		4.48E+00 ±	6.61E+00	1.06E+01
K-40	+	2.36E+01 ±	1.14E+01	1.69E+01
CR-51		2.46E+00 ±	7.60E+00	1.24E+01
MN-54		-9.72E-02 ±	7.03E-01	1.15E+00
CO-58		-4.72E-01 ±	6.77E-01	1.08E+00
FE-59		-1.84E-01 ±	1.51E+00	2.46E+00
CO-60		3.07E-01 ±	6.15E-01	9.79E-01
ZN-65		6.47E-01 ±	1.32E+00	2.12E+00
NB-95		3.28E-02 ±	8.50E-01	1.39E+00
ZR-95		4.43E-01 ±	1.27E+00	2.05E+00
CS-134		2.39E-01 ±	5.98E-01	9.68E-01
CS-137		-8.15E-03 ±	6.22E-01	1.02E+00
BALA-140		1.52E-01 ±	1.34E+00	2.19E+00
RA-226	+	3.09E+01 ±	1.48E+01	2.32E+01

Collection Period		10/1/2007		11/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		4.37E-01 ±	7.25E+00	1.19E+01
K-40	+	5.03E+01 ±	1.22E+01	1.76E+01
CR-51		-2.98E+00 ±	8.53E+00	1.39E+01
MN-54		-1.63E-01 ±	7.38E-01	1.20E+00
CO-58		-7.65E-03 ±	5.92E-01	9.72E-01
FE-59		2.87E-02 ±	1.38E+00	2.27E+00
CO-60		1.57E-01 ±	6.99E-01	1.13E+00
ZN-65		3.72E-01 ±	1.12E+00	1.80E+00
NB-95		9.95E-02 ±	9.67E-01	1.58E+00
ZR-95		-4.80E-01 ±	1.49E+00	2.41E+00
CS-134		-1.74E-01 ±	6.40E-01	1.04E+00
CS-137		-3.68E-01 ±	6.78E-01	1.09E+00
BALA-140		-2.59E-02 ±	1.46E+00	2.40E+00
RA-226	+	3.31E+01 ±	1.67E+01	2.64E+01

Collection Period		11/5/2007		12/3/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		8.93E+00 ±	6.58E+00	9.38E+00
K-40	+	2.90E+01 ±	1.11E+01	1.70E+01
CR-51		3.25E-01 ±	9.13E+00	1.50E+01
MN-54		1.20E-01 ±	6.91E-01	1.13E+00
CO-58		-1.72E-01 ±	6.84E-01	1.11E+00
FE-59		2.10E-01 ±	1.67E+00	2.72E+00
CO-60		1.86E-02 ±	6.37E-01	1.05E+00
ZN-65		-2.50E-01 ±	1.40E+00	2.28E+00
NB-95		-2.54E-02 ±	7.21E-01	1.18E+00
ZR-95		-6.40E-01 ±	1.44E+00	2.32E+00
CS-134		-2.15E-01 ±	4.72E-01	7.58E-01
CS-137		1.27E-01 ±	7.01E-01	1.14E+00
BALA-140		-9.61E-02 ±	1.68E+00	2.74E+00
RA-226	+	5.52E+01 ±	1.75E+01	2.57E+01

Collection Period		12/3/2007		1/2/2008
Nuclide	RQ	Activity	Error	MDA
BE-7		5.92E+00 ±	6.91E+00	1.10E+01
K-40	+	2.90E+01 ±	1.11E+01	1.72E+01
CR-51		-6.47E-02 ±	7.64E+00	1.26E+01
MN-54		8.98E-03 ±	6.54E-01	1.07E+00
CO-58		2.13E-01 ±	6.89E-01	1.12E+00
FE-59		-5.91E-01 ±	1.68E+00	2.71E+00
CO-60		2.27E-01 ±	6.92E-01	1.12E+00
ZN-65		-7.01E-01 ±	1.50E+00	2.41E+00
NB-95		-2.33E-01 ±	9.18E-01	1.49E+00
ZR-95		4.55E-01 ±	1.06E+00	1.71E+00
CS-134		1.70E-01 ±	4.99E-01	8.07E-01
CS-137		-7.78E-03 ±	7.21E-01	1.19E+00
BALA-140		-3.19E-01 ±	1.58E+00	2.56E+00
RA-226	+	4.71E+01 ±	1.90E+01	2.79E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-7.1

GAMMA SPECTROMETRY RESULTS OF WATER

STATION 31 - Ground Water Well 1

Results in pCi/liter, corrected for decay during collection period

Collection Period 3/5/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		-2.19E+00	±	6.80E+00	1.11E+01
K-40	+	2.61E+01	±	1.11E+01	1.61E+01
CR-51		-4.06E+00	±	8.03E+00	1.31E+01
MN-54		-9.41E-02	±	7.06E-01	1.15E+00
CO-58		-4.61E-01	±	8.17E-01	1.32E+00
FE-59		-4.61E-01	±	1.62E+00	2.64E+00
CO-60		3.80E-01	±	6.56E-01	1.04E+00
ZN-65		-1.41E+00	±	1.71E+00	2.72E+00
NB-95		-9.96E-03	±	8.92E-01	1.46E+00
ZR-95		-3.95E-01	±	1.34E+00	2.19E+00
CS-134		-1.34E-01	±	6.66E-01	1.09E+00
CS-137		-2.09E-02	±	7.63E-01	1.25E+00
BALA-140		1.73E-01	±	1.29E+00	2.11E+00
RA-226	+	5.23E+01	±	1.97E+01	2.48E+01

Collection Period 6/4/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		4.77E+00	±	1.19E+01	1.93E+01
K-40		2.34E+01	±	1.69E+01	2.97E+01
CR-51		-1.59E+00	±	1.18E+01	1.93E+01
MN-54		-4.91E-01	±	1.41E+00	2.28E+00
CO-58		-1.43E-02	±	1.33E+00	2.19E+00
FE-59		-7.48E-02	±	2.45E+00	4.02E+00
CO-60		5.55E-01	±	1.20E+00	1.91E+00
ZN-65		9.34E-01	±	1.15E+01	1.89E+01
NB-95		-1.51E+00	±	1.72E+00	2.75E+00
ZR-95		-9.61E-03	±	2.22E+00	3.65E+00
CS-134		-1.92E-01	±	1.29E+00	2.11E+00
CS-137		-8.76E-01	±	1.48E+00	2.37E+00
BALA-140		2.25E-01	±	1.53E+00	2.49E+00
RA-226	+	7.85E+01	±	3.72E+01	4.69E+01

Collection Period 9/5/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		3.12E-02	±	6.33E+00	1.04E+01
K-40		1.59E+01	±	1.22E+01	1.82E+01
CR-51		3.86E+00	±	6.99E+00	1.13E+01
MN-54		4.45E-01	±	7.02E-01	1.12E+00
CO-58		-2.60E-01	±	7.42E-01	1.20E+00
FE-59		7.34E-02	±	1.61E+00	2.64E+00
CO-60		3.98E-02	±	7.21E-01	1.18E+00
ZN-65		3.60E-01	±	1.04E+00	1.66E+00
NB-95		1.65E-02	±	8.67E-01	1.42E+00
ZR-95		5.40E-01	±	1.22E+00	1.97E+00
CS-134		-2.29E-01	±	3.70E-01	5.84E-01
CS-137		1.44E-01	±	5.29E-01	8.21E-01
BALA-140		1.11E-01	±	1.14E+00	1.86E+00
RA-226	+	5.12E+01	±	1.89E+01	2.89E+01

Collection Period 12/3/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		-2.87E+00	±	6.21E+00	1.01E+01
K-40	+	2.15E+01	±	1.25E+01	1.83E+01
CR-51		3.15E+00	±	6.92E+00	1.12E+01
MN-54		2.95E-01	±	4.64E-01	7.32E-01
CO-58		-2.51E-01	±	6.72E-01	1.09E+00
FE-59		-4.00E-01	±	1.49E+00	2.42E+00
CO-60		-2.43E-02	±	6.63E-01	1.09E+00
ZN-65		-6.37E-01	±	1.41E+00	2.27E+00
NB-95		-2.66E-01	±	8.64E-01	1.40E+00
ZR-95		2.69E-01	±	1.25E+00	2.04E+00
CS-134		-7.55E-02	±	6.49E-01	1.06E+00
CS-137		7.88E-04	±	6.86E-01	1.13E+00
BALA-140		4.85E-01	±	1.04E+00	1.65E+00
RA-226	+	4.77E+01	±	1.63E+01	2.52E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-7.1

GAMMA SPECTROMETRY RESULTS OF WATER

STATION 32 - Ground Water Well 2

Results in pCi/liter, corrected for decay during collection period

Collection Period					3/5/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		7.62E-02	±	7.52E+00	1.24E+01
K-40	+	2.31E+01	±	1.36E+01	1.69E+01
CR-51		1.42E+00	±	8.56E+00	1.40E+01
MN-54		-7.29E-01	±	8.05E-01	1.28E+00
CO-58		6.54E-03	±	7.94E-01	1.30E+00
FE-59		-6.30E-01	±	1.75E+00	2.84E+00
CO-60		5.18E-01	±	4.82E-01	1.15E+00
ZN-65		1.78E+00	±	1.67E+00	2.63E+00
NB-95		-3.75E-02	±	1.02E+00	1.67E+00
ZR-95		7.11E-02	±	1.34E+00	2.20E+00
CS-134		-6.63E-01	±	8.21E-01	1.32E+00
CS-137		-1.95E-01	±	8.34E-01	1.36E+00
BALA-140		4.58E-01	±	5.33E-01	2.59E+00
RA-226	+	4.99E+01	±	1.55E+01	2.14E+01

Collection Period					6/4/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		5.01E+00	±	1.64E+01	2.68E+01
K-40	+	3.97E+01	±	2.64E+01	3.10E+01
CR-51		1.16E+00	±	1.79E+01	2.95E+01
MN-54		-5.74E-02	±	2.53E+00	4.15E+00
CO-58		-7.39E-01	±	1.92E+00	3.13E+00
FE-59		-3.75E-01	±	3.57E+00	5.84E+00
CO-60		1.54E-01	±	1.93E+00	3.17E+00
ZN-65		-9.62E-01	±	2.22E+01	3.65E+01
NB-95		-3.16E+00	±	2.63E+00	4.20E+00
ZR-95		-1.89E-01	±	3.26E+00	5.34E+00
CS-134		1.61E-01	±	3.23E+00	5.30E+00
CS-137		2.37E-02	±	2.08E+00	3.43E+00
BALA-140		1.66E+00	±	1.30E+00	3.89E+00
RA-226	+	8.34E+01	±	4.51E+01	7.21E+01

Collection Period					9/5/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		-3.10E+00	±	8.55E+00	1.39E+01
K-40		6.10E+00	±	1.13E+01	2.09E+01
CR-51		8.88E-01	±	9.03E+00	1.48E+01
MN-54		-6.83E-02	±	8.97E-01	1.47E+00
CO-58		-5.40E-01	±	9.71E-01	1.57E+00
FE-59		4.04E-01	±	1.84E+00	3.00E+00
CO-60		3.82E-01	±	8.94E-01	1.44E+00
ZN-65		3.09E-01	±	7.70E+00	1.27E+01
NB-95		-1.06E+00	±	1.34E+00	2.16E+00
ZR-95		-1.66E-01	±	1.73E+00	2.83E+00
CS-134		1.16E-03	±	8.95E-01	1.47E+00
CS-137		2.43E-02	±	1.30E+00	2.13E+00
BALA-140		1.62E-02	±	1.53E+00	2.51E+00
RA-226	+	5.05E+01	±	2.00E+01	3.08E+01

Collection Period					12/3/2007
Nuclide	RQ	Activity		Error	MDA
BE-7		-2.29E+00	±	7.02E+00	1.14E+01
K-40	+	1.87E+01	±	1.12E+01	1.74E+01
CR-51		-2.39E-01	±	6.85E+00	1.13E+01
MN-54		-4.54E-01	±	7.24E-01	1.16E+00
CO-58		1.96E-02	±	7.56E-01	1.24E+00
FE-59		8.35E-01	±	1.35E+00	2.15E+00
CO-60		-7.53E-01	±	7.16E-01	1.11E+00
ZN-65		1.55E+00	±	8.80E-01	2.15E+00
NB-95		1.32E-01	±	9.50E-01	1.55E+00
ZR-95		-8.27E-01	±	1.46E+00	2.36E+00
CS-134		7.29E-02	±	5.60E-01	9.16E-01
CS-137		-2.72E-01	±	8.35E-01	1.36E+00
BALA-140		7.09E-03	±	1.29E+00	2.13E+00
RA-226	+	5.12E+01	±	1.90E+01	2.90E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-7.1

GAMMA SPECTROMETRY RESULTS OF WATER

STATION 52 - Ground Water Well 3

Results in pCi/liter, corrected for decay during collection period

Collection Period				3/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		2.28E+00 ±	6.91E+00	1.13E+01
K-40	+	2.27E+01 ±	1.14E+01	1.60E+01
CR-51		-7.22E-01 ±	8.62E+00	1.41E+01
MN-54		5.41E-01 ±	6.60E-01	1.05E+00
CO-58		8.08E-03 ±	7.28E-01	1.20E+00
FE-59		-3.83E-01 ±	1.67E+00	2.72E+00
CO-60		1.99E-01 ±	7.12E-01	1.15E+00
ZN-65		-4.67E-01 ±	1.49E+00	2.42E+00
NB-95		7.18E-02 ±	9.29E-01	1.52E+00
ZR-95		-2.55E-02 ±	1.36E+00	2.23E+00
CS-134		1.11E-01 ±	6.30E-01	1.03E+00
CS-137		4.18E-01 ±	6.89E-01	1.11E+00
BALA-140		2.90E-02 ±	1.64E+00	2.70E+00
RA-226	+	5.83E+01 ±	1.84E+01	2.88E+01

Collection Period				6/4/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		1.28E-01 ±	9.59E+00	1.58E+01
K-40		1.73E+01 ±	1.39E+01	2.56E+01
CR-51		-5.43E-01 ±	9.53E+00	1.56E+01
MN-54		-5.20E-01 ±	1.12E+00	1.79E+00
CO-58		-1.29E-01 ±	1.00E+00	1.64E+00
FE-59		-6.09E-01 ±	2.01E+00	3.25E+00
CO-60		7.97E-01 ±	6.93E-01	1.45E+00
ZN-65		-4.87E-01 ±	2.39E+00	3.88E+00
NB-95		-7.69E-01 ±	1.33E+00	2.13E+00
ZR-95		5.57E-01 ±	1.62E+00	2.60E+00
CS-134		-7.19E-01 ±	1.04E+00	1.66E+00
CS-137		-3.11E-02 ±	1.16E+00	1.90E+00
BALA-140		-3.00E-03 ±	1.22E+00	2.01E+00
RA-226		4.07E+01 ±	2.91E+01	4.64E+01

Collection Period				9/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-1.48E+00 ±	6.88E+00	1.12E+01
K-40		1.69E+01 ±	1.31E+01	1.86E+01
CR-51		-5.29E-01 ±	7.45E+00	1.22E+01
MN-54		-3.51E-01 ±	7.59E-01	1.23E+00
CO-58		7.85E-02 ±	7.75E-01	1.27E+00
FE-59		-2.98E-01 ±	1.58E+00	2.57E+00
CO-60		-1.71E-01 ±	8.15E-01	1.33E+00
ZN-65		-2.42E-01 ±	1.68E+00	2.74E+00
NB-95		3.11E-03 ±	8.70E-01	1.43E+00
ZR-95		3.94E-01 ±	1.24E+00	2.02E+00
CS-134		1.23E-01 ±	6.66E-01	1.09E+00
CS-137		3.53E-01 ±	7.44E-01	1.20E+00
BALA-140		-9.27E-01 ±	1.39E+00	2.20E+00
RA-226	+	4.44E+01 ±	1.62E+01	2.40E+01

Collection Period				12/3/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		5.57E-01 ±	6.32E+00	1.04E+01
K-40	+	2.30E+01 ±	1.13E+01	1.74E+01
CR-51		-2.30E+00 ±	7.48E+00	1.22E+01
MN-54		-4.29E-01 ±	7.33E-01	1.18E+00
CO-58		6.00E-01 ±	6.13E-01	8.21E-01
FE-59		-6.40E-01 ±	1.44E+00	2.32E+00
CO-60		4.27E-01 ±	5.93E-01	9.26E-01
ZN-65		-3.95E-01 ±	1.35E+00	2.18E+00
NB-95		2.86E-02 ±	7.44E-01	1.22E+00
ZR-95		3.05E-01 ±	1.25E+00	2.03E+00
CS-134		-3.03E-01 ±	6.33E-01	1.02E+00
CS-137		-4.97E-01 ±	7.76E-01	1.25E+00
BALA-140		2.23E-01 ±	1.24E+00	2.01E+00
RA-226		5.07E+01 ±	1.76E+01	2.74E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-7.2

GAMMA SPECTROMETRY RESULTS OF WATER - SUMMARY

Results in pCi/liter, corrected for decay during collection period

RIVER/DRINKING

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
BALA-140	Ind	9.37E-02	-7.47E-01	1.13E+00	3.68E+00	12	0
BALA-140	Cntl	1.83E-01	-5.80E-01	1.07E+00	3.25E+00	12	0
BE-7	Ind	-9.35E-02	-3.39E+00	3.66E+00	1.27E+01	12	0
BE-7	Cntl	-4.53E-01	-4.49E+00	2.00E+00	1.20E+01	12	0
CO-58	Ind	-1.56E-02	-4.88E-01	7.61E-01	1.31E+00	12	0
CO-58	Cntl	-7.50E-02	-3.61E-01	2.39E-01	1.27E+00	12	0
CO-60	Ind	1.06E-01	-2.85E-01	4.80E-01	1.06E+00	12	0
CO-60	Cntl	1.77E-01	-2.56E-01	5.06E-01	1.04E+00	12	0
CR-51	Ind	-9.96E-01	-4.38E+00	5.30E-01	1.62E+01	12	0
CR-51	Cntl	2.22E-01	-5.03E+00	4.25E+00	1.51E+01	12	0
CS-134	Ind	-1.07E-01	-3.41E-01	1.92E-01	1.09E+00	12	0
CS-134	Cntl	4.31E-02	-2.75E-01	4.12E-01	1.07E+00	12	0
CS-137	Ind	2.35E-03	-4.34E-01	2.75E-01	1.19E+00	12	0
CS-137	Cntl	8.51E-02	-2.54E-01	4.12E-01	1.13E+00	12	0
FE-59	Ind	-1.90E-01	-1.22E+00	1.20E+00	3.06E+00	12	0
FE-59	Cntl	9.55E-02	-9.95E-01	1.65E+00	2.76E+00	12	0
K-40	Ind	1.50E+01	-8.94E-01	3.53E+01	1.81E+01	12	5
K-40	Cntl	6.39E+00	-2.67E+01	2.71E+01	1.85E+01	12	2
MN-54	Ind	-4.30E-02	-5.22E-01	2.81E-01	1.09E+00	12	0
MN-54	Cntl	-8.42E-03	-4.36E-01	6.48E-01	1.12E+00	12	0
NB-95	Ind	-3.75E-02	-6.39E-01	3.07E-01	1.75E+00	12	0
NB-95	Cntl	2.41E-01	-1.74E-01	7.40E-01	1.54E+00	12	0
RA-226	Ind	4.90E+01	3.67E+01	6.34E+01	2.56E+01	12	12
RA-226	Cntl	4.58E+01	1.67E+01	5.91E+01	2.70E+01	12	11
ZN-65	Ind	-1.07E-02	-9.12E-01	1.02E+00	2.34E+00	12	0
ZN-65	Cntl	1.65E-01	-9.75E-01	8.64E-01	2.46E+00	12	0
ZR-95	Ind	1.46E-01	-7.82E-01	9.31E-01	2.40E+00	12	0
ZR-95	Cntl	1.45E-01	-6.09E-01	7.52E-01	2.36E+00	12	0

Ind = Indicator Stations Cntl = Control Stations

TABLE A-7.2

GAMMA SPECTROMETRY RESULTS OF WATER - SUMMARY

Results in pCi/liter, corrected for decay during collection period

DISCHARGE

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
BE-7	Ind	3.69E+00	-2.56E+00	8.93E+00	1.19E+01	12	0
K-40	Ind	2.26E+01	-5.93E-01	5.03E+01	1.77E+01	12	9
CR-51	Ind	6.77E-01	-4.42E+00	5.04E+00	1.59E+01	12	0
MN-54	Ind	4.13E-02	-2.50E-01	7.28E-01	1.13E+00	12	0
CO-58	Ind	-4.14E-02	-4.72E-01	4.14E-01	1.22E+00	12	0
FE-59	Ind	-1.19E-01	-1.23E+00	8.69E-01	2.92E+00	12	0
CO-60	Ind	1.91E-01	-1.31E-01	6.92E-01	1.10E+00	12	0
ZN-65	Ind	-8.71E-02	-1.10E+00	8.83E-01	2.33E+00	12	0
NB-95	Ind	7.54E-02	-4.75E-01	9.21E-01	1.62E+00	12	0
ZR-95	Ind	-5.04E-02	-1.40E+00	4.55E-01	2.40E+00	12	0
CS-134	Ind	-3.60E-02	-3.28E-01	2.79E-01	1.05E+00	12	0
CS-137	Ind	7.43E-02	-4.07E-01	3.94E-01	1.17E+00	12	0
BALA-140	Ind	1.17E-01	-1.19E+00	1.52E+00	3.51E+00	12	0
RA-226	Ind	4.83E+01	3.09E+01	5.66E+01	2.77E+01	12	12

GROUNDWATER

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
BE-7	Ind	7.78E-02	-3.10E+00	5.01E+00	1.37E+01	12	0
K-40	Ind	2.12E+01	6.10E+00	3.97E+01	2.05E+01	12	7
CR-51	Ind	4.29E-02	-4.06E+00	3.86E+00	1.49E+01	12	0
MN-54	Ind	-1.59E-01	-7.29E-01	5.41E-01	1.55E+00	12	0
CO-58	Ind	-1.40E-01	-7.39E-01	6.00E-01	1.50E+00	12	0
FE-59	Ind	-2.13E-01	-6.40E-01	8.35E-01	3.03E+00	12	0
CO-60	Ind	2.09E-01	-7.53E-01	7.97E-01	1.41E+00	12	0
ZN-65	Ind	2.76E-02	-1.41E+00	1.78E+00	7.55E+00	12	0
NB-95	Ind	-5.46E-01	-3.16E+00	1.32E-01	1.91E+00	12	0
ZR-95	Ind	4.35E-02	-8.27E-01	5.57E-01	2.62E+00	12	0
CS-134	Ind	-1.54E-01	-7.19E-01	1.61E-01	1.55E+00	12	0
CS-137	Ind	-7.73E-02	-8.76E-01	4.18E-01	1.61E+00	12	0
BALA-140	Ind	2.05E-01	-9.27E-01	1.66E+00	2.35E+00	12	0
RA-226	Ind	5.49E+01	4.07E+01	8.34E+01	3.38E+01	12	10

Ind = Indicator Stations Cntl = Control Stations

TABLE A-8.1

GAMMA SPECTROMETRY RESULTS OF SOIL

Results in pCi/kilogram

Location & Date		Station 1		5/14/2007	
Nuclide	RQ	Activity	Error	MDA	
BE-7	+	9.68E+01 ±	3.81E+01	4.82E+01	
K-40	+	1.53E+04 ±	2.29E+02	7.49E+01	
CR-51		-1.02E+01 ±	4.74E+01	7.87E+01	
MN-54		8.13E+00 ±	5.43E+00	8.81E+00	
CO-58		-2.01E+00 ±	5.44E+00	9.05E+00	
FE-59		5.65E-02 ±	1.42E+01	2.37E+01	
CO-60		-1.60E-02 ±	6.03E+00	1.01E+01	
ZN-65		-2.58E+01 ±	1.58E+01	2.57E+01	
NB-95		-6.67E+00 ±	7.52E+00	1.24E+01	
CS-134		-2.70E+00 ±	4.82E+00	7.98E+00	
CS-137	+	4.81E+01 ±	6.65E+00	7.70E+00	
BALA-140		-4.48E-01 ±	9.48E+00	1.61E+01	
BI-214	+	5.27E+02 ±	2.05E+01	1.49E+01	
RA-226	+	5.73E+02 ±	1.38E+02	1.48E+02	

Location & Date		Station 7		5/14/2007	
Nuclide	RQ	Activity	Error	MDA	
BE-7	+	1.28E+02 ±	4.46E+01	5.45E+01	
K-40	+	1.50E+04 ±	2.54E+02	8.04E+01	
I-133		3.34E+00 ±	5.27E+01	8.80E+01	
MN-54		1.12E+01 ±	5.96E+00	9.57E+00	
ZN-65		-1.17E-01 ±	5.75E+00	9.68E+00	
FE-59		5.35E-01 ±	1.53E+01	2.56E+01	
CO-60		1.62E+00 ±	6.16E+00	1.03E+01	
ZN-65		-3.91E-01 ±	3.33E+01	5.53E+01	
NB-95		-4.23E+00 ±	7.95E+00	1.32E+01	
CS-134		9.44E-02 ±	5.96E+00	9.97E+00	
CS-137	+	5.99E+01 ±	5.90E+00	7.25E+00	
BALA-140		-4.01E+00 ±	9.71E+00	1.63E+01	
BI-214	+	4.87E+02 ±	2.09E+01	1.61E+01	
RA-226	+	4.30E+02 ±	1.44E+02	1.56E+02	

Location & Date		Station 9a		5/14/2007	
Nuclide	RQ	Activity	Error	MDA	
BE-7	+	1.07E+02 ±	5.86E+01	7.34E+01	
K-40	+	1.38E+04 ±	2.69E+02	9.30E+01	
CR-51		1.42E+01 ±	7.61E+01	1.27E+02	
MN-54		1.04E+01 ±	6.75E+00	1.09E+01	
CO-58		2.61E+00 ±	7.20E+00	1.20E+01	
FE-59		-4.48E-01 ±	1.86E+01	3.14E+01	
CO-60		2.35E+00 ±	7.56E+00	1.23E+01	
ZN-65		-3.24E+01 ±	2.02E+01	3.26E+01	
NB-95		-9.99E+00 ±	1.17E+01	1.92E+01	
CS-134		-1.05E+00 ±	5.62E+00	9.40E+00	
CS-137	+	1.01E+02 ±	9.78E+00	8.73E+00	
BALA-140		-6.82E+00 ±	1.92E+01	3.24E+01	
BI-214	+	5.43E+02 ±	2.28E+01	1.73E+01	
RA-226	+	4.71E+02 ±	1.66E+02	1.77E+02	

Location & Date		Station 21		5/14/2007	
Nuclide	RQ	Activity	Error	MDA	
BE-7	+	8.53E+01 ±	4.45E+01	5.84E+01	
K-40	+	1.48E+04 ±	2.53E+02	7.54E+01	
CR-51		2.28E+01 ±	6.54E+01	1.09E+02	
MN-54		3.65E-01 ±	6.07E+00	1.02E+01	
CO-58		-8.86E-01 ±	6.22E+00	1.04E+01	
FE-59		3.56E+00 ±	1.73E+01	2.89E+01	
CO-60		3.11E+00 ±	6.28E+00	1.04E+01	
ZN-65		-2.44E+00 ±	3.41E+01	5.66E+01	
NB-95		-6.95E+00 ±	9.66E+00	1.59E+01	
CS-134		-1.09E+00 ±	4.94E+00	8.25E+00	
CS-137	+	2.37E+01 ±	5.68E+00	6.50E+00	
BALA-140		4.93E+00 ±	6.54E+00	2.57E+01	
BI-214	+	4.33E+02 ±	2.18E+01	1.66E+01	
RA-226	+	1.04E+03 ±	1.46E+02	1.63E+02	

Location & Date		Station 23		5/14/2007	
Nuclide	RQ	Activity	Error	MDA	
BE-7		7.44E+01 ±	6.00E+01	9.80E+01	
K-40	+	1.53E+04 ±	2.63E+02	8.23E+01	
CR-51		2.45E+00 ±	7.33E+01	1.22E+02	
MN-54		-3.66E+00 ±	6.62E+00	1.10E+01	
CO-58		-3.10E+00 ±	7.00E+00	1.16E+01	
FE-59		2.25E-02 ±	1.82E+01	3.06E+01	
CO-60		5.36E-01 ±	6.91E+00	1.16E+01	
ZN-65		-2.04E+01 ±	1.85E+01	3.04E+01	
NB-95		5.87E-01 ±	9.49E+00	1.59E+01	
CS-134		-2.19E+00 ±	5.27E+00	8.76E+00	
CS-137	+	6.15E+01 ±	1.55E+01	1.00E+01	
BALA-140		2.48E+00 ±	7.10E+00	1.15E+01	
BI-214	+	5.18E+02 ±	2.40E+01	1.52E+01	
RA-226	+	1.03E+03 ±	1.30E+02	1.56E+02	

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-8.2

GAMMA SPECTROMETRY RESULTS OF SOIL - SUMMARY

Results in pCi/kilogram

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
BALA-140	Ind	7.39E-01	-4.01E+00	4.93E+00	1.74E+01	4	0
BALA-140	Cntl	-6.82E+00	-6.82E+00	-6.82E+00	3.24E+01	1	0
BE-7	Ind	9.62E+01	7.44E+01	1.28E+02	6.48E+01	4	3
BE-7	Cntl	1.07E+02	1.07E+02	1.07E+02	7.34E+01	1	1
BI-214	Ind	4.91E+02	4.33E+02	5.27E+02	1.57E+01	4	4
BI-214	Cntl	5.43E+02	5.43E+02	5.43E+02	1.73E+01	1	1
CO-58	Ind	-1.53E+00	-3.10E+00	-1.17E-01	1.02E+01	4	0
CO-58	Cntl	2.61E+00	2.61E+00	2.61E+00	1.20E+01	1	0
CO-60	Ind	1.31E+00	-1.60E-02	3.11E+00	1.06E+01	4	0
CO-60	Cntl	2.35E+00	2.35E+00	2.35E+00	1.23E+01	1	0
CR-51	Ind	4.58E+00	-1.02E+01	2.28E+01	9.94E+01	4	0
CR-51	Cntl	1.42E+01	1.42E+01	1.42E+01	1.27E+02	1	0
CS-134	Ind	-1.47E+00	-2.70E+00	9.44E-02	8.74E+00	4	0
CS-134	Cntl	-1.05E+00	-1.05E+00	-1.05E+00	9.40E+00	1	0
CS-137	Ind	4.83E+01	2.37E+01	6.15E+01	7.86E+00	4	4
CS-137	Cntl	1.01E+02	1.01E+02	1.01E+02	8.73E+00	1	1
FE-59	Ind	1.04E+00	2.25E-02	3.56E+00	2.72E+01	4	0
FE-59	Cntl	-4.48E-01	-4.48E-01	-4.48E-01	3.14E+01	1	0
K-40	Ind	1.51E+04	1.48E+04	1.53E+04	7.82E+01	4	4
K-40	Cntl	1.38E+04	1.38E+04	1.38E+04	9.30E+01	1	1
MN-54	Ind	4.00E+00	-3.66E+00	1.12E+01	9.88E+00	4	0
MN-54	Cntl	1.04E+01	1.04E+01	1.04E+01	1.09E+01	1	0
NB-95	Ind	-4.32E+00	-6.95E+00	5.87E-01	1.43E+01	4	0
NB-95	Cntl	-9.99E+00	-9.99E+00	-9.99E+00	1.92E+01	1	0
RA-226	Ind	7.67E+02	4.30E+02	1.04E+03	1.56E+02	4	4
RA-226	Cntl	4.71E+02	4.71E+02	4.71E+02	1.77E+02	1	1
ZN-65	Ind	-1.23E+01	-2.58E+01	-3.91E-01	4.20E+01	4	0
ZN-65	Cntl	-3.24E+01	-3.24E+01	-3.24E+01	3.26E+01	1	0

Ind = Indicator Stations Cntl = Control Stations

TABLE A-9.1

GAMMA SPECTROMETRY RESULTS OF SEDIMENT

Results in pCi/Kilogram

Station 33 Upstream Control

Collection Period				6/18/2007		Collection Period				10/15/2007	
Nuclide	RQ	Activity		Error	MDA	Nuclide	RQ	Activity		Error	MDA
BE-7	+	1.51E+02	±	4.20E+01	5.57E+01	BE-7	+	1.26E+02	±	5.93E+01	8.17E+01
K-40	+	1.52E+04	±	2.57E+02	8.55E+01	K-40	+	1.73E+04	±	3.63E+02	1.22E+02
CR-51		2.35E+01	±	3.89E+01	6.33E+01	CR-51		-1.45E+01	±	4.12E+01	6.69E+01
MN-54		-1.09E+00	±	6.05E+00	9.90E+00	MN-54		-1.40E-02	±	5.27E+00	8.66E+00
CO-58		-1.40E+00	±	5.30E+00	8.65E+00	CO-58		-3.35E+00	±	7.19E+00	1.16E+01
FE-59		1.22E-01	±	1.22E+01	2.00E+01	FE-59		-7.38E+00	±	1.90E+01	3.08E+01
CO-60		-2.99E+00	±	5.86E+00	9.46E+00	CO-60		3.66E+00	±	7.58E+00	1.22E+01
ZN-65		-2.27E+01	±	1.60E+01	2.56E+01	ZN-65		-5.49E+01	±	2.64E+01	4.12E+01
NB-95		-5.82E+00	±	6.93E+00	1.12E+01	NB-95		-6.07E+00	±	9.65E+00	1.56E+01
CS-134		-2.41E-01	±	4.58E+00	7.52E+00	CS-134		-1.23E+00	±	5.30E+00	8.63E+00
CS-137	+	1.37E+02	±	8.98E+00	8.49E+00	CS-137	+	7.55E+01	±	1.08E+01	1.16E+01
BALA-140		-5.12E+00	±	6.03E+00	9.52E+00	BALA-140		-7.51E+00	±	1.06E+01	1.67E+01
BI-214	+	5.45E+02	±	2.11E+01	1.67E+01	BI-214	+	5.68E+02	±	2.73E+01	2.09E+01
RA-226	+	1.08E+03	±	1.18E+02	1.73E+02	RA-226	+	1.11E+03	±	1.56E+02	2.28E+02

Station 34 Downstream Indicator

Collection Period				6/18/2007		Collection Period				10/15/2007	
Nuclide	RQ	Activity		Error	MDA	Nuclide	RQ	Activity		Error	MDA
BE-7		6.96E+01	±	4.72E+01	7.68E+01	BE-7	+	1.47E+02	±	6.66E+01	8.88E+01
K-40	+	1.51E+04	±	2.59E+02	9.74E+01	K-40	+	1.67E+04	±	3.53E+02	1.10E+02
CR-51		7.43E+00	±	4.66E+01	7.76E+01	CR-51		-3.73E-01	±	6.40E+01	1.05E+02
MN-54		-4.11E-01	±	6.70E+00	1.12E+01	MN-54		9.57E-01	±	7.41E+00	1.24E+01
CO-58		-1.44E+00	±	5.93E+00	9.91E+00	CO-58		-3.83E+00	±	6.78E+00	1.09E+01
FE-59		-1.10E+01	±	1.44E+01	2.38E+01	FE-59		-5.49E+00	±	1.81E+01	2.94E+01
CO-60		1.94E+00	±	6.59E+00	1.10E+01	CO-60		3.81E+00	±	7.99E+00	1.29E+01
ZN-65		-2.94E+01	±	1.75E+01	2.83E+01	ZN-65		-2.52E+01	±	2.26E+01	3.61E+01
NB-95		-9.23E+00	±	7.82E+00	1.28E+01	NB-95		-1.63E-01	±	9.79E+00	1.61E+01
CS-134		-7.77E+00	±	5.67E+00	9.24E+00	CS-134		-2.87E+00	±	6.89E+00	1.12E+01
CS-137	+	1.30E+02	±	9.85E+00	1.04E+01	CS-137	+	1.44E+02	±	1.15E+01	1.07E+01
BALA-140		4.45E+00	±	1.08E+00	8.07E+00	BALA-140		-3.49E-01	±	8.96E+00	1.47E+01
BI-214	+	8.02E+02	±	2.53E+01	1.87E+01	BI-214	+	6.26E+02	±	3.00E+01	2.31E+01
RA-226	+	1.66E+03	±	1.38E+02	2.00E+02	RA-226	+	1.28E+03	±	1.63E+02	2.35E+02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-9.2

GAMMA SPECTROMETRY RESULTS OF SEDIMENT - SUMMARY

Results in pCi/Kilogram

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
BALA-140	Ind	2.05E+00	-3.49E-01	4.45E+00	1.14E+01	2	0
BALA-140	Cntl	-6.31E+00	-7.51E+00	-5.12E+00	1.31E+01	2	0
BE-7	Ind	1.08E+02	6.96E+01	1.47E+02	8.28E+01	2	1
BE-7	Cntl	1.39E+02	1.26E+02	1.51E+02	6.87E+01	2	2
BI-214	Ind	7.14E+02	6.26E+02	8.02E+02	2.09E+01	2	2
BI-214	Cntl	5.57E+02	5.45E+02	5.68E+02	1.88E+01	2	2
CO-58	Ind	-2.63E+00	-3.83E+00	-1.44E+00	1.04E+01	2	0
CO-58	Cntl	-2.38E+00	-3.35E+00	-1.40E+00	1.01E+01	2	0
CO-60	Ind	2.88E+00	1.94E+00	3.81E+00	1.19E+01	2	0
CO-60	Cntl	3.35E-01	-2.99E+00	3.66E+00	1.08E+01	2	0
CR-51	Ind	3.53E+00	-3.73E-01	7.43E+00	9.15E+01	2	0
CR-51	Cntl	4.51E+00	-1.45E+01	2.35E+01	6.51E+01	2	0
CS-134	Ind	-5.32E+00	-7.77E+00	-2.87E+00	1.02E+01	2	0
CS-134	Cntl	-7.33E-01	-1.23E+00	-2.41E-01	8.07E+00	2	0
CS-137	Ind	1.37E+02	1.30E+02	1.44E+02	1.05E+01	2	2
CS-137	Cntl	1.06E+02	7.55E+01	1.37E+02	1.01E+01	2	2
FE-59	Ind	-8.26E+00	-1.10E+01	-5.49E+00	2.66E+01	2	0
FE-59	Cntl	-3.63E+00	-7.38E+00	1.22E-01	2.54E+01	2	0
K-40	Ind	1.59E+04	1.51E+04	1.67E+04	1.04E+02	2	2
K-40	Cntl	1.62E+04	1.52E+04	1.73E+04	1.04E+02	2	2
MN-54	Ind	2.73E-01	-4.11E-01	9.57E-01	1.18E+01	2	0
MN-54	Cntl	-5.52E-01	-1.09E+00	-1.40E-02	9.28E+00	2	0
NB-95	Ind	-4.69E+00	-9.23E+00	-1.63E-01	1.44E+01	2	0
NB-95	Cntl	-5.94E+00	-6.07E+00	-5.82E+00	1.34E+01	2	0
RA-226	Ind	1.47E+03	1.28E+03	1.66E+03	2.17E+02	2	2
RA-226	Cntl	1.09E+03	1.08E+03	1.11E+03	2.00E+02	2	2
ZN-65	Ind	-2.73E+01	-2.94E+01	-2.52E+01	3.22E+01	2	0
ZN-65	Cntl	-3.88E+01	-5.49E+01	-2.27E+01	3.34E+01	2	0

Ind = Indicator Stations Cntl = Control Stations

TABLE A-10.1

GAMMA SPECTROMETRY RESULTS OF FISH

Station 30 Columbia River - Station 38 Snake River

Results in pCi/kilogram (wet)

Location & Species	Collection Date	Nuclide	RQ	Activity		Error	MDA
Steelhead	12/05/07	Be-7		-2.49E+01	±	5.41E+01	8.51E+01
Station 30		K-40	+	3.16E+03	±	2.18E+02	8.60E+01
Indicator		Cr-51		2.44E+00	±	8.73E+01	1.43E+02
		Mn-54		1.39E-02	±	4.42E+00	7.27E+00
		Co-58		2.84E+00	±	6.15E+00	9.57E+00
		Fe-59		-4.41E+00	±	2.28E+01	3.66E+01
		Co-60		2.28E+00	±	6.47E+00	1.02E+01
		Zn-65		-4.61E+00	±	1.42E+01	2.26E+01
		ZrNb-95		4.63E-01	±	4.99E+00	8.10E+00
		Cs-134		-1.45E+00	±	4.31E+00	6.85E+00
		Cs-137		-8.42E-01	±	4.71E+00	7.60E+00
		BaLa-140		8.11E+00	±	1.61E+01	1.42E+01
		Bi-214		-1.08E+01	±	5.49E+03	1.66E+01
		Ra-226		-6.26E+01	±	2.58E+02	1.86E+02
Sucker	11/06/07	Be-7		1.86E+01	±	7.59E+01	1.21E+02
Station 30		K-40	+	3.88E+03	±	2.67E+02	9.37E+01
Indicator		Cr-51		-8.40E+01	±	1.98E+02	3.13E+02
		Mn-54		9.50E-01	±	2.11E+01	1.33E+01
		Co-58		2.36E+00	±	9.59E+00	1.53E+01
		Fe-59		-7.21E+00	±	4.89E+01	7.89E+01
		Co-60		1.97E-01	±	6.78E+00	1.11E+01
		Zn-65		1.63E+01	±	1.29E+01	1.69E+01
		ZrNb-95		-7.27E+00	±	1.29E+01	2.00E+01
		Cs-134		-9.39E-01	±	5.19E+00	8.37E+00
		Cs-137	+	9.61E+00	±	6.03E+00	8.15E+00
		BaLa-140		-8.91E+00	±	2.51E+02	4.10E+02
		Bi-214		-5.25E+00	±	2.52E+01	2.10E+01
		Ra-226		-1.29E+01	±	1.48E+02	2.27E+02
White Fish	12/17/07	Be-7		3.10E+01	±	4.21E+01	6.34E+01
Station 30		K-40	+	2.74E+03	±	2.09E+02	9.55E+01
Indicator		Cr-51		-2.01E+01	±	6.51E+01	1.04E+02
		Mn-54		-1.66E+00	±	4.82E+00	7.62E+00
		Co-58		-2.32E+00	±	6.05E+00	9.53E+00
		Fe-59		3.12E-01	±	1.99E+01	3.27E+01
		Co-60		4.35E+00	±	5.03E+00	7.28E+00
		Zn-65		1.41E+00	±	9.58E+00	1.54E+01
		ZrNb-95		4.73E-01	±	6.01E+00	9.79E+00
		Cs-134		-1.22E+00	±	3.89E+00	6.18E+00
		Cs-137	+	6.72E+00	±	4.45E+00	5.97E+00
		BaLa-140		-2.24E+00	±	2.43E+01	3.92E+01
		Bi-214		-3.20E+00	±	1.60E+01	1.64E+01
		Ra-226		4.35E+01	±	1.03E+02	1.78E+02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-10.1

GAMMA SPECTROMETRY RESULTS OF FISH

Station 30 Columbia River - Station 38 Snake River

Results in pCi/kilogram (wet)

Location & Species	Collection Date	Nuclide	RQ	Activity		Error	MDA
Steelhead	12/04/07	Be-7		2.98E+01	±	5.23E+01	8.01E+01
Station 38		K-40	+	3.10E+03	±	2.27E+02	8.98E+01
Control		Cr-51		1.03E+01	±	9.62E+01	1.57E+02
		Mn-54		-1.20E+00	±	5.06E+00	8.08E+00
		Co-58		1.62E+00	±	6.07E+00	9.61E+00
		Fe-59		-4.30E+00	±	2.65E+01	4.26E+01
		Co-60		3.44E+00	±	6.47E+00	9.99E+00
		Zn-65		9.87E-01	±	8.69E+00	1.40E+01
		ZrNb-95		-6.57E-02	±	6.69E+00	1.10E+01
		Cs-134		-1.53E-01	±	4.31E+00	7.05E+00
		Cs-137		3.30E+00	±	4.25E+00	6.25E+00
		BaLa-140		2.79E+01	±	4.24E+01	5.82E+01
		Bi-214		-3.40E-01	±	9.44E+00	1.66E+01
		Ra-226		-1.45E+01	±	1.33E+02	1.97E+02
White Fish	12/18/07	Be-7		1.22E+01	±	4.97E+01	7.96E+01
Station 38		K-40	+	3.22E+03	±	2.35E+02	1.05E+02
Control		Cr-51		1.68E+01	±	6.78E+01	1.09E+02
		Mn-54		3.23E+00	±	3.07E+00	3.91E+00
		Co-58		7.19E-01	±	5.17E+00	8.34E+00
		Fe-59		-6.39E+00	±	2.26E+01	3.59E+01
		Co-60		-3.78E-01	±	6.94E+00	1.14E+01
		Zn-65		9.82E-01	±	1.36E+01	2.22E+01
		ZrNb-95		9.73E-01	±	6.01E+00	9.69E+00
		Cs-134		-1.15E+00	±	3.96E+00	6.29E+00
		Cs-137		1.81E+00	±	5.18E+00	8.20E+00
		BaLa-140		8.12E-01	±	2.43E+01	3.97E+01
		Bi-214		-1.39E+00	±	1.21E+01	1.77E+01
		Ra-226		2.32E+01	±	1.16E+02	2.01E+02
Sucker	12/06/07	Be-7		-2.24E+01	±	6.51E+01	1.04E+02
Station 38		K-40	+	3.96E+03	±	2.59E+02	1.03E+02
Control		Cr-51		1.20E+01	±	9.59E+01	1.56E+02
		Mn-54		-5.35E-01	±	5.72E+00	9.30E+00
		Co-58		-9.95E-01	±	6.27E+00	1.01E+01
		Fe-59		-2.71E+00	±	3.19E+01	5.19E+01
		Co-60		-2.00E+00	±	7.13E+00	1.14E+01
		Zn-65		2.38E+00	±	1.12E+01	1.79E+01
		ZrNb-95		-2.40E+00	±	7.46E+00	1.18E+01
		Cs-134		4.71E-01	±	3.21E+00	5.16E+00
		Cs-137		2.98E+00	±	4.42E+00	6.64E+00
		BaLa-140		3.16E+00	±	4.72E+01	7.67E+01
		Bi-214		-4.41E+00	±	1.97E+01	1.74E+01
		Ra-226		-2.57E+01	±	1.63E+02	2.08E+02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-10.2

GAMMA SPECTROMETRY RESULTS OF FISH - SUMMARY

Results in pCi/kilogram (wet)

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
BaLa-140	Ind	-1.01E+00	-8.91E+00	8.11E+00	1.54E+02	3	0
BaLa-140	Ctl	1.06E+01	8.12E-01	2.79E+01	5.82E+01	3	0
Be-7	Ind	8.23E+00	-2.49E+01	3.10E+01	8.98E+01	3	0
Be-7	Cntl	6.54E+00	-2.24E+01	2.98E+01	8.78E+01	3	0
Bi-214	Ind	-6.42E+00	-1.08E+01	-3.20E+00	1.80E+01	3	0
Bi-214	Cntl	-2.05E+00	-4.41E+00	-3.40E-01	1.72E+01	3	0
Co-58	Ind	9.61E-01	-2.32E+00	2.84E+00	1.15E+01	3	0
Co-58	Cntl	4.47E-01	-9.95E-01	1.62E+00	9.35E+00	3	0
Co-60	Ind	2.27E+00	1.97E-01	4.35E+00	9.54E+00	3	0
Co-60	Cntl	3.56E-01	-2.00E+00	3.44E+00	1.09E+01	3	0
Cr-51	Ind	-3.39E+01	-8.40E+01	2.44E+00	1.87E+02	3	0
Cr-51	Cntl	1.30E+01	1.03E+01	1.68E+01	1.41E+02	3	0
Cs-134	Ind	-1.20E+00	-1.45E+00	-9.39E-01	7.14E+00	3	0
Cs-134	Cntl	-2.77E-01	-1.15E+00	4.71E-01	6.17E+00	3	0
Cs-137	Ind	5.16E+00	-8.42E-01	9.61E+00	7.24E+00	3	2
Cs-137	Cntl	2.70E+00	1.81E+00	3.30E+00	7.03E+00	3	0
Fe-59	Ind	-3.77E+00	-7.21E+00	3.12E-01	4.94E+01	3	0
Fe-59	Cntl	-4.47E+00	-6.39E+00	-2.71E+00	4.35E+01	3	0
K-40	Ind	3.26E+03	2.74E+03	3.88E+03	9.17E+01	3	3
K-40	Cntl	3.43E+03	3.10E+03	3.96E+03	9.94E+01	3	3
Mn-54	Ind	-2.32E-01	-1.66E+00	9.50E-01	9.39E+00	3	0
Mn-54	Cntl	5.00E-01	-1.20E+00	3.23E+00	7.10E+00	3	0
Ra-226	Ind	-1.06E+01	-6.26E+01	4.35E+01	1.97E+02	3	0
Ra-226	Cntl	-5.70E+00	-2.57E+01	2.32E+01	2.02E+02	3	0
Zn-65	Ind	4.38E+00	-4.61E+00	1.63E+01	1.83E+01	3	0
Zn-65	Cntl	1.45E+00	9.82E-01	2.38E+00	1.80E+01	3	0
ZrNb-95	Ind	-2.11E+00	-7.27E+00	4.73E-01	1.26E+01	3	0
ZrNb-95	Cntl	-4.98E-01	-2.40E+00	9.73E-01	1.08E+01	3	0

Ind = Indicator Stations Cntl = Control Stations

TABLE A-11.1

IODINE 131 IN MILK

Results in pCi/liter, decay corrected to sample collection time

Collection Date	Station 9b Control RQ	I-131 Activity		Error	I-131 MDA	Station 36 Indicator RQ	I-131 Activity		Error	I-131 MDA
01/22/07		-9.25E-02	±	3.77E-01	6.30E-01		3.37E-03	±	3.45E-01	5.81E-01
02/26/07		-1.77E-02	±	4.08E-01	6.85E-01		-1.29E-01	±	3.90E-01	6.50E-01
03/26/07		-1.13E-01	±	4.14E-01	6.93E-01		7.14E-02	±	3.74E-01	6.26E-01
04/09/07		-9.30E-02	±	3.55E-01	5.94E-01		-6.64E-02	±	3.35E-01	5.61E-01
04/23/07		4.62E-02	±	3.57E-01	5.99E-01		-6.33E-02	±	3.14E-01	5.27E-01
05/07/07		-3.12E-03	±	3.29E-01	5.53E-01		-1.41E-01	±	3.64E-01	6.07E-01
05/21/07		8.96E-02	±	2.64E-01	4.30E-01		-1.54E-01	±	3.47E-01	5.77E-01
06/11/07		-1.43E-01	±	3.78E-01	6.31E-01		1.35E-01	±	3.59E-01	5.98E-01
06/26/07		7.96E-02	±	2.97E-01	4.95E-01		-2.04E-02	±	2.77E-01	4.65E-01
07/09/07		5.09E-03	±	3.70E-01	6.22E-01		8.58E-02	±	2.88E-01	4.81E-01
07/23/07		7.59E-02	±	3.78E-01	6.17E-01		6.25E-02	±	2.64E-01	4.31E-01
08/06/07		-1.52E-02	±	2.99E-01	4.90E-01		1.39E-01	±	3.75E-01	6.11E-01
08/20/07		-6.75E-02	±	3.89E-01	6.36E-01		-1.26E-01	±	2.97E-01	4.94E-01
09/10/07		3.52E-02	±	2.84E-01	4.76E-01		-1.20E-01	±	3.56E-01	5.80E-01
09/24/07		-4.91E-03	±	3.47E-01	5.71E-01		-4.34E-03	±	2.81E-01	4.73E-01
10/22/07		-1.63E-02	±	5.03E-01	8.26E-01		1.83E-03	±	3.36E-01	5.51E-01
11/12/07		5.48E-03	±	2.94E-01	4.95E-01		1.63E-01	±	2.59E-01	4.29E-01
12/17/07		-1.10E-02	±	3.12E-01	5.24E-01		1.68E-01	±	2.67E-01	4.42E-01

TABLE A-11.2

IODINE 131 IN MILK - SUMMARY

Results in pCi/liter, decay corrected to sample collection time

Location	Average Activity	Activity Low	Activity High	Average MDA	Number Samples	Number Positive IDs
Indicator- St 36	3.47E-04	-1.54E-01	1.68E-01	5.38E-01	18	0
Control - St 9b	-1.33E-02	-1.43E-01	8.96E-02	5.87E-01	18	0

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-12.1

GAMMA SPECTROMETRY RESULTS OF MILK

STATION 9b

Results in pCi/liter

Collection Period				1/22/2007
Nuclide	RQ	Activity	Error	MDA
CO-60		-5.10E-03 ±	1.27E+00	2.20E+00
ZN-65		-7.89E-03 ±	3.03E+00	5.19E+00
MN-54		3.57E-01 ±	1.13E+00	1.92E+00
CS-134		9.47E-02 ±	1.10E+00	1.87E+00
CS-137		3.64E-01 ±	1.22E+00	2.06E+00
BALA-140		-2.67E-01 ±	1.38E+00	2.40E+00
K-40	+	1.42E+03 ±	5.09E+01	2.56E+01
FE-59		-1.36E-01 ±	3.08E+00	5.24E+00
ZR-95		1.26E+00 ±	2.16E+00	3.59E+00

Collection Period				2/26/2007
Nuclide	RQ	Activity	Error	MDA
CO-60		3.02E-01 ±	1.29E+00	2.20E+00
ZN-65		8.20E-01 ±	3.18E+00	5.38E+00
MN-54		-1.13E-01 ±	1.47E+00	2.50E+00
CS-134		-2.91E-01 ±	1.05E+00	1.78E+00
CS-137		3.16E-01 ±	1.28E+00	2.16E+00
BALA-140		1.65E-02 ±	1.68E+00	2.97E+00
K-40	+	1.45E+03 ±	5.06E+01	2.48E+01
FE-59		4.94E-01 ±	3.21E+00	5.44E+00
ZR-95		-2.34E-01 ±	2.36E+00	4.01E+00

Collection Period				3/26/2007
Nuclide	RQ	Activity	Error	MDA
CO-60		5.08E-01 ±	1.20E+00	2.02E+00
ZN-65		6.84E-01 ±	3.00E+00	5.08E+00
MN-54		-6.81E-02 ±	1.17E+00	2.01E+00
CS-134		1.45E-01 ±	6.68E-01	1.15E+00
CS-137		4.36E-01 ±	1.30E+00	2.19E+00
BALA-140		4.52E-01 ±	1.31E+00	2.25E+00
K-40	+	1.43E+03 ±	5.07E+01	2.49E+01
FE-59		9.68E-01 ±	2.75E+00	4.63E+00
ZR-95		-4.71E-02 ±	2.08E+00	3.56E+00

Collection Period				4/9/2007
Nuclide	RQ	Activity	Error	MDA
CO-60		6.27E-01 ±	1.35E+00	2.28E+00
ZN-65		2.22E+00 ±	2.88E+00	4.76E+00
MN-54		4.05E-01 ±	1.13E+00	1.91E+00
CS-134		-2.55E-01 ±	1.18E+00	1.99E+00
CS-137		2.91E-02 ±	1.29E+00	2.21E+00
BALA-140		5.31E-01 ±	1.17E+00	1.99E+00
K-40	+	1.44E+03 ±	5.22E+01	2.70E+01
FE-59		4.50E-02 ±	2.89E+00	4.94E+00
ZR-95		3.22E-02 ±	2.30E+00	3.92E+00

Collection Period				4/23/2007
Nuclide	RQ	Activity	Error	MDA
CO-60		-4.61E-01 ±	1.38E+00	2.34E+00
ZN-65		1.05E+00 ±	3.03E+00	5.11E+00
MN-54		-2.08E-02 ±	1.21E+00	2.07E+00
CS-134		-6.81E-01 ±	1.18E+00	1.97E+00
CS-137		-5.56E-01 ±	1.38E+00	2.31E+00
BALA-140		1.08E-01 ±	1.10E+00	1.94E+00
K-40	+	1.42E+03 ±	5.08E+01	2.56E+01
FE-59		1.41E-01 ±	3.46E+00	5.87E+00
ZR-95		1.25E+00 ±	2.03E+00	3.38E+00

Collection Period				5/7/2007
Nuclide	RQ	Activity	Error	MDA
CO-60		8.23E-01 ±	1.29E+00	2.16E+00
ZN-65		-6.10E-01 ±	3.34E+00	5.65E+00
MN-54		-8.06E-01 ±	1.35E+00	2.25E+00
CS-134		-9.18E-02 ±	1.16E+00	1.97E+00
CS-137		-1.78E-01 ±	1.25E+00	2.13E+00
BALA-140		6.85E-02 ±	1.11E+00	1.96E+00
K-40	+	1.46E+03 ±	5.18E+01	2.69E+01
FE-59		6.75E-02 ±	2.86E+00	4.89E+00
ZR-95		9.41E-01 ±	2.26E+00	3.79E+00

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-12.1

GAMMA SPECTROMETRY RESULTS OF MILK

STATION 9b

Results in pCi/liter

Collection Period		5/21/2007		
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
CO-60		-2.45E-02 ±	1.22E+00	2.11E+00
ZN-65		-8.94E-01 ±	3.31E+00	5.59E+00
MN-54		4.52E-01 ±	1.17E+00	1.96E+00
CS-134		-4.21E-01 ±	1.17E+00	1.97E+00
CS-137		1.79E-02 ±	1.30E+00	2.21E+00
BALA-140		8.19E-01 ±	1.15E+00	1.91E+00
K-40	+	1.39E+03 ±	4.98E+01	2.51E+01
FE-59		-1.28E+00 ±	3.08E+00	5.15E+00
ZR-95		-5.12E-01 ±	2.13E+00	3.60E+00

Collection Period		6/11/2007		
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
CO-60		-5.77E-01 ±	1.50E+00	2.54E+00
ZN-65		-7.48E-01 ±	3.36E+00	5.68E+00
MN-54		-5.25E-01 ±	1.32E+00	2.22E+00
CS-134		2.82E-01 ±	1.12E+00	1.90E+00
CS-137		-7.33E-03 ±	1.29E+00	2.20E+00
BALA-140		-3.70E-01 ±	1.44E+00	2.48E+00
K-40	+	1.47E+03 ±	5.20E+01	2.49E+01
FE-59		-3.24E-01 ±	2.95E+00	5.02E+00
ZR-95		9.05E-01 ±	2.13E+00	3.57E+00

Collection Period		6/25/2007		
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
CO-60		-3.19E-01 ±	1.34E+00	2.29E+00
ZN-65		5.47E-02 ±	3.05E+00	5.21E+00
MN-54		-6.13E-02 ±	1.16E+00	1.99E+00
CS-134		2.17E-01 ±	1.00E+00	1.70E+00
CS-137		4.00E-01 ±	1.25E+00	2.11E+00
BALA-140		1.05E-01 ±	1.63E+00	2.86E+00
K-40	+	1.43E+03 ±	5.06E+01	2.73E+01
FE-59		2.58E+00 ±	2.96E+00	4.85E+00
ZR-95		9.84E-02 ±	2.29E+00	3.91E+00

Collection Period		7/9/2007		
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
CO-60		8.04E-01 ±	1.47E+00	2.46E+00
ZN-65		1.98E-01 ±	3.57E+00	6.12E+00
MN-54		4.24E-01 ±	1.33E+00	2.26E+00
CS-134		-3.50E-01 ±	1.24E+00	2.10E+00
CS-137		3.72E-01 ±	1.48E+00	2.50E+00
BALA-140		7.15E-02 ±	1.60E+00	2.88E+00
K-40	+	1.42E+03 ±	5.87E+01	3.15E+01
FE-59		-1.08E-02 ±	3.56E+00	6.12E+00
ZR-95		2.22E-01 ±	5.28E-01	1.35E+00

Collection Period		7/23/2007		
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
CO-60		-1.88E-02 ±	1.26E+00	2.18E+00
ZN-65		1.89E+00 ±	3.06E+00	5.08E+00
MN-54		5.88E-01 ±	1.10E+00	1.83E+00
CS-134		-5.62E-02 ±	9.91E-01	1.69E+00
CS-137		-1.29E-01 ±	1.27E+00	2.16E+00
BALA-140		7.80E-01 ±	1.19E+00	1.99E+00
K-40	+	1.48E+03 ±	5.16E+01	2.70E+01
FE-59		-5.50E-01 ±	3.01E+00	5.09E+00
ZR-95		-7.24E-01 ±	2.34E+00	3.95E+00

Collection Period		8/6/2007		
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
CO-60		2.73E-01 ±	1.34E+00	2.29E+00
ZN-65		-7.49E-02 ±	3.29E+00	5.61E+00
MN-54		6.34E-01 ±	1.17E+00	1.95E+00
CS-134		1.09E-02 ±	1.09E+00	1.86E+00
CS-137		2.52E-01 ±	1.36E+00	2.29E+00
BALA-140		2.53E-01 ±	1.54E+00	2.70E+00
K-40	+	1.46E+03 ±	5.09E+01	2.63E+01
FE-59		2.51E-01 ±	3.24E+00	5.51E+00
ZR-95		-8.44E-01 ±	2.37E+00	3.98E+00

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-12.1

GAMMA SPECTROMETRY RESULTS OF MILK

STATION 9b

Results in pCi/liter

Collection Period				8/20/2007		Collection Period				9/10/2007	
Nuclide	RQ	Activity		Error	MDA	Nuclide	RQ	Activity		Error	MDA
CO-60		2.17E-01	±	1.39E+00	2.42E+00	CO-60		-3.06E-01	±	1.31E+00	2.27E+00
ZN-65		1.11E+00	±	2.27E+00	3.83E+00	ZN-65		-5.70E-01	±	2.80E+00	4.80E+00
MN-54		-1.03E-01	±	1.07E+00	1.85E+00	MN-54		-6.85E-01	±	1.35E+00	2.27E+00
CS-134		-1.82E-01	±	9.20E-01	1.58E+00	CS-134		-7.25E-02	±	1.18E+00	2.03E+00
CS-137		2.00E-01	±	9.18E-01	1.59E+00	CS-137		4.51E-01	±	9.44E-01	1.60E+00
BALA-140		4.46E-01	±	1.26E+00	2.20E+00	BALA-140		5.73E-01	±	1.65E+00	2.87E+00
K-40	+	1.39E+03	±	5.78E+01	3.08E+01	K-40	+	1.39E+03	±	5.74E+01	3.04E+01
FE-59		-8.70E-01	±	2.91E+00	4.95E+00	FE-59		9.70E-01	±	2.81E+00	4.77E+00
ZR-95		1.37E+00	±	2.19E+00	3.65E+00	ZR-95		-6.56E-02	±	2.09E+00	3.62E+00

Collection Period				9/24/2007		Collection Period				10/22/2007	
Nuclide	RQ	Activity		Error	MDA	Nuclide	RQ	Activity		Error	MDA
CO-60		2.35E-03	±	1.50E+00	2.62E+00	CO-60		4.16E-01	±	1.22E+00	2.07E+00
ZN-65		1.00E-02	±	3.23E+00	5.57E+00	ZN-65		9.08E-01	±	2.83E+00	4.78E+00
MN-54		-6.04E-02	±	1.40E+00	2.40E+00	MN-54		-4.44E-01	±	1.12E+00	1.89E+00
CS-134		-4.78E-01	±	1.34E+00	2.26E+00	CS-134		2.07E-01	±	5.32E-01	1.93E+00
CS-137		2.94E-01	±	1.27E+00	2.17E+00	CS-137		1.72E-02	±	1.09E+00	1.88E+00
BALA-140		-5.64E-01	±	1.97E+00	3.42E+00	BALA-140		-9.62E-03	±	1.27E+00	2.25E+00
K-40	+	1.39E+03	±	5.72E+01	2.98E+01	K-40	+	1.44E+03	±	5.29E+01	2.91E+01
FE-59		-2.03E-01	±	3.88E+00	6.63E+00	FE-59		-9.89E-01	±	2.81E+00	4.74E+00
ZR-95		1.76E-01	±	2.78E+00	4.76E+00	ZR-95		-3.75E-02	±	1.86E+00	3.20E+00

Collection Period				11/12/2007		Collection Period				12/17/2007	
Nuclide	RQ	Activity		Error	MDA	Nuclide	RQ	Activity		Error	MDA
CO-60		9.49E-03	±	1.60E+00	2.98E+00	CO-60		3.22E-01	±	1.29E+00	2.22E+00
ZN-65		7.51E-02	±	3.55E+00	6.45E+00	ZN-65		-2.82E-01	±	2.79E+00	4.82E+00
MN-54		-2.04E-01	±	1.74E+00	3.07E+00	MN-54		-4.99E-01	±	1.29E+00	2.18E+00
CS-134		-4.08E-01	±	1.62E+00	2.81E+00	CS-134		-4.13E-01	±	1.29E+00	2.18E+00
CS-137		7.78E-01	±	1.80E+00	3.09E+00	CS-137		9.58E-02	±	1.21E+00	2.09E+00
BALA-140		4.60E-01	±	1.97E+00	3.59E+00	BALA-140		-4.38E-02	±	1.12E+00	2.03E+00
K-40	+	1.42E+03	±	8.82E+01	4.51E+01	K-40	+	1.46E+03	±	5.85E+01	3.01E+01
FE-59		6.74E-01	±	4.12E+00	7.25E+00	FE-59		1.37E-01	±	2.59E+00	4.49E+00
ZR-95		-7.04E-01	±	3.40E+00	5.92E+00	ZR-95		4.31E-01	±	2.14E+00	3.67E+00

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-12.1

GAMMA SPECTROMETRY RESULTS OF MILK

STATION 36

Results in pCi/liter

Collection Period				1/22/2007		2/27/2007		
Nuclide	**RQ**	**Activity**		**Error**	**MDA**	**Activity**		**Error**	**MDA**
CO-60		-1.91E-02	±	1.34E+00	2.31E+00	9.86E-03	±	1.26E+00	2.19E+00
ZN-65		-8.86E-01	±	3.05E+00	5.15E+00	-9.66E-01	±	3.13E+00	5.28E+00
MN-54		2.48E-01	±	1.23E+00	2.09E+00	-7.06E-02	±	1.27E+00	2.17E+00
CS-134		6.10E-01	±	1.04E+00	1.73E+00	2.55E-02	±	1.06E+00	1.81E+00
CS-137		2.71E-01	±	1.32E+00	2.23E+00	5.89E-01	±	1.24E+00	2.07E+00
BALA-140		-3.11E-01	±	1.31E+00	2.26E+00	3.41E-02	±	1.53E+00	2.71E+00
K-40	+	1.49E+03	±	5.15E+01	2.54E+01	1.34E+03	±	5.00E+01	2.62E+01
FE-59		7.93E-01	±	2.65E+00	4.48E+00	1.14E+00	±	2.74E+00	4.61E+00
ZR-95		-1.69E-02	±	2.12E+00	3.63E+00	1.31E-01	±	2.19E+00	3.74E+00

Collection Period				3/26/2007		4/9/2007		
Nuclide	**RQ**	**Activity**		**Error**	**MDA**	**Activity**		**Error**	**MDA**
CO-60		-3.91E-02	±	1.55E+00	2.67E+00	-6.87E-02	±	1.37E+00	2.37E+00
ZN-65		-9.39E-01	±	3.52E+00	5.93E+00	1.04E+00	±	3.03E+00	5.11E+00
MN-54		-2.98E-01	±	1.29E+00	2.19E+00	4.04E-01	±	1.13E+00	1.91E+00
CS-134		5.54E-02	±	1.07E+00	1.83E+00	7.68E-01	±	1.03E+00	1.70E+00
CS-137		7.14E-01	±	1.23E+00	2.05E+00	6.08E-02	±	1.28E+00	2.18E+00
BALA-140		8.10E-02	±	1.43E+00	2.50E+00	-3.82E-01	±	1.33E+00	2.28E+00
K-40	+	1.44E+03	±	5.12E+01	2.75E+01	1.39E+03	±	5.03E+01	2.57E+01
FE-59		-7.32E-02	±	2.95E+00	5.03E+00	9.13E-02	±	2.86E+00	4.87E+00
ZR-95		3.03E-01	±	1.19E+00	2.06E+00	2.13E-01	±	1.66E-01	2.21E+00

Collection Period				4/23/2007		5/7/2007		
Nuclide	**RQ**	**Activity**		**Error**	**MDA**	**Activity**		**Error**	**MDA**
CO-60		3.06E-01	±	1.38E+00	2.35E+00	9.81E-01	±	8.22E-01	1.43E+00
ZN-65		2.25E-01	±	3.00E+00	5.12E+00	8.05E-01	±	3.05E+00	5.15E+00
MN-54		-5.04E-02	±	1.26E+00	2.15E+00	-1.54E-03	±	1.14E+00	1.96E+00
CS-134		-4.77E-01	±	1.12E+00	1.87E+00	5.11E-01	±	1.08E+00	1.80E+00
CS-137		5.46E-01	±	1.16E+00	1.94E+00	-2.15E-01	±	1.33E+00	2.25E+00
BALA-140		-2.42E-01	±	1.23E+00	2.13E+00	-2.53E-01	±	1.19E+00	2.08E+00
K-40	+	1.38E+03	±	4.97E+01	2.48E+01	1.41E+03	±	5.06E+01	2.57E+01
FE-59		-2.90E-01	±	2.78E+00	4.73E+00	-2.18E+00	±	3.28E+00	5.44E+00
ZR-95		2.17E+00	±	1.43E+00	3.52E+00	6.03E-01	±	2.16E+00	3.65E+00

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-12.1

GAMMA SPECTROMETRY RESULTS OF MILK

STATION 36

Results in pCi/liter

Collection Period				5/21/2007	
Nuclide	RQ	Activity	Error	MDA	
CO-60		1.58E-01 ±	1.38E+00	2.37E+00	
ZN-65		1.15E+00 ±	2.91E+00	4.90E+00	
MN-54		-2.52E-01 ±	1.17E+00	1.99E+00	
CS-134		2.70E-01 ±	1.03E+00	1.74E+00	
CS-137		6.61E-01 ±	1.32E+00	2.20E+00	
BALA-140		3.03E-01 ±	1.16E+00	2.02E+00	
K-40	+	1.44E+03 ±	5.21E+01	2.64E+01	
FE-59		2.85E-01 ±	2.99E+00	5.08E+00	
ZR-95		2.85E-01 ±	2.02E+00	3.45E+00	

Collection Period				6/11/2007	
Nuclide	RQ	Activity	Error	MDA	
CO-60		6.08E-01 ±	1.30E+00	2.19E+00	
ZN-65		5.01E-01 ±	3.04E+00	5.16E+00	
MN-54		4.69E-01 ±	1.15E+00	1.93E+00	
CS-134		-4.12E-01 ±	1.17E+00	1.96E+00	
CS-137		-5.03E-01 ±	1.37E+00	2.30E+00	
BALA-140		-2.24E-01 ±	1.21E+00	2.11E+00	
K-40	+	1.45E+03 ±	5.09E+01	2.48E+01	
FE-59		5.61E-01 ±	2.72E+00	4.61E+00	
ZR-95		9.27E-02 ±	2.33E+00	3.97E+00	

Collection Period				6/26/2007	
Nuclide	RQ	Activity	Error	MDA	
CO-60		-3.10E-01 ±	1.31E+00	2.23E+00	
ZN-65		-5.30E-01 ±	3.24E+00	5.50E+00	
MN-54		-2.62E-01 ±	1.30E+00	2.20E+00	
CS-134		-1.12E-02 ±	1.08E+00	1.84E+00	
CS-137		8.08E-01 ±	1.36E+00	2.25E+00	
BALA-140		2.68E-02 ±	1.60E+00	2.81E+00	
K-40	+	1.48E+03 ±	5.48E+01	3.01E+01	
FE-59		9.81E-01 ±	3.23E+00	5.45E+00	
ZR-95		-7.42E-01 ±	2.27E+00	3.82E+00	

Collection Period				7/9/2007	
Nuclide	RQ	Activity	Error	MDA	
CO-60		5.70E-01 ±	1.40E+00	2.37E+00	
ZN-65		3.79E-01 ±	3.25E+00	5.52E+00	
MN-54		-4.91E-02 ±	1.29E+00	2.21E+00	
CS-134		-3.27E-01 ±	1.17E+00	1.97E+00	
CS-137		5.43E-01 ±	1.39E+00	2.34E+00	
BALA-140		-1.80E-01 ±	1.40E+00	2.44E+00	
K-40	+	1.49E+03 ±	5.31E+01	2.70E+01	
FE-59		-1.53E+00 ±	3.23E+00	5.41E+00	
ZR-95		-5.38E-02 ±	2.06E+00	3.54E+00	

Collection Period				7/23/2007	
Nuclide	RQ	Activity	Error	MDA	
CO-60		5.80E-03 ±	1.48E+00	2.57E+00	
ZN-65		1.01E-02 ±	3.29E+00	5.68E+00	
MN-54		-5.34E-03 ±	1.40E+00	2.41E+00	
CS-134		-1.46E-02 ±	1.32E+00	2.26E+00	
CS-137		8.46E-02 ±	1.44E+00	2.47E+00	
BALA-140		-1.04E-01 ±	1.47E+00	2.59E+00	
K-40	+	1.43E+03 ±	5.81E+01	3.08E+01	
FE-59		1.34E+00 ±	3.00E+00	5.04E+00	
ZR-95		1.08E+00 ±	2.50E+00	4.20E+00	

Collection Period				8/6/2007	
Nuclide	RQ	Activity	Error	MDA	
CO-60		1.76E-02 ±	1.32E+00	2.28E+00	
ZN-65		-1.24E-01 ±	3.03E+00	5.18E+00	
MN-54		-7.35E-02 ±	1.18E+00	2.01E+00	
CS-134		2.00E-01 ±	1.12E+00	1.89E+00	
CS-137		-4.52E-01 ±	1.30E+00	2.19E+00	
BALA-140		1.11E+00 ±	1.52E+00	2.52E+00	
K-40	+	1.45E+03 ±	5.09E+01	2.65E+01	
FE-59		1.60E+00 ±	3.17E+00	5.30E+00	
ZR-95		-6.96E-01 ±	2.35E+00	3.97E+00	

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-12.1

GAMMA SPECTROMETRY RESULTS OF MILK

STATION 36

Results in pCi/liter

Collection Period					8/20/2007
Nuclide	RQ	Activity		Error	MDA
CO-60		6.44E-01	±	1.54E+00	2.61E+00
ZN-65		1.45E+00	±	3.85E+00	6.50E+00
MN-54		8.12E-02	±	1.69E+00	2.90E+00
CS-134		-3.10E-01	±	1.31E+00	2.22E+00
CS-137		1.07E+00	±	1.34E+00	2.22E+00
BALA-140		-9.41E-02	±	1.51E+00	2.69E+00
K-40	+	1.50E+03	±	6.22E+01	3.18E+01
FE-59		-7.23E-03	±	3.42E+00	5.89E+00
ZR-95		1.42E+00	±	2.45E+00	4.09E+00

Collection Period					9/10/2007
Nuclide	RQ	Activity		Error	MDA
CO-60		1.03E-02	±	1.43E+00	2.50E+00
ZN-65		6.90E-01	±	3.51E+00	5.98E+00
MN-54		6.68E-01	±	1.39E+00	2.33E+00
CS-134		-4.42E-02	±	1.30E+00	2.22E+00
CS-137		6.17E-01	±	1.44E+00	2.42E+00
BALA-140		7.26E-01	±	1.41E+00	2.40E+00
K-40	+	1.52E+03	±	6.01E+01	3.14E+01
FE-59		-1.83E+00	±	3.64E+00	6.09E+00
ZR-95		-9.99E-01	±	2.47E+00	4.16E+00

Collection Period					9/24/2007
Nuclide	RQ	Activity		Error	MDA
CO-60		1.22E+00	±	1.52E+00	2.50E+00
ZN-65		-3.77E-02	±	3.23E+00	5.57E+00
MN-54		1.19E-01	±	1.28E+00	2.21E+00
CS-134		-6.75E-02	±	1.25E+00	2.13E+00
CS-137		9.33E-01	±	1.32E+00	2.19E+00
BALA-140		-1.02E-02	±	1.50E+00	2.68E+00
K-40	+	1.43E+03	±	5.93E+01	3.26E+01
FE-59		1.16E+00	±	3.16E+00	5.34E+00
ZR-95		-1.38E+00	±	2.52E+00	4.21E+00

Collection Period					10/22/2007
Nuclide	RQ	Activity		Error	MDA
CO-60		4.38E-01	±	9.44E-01	1.58E+00
ZN-65		9.81E-01	±	2.05E+00	3.41E+00
MN-54		-2.77E-03	±	7.19E-01	1.22E+00
CS-134		1.31E-01	±	7.07E-01	1.19E+00
CS-137		1.09E-01	±	5.89E-01	1.00E+00
BALA-140		3.35E-02	±	8.07E-01	1.40E+00
K-40	+	1.46E+03	±	3.65E+01	1.89E+01
FE-59		3.88E-01	±	1.91E+00	3.22E+00
ZR-95		7.64E-01	±	1.33E+00	2.22E+00

Collection Period					11/12/2007
Nuclide	RQ	Activity		Error	MDA
CO-60		-5.18E-01	±	2.45E+00	4.29E+00
ZN-65		-4.72E-02	±	4.62E+00	8.22E+00
MN-54		6.37E-01	±	1.76E+00	3.05E+00
CS-134		-2.90E-02	±	1.59E+00	2.82E+00
CS-137		4.89E-01	±	1.66E+00	2.89E+00
BALA-140		-7.04E-02	±	1.95E+00	3.68E+00
K-40	+	1.45E+03	±	8.96E+01	4.54E+01
FE-59		5.41E-01	±	4.16E+00	7.33E+00
ZR-95		1.40E+00	±	3.14E+00	5.36E+00

Collection Period					12/17/2007
Nuclide	RQ	Activity		Error	MDA
CO-60		6.61E-01	±	1.47E+00	2.48E+00
ZN-65		-2.25E+00	±	3.63E+00	6.04E+00
MN-54		0.00E+00	±	0.00E+00	2.50E+00
CS-134		-7.42E-01	±	1.07E+00	1.78E+00
CS-137		3.30E-02	±	1.19E+00	2.06E+00
BALA-140		1.48E-01	±	1.37E+00	2.42E+00
K-40	+	1.50E+03	±	6.04E+01	3.25E+01
FE-59		-4.02E-01	±	2.39E+00	4.12E+00
ZR-95		-1.40E-01	±	2.09E+00	3.62E+00

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-12.2

GAMMA SPECTROMETRY RESULTS OF MILK - SUMMARY

Results in pCi/liter

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
BALA-140	Ind	3.28E-02	-3.82E-01	1.11E+00	2.30E+00	18	0
BALA-140	Cntl	1.90E-01	-5.64E-01	8.19E-01	2.35E+00	18	0
CO-60	Ind	2.60E-01	-5.18E-01	1.22E+00	2.28E+00	18	0
CO-60	Cntl	1.44E-01	-5.77E-01	8.23E-01	2.19E+00	18	0
CS-134	Ind	7.59E-03	-7.42E-01	7.68E-01	1.83E+00	18	0
CS-134	Cntl	-1.52E-01	-6.81E-01	2.82E-01	1.83E+00	18	0
CS-137	Ind	3.53E-01	-5.03E-01	1.07E+00	2.07E+00	18	0
CS-137	Cntl	1.75E-01	-5.56E-01	7.78E-01	2.05E+00	18	0
FE-59	Ind	1.43E-01	-2.18E+00	1.60E+00	4.84E+00	18	0
FE-59	Cntl	1.09E-01	-1.28E+00	2.58E+00	5.03E+00	18	0
K-40	Ind	1.45E+03	1.34E+03	1.52E+03	2.70E+01	18	18
K-40	Cntl	1.43E+03	1.39E+03	1.48E+03	2.70E+01	18	18
MN-54	Ind	8.67E-02	-2.98E-01	6.68E-01	2.08E+00	18	0
MN-54	Cntl	-4.05E-02	-8.06E-01	6.34E-01	2.03E+00	18	0
ZN-65	Ind	8.05E-02	-2.25E+00	1.45E+00	5.23E+00	18	0
ZN-65	Cntl	3.24E-01	-8.94E-01	2.22E+00	4.98E+00	18	0
ZR-95	Ind	2.46E-01	-1.38E+00	2.17E+00	3.44E+00	18	0
ZR-95	Cntl	1.95E-01	-8.44E-01	1.37E+00	3.55E+00	18	0

Ind = Indicator Stations Cntl = Control Locations

TABLE A-15.1

GAMMA SPECTROMETRY RESULTS OF ROOTS

Results in pCi/ kilogram (wet)

Station 37 Potato collected 6/18/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	3.50E+03	±	1.22E+02	6.36E+01
MN-54		1.64E+00	±	2.74E+00	3.56E+00
CO-58		8.98E-01	±	1.65E+00	2.59E+00
CO-60		1.72E+00	±	1.57E+00	3.64E+00
ZN-65		6.35E-01	±	5.71E+00	9.33E+00
I-131		2.09E+00	±	2.28E+00	3.23E+00
CS-134		1.06E+00	±	1.90E+00	2.31E+00
CS-137		1.44E+00	±	2.02E+00	2.94E+00

Station 37 Potato collected 8/13/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	4.11E+03	±	1.43E+02	6.22E+01
MN-54		1.66E+00	±	2.92E+00	4.88E+00
CO-58		7.28E-01	±	3.21E+00	5.45E+00
CO-60		-1.62E+00	±	3.74E+00	6.30E+00
ZN-65		-1.41E+00	±	8.17E+00	1.39E+01
I-131		8.79E-01	±	3.34E+00	5.62E+00
CS-134		2.68E-01	±	2.82E+00	4.81E+00
CS-137		2.80E-03	±	3.36E+00	5.75E+00

Station 9c Onion collected 6/18/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	9.54E+02	±	7.53E+01	5.98E+01
MN-54		-1.34E-02	±	2.37E+00	3.89E+00
CO-58		-5.59E-01	±	2.50E+00	4.06E+00
CO-60		2.17E+00	±	3.03E+00	4.72E+00
ZN-65		2.23E-01	±	5.27E+00	8.63E+00
I-131		2.98E-02	±	2.37E+00	3.89E+00
CS-134		8.54E-01	±	2.03E+00	3.25E+00
CS-137		3.35E-01	±	2.70E+00	4.40E+00

Station 9c Potato collected 8/13/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	4.47E+03	±	1.49E+02	6.58E+01
MN-54		-1.75E+00	±	3.31E+00	5.53E+00
CO-58		3.42E-01	±	2.99E+00	5.11E+00
CO-60		6.74E-02	±	3.42E+00	5.93E+00
ZN-65		1.68E+00	±	8.47E+00	1.44E+01
I-131		1.58E+00	±	3.64E+00	6.08E+00
CS-134		-4.26E-01	±	2.76E+00	4.68E+00
CS-137		1.29E+00	±	3.53E+00	5.93E+00

Station 37 Potato collected 7/16/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	4.44E+03	±	1.39E+02	5.32E+01
MN-54		1.24E+00	±	3.17E+00	5.13E+00
CO-58		1.47E+00	±	3.07E+00	4.94E+00
CO-60		1.88E+00	±	3.60E+00	5.74E+00
ZN-65		3.73E+00	±	8.31E+00	1.34E+01
I-131		-1.36E+00	±	3.15E+00	5.11E+00
CS-134		-5.75E-01	±	3.24E+00	5.30E+00
CS-137		1.88E-02	±	3.32E+00	5.46E+00

Station 37 Potato collected 9/17/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	4.54E+03	±	1.53E+02	6.84E+01
MN-54		-1.76E-01	±	2.81E+00	4.83E+00
CO-58		7.12E-01	±	3.22E+00	5.46E+00
CO-60		-1.10E+00	±	3.76E+00	6.40E+00
ZN-65		9.17E-01	±	8.76E+00	1.49E+01
I-131		-8.23E-01	±	3.56E+00	5.99E+00
CS-134		7.81E-01	±	2.81E+00	4.74E+00
CS-137		2.21E+00	±	3.21E+00	5.33E+00

Station 9c Potato collected 7/16/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	3.57E+03	±	1.12E+02	5.16E+01
MN-54		5.96E-01	±	2.52E+00	4.27E+00
CO-58		3.43E-01	±	2.40E+00	4.08E+00
CO-60		4.17E-02	±	2.70E+00	4.65E+00
ZN-65		2.34E+00	±	6.40E+00	1.08E+01
I-131		2.29E+00	±	2.62E+00	3.37E+00
CS-134		-7.63E-02	±	2.55E+00	4.31E+00
CS-137		-1.13E+00	±	2.77E+00	4.63E+00

Station 9c Potato collected 9/17/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	3.38E+03	±	1.50E+02	7.98E+01
MN-54		1.91E+00	±	3.61E+00	5.77E+00
CO-58		-6.41E-01	±	3.85E+00	6.28E+00
CO-60		1.87E+00	±	3.31E+00	5.18E+00
ZN-65		-7.62E-01	±	8.60E+00	1.41E+01
I-131		5.32E-01	±	6.11E+00	1.00E+01
CS-134		-1.04E+00	±	3.47E+00	5.63E+00
CS-137		1.09E+00	±	3.66E+00	5.93E+00

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-15.2

GAMMA SPECTROMETRY RESULTS OF ROOTS - SUMMARY

Results in pCi/ kilogram (wet)

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
CO-58	Ind	9.51E-01	7.12E-01	1.47E+00	4.61E+00	4	0
CO-58	Cntl	-1.29E-01	-6.41E-01	3.43E-01	4.88E+00	4	0
CO-60	Ind	2.20E-01	-1.62E+00	1.88E+00	5.52E+00	4	0
CO-60	Cntl	1.04E+00	4.17E-02	2.17E+00	5.12E+00	4	0
CS-134	Ind	3.85E-01	-5.75E-01	1.06E+00	4.29E+00	4	0
CS-134	Cntl	-1.71E-01	-1.04E+00	8.54E-01	4.47E+00	4	0
CS-137	Ind	9.18E-01	2.80E-03	2.21E+00	4.87E+00	4	0
CS-137	Cntl	3.97E-01	-1.13E+00	1.29E+00	5.22E+00	4	0
I-131	Ind	1.95E-01	-1.36E+00	2.09E+00	4.99E+00	4	0
I-131	Cntl	1.11E+00	2.98E-02	2.29E+00	5.84E+00	4	0
K-40	Ind	4.15E+03	3.50E+03	4.54E+03	6.18E+01	4	4
K-40	Cntl	3.09E+03	9.54E+02	4.47E+03	6.43E+01	4	4
MN-54	Ind	1.09E+00	-1.76E-01	1.66E+00	4.60E+00	4	0
MN-54	Cntl	1.87E-01	-1.75E+00	1.91E+00	4.86E+00	4	0
ZN-65	Ind	9.68E-01	-1.41E+00	3.73E+00	1.29E+01	4	0
ZN-65	Cntl	8.71E-01	-7.62E-01	2.34E+00	1.20E+01	4	0

TABLE A-16.2

GAMMA SPECTROMETRY RESULTS OF FRUIT - SUMMARY

Results in pCi/ kilogram (wet)

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
CO-58	Ind	1.94E-01	-7.13E-01	9.76E-01	4.27E+00	5	0
CO-58	Cntl	-4.02E-01	-1.32E+00	2.67E-01	4.30E+00	4	0
CO-60	Ind	6.83E-01	-8.36E-02	1.63E+00	4.78E+00	5	0
CO-60	Cntl	9.69E-01	-7.27E-03	2.12E+00	4.42E+00	4	0
CS-134	Ind	1.25E-01	-1.03E+00	1.01E+00	4.63E+00	5	0
CS-134	Cntl	-9.82E-01	-1.51E+00	1.53E-01	4.51E+00	4	0
CS-137	Ind	-3.20E-02	-1.09E+00	9.49E-01	4.80E+00	5	0
CS-137	Cntl	3.50E-01	-8.32E-02	8.06E-01	4.64E+00	4	0
I-131	Ind	-2.35E-01	-3.73E+00	1.07E+00	5.63E+00	5	0
I-131	Cntl	7.49E-03	-3.60E-01	2.16E-01	5.10E+00	4	0
K-40	Ind	1.61E+03	1.06E+03	1.89E+03	6.20E+01	5	5
K-40	Cntl	1.86E+03	1.67E+03	2.09E+03	5.64E+01	4	4
MN-54	Ind	4.24E-01	-5.55E-01	1.99E+00	4.44E+00	5	0
MN-54	Cntl	7.98E-01	1.69E-01	1.77E+00	4.10E+00	4	0
ZN-65	Ind	-7.07E-01	-3.08E+00	1.64E+00	1.05E+01	5	0
ZN-65	Cntl	-3.78E-01	-4.03E+00	2.61E+00	1.02E+01	4	0

Ind = Indicator Station. Ctrl = Control Station.

TABLE A-16.1

GAMMA SPECTROMETRY RESULTS OF FRUIT

Results in pCi/ kilogram (wet)

Station 37 Cherries collected 6/18/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.74E+03	±	8.50E+01	5.05E+01
MN-54		-5.55E-01	±	2.83E+00	4.61E+00
CO-58		8.17E-01	±	2.10E+00	3.37E+00
CO-60		1.26E+00	±	2.50E+00	3.97E+00
ZN-65		-3.08E+00	±	6.53E+00	1.05E+01
I-131		9.27E-01	±	2.54E+00	4.12E+00
CS-134		4.65E-02	±	2.36E+00	3.87E+00
CS-137		9.49E-01	±	2.72E+00	4.40E+00

Station 9c Nectarines collected 8/13/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.67E+03	±	1.04E+02	6.35E+01
MN-54		9.09E-01	±	2.73E+00	4.39E+00
CO-58		2.67E-01	±	2.84E+00	4.64E+00
CO-60		6.04E-01	±	3.22E+00	5.21E+00
ZN-65		2.61E+00	±	7.12E+00	1.14E+01
I-131		-1.97E-02	±	3.66E+00	6.01E+00
CS-134		-1.34E+00	±	3.33E+00	5.39E+00
CS-137		-8.32E-02	±	3.25E+00	5.34E+00

Station 9c Cherries collected 6/18/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.92E+03	±	8.24E+01	4.88E+01
MN-54		3.46E-01	±	2.00E+00	3.40E+00
CO-58		-5.27E-01	±	2.08E+00	3.52E+00
CO-60		-7.27E-03	±	2.30E+00	3.99E+00
ZN-65		-4.03E+00	±	5.77E+00	9.55E+00
I-131		2.16E-01	±	2.08E+00	3.52E+00
CS-134		1.53E-01	±	1.85E+00	3.15E+00
CS-137		4.66E-01	±	2.23E+00	3.78E+00

Station 37 Nectarines collected 9/17/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.54E+03	±	1.00E+02	5.80E+01
MN-54		5.64E-01	±	3.13E+00	5.09E+00
CO-58		-3.66E-01	±	3.16E+00	5.16E+00
CO-60		2.31E-01	±	4.12E+00	6.75E+00
ZN-65		1.48E+00	±	6.82E+00	1.10E+01
I-131		3.50E-01	±	2.99E+00	4.90E+00
CS-134		-1.03E+00	±	3.39E+00	5.50E+00
CS-137		-4.65E-01	±	3.21E+00	5.23E+00

Station 37 Peaches collected 7/16/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.89E+03	±	8.58E+01	5.26E+01
MN-54		3.62E-01	±	2.29E+00	3.89E+00
CO-58		2.57E-01	±	2.36E+00	4.02E+00
CO-60		-8.36E-02	±	2.17E+00	3.79E+00
ZN-65		1.64E+00	±	5.64E+00	9.53E+00
I-131		2.08E-01	±	2.21E+00	3.74E+00
CS-134		4.83E-01	±	2.09E+00	3.53E+00
CS-137		4.06E-01	±	2.55E+00	4.32E+00

Station 9c Nectarines collected 9/17/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.75E+03	±	1.04E+02	6.11E+01
MN-54		1.77E+00	±	2.92E+00	4.62E+00
CO-58		-1.32E+00	±	3.36E+00	5.40E+00
CO-60		1.16E+00	±	3.21E+00	5.13E+00
ZN-65		-7.56E-01	±	6.35E+00	1.03E+01
I-131		-3.60E-01	±	3.85E+00	6.30E+00
CS-134		-1.51E+00	±	3.48E+00	5.62E+00
CS-137		8.06E-01	±	3.17E+00	5.14E+00

Station 9c Peaches collected 7/16/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.09E+03	±	8.97E+01	5.19E+01
MN-54		1.69E-01	±	2.33E+00	3.98E+00
CO-58		-2.97E-02	±	2.11E+00	3.63E+00
CO-60		2.12E+00	±	2.07E+00	3.34E+00
ZN-65		6.58E-01	±	5.65E+00	9.64E+00
I-131		1.94E-01	±	2.70E+00	4.56E+00
CS-134		-1.23E+00	±	2.34E+00	3.90E+00
CS-137		2.10E-01	±	2.51E+00	4.28E+00

Station 92 Apples collected 9/28/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.06E+03	±	8.28E+01	6.32E+01
MN-54		-2.41E-01	±	2.23E+00	3.86E+00
CO-58		-7.13E-01	±	2.26E+00	3.86E+00
CO-60		1.63E+00	±	2.48E+00	4.14E+00
ZN-65		-2.14E+00	±	5.44E+00	9.23E+00
I-131		-3.73E+00	±	5.92E+00	9.83E+00
CS-134		1.08E-01	±	2.83E+00	4.82E+00
CS-137		4.18E-02	±	2.39E+00	4.15E+00

Station 37 Peaches collected 8/13/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.82E+03	±	1.24E+02	8.56E+01
MN-54		1.99E+00	±	3.03E+00	4.77E+00
CO-58		9.76E-01	±	3.07E+00	4.95E+00
CO-60		3.80E-01	±	3.24E+00	5.27E+00
ZN-65		-1.43E+00	±	7.54E+00	1.23E+01
I-131		1.07E+00	±	3.43E+00	5.57E+00
CS-134		1.01E+00	±	3.36E+00	5.45E+00
CS-137		-1.09E+00	±	3.66E+00	5.92E+00

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-17.1

GAMMA SPECTROMETRY RESULTS OF VEGETABLES

Results in pCi/ kilogram (wet)

Station 37 Asparagus collected 4/23/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.50E+03	±	1.21E+02	6.85E+01
MN-54		-8.95E-01	±	3.63E+00	5.89E+00
CO-58		-9.46E-02	±	3.22E+00	5.29E+00
CO-60		2.22E+00	±	1.84E+00	6.24E+00
ZN-65		-3.31E-01	±	1.11E+01	1.82E+01
I-131		3.82E-01	±	3.48E+00	5.70E+00
CS-134		8.01E-02	±	3.44E+00	5.64E+00
CS-137		-2.17E-01	±	3.70E+00	6.06E+00

Station 9c Peas collected 6/18/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.58E+03	±	1.35E+02	9.01E+01
MN-54		1.15E+00	±	4.37E+00	7.38E+00
CO-58		7.50E-01	±	3.92E+00	6.68E+00
CO-60		-1.21E+00	±	4.49E+00	7.67E+00
ZN-65		-4.35E+00	±	1.11E+01	1.86E+01
I-131		-1.34E+00	±	4.47E+00	7.49E+00
CS-134		1.42E-01	±	3.76E+00	6.41E+00
CS-137		1.31E+00	±	4.64E+00	7.82E+00

Station 9c Asparagus collected 4/23/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.35E+03	±	1.07E+02	6.61E+01
MN-54		-7.10E-01	±	2.77E+00	4.68E+00
CO-58		9.04E-02	±	2.45E+00	4.20E+00
CO-60		1.84E+00	±	2.77E+00	4.60E+00
ZN-65		3.36E+00	±	5.77E+00	9.64E+00
I-131		-3.83E-01	±	2.59E+00	4.36E+00
CS-134		1.64E+00	±	2.28E+00	3.77E+00
CS-137		-1.63E+00	±	3.06E+00	5.11E+00

Station 37 Cabbage collected 7/16/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.25E+03	±	1.03E+02	6.17E+01
MN-54		-3.89E-01	±	2.50E+00	4.26E+00
CO-58		-5.90E-01	±	2.66E+00	4.52E+00
CO-60		2.83E-01	±	2.88E+00	4.96E+00
ZN-65		2.27E+00	±	6.59E+00	1.11E+01
I-131		-1.03E+00	±	2.87E+00	4.81E+00
CS-134		1.19E-01	±	2.37E+00	4.04E+00
CS-137		1.15E-01	±	3.20E+00	5.44E+00

Station 37 Asparagus collected 5/21/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.56E+03	±	1.24E+02	6.84E+01
MN-54		1.76E+00	±	3.20E+00	5.10E+00
CO-58		6.79E-02	±	3.28E+00	5.38E+00
CO-60		-2.22E-01	±	3.95E+00	6.48E+00
ZN-65		-2.24E+00	±	8.75E+00	1.42E+01
I-131		-8.30E-01	±	3.94E+00	6.43E+00
CS-134		-1.22E+00	±	3.75E+00	6.08E+00
CS-137		6.49E-01	±	3.71E+00	6.06E+00

Station 9c Cabbage collected 7/16/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.96E+03	±	9.92E+01	6.54E+01
MN-54		-4.58E-02	±	2.11E+00	3.67E+00
CO-58		8.61E-01	±	1.78E+00	3.01E+00
CO-60		-1.43E-02	±	2.52E+00	4.42E+00
ZN-65		1.51E-01	±	5.95E+00	1.03E+01
I-131		-4.11E-01	±	3.40E+00	5.74E+00
CS-134		6.41E-01	±	2.48E+00	4.20E+00
CS-137		1.76E+00	±	2.31E+00	3.81E+00

Station 9c Asparagus collected 5/21/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.34E+03	±	1.07E+02	6.51E+01
MN-54		1.19E+00	±	2.58E+00	4.34E+00
CO-58		6.57E-01	±	2.48E+00	4.22E+00
CO-60		-7.01E-02	±	3.03E+00	5.26E+00
ZN-65		1.93E+00	±	6.94E+00	1.17E+01
I-131		1.24E+00	±	2.88E+00	4.80E+00
CS-134		-4.00E-01	±	2.52E+00	4.28E+00
CS-137		9.00E-01	±	2.88E+00	4.87E+00

Station 102g Cabbage collected 7/23/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.26E+03	±	1.70E+02	1.23E+02
MN-54		-7.96E-01	±	4.75E+00	7.72E+00
CO-58		-1.87E+00	±	5.92E+00	9.57E+00
CO-60		5.11E-01	±	5.17E+00	8.42E+00
ZN-65		5.33E+00	±	1.21E+01	1.94E+01
I-131		1.63E-01	±	5.78E+00	9.49E+00
CS-134		-1.27E-01	±	4.98E+00	8.17E+00
CS-137	+	4.94E+01	±	8.37E+00	7.23E+00

Station 37 Cabbage collected 6/18/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	1.69E+03	±	1.08E+02	7.57E+01
MN-54		1.91E+00	±	3.21E+00	5.09E+00
CO-58		-1.77E-02	±	3.23E+00	5.32E+00
CO-60		3.10E+00	±	2.64E+00	5.78E+00
ZN-65		-2.19E-01	±	6.74E+00	1.11E+01
I-131		-1.43E+00	±	3.67E+00	5.95E+00
CS-134		-1.52E+00	±	3.43E+00	5.54E+00
CS-137		-1.76E+00	±	3.68E+00	5.91E+00

Station 37 Cabbage collected 8/13/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.77E+03	±	1.27E+02	6.97E+01
MN-54		-6.81E-01	±	3.30E+00	5.62E+00
CO-58		-1.10E-01	±	3.08E+00	5.30E+00
CO-60		1.96E+00	±	1.71E+00	5.73E+00
ZN-65		1.37E+00	±	7.38E+00	1.26E+01
I-131		1.89E+00	±	3.81E+00	6.36E+00
CS-134		-6.33E-01	±	2.97E+00	5.03E+00
CS-137		1.15E+00	±	3.05E+00	5.14E+00

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE A-17.1

GAMMA SPECTROMETRY RESULTS OF VEGETABLES

Results in pCi/ kilogram (wet)

Station 9c Cabbage collected 8/13/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.01E+03	±	1.42E+02	9.89E+01
MN-54		9.19E-02	±	3.97E+00	6.51E+00
CO-58		6.15E-01	±	4.07E+00	6.63E+00
CO-60		3.93E+00	±	2.76E+00	5.08E+00
ZN-65		-4.30E+00	±	1.03E+01	1.66E+01
I-131		8.64E-01	±	5.22E+00	8.52E+00
CS-134		-7.76E-01	±	4.26E+00	6.95E+00
CS-137		-4.18E-01	±	4.27E+00	6.97E+00

Station 37 Green Bean collected 9/17/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	2.97E+03	±	1.39E+02	7.77E+01
MN-54		-7.11E-01	±	3.57E+00	6.08E+00
CO-58		-5.94E-01	±	3.76E+00	6.42E+00
CO-60		1.78E+00	±	3.52E+00	5.94E+00
ZN-65		-3.10E-01	±	8.61E+00	1.48E+01
I-131		2.25E+00	±	4.36E+00	7.26E+00
CS-134		-2.07E-02	±	3.34E+00	5.72E+00
CS-137		1.85E+00	±	3.51E+00	5.87E+00

Station 102g Broad Leaf Vegtable collected 8/29/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	3.48E+03	±	1.95E+02	1.16E+02
MN-54		4.54E-01	±	4.66E+00	7.61E+00
CO-58		-3.50E+00	±	5.87E+00	9.35E+00
CO-60		3.77E+00	±	6.22E+00	9.78E+00
ZN-65		3.72E+00	±	1.33E+01	2.16E+01
I-131		1.61E-01	±	5.57E+00	9.14E+00
CS-134		-2.94E+00	±	5.86E+00	9.43E+00
CS-137	+	8.92E+00	±	4.72E+00	6.75E+00

Station 9c Green Bean collected 9/17/2007

Nuclide	RQ	Activity		Error	MDA
K-40	+	3.41E+03	±	1.42E+02	7.17E+01
MN-54		2.90E+00	±	3.53E+00	5.80E+00
CO-58		-1.54E+00	±	3.82E+00	6.42E+00
CO-60		7.96E-01	±	3.71E+00	6.37E+00
ZN-65		-3.89E+00	±	8.94E+00	1.50E+01
I-131		1.12E+00	±	5.76E+00	9.71E+00
CS-134		1.63E+00	±	2.48E+00	4.14E+00
CS-137		1.14E+00	±	3.54E+00	5.98E+00

TABLE A-17.2

GAMMA SPECTROMETRY RESULTS OF VEGETABLES - SUMMARY

Results in pCi/ kilogram (wet)

Nuclide		Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
CO-58	Ind	-8.38E-01	-3.50E+00	6.79E-02	6.39E+00	8	0
CO-58	Cntl	2.39E-01	-1.54E+00	8.61E-01	5.19E+00	6	0
CO-60	Ind	1.68E+00	-2.22E-01	3.77E+00	6.67E+00	8	0
CO-60	Cntl	8.79E-01	-1.21E+00	3.93E+00	5.57E+00	6	0
CS-134	Ind	-7.84E-01	-2.94E+00	1.19E-01	6.21E+00	8	0
CS-134	Cntl	4.79E-01	-7.76E-01	1.64E+00	4.96E+00	6	0
CS-137	Ind	7.51E+00	-1.76E+00	4.94E+01	6.06E+00	8	2
CS-137	Cntl	5.11E-01	-1.63E+00	1.76E+00	5.76E+00	6	0
I-131	Ind	1.95E-01	-1.43E+00	2.25E+00	6.89E+00	8	0
I-131	Cntl	1.82E-01	-1.34E+00	1.24E+00	6.77E+00	6	0
K-40	Ind	2.56E+03	1.69E+03	3.48E+03	8.25E+01	8	8
K-40	Cntl	2.44E+03	1.96E+03	3.41E+03	7.62E+01	6	6
MN-54	Ind	8.15E-02	-8.95E-01	1.91E+00	5.92E+00	8	0
MN-54	Cntl	7.63E-01	-7.10E-01	2.90E+00	5.40E+00	6	0
ZN-65	Ind	1.20E+00	-2.24E+00	5.33E+00	1.54E+01	8	0
ZN-65	Cntl	-1.18E+00	-4.35E+00	3.36E+00	1.36E+01	6	0

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE B-1.1

2007 QUARTERLY & ANNUAL SPECIAL INTEREST TLD RESULTS

Results in milli-Roentgen (mR)

Station ID	1rst Quarter	2nd Quarter	3rd Quarter	4th Quarter	Quarterly Sum	Annual
119B	20.20	21.01	21.52	22.89	85.62	79.94
119 CNTL	20.64	19.48	22.55	22.10	84.77	83.87
120 EAST	20.82	20.80	21.94	22.72	86.27	82.60
121	87.14	45.81	129.91	109.85	372.70	377.80
122	33.08	31.59	35.81	34.82	135.30	140.45
123	126.23	114.39	123.94	117.46	482.01	514.43
124	156.93	151.20	154.89	157.35	620.37	604.94
125	109.13	101.47	109.01	103.17	422.78	426.50
126	67.11	59.24	70.02	63.08	259.45	260.40
127	54.20	47.97	58.70	54.55	215.43	219.11
128	73.68	63.53	74.86	68.75	280.82	288.64
129	59.75	51.62	65.65	58.54	235.56	229.78
136A	55.15	50.63	61.11	42.40	209.28	216.95
137A	56.72	47.17	60.36	46.07	210.32	212.80
138A	40.99	32.95	47.85	37.31	159.10	153.13

TABLE B-1.2

2007 QUARTERLY & ANNUAL SPECIAL INTEREST TLD RESULTS- SUMMARY

Results in milli-Roentgen (mR)

Location	Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
ST 119 Quarterly Ind	21.41	20.20	22.89	4	4
ST 119 Quarterly Cntl	21.19	19.48	22.55	4	4
ST 120 Quarterly Ind	21.57	20.80	22.72	4	4
ISFSI Quarterly Ind	75.07	31.59	157.35	48	48
ISFSI Annual Ind	303.75	140.45	604.94	12	12

1rst Q 12/28/06 to 3/29/07 - 2nd Q 3/29/07 to 6/28/07 - 3rd Q 6/28/07 to 9/27/07 - 4th Q 9/27/07 to 12/28/07

Ind = Indicator Station Cntl = Control Station

Stations 121 through 138A are TLD locations associated with ISFSI

TABLE B-2.1

GAMMA SPECTROMETRY RESULTS OF STORM DRAIN WATER

STATION 101

Results in pCi/liter, corrected for decay during collection period

Collection Period		1/3/2007		2/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		1.08E+01 ±	2.53E+01	4.09E+01
K-40	+	5.14E+01 ±	3.46E+01	4.88E+01
CR-51		9.50E+00 ±	3.19E+01	5.19E+01
MN-54		5.37E-02 ±	2.40E+00	3.94E+00
CO-58		-1.09E+00 ±	2.68E+00	4.29E+00
FE-59		-1.84E+00 ±	5.99E+00	9.65E+00
CO-60		1.70E+00 ±	2.13E+00	3.25E+00
ZN-65		-4.96E-01 ±	4.86E+00	7.94E+00
NB-95		-9.07E-01 ±	3.45E+00	5.58E+00
ZR-95		-4.90E-02 ±	4.83E+00	7.93E+00
CS-134		5.50E-01 ±	2.34E+00	3.80E+00
CS-137		-8.51E-02 ±	2.28E+00	3.73E+00
BALA-140		-2.25E-01 ±	6.14E+00	1.01E+01
RA-226	+	1.40E+02 ±	6.35E+01	8.15E+01

Collection Period		2/5/2007		3/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		1.54E+01 ±	2.45E+01	3.92E+01
K-40		-1.99E+01 ±	4.71E+01	5.68E+01
CR-51		-6.36E+00 ±	2.89E+01	4.71E+01
MN-54		1.22E+00 ±	2.14E+00	3.39E+00
CO-58		1.47E+00 ±	2.23E+00	3.50E+00
FE-59		-5.41E-01 ±	5.07E+00	8.28E+00
CO-60		1.20E+00 ±	9.67E-01	3.54E+00
ZN-65		1.44E+00 ±	4.09E+00	6.52E+00
NB-95		5.86E-01 ±	2.95E+00	4.79E+00
ZR-95		1.84E+00 ±	4.33E+00	6.94E+00
CS-134		-1.39E+00 ±	2.57E+00	4.13E+00
CS-137		4.20E-01 ±	2.51E+00	4.09E+00
BALA-140		6.30E-01 ±	5.01E+00	8.14E+00
RA-226	+	1.91E+02 ±	6.57E+01	8.09E+01

Collection Period		3/5/2007		4/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-5.85E-02 ±	2.30E+01	3.78E+01
K-40		-1.96E+01 ±	4.67E+01	5.68E+01
CR-51		3.14E-01 ±	2.68E+01	4.40E+01
MN-54		-7.85E-01 ±	2.36E+00	3.80E+00
CO-58		1.02E-01 ±	2.34E+00	3.83E+00
FE-59		-1.73E+00 ±	5.16E+00	8.29E+00
CO-60		2.27E+00 ±	2.12E+00	3.13E+00
ZN-65		-1.38E+00 ±	4.19E+00	6.71E+00
NB-95		-2.03E-01 ±	2.96E+00	4.85E+00
ZR-95		2.22E+00 ±	4.42E+00	7.04E+00
CS-134		-1.14E+00 ±	2.48E+00	3.99E+00
CS-137		1.30E+00 ±	1.96E+00	3.08E+00
BALA-140		3.07E+00 ±	4.83E+00	7.43E+00
RA-226	+	1.28E+02 ±	5.69E+01	7.47E+01

Collection Period		4/2/2007		5/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		1.35E+01 ±	2.15E+01	3.39E+01
K-40		2.35E+01 ±	3.00E+01	4.75E+01
CR-51		-5.04E+00 ±	4.04E+01	6.61E+01
MN-54		-6.68E-02 ±	2.03E+00	3.32E+00
CO-58		-2.10E-02 ±	2.49E+00	4.09E+00
FE-59		2.06E+00 ±	2.65E+00	7.99E+00
CO-60		5.43E-01 ±	2.01E+00	3.23E+00
ZN-65		8.32E-02 ±	2.61E+00	4.26E+00
NB-95		5.28E-01 ±	3.68E+00	5.73E+00
ZR-95		1.87E+00 ±	4.41E+00	7.01E+00
CS-134		6.97E-02 ±	2.46E+00	4.04E+00
CS-137		-3.02E-02 ±	2.07E+00	3.39E+00
BALA-140		-7.48E-01 ±	1.63E+01	2.66E+01
RA-226	+	1.03E+02 ±	5.15E+01	8.04E+01

Collection Period		5/2/2007		6/4/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		5.23E+00 ±	2.38E+01	3.88E+01
K-40		-2.45E+01 ±	5.04E+01	5.52E+01
CR-51		4.36E+00 ±	3.08E+01	5.03E+01
MN-54		1.43E+00 ±	2.45E+00	3.90E+00
CO-58		-1.69E+00 ±	2.87E+00	4.56E+00
FE-59		-2.47E+00 ±	6.19E+00	9.94E+00
CO-60		3.27E-01 ±	2.39E+00	3.89E+00
ZN-65		-1.53E+00 ±	5.07E+00	8.16E+00
NB-95		1.44E+00 ±	2.93E+00	4.68E+00
ZR-95		1.48E+00 ±	4.07E+00	6.53E+00
CS-134		3.43E-01 ±	2.34E+00	3.83E+00
CS-137		2.30E-01 ±	2.45E+00	4.02E+00
BALA-140		-4.28E-01 ±	5.83E+00	9.53E+00
RA-226	+	1.38E+02 ±	5.50E+01	7.36E+01

Collection Period		6/4/2007		7/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		7.69E+00 ±	9.62E+00	3.18E+01
K-40		-2.36E+01 ±	4.73E+01	5.39E+01
CR-51		1.36E-01 ±	1.99E+01	3.28E+01
MN-54		1.71E+00 ±	2.20E+00	3.43E+00
CO-58		-8.17E-02 ±	2.36E+00	3.88E+00
FE-59		3.34E+00 ±	4.61E+00	7.11E+00
CO-60		9.10E-01 ±	2.22E+00	3.52E+00
ZN-65		-2.11E+00 ±	4.90E+00	7.81E+00
NB-95		1.26E+00 ±	2.47E+00	3.93E+00
ZR-95		-2.32E+00 ±	4.65E+00	7.41E+00
CS-134		-6.51E-01 ±	2.17E+00	3.51E+00
CS-137		-5.13E-01 ±	2.35E+00	3.82E+00
BALA-140		4.64E-01 ±	5.10E+00	8.30E+00
RA-226	+	1.46E+02 ±	5.50E+01	8.44E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE B-2.1

GAMMA SPECTROMETRY RESULTS OF STORM DRAIN WATER

STATION 101

Results in pCi/liter, corrected for decay during collection period

Collection Period				7/2/2007		8/1/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		5.72E+00	±	2.65E+01		4.32E+01
K-40		-2.39E+01	±	5.30E+01		5.75E+01
CR-51		1.40E+00	±	3.54E+01		5.81E+01
MN-54		9.26E-02	±	2.41E+00		3.95E+00
CO-58		4.13E-03	±	2.66E+00		4.37E+00
FE-59		2.05E+00	±	5.59E+00		8.95E+00
CO-60		7.21E-01	±	2.30E+00		3.69E+00
ZN-65		3.70E+00	±	4.41E+00		6.77E+00
NB-95		-4.13E-01	±	3.27E+00		5.33E+00
ZR-95		1.15E+00	±	4.73E+00		7.66E+00
CS-134		-7.12E-01	±	2.62E+00		4.25E+00
CS-137		1.33E+00	±	2.50E+00		3.99E+00
BALA-140		1.40E+00	±	7.58E+00		1.22E+01
RA-226	+	1.51E+02	±	6.28E+01		9.80E+01

Collection Period				8/1/2007		9/5/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		-1.60E+00	±	3.85E+01		6.32E+01
K-40	+	1.68E+03	±	8.76E+01		5.66E+01
CR-51		-6.52E+00	±	5.27E+01		8.65E+01
MN-54		1.08E+00	±	3.67E+00		5.98E+00
CO-58		7.42E-01	±	3.82E+00		6.24E+00
FE-59		-1.06E+00	±	8.50E+00		1.39E+01
CO-60		2.36E+00	±	3.36E+00		5.35E+00
ZN-65		6.67E-01	±	8.34E+00		1.37E+01
NB-95		-4.09E+00	±	5.51E+00		8.87E+00
ZR-95		-1.64E+00	±	7.52E+00		1.23E+01
CS-134		-1.07E+00	±	3.55E+00		5.80E+00
CS-137		1.45E+00	±	3.75E+00		6.10E+00
BALA-140		4.53E+00	±	6.79E+00		1.07E+01
RA-226		8.86E+01	±	1.16E+02		1.89E+02

Collection Period				9/5/2007		10/1/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		-2.66E-01	±	1.70E+01		2.80E+01
K-40		-1.17E+01	±	3.52E+01		5.68E+01
CR-51		-1.11E+01	±	2.20E+01		3.54E+01
MN-54		6.59E-01	±	2.00E+00		3.20E+00
CO-58		8.57E-01	±	2.08E+00		3.31E+00
FE-59		1.96E-01	±	4.59E+00		7.51E+00
CO-60		-1.81E-02	±	1.50E+00		2.47E+00
ZN-65		-3.05E-01	±	3.88E+00		6.34E+00
NB-95		1.75E+00	±	2.09E+00		3.18E+00
ZR-95		-1.91E+00	±	4.44E+00		7.09E+00
CS-134		4.09E-02	±	1.47E+00		2.41E+00
CS-137		4.60E-04	±	1.96E+00		3.24E+00
BALA-140		-3.54E-01	±	4.43E+00		7.22E+00
RA-226	+	7.32E+01	±	4.35E+01		6.73E+01

Collection Period				10/1/2007		11/5/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		9.92E+00	±	2.71E+01		4.31E+01
K-40		1.96E+01	±	4.13E+01		7.93E+01
CR-51		-6.87E+00	±	3.67E+01		5.96E+01
MN-54		-5.66E-02	±	2.47E+00		4.05E+00
CO-58		1.26E+00	±	2.74E+00		4.25E+00
FE-59		-6.41E-01	±	6.67E+00		1.08E+01
CO-60		3.33E-01	±	2.13E+00		3.40E+00
ZN-65		-1.27E+00	±	5.53E+00		8.81E+00
NB-95		6.72E-01	±	3.97E+00		6.41E+00
ZR-95		-4.25E-01	±	5.18E+00		8.43E+00
CS-134		1.52E+00	±	2.43E+00		3.73E+00
CS-137		-3.54E-01	±	2.85E+00		4.63E+00
BALA-140		-3.48E+00	±	1.07E+01		1.70E+01
RA-226	+	1.14E+02	±	6.66E+01		9.78E+01

Collection Period				11/5/2007		12/3/2007
Nuclide	RQ	Activity		Error		MDA
BE-7		1.21E+01	±	2.09E+01		3.32E+01
K-40		4.68E+01	±	3.57E+01		5.17E+01
CR-51		-1.60E+01	±	2.68E+01		4.30E+01
MN-54		6.77E-01	±	1.97E+00		3.15E+00
CO-58		2.28E-01	±	1.93E+00		3.14E+00
FE-59		-2.23E+00	±	5.59E+00		8.92E+00
CO-60		6.10E-01	±	1.98E+00		3.14E+00
ZN-65		-1.95E+00	±	4.34E+00		6.86E+00
NB-95		-1.40E+00	±	2.74E+00		4.33E+00
ZR-95		2.31E+00	±	3.90E+00		6.11E+00
CS-134		-1.19E+00	±	2.06E+00		3.28E+00
CS-137		-2.29E-01	±	1.96E+00		3.19E+00
BALA-140		1.49E+00	±	4.63E+00		7.31E+00
RA-226	+	1.27E+02	±	4.75E+01		7.11E+01

Collection Period				12/3/2007		1/2/2008
Nuclide	RQ	Activity		Error		MDA
BE-7		1.97E+01	±	1.95E+01		3.02E+01
K-40		7.81E-01	±	2.60E+01		5.37E+01
CR-51		-1.22E+01	±	2.69E+01		4.35E+01
MN-54		-4.12E-01	±	1.69E+00		2.72E+00
CO-58		-2.89E-02	±	1.58E+00		2.59E+00
FE-59		-1.32E+00	±	5.03E+00		8.10E+00
CO-60		1.06E+00	±	1.11E+00		1.52E+00
ZN-65		-4.88E-01	±	3.84E+00		6.23E+00
NB-95		1.60E+00	±	2.23E+00		3.44E+00
ZR-95		2.23E+00	±	1.96E+00		6.25E+00
CS-134		5.94E-02	±	1.78E+00		2.92E+00
CS-137		7.68E-01	±	1.54E+00		2.42E+00
BALA-140		-3.38E+00	±	6.40E+00		1.00E+01
RA-226	+	1.33E+02	±	5.37E+01		7.60E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE B-2.2

GAMMA SPECTROMETRY RESULTS OF STORM DRAIN WATER

STATION 101 Summary

Results in pCi/liter, corrected for decay during collection period

Nuclide	Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
BE-7	8.18E+00	-1.60E+00	1.97E+01	3.86E+01	12	0
K-40	1.42E+02	-2.45E+01	1.68E+03	5.62E+01	12	2
CR-51	-4.03E+00	-1.60E+01	9.50E+00	5.15E+01	12	0
MN-54	4.66E-01	-7.85E-01	1.71E+00	3.73E+00	12	0
CO-58	1.46E-01	-1.69E+00	1.47E+00	4.00E+00	12	0
FE-59	-3.49E-01	-2.47E+00	3.34E+00	9.12E+00	12	0
CO-60	1.00E+00	-1.81E-02	2.36E+00	3.34E+00	12	0
ZN-65	-3.03E-01	-2.11E+00	3.70E+00	7.50E+00	12	0
NB-95	6.88E-02	-4.09E+00	1.75E+00	5.09E+00	12	0
ZR-95	5.62E-01	-2.32E+00	2.31E+00	7.56E+00	12	0
CS-134	-2.97E-01	-1.39E+00	1.52E+00	3.81E+00	12	0
CS-137	3.58E-01	-5.13E-01	1.45E+00	3.81E+00	12	0
BALA-140	2.47E-01	-3.48E+00	4.53E+00	1.12E+01	12	0
RA-226	1.28E+02	7.32E+01	1.91E+02	8.96E+01	12	11

Table B-3.1

GROSS BETA IN STORM DRAIN WATER

Results in pCi/ liter

Location	Collection Period			RQ	Activity		Error
St 101	01/03/07	-	02/05/07		1.58E+00	±	1.23E+00
	02/05/07	-	03/05/07	+	2.92E+00	±	2.06E+00
	03/05/07	-	04/02/07		6.04E-01	±	9.53E-01
	04/02/07	-	05/02/07		2.09E-01	±	7.61E-01
	05/02/07	-	06/04/07		8.99E-01	±	9.46E-01
	06/04/07	-	07/02/07		1.22E+00	±	9.69E-01
	07/02/07	-	08/01/07		1.61E+00	±	1.15E+00
	08/01/07	-	09/05/07	+	1.97E+01	±	4.68E+00
	09/05/07	-	10/01/07		2.32E+00	±	1.25E+00
	10/01/07	-	11/05/07		1.10E+00	±	1.06E+00
	11/05/07	-	12/03/07		1.55E+00	±	1.05E+00
	12/03/07	-	01/02/08		1.07E+00	±	9.33E-01

TABLE B-3.2

GROSS BETA IN STORM DRAIN WATER - SUMMARY

Results in pCi/ liter

Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
2.90E+00	2.09E-01	1.97E+01	12	2

Table B-4.1

TRITIUM IN STORM DRAIN WATER

Results in pCi/ liter

Location	Collection Period			RQ	Activity		Error
St 101	01/03/07	-	02/05/07	+	8.92E+03	±	3.37E+02
	02/05/07	-	03/05/07	+	3.77E+03	±	2.41E+02
	03/05/07	-	04/02/07	+	1.80E+03	±	1.87E+02
	04/02/07	-	05/02/07		2.78E+02	±	1.43E+02
	05/02/07	-	06/04/07		6.93E+01	±	1.34E+02
	06/04/07	-	07/02/07	+	7.34E+02	±	1.58E+02
	07/02/07	-	08/01/07		1.10E+02	±	1.33E+02
	08/01/07	-	09/05/07		2.88E+02	±	1.39E+02
	09/05/07	-	10/01/07		2.64E+02	±	1.45E+02
	10/01/07	-	11/05/07		8.11E+01	±	1.41E+02
	11/05/07	-	12/03/07	+	2.14E+03	±	1.22E+02
	12/03/07	-	01/02/08	+	3.03E+03	±	1.61E+02

TABLE B-4.2

TRITIUM IN STORM DRAIN WATER - SUMMARY

Results in pCi/ liter

Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
1.79E+03	6.93E+01	8.92E+03	12	6

RQ = Results Qualifier. If blank, result is less than detection lomit. If "+", result is above detection limit.

Table B-5.1

GROSS ALPHA IN SANITARY WASTE TREATMENT WATER

Results in pCi/ liter

Collection Period	ST 102A RQ	ST 102A Activity	ST 102A Error	ST 102B RQ	ST 102B Activity	ST 102B Error
01/03/07 - 02/05/07		2.46E+00 ±	2.56E+00		5.11E-01 ±	1.42E+00
02/05/07 - 03/05/07		7.77E-01 ±	1.27E+00		-1.34E-01 ±	1.12E+00
03/05/07 - 04/02/07		-4.01E-01 ±	9.79E-01		-1.86E-01 ±	1.54E+00
04/02/07 - 05/02/07		-3.89E-01 ±	9.50E-01		-1.73E-01 ±	1.44E+00
05/02/07 - 06/04/07		-1.22E-01 ±	1.01E+00		2.34E-01 ±	2.15E+00
06/04/07 - 07/02/07		3.66E-01 ±	1.22E+00		-1.78E-01 ±	1.48E+00
07/02/07 - 08/01/07		5.40E-01 ±	1.80E+00		1.08E+00 ±	1.45E+00
08/01/07 - 09/05/07		3.48E-01 ±	1.16E+00		1.30E-01 ±	1.19E+00
09/05/07 - 10/01/07		3.16E-01 ±	1.05E+00		1.09E-01 ±	1.01E+00
10/01/07 - 11/05/07		-3.97E-01 ±	9.70E-01		-4.09E-01 ±	1.00E+00
11/05/07 - 12/03/07		-1.25E-01 ±	1.04E+00		-4.35E-01 ±	1.06E+00
12/03/07 - 01/02/08		-7.06E-01 ±	1.13E+00		8.17E-01 ±	2.26E+00

TABLE B-5.2

GROSS ALPHA IN SANITARY WASTE TREATMENT WATER - SUMMARY

Results in pCi/ liter

Location	Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
ST 102A	2.22E-01	-7.06E-01	2.46E+00	12	0
ST 102B	1.14E-01	-4.35E-01	1.08E+00	12	0

Table B-6.1

GROSS BETA IN SANITARY WASTE TREATMENT WATER

Results in pCi/ liter

Collection Period	ST 102A RQ	ST 102A Activity	ST 102A Error	ST 102B RQ	ST 102B Activity	ST 102B Error
01/03/07 - 02/05/07	+	9.49E+00 ±	1.40E+00	+	1.70E+01 ±	2.48E+00
02/05/07 - 03/05/07	+	1.17E+01 ±	2.73E+00	+	1.44E+01 ±	3.12E+00
03/05/07 - 04/02/07	+	1.22E+01 ±	2.93E+00	+	1.11E+01 ±	3.13E+00
04/02/07 - 05/02/07	+	1.04E+01 ±	2.75E+00	+	1.50E+01 ±	3.41E+00
05/02/07 - 06/04/07	+	9.44E+00 ±	2.61E+00	+	2.53E+01 ±	4.54E+00
06/04/07 - 07/02/07	+	9.27E+00 ±	2.60E+00	+	1.55E+01 ±	3.48E+00
07/02/07 - 08/01/07	+	8.27E+00 ±	2.83E+00	+	1.17E+01 ±	2.80E+00
08/01/07 - 09/05/07	+	6.69E+00 ±	2.32E+00	+	1.07E+01 ±	2.78E+00
09/05/07 - 10/01/07	+	6.69E+00 ±	2.24E+00	+	1.46E+01 ±	2.93E+00
10/01/07 - 11/05/07	+	1.06E+01 ±	2.78E+00	+	1.37E+01 ±	3.07E+00
11/05/07 - 12/03/07	+	7.89E+00 ±	2.49E+00	+	1.29E+01 ±	3.07E+00
12/03/07 - 01/02/08	+	8.36E+00 ±	2.32E+00	+	2.46E+01 ±	5.54E+00

TABLE B-6.2

GROSS BETA IN SANITARY WASTE TREATMENT WATER - SUMMARY

Results in pCi/ liter

Location	Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
ST 102A	9.25E+00	6.69E+00	1.22E+01	12	12
ST 102B	1.55E+01	1.07E+01	2.53E+01	12	12

RQ = Results Qualifier. If blank, result is less than detection lomit. If "+", result is above detection limit.

TABLE B-7.1

GAMMA SPECTROMETRY RESULTS OF SANITARY WASTE TREATMENT WATER

Station 102A

Results in pCi/liter, corrected for decay during collection period

Collection Period			1/4/2007	2/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		9.97E+00 ±	2.34E+01	3.77E+01
K-40		-3.29E-01 ±	2.66E+01	5.21E+01
CR-51		2.52E+01 ±	3.07E+01	4.89E+01
MN-54		2.64E-01 ±	1.41E+00	2.34E+00
CO-58		4.24E-01 ±	2.27E+00	3.69E+00
FE-59		-2.73E-01 ±	4.54E+00	7.42E+00
CO-60		9.07E-01 ±	2.01E+00	3.16E+00
ZN-65		2.56E+00 ±	4.70E+00	7.41E+00
NB-95		1.26E+00 ±	3.15E+00	5.04E+00
ZR-95		-1.72E+00 ±	4.87E+00	7.84E+00
CS-134		-1.02E+00 ±	2.24E+00	3.59E+00
CS-137		-9.27E-01 ±	2.36E+00	3.79E+00
BALA-140		1.26E-01 ±	5.43E+00	8.89E+00
RA-226	+	1.97E+02 ±	4.59E+01	6.55E+01

Collection Period			2/5/2007	3/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		6.06E-01 ±	2.34E+01	3.84E+01
K-40		1.11E+01 ±	2.90E+01	5.47E+01
CR-51		2.43E+00 ±	9.28E+00	4.20E+01
MN-54		3.49E-01 ±	2.14E+00	3.49E+00
CO-58		-1.06E-01 ±	1.71E+00	2.80E+00
FE-59		-2.67E-01 ±	5.13E+00	8.40E+00
CO-60		-1.36E-01 ±	2.12E+00	3.46E+00
ZN-65		-1.51E+00 ±	5.24E+00	8.44E+00
NB-95		6.03E-02 ±	2.59E+00	4.17E+00
ZR-95		2.19E+00 ±	3.87E+00	6.11E+00
CS-134		-1.70E+00 ±	2.39E+00	3.81E+00
CS-137		-5.54E-01 ±	2.25E+00	3.65E+00
BALA-140		-2.43E+00 ±	5.42E+00	8.55E+00
RA-226	+	1.35E+02 ±	4.95E+01	7.64E+01

Collection Period			3/5/2007	4/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-3.13E+00 ±	2.60E+01	4.25E+01
K-40		1.35E+01 ±	2.80E+01	5.30E+01
CR-51		-1.25E+01 ±	3.30E+01	5.36E+01
MN-54		6.85E-01 ±	2.50E+00	4.05E+00
CO-58		1.16E+00 ±	2.71E+00	4.35E+00
FE-59		-1.05E+00 ±	6.40E+00	1.04E+01
CO-60		-5.69E-02 ±	2.40E+00	3.94E+00
ZN-65		1.40E+00 ±	4.28E+00	6.85E+00
NB-95		-1.57E-01 ±	3.62E+00	5.94E+00
ZR-95		8.12E-01 ±	4.57E+00	7.43E+00
CS-134		-1.06E+00 ±	2.44E+00	3.94E+00
CS-137		9.67E-01 ±	2.41E+00	3.88E+00
BALA-140		1.52E+00 ±	7.59E+00	1.23E+01
RA-226	+	1.55E+02 ±	6.41E+01	7.97E+01

Collection Period			4/2/2007	5/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		4.29E+00 ±	2.65E+01	4.32E+01
K-40		3.49E+00 ±	2.64E+01	5.17E+01
CR-51		1.14E+01 ±	3.30E+01	5.36E+01
MN-54		9.71E-02 ±	2.20E+00	3.61E+00
CO-58		-1.11E+00 ±	3.02E+00	4.86E+00
FE-59		8.98E-01 ±	5.95E+00	9.69E+00
CO-60		5.93E-01 ±	2.60E+00	4.21E+00
ZN-65		1.74E+00 ±	4.14E+00	6.56E+00
NB-95		1.37E+00 ±	3.32E+00	5.33E+00
ZR-95		3.33E+00 ±	4.86E+00	7.67E+00
CS-134		2.06E-01 ±	3.12E+00	5.12E+00
CS-137		-8.48E-02 ±	2.29E+00	3.76E+00
BALA-140		-3.10E-02 ±	6.68E+00	1.10E+01
RA-226	+	1.54E+02 ±	6.42E+01	1.00E+02

Collection Period			5/2/2007	6/4/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-3.47E+00 ±	2.43E+01	3.96E+01
K-40		-1.03E+01 ±	3.74E+01	5.66E+01
CR-51		2.68E-01 ±	3.15E+01	5.17E+01
MN-54		-9.59E-02 ±	2.59E+00	4.24E+00
CO-58		1.57E+00 ±	2.43E+00	3.83E+00
FE-59		1.69E+00 ±	5.79E+00	9.34E+00
CO-60		-9.71E-01 ±	2.50E+00	3.99E+00
ZN-65		2.34E-01 ±	4.48E+00	7.34E+00
NB-95		1.66E+00 ±	2.94E+00	4.66E+00
ZR-95		-4.53E-01 ±	4.27E+00	6.97E+00
CS-134		-5.08E-01 ±	2.43E+00	3.96E+00
CS-137		-8.41E-03 ±	2.34E+00	3.85E+00
BALA-140		1.80E+00 ±	4.91E+00	7.74E+00
RA-226	+	1.46E+02 ±	6.52E+01	8.37E+01

Collection Period			6/4/2007	7/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-3.96E+00 ±	2.55E+01	4.16E+01
K-40		-1.85E+01 ±	4.08E+01	5.28E+01
CR-51		1.38E+01 ±	3.01E+01	4.86E+01
MN-54		4.83E-01 ±	2.31E+00	3.75E+00
CO-58		1.31E-02 ±	2.58E+00	4.24E+00
FE-59		3.33E+00 ±	3.74E+00	6.68E+00
CO-60		2.41E+00 ±	2.16E+00	3.19E+00
ZN-65		2.92E+00 ±	4.90E+00	7.72E+00
NB-95		4.21E-01 ±	2.89E+00	4.71E+00
ZR-95		2.12E+00 ±	4.32E+00	6.87E+00
CS-134		-7.07E-02 ±	2.28E+00	3.75E+00
CS-137		-3.54E-01 ±	2.55E+00	4.15E+00
BALA-140		2.00E+00 ±	5.83E+00	9.25E+00
RA-226	+	1.29E+02 ±	4.89E+01	6.67E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE B-7.1

GAMMA SPECTROMETRY RESULTS OF SANITARY WASTE TREATMENT WATER

Station 102A

Results in pCi/liter, corrected for decay during collection period

Collection Period		7/2/2007		8/1/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		4.51E-01 ±	2.59E+01	4.25E+01
K-40		-2.85E+01 ±	5.81E+01	5.66E+01
CR-51		-6.89E+00 ±	3.79E+01	6.19E+01
MN-54		8.01E-02 ±	2.31E+00	3.79E+00
CO-58		-2.70E-01 ±	2.98E+00	4.88E+00
FE-59		1.39E+00 ±	1.65E+00	2.16E+00
CO-60		1.38E+00 ±	1.52E+00	3.11E+00
ZN-65		2.81E+00 ±	4.54E+00	7.10E+00
NB-95		5.59E-03 ±	3.16E+00	5.17E+00
ZR-95		-1.98E-01 ±	5.30E+00	8.70E+00
CS-134		-1.29E+00 ±	2.60E+00	4.18E+00
CS-137		3.14E-01 ±	2.35E+00	3.84E+00
BALA-140		-3.24E+00 ±	9.99E+00	1.60E+01
RA-226	+	1.25E+02 ±	6.35E+01	1.00E+02

Collection Period		8/1/2007		9/5/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		1.18E+01 ±	2.44E+01	3.93E+01
K-40		-1.26E+01 ±	3.99E+01	5.69E+01
CR-51		2.26E+00 ±	3.00E+01	4.92E+01
MN-54		6.76E-01 ±	2.29E+00	3.70E+00
CO-58		7.82E-03 ±	2.46E+00	4.04E+00
FE-59		2.22E-02 ±	5.47E+00	9.00E+00
CO-60		7.50E-01 ±	2.15E+00	3.42E+00
ZN-65		-2.07E+00 ±	5.22E+00	8.36E+00
NB-95		7.41E-01 ±	3.12E+00	5.06E+00
ZR-95		1.36E-01 ±	4.39E+00	7.21E+00
CS-134		-1.05E+00 ±	2.43E+00	3.91E+00
CS-137		-6.18E-02 ±	2.36E+00	3.87E+00
BALA-140		1.12E+00 ±	5.56E+00	8.96E+00
RA-226	+	2.18E+02 ±	6.22E+01	7.52E+01

Collection Period		9/5/2007		10/1/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		-7.96E+00 ±	2.09E+01	3.37E+01
K-40		2.23E+01 ±	2.74E+01	5.34E+01
CR-51		-7.82E+00 ±	2.40E+01	3.89E+01
MN-54		4.79E-01 ±	1.79E+00	2.88E+00
CO-58		1.07E+00 ±	2.30E+00	3.64E+00
FE-59		1.21E+00 ±	4.31E+00	6.90E+00
CO-60		-4.67E-01 ±	1.96E+00	3.13E+00
ZN-65		9.75E-01 ±	3.26E+00	5.18E+00
NB-95		-3.23E-02 ±	2.13E+00	3.49E+00
ZR-95		6.04E-01 ±	1.20E+00	8.50E+00
CS-134		-2.50E-02 ±	1.93E+00	3.18E+00
CS-137		-5.22E-01 ±	2.36E+00	3.83E+00
BALA-140		5.25E-01 ±	4.43E+00	7.17E+00
RA-226	+	8.64E+01 ±	2.52E+01	7.46E+01

Collection Period		10/1/2007		11/5/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		8.14E+00 ±	2.99E+01	4.81E+01
K-40	+	1.15E+02 ±	4.72E+01	6.86E+01
CR-51		5.86E+00 ±	3.69E+01	6.01E+01
MN-54		7.42E-01 ±	2.56E+00	4.05E+00
CO-58		5.20E-02 ±	2.79E+00	4.57E+00
FE-59		1.32E+00 ±	2.47E+00	3.41E+00
CO-60		-5.75E-01 ±	3.15E+00	5.06E+00
ZN-65		7.55E-02 ±	6.04E+00	9.92E+00
NB-95		-6.94E-01 ±	4.13E+00	6.68E+00
ZR-95		-1.68E+00 ±	6.24E+00	9.99E+00
CS-134		-1.21E+00 ±	2.78E+00	4.39E+00
CS-137		1.97E-01 ±	2.38E+00	3.87E+00
BALA-140		2.79E+00 ±	4.10E+00	3.19E+00
RA-226	+	1.18E+02 ±	6.06E+01	8.97E+01

Collection Period		11/5/2007		12/3/2007
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		-8.27E+00 ±	2.32E+01	3.75E+01
K-40	+	9.12E+01 ±	3.92E+01	5.26E+01
CR-51		-6.51E+00 ±	2.63E+01	4.27E+01
MN-54		8.33E-01 ±	1.83E+00	2.90E+00
CO-58		4.39E-01 ±	2.39E+00	3.88E+00
FE-59		-3.55E-01 ±	5.33E+00	8.72E+00
CO-60		2.90E-01 ±	1.73E+00	2.78E+00
ZN-65		-2.11E+00 ±	4.67E+00	7.40E+00
NB-95		1.32E+00 ±	2.46E+00	3.87E+00
ZR-95		1.67E+00 ±	4.03E+00	6.42E+00
CS-134		-1.20E+00 ±	2.19E+00	3.48E+00
CS-137		7.43E-01 ±	2.16E+00	3.46E+00
BALA-140		-9.90E-01 ±	5.66E+00	9.14E+00
RA-226	+	1.13E+02 ±	4.88E+01	7.45E+01

Collection Period		12/3/2007		1/2/2008
Nuclide	**RQ**	**Activity**	**Error**	**MDA**
BE-7		-1.58E+01 ±	2.48E+01	3.96E+01
K-40	+	1.36E+02 ±	4.53E+01	5.39E+01
CR-51		2.54E+00 ±	2.67E+01	4.38E+01
MN-54		5.49E-01 ±	2.03E+00	3.27E+00
CO-58		-1.65E+00 ±	2.80E+00	4.43E+00
FE-59		-4.19E-01 ±	4.46E+00	7.26E+00
CO-60		3.09E-02 ±	2.19E+00	3.60E+00
ZN-65		-1.42E+00 ±	4.44E+00	7.10E+00
NB-95		1.34E+00 ±	2.63E+00	4.17E+00
ZR-95		2.89E-01 ±	3.77E+00	6.15E+00
CS-134		1.48E+00 ±	2.00E+00	3.13E+00
CS-137		-1.28E-01 ±	2.69E+00	4.41E+00
BALA-140		6.48E-01 ±	5.13E+00	8.32E+00
RA-226	+	9.73E+01 ±	5.20E+01	8.09E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE B-7.1

GAMMA SPECTROMETRY RESULTS OF SANITARY WASTE TREATMENT WATER

Station 102B

Results in pCi/liter, corrected for decay during collection period

Collection Period			1/4/2007	2/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		5.05E+00 ±	2.73E+01	4.46E+01
K-40		9.04E+00 ±	3.05E+01	5.70E+01
CR-51		-1.36E+01 ±	3.75E+01	6.09E+01
MN-54		8.10E-01 ±	2.37E+00	3.81E+00
CO-58		-7.23E-01 ±	2.98E+00	4.84E+00
FE-59		1.07E-03 ±	5.21E+00	8.50E+00
CO-60		1.99E+00 ±	1.96E+00	2.89E+00
ZN-65		-2.26E+00 ±	5.28E+00	8.43E+00
NB-95		1.27E+00 ±	3.59E+00	5.78E+00
ZR-95		2.77E+00 ±	3.41E+00	5.28E+00
CS-134		-6.61E-01 ±	2.49E+00	4.05E+00
CS-137		-1.56E-01 ±	2.31E+00	3.79E+00
BALA-140		4.65E+00 ±	7.52E+00	1.16E+01
RA-226	+	1.73E+02 ±	6.27E+01	9.69E+01

Collection Period			2/5/2007	3/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		7.64E+00 ±	1.95E+01	3.13E+01
K-40		3.53E+01 ±	3.74E+01	5.30E+01
CR-51		1.29E+01 ±	2.63E+01	4.24E+01
MN-54		1.20E+00 ±	1.83E+00	2.70E+00
CO-58		2.12E-01 ±	2.21E+00	3.60E+00
FE-59		-1.13E-01 ±	4.68E+00	7.68E+00
CO-60		2.10E+00 ±	1.85E+00	2.67E+00
ZN-65		-1.25E+00 ±	4.42E+00	7.12E+00
NB-95		1.59E+00 ±	2.04E+00	3.33E+00
ZR-95		2.54E+00 ±	4.03E+00	6.35E+00
CS-134		-1.67E+00 ±	2.43E+00	3.87E+00
CS-137		-2.36E-01 ±	2.33E+00	3.80E+00
BALA-140		-1.19E-01 ±	5.07E+00	8.31E+00
RA-226	+	1.32E+02 ±	5.00E+01	7.76E+01

Collection Period			3/5/2007	4/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-4.13E-01 ±	2.49E+01	4.09E+01
K-40		-6.79E+00 ±	3.22E+01	5.38E+01
CR-51		7.22E+00 ±	3.50E+01	5.71E+01
MN-54		8.05E-01 ±	2.23E+00	3.58E+00
CO-58		4.32E-01 ±	2.69E+00	4.39E+00
FE-59		3.88E+00 ±	1.95E+00	5.88E+00
CO-60		1.28E+00 ±	2.12E+00	3.30E+00
ZN-65		-1.98E+00 ±	5.05E+00	8.08E+00
NB-95		6.75E-01 ±	3.47E+00	5.64E+00
ZR-95		-4.13E-02 ±	4.71E+00	7.73E+00
CS-134		-9.04E-01 ±	2.43E+00	3.93E+00
CS-137		1.96E+00 ±	2.33E+00	3.64E+00
BALA-140		3.14E+00 ±	6.84E+00	1.07E+01
RA-226	+	1.54E+02 ±	5.64E+01	7.29E+01

Collection Period			4/2/2007	5/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		1.67E+00 ±	2.72E+01	4.46E+01
K-40	+	5.65E+01 ±	3.20E+01	4.75E+01
CR-51		-7.97E+00 ±	3.79E+01	6.18E+01
MN-54		-6.89E-02 ±	2.43E+00	3.99E+00
CO-58		7.97E-01 ±	3.02E+00	4.89E+00
FE-59		-2.34E+00 ±	6.23E+00	9.97E+00
CO-60		1.09E+00 ±	2.14E+00	3.35E+00
ZN-65		2.51E+00 ±	4.66E+00	7.34E+00
NB-95		7.85E-01 ±	3.56E+00	5.78E+00
ZR-95		3.11E-01 ±	4.02E+00	6.56E+00
CS-134		-1.61E+00 ±	2.57E+00	4.11E+00
CS-137		2.92E-01 ±	2.34E+00	3.82E+00
BALA-140		-2.39E+00 ±	1.01E+01	1.63E+01
RA-226	+	1.70E+02 ±	5.75E+01	7.40E+01

Collection Period			5/2/2007	6/4/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		1.82E+01 ±	2.52E+01	4.01E+01
K-40	+	5.51E+01 ±	3.70E+01	5.07E+01
CR-51		7.87E+00 ±	3.08E+01	5.02E+01
MN-54		-8.44E-02 ±	2.26E+00	3.70E+00
CO-58		1.01E+00 ±	2.53E+00	4.05E+00
FE-59		3.85E+00 ±	3.66E+00	9.23E+00
CO-60		3.52E-01 ±	2.20E+00	3.56E+00
ZN-65		1.22E-01 ±	4.21E+00	6.91E+00
NB-95		2.38E+00 ±	3.20E+00	5.04E+00
ZR-95		-3.91E-01 ±	4.39E+00	7.17E+00
CS-134		-1.19E+00 ±	2.37E+00	3.81E+00
CS-137		-5.82E-02 ±	2.38E+00	3.91E+00
BALA-140		0.00E+00 ±	7.28E+00	1.21E+01
RA-226	+	1.52E+02 ±	5.80E+01	7.55E+01

Collection Period			6/4/2007	7/2/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-5.36E+00 ±	2.77E+01	4.51E+01
K-40	+	6.68E+01 ±	2.55E+01	4.17E+01
CR-51		-6.64E+00 ±	3.31E+01	5.41E+01
MN-54		7.98E-01 ±	2.27E+00	3.66E+00
CO-58		8.88E-01 ±	2.87E+00	4.63E+00
FE-59		-1.87E+00 ±	6.53E+00	1.05E+01
CO-60		1.03E+00 ±	2.33E+00	3.69E+00
ZN-65		-3.64E+00 ±	5.40E+00	8.49E+00
NB-95		9.76E-01 ±	3.37E+00	5.45E+00
ZR-95		7.87E-01 ±	4.52E+00	7.35E+00
CS-134		-7.87E-01 ±	2.38E+00	3.86E+00
CS-137		-1.62E+00 ±	2.74E+00	4.37E+00
BALA-140		5.31E+00 ±	5.33E+00	7.56E+00
RA-226	+	1.54E+02 ±	6.19E+01	9.63E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE B-7.1

GAMMA SPECTROMETRY RESULTS OF SANITARY WASTE TREATMENT WATER

Station 102B

Results in pCi/liter, corrected for decay during collection period

Collection Period			7/2/2007	8/1/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		9.93E+00 ±	2.86E+01	4.63E+01
K-40		-2.10E+01 ±	5.03E+01	5.84E+01
CR-51		-4.28E+00 ±	4.11E+01	6.73E+01
MN-54		6.54E-01 ±	2.49E+00	4.03E+00
CO-58		-6.91E-01 ±	2.81E+00	4.56E+00
FE-59		-2.14E+00 ±	6.74E+00	1.09E+01
CO-60		-3.08E-02 ±	2.31E+00	3.80E+00
ZN-65		-1.73E+00 ±	5.17E+00	8.31E+00
NB-95		2.61E+00 ±	3.27E+00	5.09E+00
ZR-95		2.81E+00 ±	4.96E+00	7.87E+00
CS-134		2.62E-02 ±	2.34E+00	3.84E+00
CS-137		-8.35E-02 ±	2.55E+00	4.19E+00
BALA-140		5.67E+00 ±	1.06E+01	1.66E+01
RA-226	+	1.46E+02 ±	7.49E+01	6.91E+01

Collection Period			8/1/2007	9/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-1.57E+01 ±	3.14E+01	5.05E+01
K-40		-9.27E+00 ±	3.52E+01	5.78E+01
CR-51		-1.21E+01 ±	3.92E+01	6.36E+01
MN-54		-1.08E+00 ±	2.86E+00	4.59E+00
CO-58		2.28E+00 ±	2.72E+00	4.17E+00
FE-59		-1.47E+00 ±	6.45E+00	1.04E+01
CO-60		9.45E-01 ±	1.11E+00	4.26E+00
ZN-65		2.90E+00 ±	5.16E+00	8.05E+00
NB-95		9.53E-01 ±	3.86E+00	6.23E+00
ZR-95		3.19E+00 ±	5.52E+00	8.70E+00
CS-134		-1.35E+00 ±	3.10E+00	4.99E+00
CS-137		-7.90E-01 ±	2.88E+00	4.65E+00
BALA-140		-6.50E-01 ±	8.60E+00	1.40E+01
RA-226	+	1.49E+02 ±	6.95E+01	1.08E+02

Collection Period			9/5/2007	10/1/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		5.75E-01 ±	1.84E+01	3.03E+01
K-40	+	8.10E+01 ±	3.48E+01	5.08E+01
CR-51		6.50E+00 ±	1.95E+01	3.15E+01
MN-54		1.33E+00 ±	1.86E+00	2.87E+00
CO-58		8.06E-01 ±	2.04E+00	3.24E+00
FE-59		-1.07E+00 ±	4.36E+00	7.00E+00
CO-60		4.44E-01 ±	2.01E+00	3.23E+00
ZN-65		-1.18E+00 ±	4.07E+00	6.51E+00
NB-95		3.78E-01 ±	2.65E+00	4.32E+00
ZR-95		-3.08E-01 ±	4.56E+00	7.47E+00
CS-134		-5.47E-01 ±	2.20E+00	3.57E+00
CS-137		1.27E+00 ±	2.29E+00	3.63E+00
BALA-140		-5.36E-01 ±	5.36E+00	8.73E+00
RA-226	+	9.83E+01 ±	4.82E+01	7.42E+01

Collection Period			10/1/2007	11/5/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-7.09E+00 ±	2.84E+01	4.58E+01
K-40		2.18E+01 ±	4.44E+01	8.35E+01
CR-51		7.04E-01 ±	3.19E+01	5.24E+01
MN-54		-8.15E-02 ±	2.26E+00	3.70E+00
CO-58		-2.35E-01 ±	2.96E+00	4.81E+00
FE-59		7.58E+00 ±	6.36E+00	8.60E+00
CO-60		-1.83E-01 ±	2.81E+00	4.58E+00
ZN-65		-1.40E+00 ±	6.87E+00	1.10E+01
NB-95		-9.66E-01 ±	4.39E+00	7.06E+00
ZR-95		-8.82E-02 ±	5.56E+00	9.12E+00
CS-134		2.73E-01 ±	2.33E+00	3.79E+00
CS-137		-8.34E-01 ±	3.34E+00	5.37E+00
BALA-140		4.53E+00 ±	6.59E+00	7.77E+00
RA-226	+	1.14E+02 ±	6.86E+01	1.01E+02

Collection Period			11/5/2007	12/3/2007
Nuclide	RQ	Activity	Error	MDA
BE-7		-4.65E+00 ±	2.36E+01	3.84E+01
K-40	+	1.12E+02 ±	4.07E+01	5.21E+01
CR-51		8.06E+00 ±	2.77E+01	4.50E+01
MN-54		-9.11E-01 ±	2.12E+00	3.37E+00
CO-58		-5.79E-03 ±	1.93E+00	3.18E+00
FE-59		4.02E-01 ±	5.05E+00	8.24E+00
CO-60		1.20E+00 ±	2.05E+00	3.17E+00
ZN-65		-1.44E-01 ±	3.97E+00	6.51E+00
NB-95		9.71E-01 ±	2.64E+00	4.22E+00
ZR-95		-9.58E-01 ±	4.10E+00	6.61E+00
CS-134		-7.27E-01 ±	2.01E+00	3.23E+00
CS-137		1.40E+00 ±	1.91E+00	2.96E+00
BALA-140		-1.93E+00 ±	6.81E+00	1.09E+01
RA-226	+	8.80E+01 ±	2.15E+01	6.86E+01

Collection Period			12/3/2007	1/2/2008
Nuclide	RQ	Activity	Error	MDA
BE-7		4.44E+00 ±	2.27E+01	3.69E+01
K-40	+	6.48E+01 ±	3.17E+01	5.52E+01
CR-51		7.19E+00 ±	2.71E+01	4.40E+01
MN-54		3.04E-02 ±	1.90E+00	3.12E+00
CO-58		-5.04E-01 ±	2.14E+00	3.44E+00
FE-59		-2.45E+00 ±	5.46E+00	8.65E+00
CO-60		-4.65E-01 ±	2.04E+00	3.28E+00
ZN-65		8.48E-01 ±	4.12E+00	6.64E+00
NB-95		3.02E-01 ±	2.11E+00	3.40E+00
ZR-95		1.74E+00 ±	2.55E+00	3.84E+00
CS-134		7.60E-01 ±	2.05E+00	3.29E+00
CS-137		2.58E-02 ±	2.15E+00	3.53E+00
BALA-140		-2.01E+00 ±	7.08E+00	1.13E+01
RA-226	+	8.80E+01 ±	4.47E+01	6.86E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE B-7.2

GAMMA SPECTROMETRY RESULTS OF SANITARY WASTE TREATMENT WATER - SUMMARY

Results in pCi/liter, corrected for decay during collection period

Location	Nuclide	Average Activity	Activity Low	Activity High	Average MDA	Number of Samples	Number of Positive IDs
102A	BE-7	-6.17E-01	-1.58E+01	1.18E+01	4.03E+01	12	0
	K-40	2.68E+01	-2.85E+01	1.36E+02	5.52E+01	12	3
	CR-51	2.50E+00	-1.25E+01	2.52E+01	4.96E+01	12	0
	MN-54	4.28E-01	-9.59E-02	8.33E-01	3.51E+00	12	0
	CO-58	1.34E-01	-1.65E+00	1.57E+00	4.10E+00	12	0
	FE-59	6.25E-01	-1.05E+00	3.33E+00	7.45E+00	12	0
	CO-60	3.46E-01	-9.71E-01	2.41E+00	3.59E+00	12	0
	ZN-65	4.67E-01	-2.11E+00	2.92E+00	7.45E+00	12	0
	NB-95	6.09E-01	-6.94E-01	1.66E+00	4.86E+00	12	0
	ZR-95	5.91E-01	-1.72E+00	3.33E+00	7.49E+00	12	0
	CS-134	-6.20E-01	-1.70E+00	1.48E+00	3.87E+00	12	0
	CS-137	-3.50E-02	-9.27E-01	9.67E-01	3.86E+00	12	0
	BALA-140	3.20E-01	-3.24E+00	2.79E+00	9.20E+00	12	0
	RA-226	1.40E+02	8.64E+01	2.18E+02	8.06E+01	12	12
102B	BE-7	1.19E+00	-1.57E+01	1.82E+01	4.12E+01	12	0
	K-40	3.88E+01	-2.10E+01	1.12E+02	5.51E+01	12	6
	CR-51	4.88E-01	-1.36E+01	1.29E+01	5.25E+01	12	0
	MN-54	2.83E-01	-1.08E+00	1.33E+00	3.59E+00	12	0
	CO-58	3.55E-01	-7.23E-01	2.28E+00	4.15E+00	12	0
	FE-59	3.56E-01	-2.45E+00	7.58E+00	8.80E+00	12	0
	CO-60	8.12E-01	-4.65E-01	2.10E+00	3.48E+00	12	0
	ZN-65	-6.02E-01	-3.64E+00	2.90E+00	7.79E+00	12	0
	NB-95	9.93E-01	-9.66E-01	2.61E+00	5.11E+00	12	0
	ZR-95	1.03E+00	-9.58E-01	3.19E+00	7.01E+00	12	0
	CS-134	-6.99E-01	-1.67E+00	7.60E-01	3.86E+00	12	0
	CS-137	9.75E-02	-1.62E+00	1.96E+00	3.97E+00	12	0
	BALA-140	1.31E+00	-2.39E+00	5.67E+00	1.13E+01	12	0
	RA-226	1.35E+02	8.80E+01	1.73E+02	8.19E+01	12	12

TABLE B-8.1

TRITIUM IN SANITARY WASTE TREATMENT WATER

Results in pCi/liter

Location	Description	Collection Period			RQ	Activity		Error
102A	FFTF-Effluent	1/3/2007	-	02/05/07	+	2.56E+03	±	2.11E+02
		02/05/07	-	03/05/07	+	2.33E+03	±	2.06E+02
		03/05/07	-	04/02/07	+	2.35E+03	±	2.03E+02
		04/02/07	-	05/02/07	+	2.31E+03	±	2.06E+02
		05/02/07	-	06/04/07	+	2.49E+03	±	2.10E+02
		06/04/07	-	07/02/07	+	2.37E+03	±	2.07E+02
		07/02/07	-	08/01/07	+	2.55E+03	±	2.10E+02
		08/01/07	-	09/05/07	+	2.45E+03	±	2.08E+02
		09/05/07	-	10/01/07	+	2.43E+03	±	2.10E+02
		10/01/07	-	11/05/07	+	2.49E+03	±	2.15E+02
		11/05/07	-	12/03/07	+	2.27E+03	±	1.23E+02
		12/03/07	-	01/02/08	+	2.31E+03	±	1.48E+02
102B	Monthly Headworks	1/3/2007	-	02/05/07	+	7.94E+02	±	1.60E+02
		02/05/07	-	03/05/07	+	6.09E+02	±	1.53E+02
		03/05/07	-	04/02/07	+	7.56E+02	±	1.54E+02
		04/02/07	-	05/02/07	+	6.37E+02	±	1.56E+02
		05/02/07	-	06/04/07	+	4.00E+02	±	1.47E+02
		06/04/07	-	07/02/07	+	5.96E+02	±	1.55E+02
		07/02/07	-	08/01/07	+	1.03E+03	±	1.66E+02
		08/01/07	-	09/05/07	+	9.09E+02	±	1.62E+02
		09/05/07	-	10/01/07	+	1.11E+03	±	1.74E+02
		10/01/07	-	11/05/07	+	9.47E+02	±	1.74E+02
		11/05/07	-	12/03/07	+	7.31E+02	±	9.81E+01
		12/03/07	-	01/02/08	+	1.05E+03	±	1.23E+02

TABLE B-8.2

TRITIUM IN SANITARY WASTE TREATMENT WATER - SUMMARY

Results in pCi/liter

Location Description	Average Activity	Activity Low	Activity High	Number of Samples	Number of Positive IDs
102A & 102B	1.60E+03	4.00E+02	2.56E+03	24	24
102A FFTF Effluent	2.41E+03	2.27E+03	2.56E+03	12	12
102B Monthly Headworks	7.97E+02	4.00E+02	1.11E+03	12	12

RQ= results Qualifier. If blank, result is less than detection limit. If "+", result is above the detection limit.

TABLE B-9.1

GAMMA SPECTROMETRY RESULTS OF SANITARY WASTE TREATMENT SEDIMENT

Results in pCi/Kilogram

Location	Collection Date	Nuclide	RQ	Activity		Error	MDA
Station 102d	12/10/07	BE-7		1.13E+02	±	1.16E+02	1.75E+02
		K-40	+	8.68E+03	±	6.00E+02	3.23E+02
		CR-51		1.99E+01	±	1.38E+02	2.25E+02
		MN-54		-1.60E+00	±	1.38E+01	2.24E+01
		CO-58		-3.23E+00	±	1.52E+01	2.45E+01
		FE-59		5.97E+00	±	3.48E+01	5.63E+01
		CO-60	+	1.17E+02	±	1.95E+01	1.60E+01
		ZN-65		1.11E+01	±	2.96E+01	4.67E+01
		NB-95		0.00E+00	±	2.32E+01	3.87E+01
		CS-134		-4.59E+00	±	1.36E+01	2.18E+01
		CS-137	+	1.30E+02	±	2.50E+01	2.24E+01
		BALA-140		1.34E+01	±	2.00E+01	2.83E+01
		BI-214	+	4.92E+02	±	5.66E+01	4.18E+01
		RA-226		1.38E+02	±	3.54E+01	4.98E+02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE B- 10.1

GAMMA SPECTROMETRY RESULTS OF MONITORING WELL SAMPLES

Results in pCi/liter

Location MW-8 collected 1/27/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		6.23E+00	±	2.17E+01	3.53E+01
K-40		3.25E+01	±	4.29E+01	5.51E+01
CR-51		1.82E+00	±	2.70E+01	4.42E+01
MN-54		6.76E-01	±	1.34E+00	2.09E+00
CO-58		8.74E-01	±	2.44E+00	3.93E+00
FE-59		-4.61E-01	±	5.26E+00	8.59E+00
CO-60		1.79E+00	±	2.24E+00	3.43E+00
ZN-65		-2.22E+00	±	5.14E+00	8.21E+00
NB-95		1.01E+00	±	2.83E+00	4.57E+00
ZR-95		1.99E+00	±	4.34E+00	6.95E+00
CS-134		-5.95E-01	±	2.55E+00	4.15E+00
CS-137		1.06E+00	±	2.19E+00	3.49E+00
BALA-140		-1.94E-01	±	4.43E+00	7.25E+00
RA-226	+	1.88E+02	±	5.76E+01	7.36E+01

Location MW-9 collected 1/24/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		-7.48E+00	±	2.53E+01	4.10E+01
K-40		-1.47E+01	±	3.76E+01	5.30E+01
CR-51		5.18E-01	±	2.89E+01	4.75E+01
MN-54		6.10E-01	±	2.44E+00	3.95E+00
CO-58		3.31E-01	±	2.61E+00	4.26E+00
FE-59		1.86E-01	±	5.53E+00	9.08E+00
CO-60		3.07E-01	±	2.15E+00	3.48E+00
ZN-65		-1.62E+00	±	5.77E+00	9.32E+00
NB-95		-5.85E-01	±	3.36E+00	5.48E+00
ZR-95		4.73E-03	±	4.64E+00	7.65E+00
CS-134		-1.49E+00	±	2.69E+00	4.32E+00
CS-137		-5.41E-01	±	2.83E+00	4.62E+00
BALA-140		-2.23E+00	±	6.11E+00	9.73E+00
RA-226	+	1.72E+02	±	6.35E+01	8.05E+01

Location MW-7 collected 1/24/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		6.95E+00	±	2.37E+01	3.84E+01
K-40	+	1.27E+02	±	3.87E+01	5.24E+01
CR-51		1.24E+00	±	1.34E+01	2.52E+01
MN-54		6.03E-01	±	2.42E+00	3.93E+00
CO-58		1.08E+00	±	2.13E+00	3.37E+00
FE-59		3.56E+00	±	4.57E+00	7.02E+00
CO-60		-1.57E-01	±	2.07E+00	3.37E+00
ZN-65		-2.67E-01	±	8.17E+00	1.34E+01
NB-95		4.91E-01	±	2.56E+00	4.14E+00
ZR-95		8.98E-01	±	4.19E+00	6.79E+00
CS-134		2.69E-01	±	2.31E+00	3.78E+00
CS-137		-9.23E-01	±	2.49E+00	4.00E+00
BALA-140		4.87E-02	±	4.96E+00	8.14E+00
RA-226	+	2.13E+02	±	5.96E+01	8.68E+01

Location MW-9 collected 10/24/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		-4.04E+00	±	8.42E+00	1.37E+01
K-40	+	4.24E+01	±	1.46E+01	1.99E+01
CR-51		-9.22E-01	±	5.81E+00	9.51E+00
MN-54		-2.55E-02	±	6.66E-01	1.09E+00
CO-58		-4.74E-02	±	7.29E-01	1.19E+00
FE-59		3.33E-01	±	7.44E-01	1.92E+00
CO-60		-9.31E-02	±	9.42E-01	1.54E+00
ZN-65		2.38E-01	±	9.27E+00	1.52E+01
NB-95		5.29E-02	±	1.04E+00	1.70E+00
ZR-95		1.40E-01	±	1.76E+00	2.89E+00
CS-134		1.59E-01	±	1.56E+00	2.57E+00
CS-137		-2.62E-01	±	9.24E-01	1.50E+00
BALA-140		1.96E-01	±	8.58E-01	1.39E+00
RA-226		6.58E+00	±	2.41E+01	3.95E+01

Location MW-3 collected 11/28/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		-2.93E+00	±	4.90E+00	7.96E+00
K-40	+	1.66E+01	±	9.66E+00	1.22E+01
CR-51		5.61E-02	±	4.84E+00	7.95E+00
MN-54		-2.31E-01	±	5.59E-01	9.08E-01
CO-58		5.54E-02	±	4.93E-01	8.07E-01
FE-59		-5.08E-01	±	1.05E+00	1.70E+00
CO-60		5.19E-01	±	4.14E-01	6.69E-01
ZN-65		8.67E-02	±	6.05E+00	9.95E+00
NB-95		-6.14E-01	±	6.92E-01	1.11E+00
ZR-95		-1.56E-01	±	9.41E-01	1.54E+00
CS-134		1.34E-01	±	4.02E-01	6.53E-01
CS-137		-8.03E-01	±	6.52E-01	1.04E+00
BALA-140		3.77E-02	±	7.52E-01	1.23E+00
RA-226	+	2.81E+01	±	1.39E+01	2.17E+01

Location MW-5 collected 11/28/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		-2.65E+00	±	6.86E+00	1.12E+01
K-40	+	2.10E+01	±	1.46E+01	1.98E+01
CR-51		-4.73E-01	±	7.59E+00	1.25E+01
MN-54		7.15E-02	±	8.22E-01	1.35E+00
CO-58		-7.36E-02	±	7.96E-01	1.30E+00
FE-59		-1.24E+00	±	1.78E+00	2.84E+00
CO-60		2.29E-01	±	8.40E-01	1.36E+00
ZN-65		3.98E-01	±	7.34E+00	1.21E+01
NB-95		-6.72E-01	±	9.75E-01	1.57E+00
ZR-95		-2.04E-01	±	1.47E+00	2.40E+00
CS-134		-5.19E-01	±	3.78E-01	5.66E-01
CS-137		0.00E+00	±	0.00E+00	2.04E+00
BALA-140		7.69E-02	±	8.34E-01	1.36E+00
RA-226		5.10E+01	±	2.20E+01	3.50E+01

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.

TABLE B- 10.1

GAMMA SPECTROMETRY RESULTS OF MONITORING WELL SAMPLES

Results in pCi/liter

Location MW-8 collected 11/28/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		9.63E-01	±	7.04E+00	1.15E+01
K-40	+	4.19E+01	±	1.44E+01	1.90E+01
CR-51		-1.47E-01	±	6.86E+00	1.13E+01
MN-54		-3.12E-01	±	7.75E-01	1.25E+00
CO-58		-4.96E-01	±	7.42E-01	1.19E+00
FE-59		2.33E-03	±	1.61E+00	2.64E+00
CO-60		-2.66E-02	±	7.10E-01	1.16E+00
ZN-65		1.34E-01	±	1.68E+00	2.75E+00
NB-95		2.96E-01	±	7.64E-01	1.23E+00
ZR-95		-3.13E-02	±	1.40E+00	2.30E+00
CS-134		9.65E-02	±	6.73E-01	1.10E+00
CS-137		1.64E-01	±	8.02E-01	1.31E+00
BALA-140		5.38E-01	±	1.24E+00	1.98E+00
RA-226		1.15E+01	±	1.83E+01	2.98E+01

Location MW-7 collected 11/28/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		-4.01E+00	±	7.26E+00	1.17E+01
K-40	+	4.38E+01	±	1.25E+01	1.82E+01
CR-51		1.36E+00	±	7.64E+00	1.25E+01
MN-54		-3.36E-01	±	7.69E-01	1.24E+00
CO-58		3.36E-01	±	7.68E-01	1.24E+00
FE-59		-5.37E-02	±	1.51E+00	2.47E+00
CO-60		3.13E-01	±	7.17E-01	1.15E+00
ZN-65		-8.69E-02	±	1.43E+00	2.34E+00
NB-95		-5.73E-02	±	9.43E-01	1.55E+00
ZR-95		6.78E-01	±	7.57E-01	1.48E+00
CS-134		-7.53E-02	±	6.94E-01	1.14E+00
CS-137		-4.47E-02	±	8.42E-01	1.38E+00
BALA-140		5.11E-01	±	1.02E+00	1.63E+00
RA-226	+	4.02E+01	±	1.79E+01	2.83E+01

Location MW-6 collected 11/28/2007

Nuclide	RQ	Activity		Error	MDA
BE-7		3.59E-02	±	6.26E+00	1.03E+01
K-40	+	3.86E+01	±	1.45E+01	1.94E+01
CR-51		-4.97E-01	±	8.00E+00	1.31E+01
MN-54		-1.76E-02	±	8.13E-01	1.33E+00
CO-58		-1.48E-02	±	8.61E-01	1.41E+00
FE-59		7.46E-01	±	1.67E+00	2.70E+00
CO-60		-1.24E-01	±	7.57E-01	1.23E+00
ZN-65		-9.44E-01	±	6.80E+00	1.12E+01
NB-95		-9.42E-01	±	1.13E+00	1.82E+00
ZR-95		5.99E-03	±	1.23E+00	2.02E+00
CS-134		3.75E-01	±	7.96E-01	1.29E+00
CS-137		-4.03E-02	±	7.68E-01	1.26E+00
BALA-140		-2.24E-01	±	1.36E+00	2.22E+00
RA-226		5.79E+01	±	2.28E+01	3.62E+01

TABLE B-10.2

TRITIUM IN MONITORING WELL SAMPLES

Results in pCi/liter

Location	Collection Date	RQ	Activity		Error
MW-7	01/24/07		2.37E+02	±	1.39E+02
MW-8	01/24/07		3.96E+02	±	1.44E+02
MW-9	01/24/07	+	6.05E+02	±	1.51E+02
MW-3	11/28/07	+	8.40E+02	±	1.19E+02
MW-5	11/28/07	+	1.68E+04	±	3.21E+02
MW-6	11/28/07	+	4.56E+03	±	1.86E+02
MW-7	11/28/07		1.31E+02	±	1.01E+02
MW-8	11/28/07	+	2.32E+03	±	1.50E+02

RQ = Results Qualifier. If blank, result is less than detection limit. If "+", result is above detection limit.