



**LA CROSSE BOILING WATER REACTOR
FINAL STATUS SURVEY RELEASE RECORD**

**CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102**



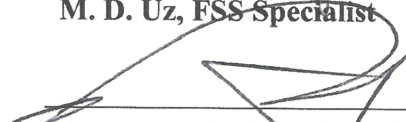
PREPARED BY / DATE:

 12/11/19
R. F. Yetter III, FSS Specialist


REVIEWED BY / DATE:

 12/12/19
M. D. Uz, FSS Specialist

REVIEWED BY / DATE:

 12/12/19
R. Yetter, Director, Radiological Site Closure

REVIEWED BY / DATE:

 12/12/19
P. Hollenbeck, Radiological Engineer

APPROVED BY / DATE:


 12/12/19
S. Zoller, FSS Manager

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LIST OF ACRONYMS AND ABBREVIATIONS

ALARA	As Low As Reasonably Achievable
CWD	Circulating Water Discharge
DQO	Data Quality Objective
DCGL	Derived Concentration Guideline Level
DCGL _{BP}	Buried Pipe Base Case Derived Concentration Guideline Level
FSS	Final Status Survey
HSA	Historical Site Assessment
IC	Insignificant Contributors
ID	Internal Diameter
LACBWR	La Crosse Boiling Water Reactor
LTP	License Termination Plan
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MCNP	Monte Carlo Neutral Particle
MDC	Minimum Detectable Concentration
NaI	Sodium Iodide
OpDCGL _{BP}	Buried Pipe Operational Derived Concentration Guideline Level
QAPP	Quality Assurance Project Plan
QC	Quality Control
ROC	Radionuclides of Concern
SOF	Sum-of-Fractions
TEDE	Total Effective Dose Equivalent
TSD	Technical Support Document
UCL	Upper Confidence Limit

1. EXECUTIVE SUMMARY

This Final Status Survey (FSS) Release Record for survey unit S1-011-102, Circulating Water Discharge (CWD) Pipe, has been generated in accordance with LaCrosseSolutions procedure LC-FS-PR-009, *Final Status Survey Data Reporting* (Reference 1) and satisfies the requirements of Section 5.11 of the *La Crosse Boiling Water Reactor License Termination Plan* (LACBWR LTP) (Reference 2).

An FSS sample plan for this survey unit was developed in accordance with LaCrosseSolutions procedures LC-FS-PR-002, *Final Status Survey Package Development* (Reference 3) and LC-FS-PR-018, *Radiation Surveys of Pipe Interiors Using Sodium/Cesium Iodide Detectors* (Reference 4), the LACBWR LTP, and with guidance from NUREG-1575, *Multi-Agency Radiation Survey and Site Investigation Manual* (MARSSIM) (Reference 5).

Survey unit S1-011-102 has a MARSSIM classification of 1. A survey plan was designed based upon use of the Sign Test as the nonparametric statistical test for compliance. Both the Type I (α) and Type II (β) decision error rates were set at 0.05. As a systematic measurement population, five hundred and ten (510) static gamma measurements were acquired from the survey unit. The data assessment results for survey unit S1-011-102 indicate that the maximum Sum-of-Fractions (SOF), considering the concentration of all applicable Radionuclides of Concern (ROC) either by direct measurement or by inference, is equal to 0.1131 when applying the respective Operational Derived Concentration Guideline Levels (OpDCGL_{BP}) for buried pipe. The mean SOF when applying the respective Base Case DCGLs (DCGL_{BP}) is 0.0012. This SOF equates to a dose for the survey unit of 0.0299 mrem/yr.

2. SURVEY UNIT DESCRIPTION

S1-011-102 is an impacted Class 1 buried pipe survey unit. The survey unit consists of the interior surface of the CWD Pipe. The steel pipe has an internal diameter (ID) of 60 inches and a total length of 421 feet. The pipe runs from the Turbine Building to a combined discharge structure on the banks of the Mississippi River. The interior surface area of the CWD Pipe is 614.37 m² (6,143,736.42 cm²). Refer to Attachment 1 of this report for figures and maps depicting survey unit S1-011-102.

3. CLASSIFICATION BASIS

Based on the *La Crosse Boiling Water Reactor Historical Site Assessment* (HSA) (Reference 6), the CWD Pipe was identified as a Class 1 system.

Based upon review of the historical information and completion of a final Survey Unit Classification Worksheet from LC-FS-PR-006, *Survey Unit Classification* (Reference 7), the correct final classification of survey unit S1-011-102 was determined to be Class 1.

4. DATA QUALITY OBJECTIVES

FSS planning and design relies on a properly executed Data Quality Objective (DQO) process to ensure, through compliance with explicitly defined inputs and boundaries, that the primary objective of the survey is satisfied. The DQO process is described in the LACBWR LTP in accordance with MARSSIM. The appropriate design for a given survey was developed using the DQO process as outlined in Appendix D of MARSSIM.

The DQO process incorporated hypothesis testing and probabilistic sampling distributions to control decision errors during data analysis. Hypothesis testing is a process based on the scientific method that compares a baseline condition to an alternate condition. The baseline condition is technically known as the null hypothesis. Hypothesis testing rests on the premise that the null hypothesis is true and that sufficient evidence must be provided for rejection. In designing the survey plan, the underlying assumption, or null hypothesis was that residual activity in the survey unit exceeded the release criteria. Rejection of the null hypothesis would indicate that residual activity within the survey unit does not exceed the release criteria. Therefore, the survey unit would satisfy the primary objective of the FSS sample plan.

The primary objective of the FSS sample plan is to demonstrate that the level of residual radioactivity in survey unit S1-011-102 did not exceed the release criteria specified in the LTP and that the potential dose from residual radioactivity is As Low As Reasonably Achievable (ALARA).

EnergySolutions Technical Support Document (TSD) RS-TD-313196-001, *Radionuclides of Concern during LACBWR Decommissioning* (Reference 8) established the basis for an initial suite of potential ROC for decommissioning. Insignificant contributors (IC) were determined consistent with the guidance contained in Section 3.3 of NUREG-1757, Volume 2, Revision 1, *Consolidated Decommissioning Guidance – Characterization, Survey, and Determination of Radiological Criteria, Final Report* (Reference 9). In all soil and concrete scenarios, Cs-137, Co-60, Sr-90, Eu-152 and Eu-154 contribute nearly 100% of the total dose. The remaining radionuclides were designated as IC and are eliminated from further detailed evaluation. Therefore, the final ROCs for LACBWR soil, basement concrete, and buried piping are Cs-137, Co-60, Sr-90, Eu-152 and Eu-154.

LTP, Section 6.14.1 discusses the process used to derive the ROC for the decommissioning of LACBWR, including the elimination of IC from the initial suite. Table 4-1 presents the

ROC for the decommissioning of buried pipe at LACBWR and the normalized mixture fractions based on the radionuclide mixture.

Table 4-1 - Dose Significant Radionuclides and Mixture for Buried Pipe

Radionuclide	Fraction of Total Activity (normalized) ⁽¹⁾
Co-60	0.064
Sr-90	0.098
Cs-137	0.829
Eu-152	0.005
Eu-154	0.003

(1) Based on maximum percent of total activity from Table 22 of RS-TD-313196-001, normalized to one for the dose significant radionuclides.

The LTP, Section 5.2, states that each radionuclide-specific Base Case DCGL is equivalent to the level of residual radioactivity (above background levels) that could, when considered independently, result in a Total Effective Dose Equivalent (TEDE) of 25 mrem/yr to an Average Member of the Critical Group. To ensure that the summation of dose from each source term is 25 mrem/yr or less after all FSS is completed, the Base Case DCGLs are reduced based on an expected, or *a priori*, fraction of the 25 mrem/yr dose limit from each source term. The reduced DCGLs, or “Operational” DCGLs, can be related to the Base Case DCGLs as an expected fraction of dose based on an *a priori* assessment of what the expected dose should be based on the results of site characterization, process knowledge, and the extent of planned remediation. The Operational DCGL is then used as the DCGL for the FSS design of the survey unit (i.e., calculation of surrogate DCGLs and investigations levels). Details of the Operational DCGLs derived for each dose component and the basis for the applied *a priori* dose fractions are provided in LC-FS-TSD-002, *Operational Derived Concentration Guideline Levels for Final Status Survey* (Reference 10).

The dose contribution from each ROC is accounted for using the SOF to ensure that the total dose from all ROC does not exceed the dose criterion. A Base Case DCGL that is established for the average residual radioactivity in a survey unit is equivalent to a DCGL_w. The DCGL_w can be multiplied by Area Factors to obtain a Base Case DCGL that represents the same dose to an individual for residual radioactivity over a smaller area within a survey unit.

At LACBWR, compliance is demonstrated through the summation of dose from five (5) distinct source terms for the end state (basements, soils, buried pipe, above-ground structures, and groundwater). When applied to buried pipe, the DCGLs are expressed in units of activity per surface area (dpm/100 cm²).

Buried piping is defined as below ground pipe located outside of structures and basements. The dose assessment methods and resulting DCGLs for buried piping are described in detail in LTP, Section 6.20. The buried piping was separated into two categories. The first category included the summation and grouping of all impacted buried pipe other than the CWD Pipe and is designated as the “Buried Pipe Group.” The second category consisted of the CWD Pipe only. The separation of the Circulating Water pipe was necessary because the geometry of the CWD pipe was significantly different than the other pipes, and the pipes are located in distinctly different parts of the site.

EnergySolutions TSD RS-TD-313196-004, *LACBWR Soil DCGL, Basement Concrete DCGL, and Buried Pipe DCGL* (Reference 11) and LTP, Section 6.20, provide the exposure scenarios and modeling parameters that were used to calculate the site-specific buried pipe DCGLs. The final DCGLs to be used during FSS account for the fact that the dose from the *In Situ* and Excavation scenarios must be summed in the conceptual model for buried pipe dose assessment (i.e., the *In Situ* and Excavation scenarios occur in parallel). The summed Buried Pipe Base Case DCGLs are reproduced in Table 4-2 below. The IC dose percentages for each of the buried pipe scenarios were used to adjust each buried pipe Base Case DCGL to account for the dose from the eliminated IC radionuclides. The Operational DCGLs for the CWD Pipe are provided in Table 4-3.

Table 4-2 - Base Case DCGLs for Buried Pipe – Circulating Water Discharge Pipe

Radionuclide	DCGL _{BP} (dpm/100 cm ²)
Co-60	7.75E+04
Sr-90	7.55E+05
Cs-137	3.30E+05
Eu-152	1.67E+05
Eu-154	1.56E+05

Table 4-3 - Operational DCGLs for Buried Pipe – Circulating Water Discharge Pipe

Radionuclide	OpDCGL_{BP} (dpm/100 cm²)
Co-60	1.63E+04
Sr-90	1.58E+05
Cs-137	6.94E+04
Eu-152	3.51E+04
Eu-154	3.27E+04

Instrument DQOs included a verification of the ability of the survey instrument to detect the radiation(s) of interest relative to the Operational DCGL. Survey instrument response checks were required prior to issuance and after the instrument had been used. Control and accountability of survey instruments was required to assure the quality and prevent the loss of data.

In accordance with the LTP, the minimum acceptable MDC for measurements obtained using field instruments was 50% of the applicable Operational DCGL.

5. SURVEY DESIGN

The level of effort associated with planning a survey is based on the complexity of the survey unit and nature of the hazards. Guidance for preparing FSS plans is provided in procedure LC-FS-PR-002, *Final Status Survey Package Development*.

The DQO process validated that Co-60, Sr-90, Cs-137, Eu-152, and Eu-154 would be the ROC in survey unit S1-011-102 as presented in LTP, Section 5.1. During the data analysis of the FSS results, concentrations for the HTD ROC Sr-90 are inferred using a surrogate approach. Cs-137 is the principle surrogate radionuclide for Sr-90. During characterization, both Sr-90 and Cs-137 was positively detected in all thirty (30) concrete core samples assessed in the Reactor Building, Tunnel, and Waste Treatment Building. The 95% Upper Confidence Limit (UCL) of the Cs-137 fractions was chosen to represent the overall nuclide mix for soils/buried pipe, the Reactor Building, and the Waste Gas Tank Vault. The surrogate ratio for soil/buried pipe is given in Table 5-1.

Table 5-1 – Soil Surrogate Ratio

Radionuclides	Ratio
Sr-90/Cs-137	0.502

The equation for calculating a surrogate DCGL is as follows:

Equation 1

$$Surrogate_{DCGL} = \frac{1}{\left[\left(\frac{1}{DCGL_{Sur}} \right) + \left(\frac{R_2}{DCGL_2} \right) + \left(\frac{R_3}{DCGL_3} \right) + \dots \left(\frac{R_n}{DCGL_n} \right) \right]}$$

Where: $DCGL_{Sur}$ = Surrogate radionuclide DCGL
 $DCGL_{2,3,\dots,n}$ = DCGL for radionuclides to be represented by the surrogate
 R_n = Ratio of concentration (or nuclide mixture fraction) of radionuclide “n” to surrogate radionuclide

Using the Operational DCGLs presented in Table 4-3 and the ratio from Table 5-1, the following surrogate calculation was performed:

Equation 2

$$\begin{aligned} Surrogate_{DCGL(Cs-137)} &= \frac{1}{\left[\left(\frac{1}{6.94E+04_{(Cs-137)}} \right) + \left(\frac{0.502}{1.58E+05_{(Sr-90)}} \right) \right]} \\ &= 5.69E+04 \text{ dpm}/100 \text{ cm}^2 \end{aligned}$$

The surrogate Operational DCGL for Cs-137 is then used in the calculation of the gross gamma Operational DCGL, as calculated in Equation 3.

Equation 3

$$\begin{aligned} Surrogate_{DCGL(gamma)} &= \frac{1}{\left[\left(\frac{0.071}{1.63E+04_{(Co-60)}} \right) + \left(\frac{0.919}{5.69E+04_{Cs-137}} \right) + \left(\frac{0.006}{3.51E+04_{(Eu-152)}} \right) + \left(\frac{0.003}{3.27E+04_{(Eu-154)}} \right) \right]} \\ &= 4.81E+04 \text{ dpm}/100 \text{ cm}^2 \end{aligned}$$

The action level for survey unit S1-011-102 was equivalent to the calculated gross gamma Operational DCGL of 4.81E+04 dpm/100 cm².

For the survey of interior pipe surfaces, areal coverage is achieved by the “area of detection” for each static measurement collected. Scanning, in the traditional context, is not applicable to the survey of pipe internal surfaces. For the survey of the CWD Pipe, the detector was erroneously calibrated for a specific geometry of a 3,050 cm² (1 ft x 1 m) area of contamination on the bottom of the pipe, resulting in inaccurate detector efficiencies and inaccurate calculations for activity per area. TSD LC-FS-TSD-005, *MCNP Modeling of Water Discharge Pipes for the LaCrosse Boiling Water Reactor* (Reference 12) was written

to address the discrepancy in efficiency and area of detection. The TSD details the Monte Carlo Neutral Particle (MCNP) radiation transport code that modeled the response of a NaI detector to a calibration source for several different pipe sizes. The MCNP models resulted in efficiency correction factors. The calculated efficiency from original source calibration can be multiplied by the correction factors to obtain an efficiency that more realistically portrays the specific contamination geometry of the pipe. For a 60" ID pipe, each measurement has a true Field-of-View (FOV) of 14,590 cm².

The CWD Pipe contains 421 linear feet of 60" ID steel piping, which equates to a surface area of 614.37 m² (6,143,736.42 cm²). The LTP states that a Class 1 FSS survey unit shall have an areal coverage of 100%. Therefore, one (1) measurement was to be collected every one (1) linear foot traversed through the pipe, for a total of at least four hundred and twenty-one (421) distinct measurements over the entire accessible pathway of the piping system. During survey design, eighty-nine (89) systematic static measurements (approximately four [4] every twenty [20] feet) were added in an effort to assess the sides and top of the pipe (see Figure 16-2), for a total of five hundred and ten (510) static measurements that make up the systematic measurement population.

Each static measurement represents the gamma activity in gross counts per minute (cpm) for each specific measurement location. Background is subtracted, then the value is converted to dpm using an efficiency factor based on the calibration source and the efficiency correction factors detailed in TSD LC-FS-TSD-005, *MCNP Modeling of Water Discharge Pipes for the LaCrosse Boiling Water Reactor*. The total activity in dpm is then adjusted for the assumed effective surface area commensurate with the pipe diameter, resulting in units of dpm/100 cm². The total gamma surface activity for each measurement was converted to an activity concentration for each gamma-emitting ROC, based on the normalized gamma mixture from Table 4-1. Concentrations for the HTD ROC Sr-90 were inferred using the surrogate approach in accordance with LTP Chapter 5.

The implementation of quality control measures as referenced by LTP, Section 5.9 and LaCrosseSolutions LC-QA-PN-001, *Final Status Survey Quality Assurance Project Plan* (QAPP) (Reference 13) includes the collection of replicate static measurements on 5% of the systematic measurements collected in the survey unit, with the locations selected at random. Twenty-five (25) replicate static measurements were selected for Quality Control (QC) analysis for the FSS of this survey unit.

For this Class 1 buried pipe survey unit, the "Investigation Levels" for measurement results are those levels specified in LTP Chapter 5, Table 5-16, and are reproduced below in Table 5-2.

Table 5-2 – Investigation Levels

Classification	Scan Investigation Levels	Direct Investigation Levels
Class 1	>Operational DCGL or >MDC _{scan} if MDC _{scan} is greater than Operational DCGL	>Operational DCGL

Table 5-3 provides a synopsis of the survey design for survey unit S1-011-102.

Table 5-3 – Synopsis of Survey Design

Feature	Design Criteria	Basis
Survey Unit Surface Area	614.37 m ² (6,143,736.42 cm ²) 421'	421' of 60" diameter steel pipe
Number of Systematic Measurements (N)	510	100% coverage
Operational DCGLs (dpm/100 cm ²)	<ul style="list-style-type: none"> Co-60: 1.63E+04 Sr-90: 1.58E+05 Cs-137: 6.94E+04 Eu-152: 3.51E+04 Eu-154: 3.27E+04 	Operational DCGLs for buried pipe, LTP, Table 5-8, Release Record, Table 4-3
Action Level	4.81E+04 dpm/100 cm ²	Gross Gamma Operational DCGL, Equation 3
Investigation Level	>Operational DCGL	LTP, Table 5-16
Scan Areal Coverage	N/A	LTP, Section 5.7.1.8
Number of Judgmental Measurements	1 2	Per Sample Plan Actual Number Obtained
QC	25 replicate measurements	LTP, Section 5.9
Non-parametric Statistical Test	Sign Test	LTP, Section 5.6.4.2

6. SURVEY IMPLEMENTATION

FSS field activities were conducted under the FSS sample plan, which included DQOs, survey design, detailed FSS instructions, job safety analysis, and related procedures for reference. The survey unit was inspected and controlled in accordance with LC-FS-PR-010, *Isolation and Control for Final Status Survey* (Reference 14). A “Field Log” was used to document field activities and other information pertaining to the performance of the FSS. FSS field activities commenced on April 22, 2018.

FSS field activities were projected to take four (4) working days to complete. Daily briefings were conducted to discuss the expectations for job performance and to review safety aspects of the job. The survey-required field activities were performed during normal working hours and concluded on April 25, 2018.

Background measurements were acquired in the North Yard area of the site. These readings were found to be inconsistent with the activity measured in the pipe; nearly all measurements were negative after subtracting background. It was determined that the backgrounds originally collected for the CWD pipe were not representative of true background levels. Because the CWD pipe was no longer accessible after survey implementation, a background value was developed from the existing survey data. TSD LC-FS-TSD-003, *Assessment of the LACBWR Circulating Water Discharge Pipe Final Status Survey Data for Detection Efficiency and Detector Background* (Reference 15) details the process and justification for using a mean value of the data as a reasonable background value.

Daily, prior to and following use, each detector was subjected to an Operational Response Check in accordance with procedure LC-FS-PR-018, *Radiation Surveys of Pipe Interiors Using Sodium/Cesium Iodide Detectors*. The Daily Operational Response Check compared the background response and the response to check source ranges established for normal background and detector source response to ensure that the detector was working properly.

The five hundred and ten (510) systematic 1-minute static measurements were collected using a Ludlum Model 2350-1 paired with a Model 44-10 NaI detector operated in the rate-meter mode and using audio response. The detector was fitted into a wheeled rig, which maintained a fixed detector geometry, an area of detection of 14,590 cm². The static MDC was sufficient to detect residual radioactivity at the action level (adjusted gross gamma Operational DCGL of 4.81E+04 dpm/100 cm²). Complete measurement results are provided in Attachment 2.

Two (2) judgmental static measurements were collected during implementation of FSS.

The implementation of survey specific QC measures included the collection of twenty-five (25) replicate static measurements for QC analysis.

7. SURVEY RESULTS

The SOF or “unity rule” is the mathematical test used to evaluate compliance with radiological criteria for license termination when more than one radionuclide has been determined to be potentially present. The equation for the unity rule is:

Equation 4

$$\frac{C_1}{DCGL_1} + \frac{C_2}{DCGL_2} + \dots + \frac{C_n}{DCGL_n} \leq 1$$

Where: C_n = concentration of radionuclide n

$DCGL_n$ = DCGL of radionuclide n .

The application of the unity rule serves to normalize the data to allow for an accurate comparison of the various data measurements to the release criteria. When the unity rule is applied, the $DCGL_W$ (used for the nonparametric statistical test) becomes one (1). The $DCGL_{BP}$ are directly analogous to the $DCGL_W$ as defined in MARSSIM. The use and application of the unity rule was performed in accordance with section 4.3.3 of MARSSIM.

As described in LTP, Section 5.10.3.2, the Sign Test was used to evaluate the measured residual radioactivity against the dose criterion. The SOF for each measurement was used as the sum value for the Sign Test. The Sign Test then demonstrated that the mean activity for each ROC was less than the $OpDCGL_{BP}$ at a Type I decision error of 0.05. The results of the Sign Test are presented in Attachment 3.

For buried pipe, areas of elevated activity were defined as any area identified by measurement (systematic or judgmental) that exceeded the $OpDCGL_{BP}$ but was less than the $DCGL_{BP}$. The SOF (based on the $OpDCGL_B$) for a systematic or judgmental measurement can exceed one (1) without remediation as long as the survey unit passes the Sign Test, and the mean SOF (based on the $OpDCGL_{BP}$) for the survey unit does not exceed one (1). Once the survey data set passes the Sign Test (using Operational DCGLs), then the mean radionuclide activity for each ROC from systematic measurements along with any identified elevated areas from systematic and judgmental samples can be used with the Base Case DCGLs to perform a mean SOF_{BP} calculation. The dose from residual radioactivity assigned to the FSS unit is the mean SOF_{BP} multiplied by 25 mrem/yr.

The systematic measurement population consisted of five hundred and ten (510) static measurements that were acquired using the Ludlum Model 2350-1 paired to a Model 44-10 detector. In total, five hundred and thirty-seven (537) static measurements were collected, including the systematic, judgmental, and QC measurements. A breakdown of the total static measurements and SOF for systematic measurements compared to the $OpDCGL_{BP}$ is provided in Table 7-1. A summary of the results of the systematic measurements taken for

non-parametric statistical testing when compared to the DCGL_{BP} is provided in Table 7-2. The complete results of the data assessment for survey unit S1-011-102 are provided in Attachment 2.

Table 7-1 - Summary of Systematic, Judgmental, and QC Measurements

Total Number of Systematic Measurements	510
Number of Quality Control Measurements	25
Number of Judgmental Measurements	2
Total Number of Measurements	537
Mean Systematic Measurement SOF ⁽¹⁾	0.0057
Max Individual Systematic Measurement SOF ⁽¹⁾	0.1131
Number of Systematic Measurements with SOF ≥ 1 ⁽¹⁾	0
Number of Judgmental Measurements with SOF ≥ 1 ⁽¹⁾	0

(1) Based on the OpDCGL_{BP}

Table 7-2 - Basic Statistical Properties of the Systematic Measurement Population

ROC	Mean (dpm/100 cm ²)	Median (dpm/100 cm ²)	Min (dpm/100 cm ²)	Max (dpm/100 cm ²)	St. Dev. (dpm/100 cm ²)	BcDCGL (dpm/100 cm ²)	Avg. SOF per ROC	Avg. Dose per ROC
Co-60	1.95E+01	0.00E+00	3.88E+02	0.00E+00	5.26E+01	7.75E+04	0.0003	0.0063
Cs-137	2.51E+02	0.00E+00	5.00E+03	0.00E+00	6.77E+02	3.30E+05	0.0008	0.0190
Eu-152	1.67E+00	0.00E+00	3.31E+01	0.00E+00	4.49E+00	1.67E+05	0.0000	0.0002
Eu-154	8.52E-01	0.00E+00	1.69E+01	0.00E+00	2.30E+00	1.56E+05	0.0000	0.0001
Sr-90	1.26E+02	0.00E+00	2.51E+03	0.00E+00	3.40E+02	7.55E+05	0.0002	0.0042
SUM							0.0012	0.0299

The mean SOF for the CWD Pipe, based on the mean concentration for each ROC as measured by the systematic measurement population when compared against the DCGL_{BP}, is 0.0012. This SOF equates to a dose of 0.0299 mrem/yr.

8. QUALITY CONTROL

The implementation of survey specific QC measures included the collection of twenty-five (25) replicate static measurements for QC analysis. The acceptance criteria for replicate static measurements is that the same conclusion is reached for each measurement. This is defined as the replicate measurement being within 20% of the standard measurement. In cases where the replicate measurement is not within 20% of the standard measurement, but both measurements are below the Operational DCGL, there is an acceptable agreement.

Fourteen (14) QC replicate measurement did not fall within the 20% criteria, but both the standard and replicate measurements were well below the Operational DCGL. No further action was deemed necessary, and there is an acceptable agreement between standard and replicate results. Refer to Attachment 4 for QC analysis results.

9. INVESTIGATIONS AND RESULTS

No investigations were performed during the performance or analyses of the survey.

10. REMEDIATION AND RESULTS

No radiological remedial action as described by MARSSIM Section 5.4 was performed in this survey unit. Chapter 4 of the LTP determined that remediation beyond that required to meet the release criteria is unnecessary and that the remaining residual radioactivity in buried pipe was ALARA.

11. CHANGES FROM THE FINAL STATUS SURVEY PLAN

TSDs LC-FS-TSD-003, *Assessment of the LACBWR Circulating Water Discharge Pipe Final Status Survey Data for Detection Efficiency and Detector Background*, and LC-FS-TSD-005, *MCNP Modeling of Water Discharge Pipes for the LaCrosse Boiling Water Reactor*, were developed in response to inaccurate efficiency calibration geometries and backgrounds originally assumed in the sample plan and during survey implementation.

12. DATA QUALITY ASSESSMENT

The DQO survey design and data were reviewed in accordance with LC-FS-PR-008, *Final Status Survey Data Assessment* (Reference 16) for completeness and consistency. Documentation was complete and legible. Surveys were consistent with the DQOs and were sufficient to ensure that the survey unit was properly designated as Class 1. The survey design had adequate power as indicated by the Retrospective Power Curve (see Attachment 5).

All measurements were less than a SOF of one (1) when compared to the OpDCGL_{BP}.

The Sign Test was performed on the data and compared to the original assumptions of the DQOs. The evaluation of the Sign Test results clearly demonstrates that the survey unit passes the unrestricted release criteria, thus, the null hypothesis is rejected.

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). All data was considered valid including negative values, zeros, values reported below the MDC, and values with uncertainties that exceeded two standard deviations. The mean and median values for each ROC were well below the respective

Operational DCGLs. Also, the retrospective power curve shows that a sufficient number of measurements were collected to achieve the desired power. Therefore, the survey unit meets the unrestricted release criteria with adequate power as required by the DQOs.

13. ANOMALIES

No anomalies were observed during the performance or analyses of the survey.

14. CONCLUSION

Survey unit S1-011-102 has met the DQOs of the FSS plan. The ALARA criteria as specified in Chapter 4 of the LTP were achieved.

The sample data passed the Sign Test. The null hypothesis was rejected. The Retrospective Power Curve showed that adequate power was achieved. The survey unit is properly classified as Class 1. Therefore, in accordance with LTP Section 5.11, the survey unit meets the release criteria.

The dose contribution from survey unit S1-011-102 is 0.0299 mrem/yr TEDE, based on the average concentration of the ROC in measurements used for non-parametric statistical testing (mean SOF).

Survey unit S1-011-102 is acceptable for unrestricted release.

15. REFERENCES

1. LC-FS-PR-009, *Final Status Survey Data Reporting*
2. *La Crosse Boiling Water Reactor License Termination Plan*
3. LC-FS-PR-002, *Final Status Survey Package Development*
4. LC-FS-PR-018, *Radiation Surveys of Pipe Interiors Using Sodium/Cesium Iodide Detectors*
5. NUREG-1575, Revision 1, *Multi-Agency Radiation Survey and Site Investigation Manual*
6. *La Crosse Boiling Water Reactor Historical Site Assessment*
7. LC-FS-PR-006, *Survey Unit Classification*
8. RS-TD-313196-001, *Radionuclides of Concern during LACBWR Decommissioning*
9. NUREG-1757, Volume 2, Revision 1, *Consolidated Decommissioning Guidance – Characterization, Survey, and Determination of Radiological Criteria, Final Report*
10. LC-FS-TSD-002, *Operational Derived Concentration Guideline Levels for Final Status Survey DCGL*
11. RS-TD-313196-004, *LACBWR Soil DCGL, Basement Concrete DCGL, and Buried Pipe*

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12. LC-FS-TSD-005, *MCNP Modeling of Water Discharge Pipes for the LaCrosse Boiling Water Reactor*
 13. LC-QA-PN-001, *Final Status Survey Quality Assurance Project Plan*
 14. LC-FS-PR-010, *Isolation and Control for Final Status Survey*
 15. LC-FS-TSD-003, *Assessment of the LACBWR Circulating Water Discharge Pipe Final Status Survey Data for Detection Efficiency and Detector Background*
 16. LC-FS-PR-008, *Final Status Survey Data Assessment*

16. ATTACHMENTS

- Attachment 1 – Figures and Maps
- Attachment 2 – Measurement Data
- Attachment 3 – Sign Test
- Attachment 4 – Quality Control Assessment
- Attachment 5 – Graphical Presentations

ATTACHMENT 1

FIGURES AND MAPS

Figure 16-1 – Survey Unit S1-011-102 Drawing

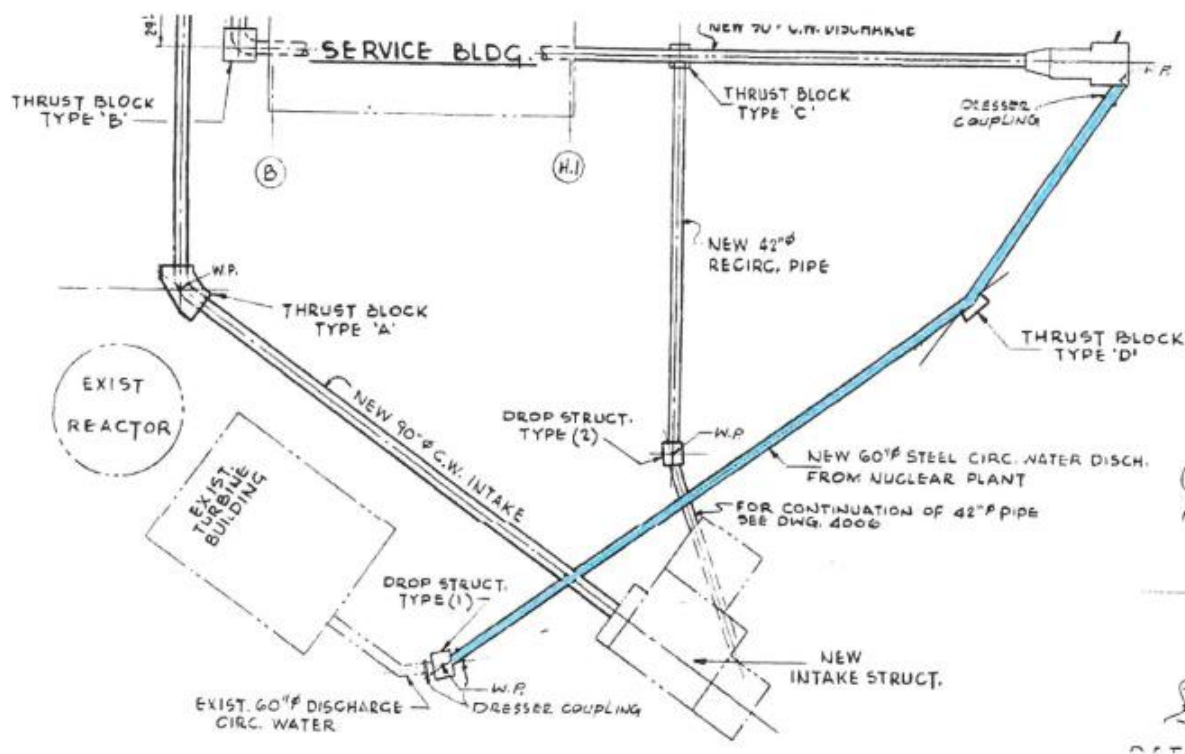
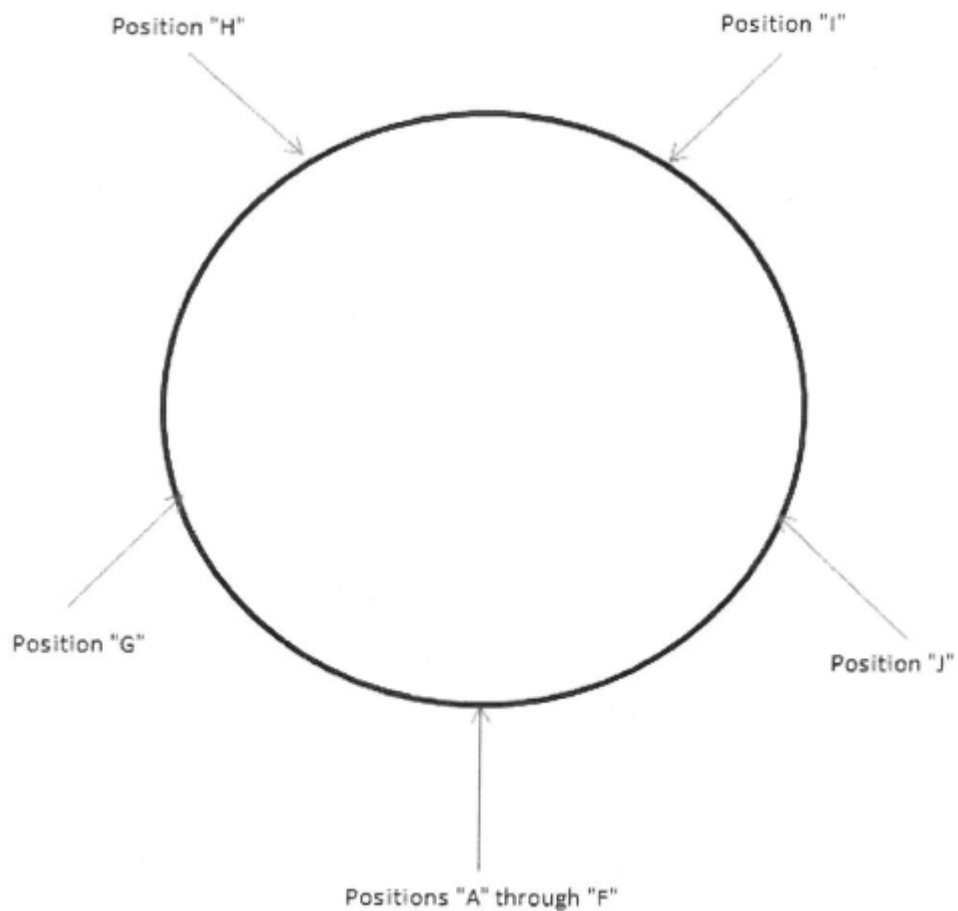


Figure 16-2 – Survey Unit S1-011-102 Measurement Position Designations



ATTACHMENT 2

MEASUREMENT DATA

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Table 16-1 – Survey Unit S1-011-102 Static Measurements Data Assessment

Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	G01	603	4.30E+01	5.54E+02	3.67E+00	1.88E+00	2.78E+02	0.0026	0.0080	0.0001	0.0001	0.0018	0.0125
S	H01	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I01	11	7.73E-01	9.95E+00	6.59E-02	3.37E-02	5.00E+00	0.0000	0.0001	0.0000	0.0000	0.0000	0.0002
S	J01	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	J02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	J03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	J04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G05	453	3.23E+01	4.16E+02	2.76E+00	1.41E+00	2.09E+02	0.0020	0.0060	0.0001	0.0000	0.0013	0.0094
S	H05	193	1.38E+01	1.77E+02	1.18E+00	6.02E-01	8.91E+01	0.0008	0.0026	0.0000	0.0000	0.0006	0.0040
S	I05	319	2.28E+01	2.94E+02	1.94E+00	9.95E-01	1.47E+02	0.0014	0.0042	0.0001	0.0000	0.0009	0.0066
S	J05	691	4.94E+01	6.35E+02	4.21E+00	2.15E+00	3.19E+02	0.0030	0.0092	0.0001	0.0001	0.0020	0.0144
S	G06	171	1.22E+01	1.58E+02	1.04E+00	5.34E-01	7.91E+01	0.0008	0.0023	0.0000	0.0000	0.0005	0.0036
S	H06	211	1.51E+01	1.94E+02	1.29E+00	6.58E-01	9.74E+01	0.0009	0.0028	0.0000	0.0000	0.0006	0.0044
S	I06	150	1.07E+01	1.38E+02	9.12E-01	4.67E-01	6.91E+01	0.0007	0.0020	0.0000	0.0000	0.0004	0.0031
S	J06	69	4.90E+00	6.30E+01	4.17E-01	2.14E-01	3.16E+01	0.0003	0.0009	0.0000	0.0000	0.0002	0.0014

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
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Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	G07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	J07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G08	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H08	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I08	43	3.09E+00	3.98E+01	2.64E-01	1.35E-01	2.00E+01	0.0002	0.0006	0.0000	0.0000	0.0001	0.0009
S	J08	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G09	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H09	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I09	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	J09	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G10	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H10	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I10	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	J10	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G11	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H11	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I11	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	J11	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G12	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H12	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I12	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	J12	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G13	184	1.31E+01	1.69E+02	1.12E+00	5.73E-01	8.49E+01	0.0008	0.0024	0.0000	0.0000	0.0005	0.0038

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	H13	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I13	60	4.25E+00	5.47E+01	3.62E-01	1.86E-01	2.75E+01	0.0003	0.0008	0.0000	0.0000	0.0002	0.0012
S	J13	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G14	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	H14	18	1.29E+00	1.66E+01	1.10E-01	5.62E-02	8.33E+00	0.0001	0.0002	0.0000	0.0000	0.0001	0.0004
S	I14	7	5.15E-01	6.63E+00	4.39E-02	2.25E-02	3.33E+00	0.0000	0.0001	0.0000	0.0000	0.0000	0.0002
S	J14	74	5.28E+00	6.80E+01	4.50E-01	2.31E-01	3.41E+01	0.0003	0.0010	0.0000	0.0000	0.0002	0.0015
S	G15	144	1.03E+01	1.33E+02	8.79E-01	4.50E-01	6.66E+01	0.0006	0.0019	0.0000	0.0000	0.0004	0.0030
S	H15	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I15	14	1.03E+00	1.33E+01	8.79E-02	4.50E-02	6.66E+00	0.0001	0.0002	0.0000	0.0000	0.0000	0.0003
S	J15	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G16	420	3.00E+01	3.86E+02	2.56E+00	1.31E+00	1.94E+02	0.0018	0.0056	0.0001	0.0000	0.0012	0.0088
S	H16	67	4.77E+00	6.14E+01	4.06E-01	2.08E-01	3.08E+01	0.0003	0.0009	0.0000	0.0000	0.0002	0.0014
S	I16	218	1.56E+01	2.01E+02	1.33E+00	6.80E-01	1.01E+02	0.0010	0.0029	0.0000	0.0000	0.0006	0.0045
S	J16	175	1.25E+01	1.61E+02	1.07E+00	5.45E-01	8.08E+01	0.0008	0.0023	0.0000	0.0000	0.0005	0.0036
S	G17	671	4.79E+01	6.17E+02	4.09E+00	2.09E+00	3.10E+02	0.0029	0.0089	0.0001	0.0001	0.0020	0.0140
S	H17	709	5.06E+01	6.52E+02	4.32E+00	2.21E+00	3.27E+02	0.0031	0.0094	0.0001	0.0001	0.0021	0.0148
S	I17	880	6.29E+01	8.09E+02	5.36E+00	2.74E+00	4.06E+02	0.0039	0.0117	0.0002	0.0001	0.0026	0.0183
S	J17	651	4.65E+01	5.99E+02	3.97E+00	2.03E+00	3.01E+02	0.0029	0.0086	0.0001	0.0001	0.0019	0.0136
S	G18	514	3.67E+01	4.73E+02	3.13E+00	1.60E+00	2.37E+02	0.0023	0.0068	0.0001	0.0000	0.0015	0.0107
S	H18	563	4.02E+01	5.18E+02	3.43E+00	1.75E+00	2.60E+02	0.0025	0.0075	0.0001	0.0001	0.0016	0.0117
S	I18	485	3.47E+01	4.46E+02	2.95E+00	1.51E+00	2.24E+02	0.0021	0.0064	0.0001	0.0000	0.0014	0.0101
S	J18	548	3.92E+01	5.04E+02	3.34E+00	1.71E+00	2.53E+02	0.0024	0.0073	0.0001	0.0001	0.0016	0.0114
S	G19	440	3.14E+01	4.05E+02	2.68E+00	1.37E+00	2.03E+02	0.0019	0.0058	0.0001	0.0000	0.0013	0.0092
S	H19	229	1.64E+01	2.11E+02	1.40E+00	7.14E-01	1.06E+02	0.0010	0.0030	0.0000	0.0000	0.0007	0.0048

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
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Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	I19	318	2.27E+01	2.92E+02	1.93E+00	9.90E-01	1.47E+02	0.0014	0.0042	0.0001	0.0000	0.0009	0.0066
S	J19	213	1.52E+01	1.96E+02	1.30E+00	6.63E-01	9.83E+01	0.0009	0.0028	0.0000	0.0000	0.0006	0.0044
S	G20	124	8.89E+00	1.14E+02	7.58E-01	3.88E-01	5.75E+01	0.0005	0.0016	0.0000	0.0000	0.0004	0.0026
S	H20	217	1.55E+01	1.99E+02	1.32E+00	6.75E-01	9.99E+01	0.0009	0.0029	0.0000	0.0000	0.0006	0.0045
S	I20	128	9.15E+00	1.18E+02	7.80E-01	3.99E-01	5.91E+01	0.0006	0.0017	0.0000	0.0000	0.0004	0.0027
S	J20	303	2.16E+01	2.79E+02	1.85E+00	9.45E-01	1.40E+02	0.0013	0.0040	0.0001	0.0000	0.0009	0.0063
S	G21	41	2.96E+00	3.82E+01	2.53E-01	1.29E-01	1.92E+01	0.0002	0.0005	0.0000	0.0000	0.0001	0.0009
S	H21	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	I21	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	J21	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	G22	4058	2.90E+02	3.73E+03	2.47E+01	1.26E+01	1.87E+03	0.0178	0.0538	0.0007	0.0004	0.0119	0.0845
S	H22	5434	3.88E+02	5.00E+03	3.31E+01	1.69E+01	2.51E+03	0.0238	0.0720	0.0009	0.0005	0.0159	0.1131
S	I22	5346	3.82E+02	4.91E+03	3.25E+01	1.67E+01	2.47E+03	0.0234	0.0708	0.0009	0.0005	0.0156	0.1113
S	J22	4592	3.28E+02	4.22E+03	2.80E+01	1.43E+01	2.12E+03	0.0201	0.0608	0.0008	0.0004	0.0134	0.0956
S	A00	949	6.78E+01	8.72E+02	5.78E+00	2.96E+00	4.38E+02	0.0042	0.0126	0.0002	0.0001	0.0028	0.0198
S	A01	395	2.82E+01	3.63E+02	2.41E+00	1.23E+00	1.82E+02	0.0017	0.0052	0.0001	0.0000	0.0012	0.0082
S	A02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A08	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A09	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A10	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	A11	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A12	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A13	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A14	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A15	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A16	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A17	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A18	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A19	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A20	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A21	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A22	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A23	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A24	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A25	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A26	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A27	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A28	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A29	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A30	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A31	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A32	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A33	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A34	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A35	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	A36	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A37	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A38	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A39	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A40	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A41	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A42	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A43	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A44	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A45	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A46	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A47	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A48	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A49	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A50	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A51	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A52	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A53	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A54	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A55	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A56	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A57	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A58	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A59	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A60	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	A61	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A62	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A63	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A64	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A65	70	5.03E+00	6.47E+01	4.28E-01	2.19E-01	3.25E+01	0.0003	0.0009	0.0000	0.0000	0.0002	0.0015
S	A66	159	1.13E+01	1.46E+02	9.67E-01	4.95E-01	7.33E+01	0.0007	0.0021	0.0000	0.0000	0.0005	0.0033
S	A67	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A68	88	6.31E+00	8.13E+01	5.38E-01	2.75E-01	4.08E+01	0.0004	0.0012	0.0000	0.0000	0.0003	0.0018
S	A69	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A70	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	A71	202	1.44E+01	1.86E+02	1.23E+00	6.30E-01	9.33E+01	0.0009	0.0027	0.0000	0.0000	0.0006	0.0042
S	A72	597	4.27E+01	5.49E+02	3.64E+00	1.86E+00	2.76E+02	0.0026	0.0079	0.0001	0.0001	0.0017	0.0124
S	A73	520	3.71E+01	4.78E+02	3.16E+00	1.62E+00	2.40E+02	0.0023	0.0069	0.0001	0.0000	0.0015	0.0108
S	A74	462	3.30E+01	4.25E+02	2.81E+00	1.44E+00	2.13E+02	0.0020	0.0061	0.0001	0.0000	0.0013	0.0096
S	A75	586	4.19E+01	5.39E+02	3.57E+00	1.83E+00	2.71E+02	0.0026	0.0078	0.0001	0.0001	0.0017	0.0122
S	A76	339	2.42E+01	3.12E+02	2.07E+00	1.06E+00	1.57E+02	0.0015	0.0045	0.0001	0.0000	0.0010	0.0071
S	A77	411	2.94E+01	3.78E+02	2.50E+00	1.28E+00	1.90E+02	0.0018	0.0054	0.0001	0.0000	0.0012	0.0086
S	A78	527	3.76E+01	4.84E+02	3.21E+00	1.64E+00	2.43E+02	0.0023	0.0070	0.0001	0.0001	0.0015	0.0110
S	A79	384	2.74E+01	3.53E+02	2.34E+00	1.20E+00	1.77E+02	0.0017	0.0051	0.0001	0.0000	0.0011	0.0080
S	A80	328	2.35E+01	3.02E+02	2.00E+00	1.02E+00	1.52E+02	0.0014	0.0043	0.0001	0.0000	0.0010	0.0068
S	A81	429	3.07E+01	3.95E+02	2.61E+00	1.34E+00	1.98E+02	0.0019	0.0057	0.0001	0.0000	0.0013	0.0089
S	A82	363	2.59E+01	3.33E+02	2.21E+00	1.13E+00	1.67E+02	0.0016	0.0048	0.0001	0.0000	0.0011	0.0075
S	A83	175	1.25E+01	1.61E+02	1.07E+00	5.45E-01	8.08E+01	0.0008	0.0023	0.0000	0.0000	0.0005	0.0036
S	A84	280	2.00E+01	2.57E+02	1.70E+00	8.71E-01	1.29E+02	0.0012	0.0037	0.0000	0.0000	0.0008	0.0058
S	A85	437	3.12E+01	4.01E+02	2.66E+00	1.36E+00	2.02E+02	0.0019	0.0058	0.0001	0.0000	0.0013	0.0091

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	A86	384	2.74E+01	3.53E+02	2.34E+00	1.20E+00	1.77E+02	0.0017	0.0051	0.0001	0.0000	0.0011	0.0080
S	A87	251	1.79E+01	2.31E+02	1.53E+00	7.82E-01	1.16E+02	0.0011	0.0033	0.0000	0.0000	0.0007	0.0052
S	A88	538	3.84E+01	4.94E+02	3.27E+00	1.68E+00	2.48E+02	0.0024	0.0071	0.0001	0.0001	0.0016	0.0112
S	A89	431	3.08E+01	3.96E+02	2.63E+00	1.34E+00	1.99E+02	0.0019	0.0057	0.0001	0.0000	0.0013	0.0090
S	A90	355	2.54E+01	3.27E+02	2.16E+00	1.11E+00	1.64E+02	0.0016	0.0047	0.0001	0.0000	0.0010	0.0074
S	A91	484	3.45E+01	4.45E+02	2.94E+00	1.51E+00	2.23E+02	0.0021	0.0064	0.0001	0.0000	0.0014	0.0101
S	A92	251	1.79E+01	2.31E+02	1.53E+00	7.82E-01	1.16E+02	0.0011	0.0033	0.0000	0.0000	0.0007	0.0052
S	A93	217	1.55E+01	1.99E+02	1.32E+00	6.75E-01	9.99E+01	0.0009	0.0029	0.0000	0.0000	0.0006	0.0045
S	A94	280	2.00E+01	2.57E+02	1.70E+00	8.71E-01	1.29E+02	0.0012	0.0037	0.0000	0.0000	0.0008	0.0058
S	A95	585	4.17E+01	5.37E+02	3.56E+00	1.82E+00	2.70E+02	0.0026	0.0077	0.0001	0.0001	0.0017	0.0122
S	A96	399	2.85E+01	3.67E+02	2.43E+00	1.24E+00	1.84E+02	0.0017	0.0053	0.0001	0.0000	0.0012	0.0083
S	A97	186	1.33E+01	1.71E+02	1.13E+00	5.79E-01	8.58E+01	0.0008	0.0025	0.0000	0.0000	0.0005	0.0039
S	A98	301	2.15E+01	2.77E+02	1.83E+00	9.39E-01	1.39E+02	0.0013	0.0040	0.0001	0.0000	0.0009	0.0063
S	A99	150	1.07E+01	1.38E+02	9.12E-01	4.67E-01	6.91E+01	0.0007	0.0020	0.0000	0.0000	0.0004	0.0031
S	B01	155	1.11E+01	1.43E+02	9.45E-01	4.84E-01	7.16E+01	0.0007	0.0021	0.0000	0.0000	0.0005	0.0032
S	B02	364	2.60E+01	3.35E+02	2.22E+00	1.14E+00	1.68E+02	0.0016	0.0048	0.0001	0.0000	0.0011	0.0076
S	B03	321	2.29E+01	2.95E+02	1.96E+00	1.00E+00	1.48E+02	0.0014	0.0043	0.0001	0.0000	0.0009	0.0067
S	B04	56	3.99E+00	5.14E+01	3.41E-01	1.74E-01	2.58E+01	0.0002	0.0007	0.0000	0.0000	0.0002	0.0012
S	B05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B06	171	1.22E+01	1.58E+02	1.04E+00	5.34E-01	7.91E+01	0.0008	0.0023	0.0000	0.0000	0.0005	0.0036
S	B07	31	2.19E+00	2.82E+01	1.87E-01	9.56E-02	1.42E+01	0.0001	0.0004	0.0000	0.0000	0.0001	0.0006
S	B08	527	3.76E+01	4.84E+02	3.21E+00	1.64E+00	2.43E+02	0.0023	0.0070	0.0001	0.0001	0.0015	0.0110
S	B09	128	9.15E+00	1.18E+02	7.80E-01	3.99E-01	5.91E+01	0.0006	0.0017	0.0000	0.0000	0.0004	0.0027
S	B10	180	1.29E+01	1.66E+02	1.10E+00	5.62E-01	8.33E+01	0.0008	0.0024	0.0000	0.0000	0.0005	0.0038
S	B11	146	1.04E+01	1.34E+02	8.90E-01	4.55E-01	6.74E+01	0.0006	0.0019	0.0000	0.0000	0.0004	0.0030

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	B12	258	1.84E+01	2.37E+02	1.57E+00	8.04E-01	1.19E+02	0.0011	0.0034	0.0000	0.0000	0.0008	0.0054
S	B13	63	4.51E+00	5.81E+01	3.84E-01	1.97E-01	2.91E+01	0.0003	0.0008	0.0000	0.0000	0.0002	0.0013
S	B14	269	1.92E+01	2.47E+02	1.64E+00	8.38E-01	1.24E+02	0.0012	0.0036	0.0000	0.0000	0.0008	0.0056
S	B15	90	6.44E+00	8.29E+01	5.49E-01	2.81E-01	4.16E+01	0.0004	0.0012	0.0000	0.0000	0.0003	0.0019
S	B16	175	1.25E+01	1.61E+02	1.07E+00	5.45E-01	8.08E+01	0.0008	0.0023	0.0000	0.0000	0.0005	0.0036
S	B17	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B18	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B19	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B20	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B21	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B22	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B23	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B24	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B25	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B26	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B27	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B28	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B29	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B30	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B31	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B32	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B33	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B34	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B35	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B36	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	B37	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B38	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B39	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B40	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B41	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B42	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B43	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B44	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B45	7	5.15E-01	6.63E+00	4.39E-02	2.25E-02	3.33E+00	0.0000	0.0001	0.0000	0.0000	0.0000	0.0002
S	B46	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B47	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B48	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B49	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B50	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B51	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B52	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B53	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B54	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B55	5	3.87E-01	4.98E+00	3.30E-02	1.69E-02	2.50E+00	0.0000	0.0001	0.0000	0.0000	0.0000	0.0001
S	B56	52	3.74E+00	4.81E+01	3.19E-01	1.63E-01	2.41E+01	0.0002	0.0007	0.0000	0.0000	0.0002	0.0011
S	B57	296	2.11E+01	2.72E+02	1.80E+00	9.22E-01	1.37E+02	0.0013	0.0039	0.0001	0.0000	0.0009	0.0062
S	B58	60	4.25E+00	5.47E+01	3.62E-01	1.86E-01	2.75E+01	0.0003	0.0008	0.0000	0.0000	0.0002	0.0012
S	B59	135	9.66E+00	1.24E+02	8.24E-01	4.22E-01	6.25E+01	0.0006	0.0018	0.0000	0.0000	0.0004	0.0028
S	B60	32	2.32E+00	2.99E+01	1.98E-01	1.01E-01	1.50E+01	0.0001	0.0004	0.0000	0.0000	0.0001	0.0007
S	B61	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	B62	47	3.35E+00	4.31E+01	2.86E-01	1.46E-01	2.16E+01	0.0002	0.0006	0.0000	0.0000	0.0001	0.0010
S	B63	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B64	32	2.32E+00	2.99E+01	1.98E-01	1.01E-01	1.50E+01	0.0001	0.0004	0.0000	0.0000	0.0001	0.0007
S	B65	36	2.58E+00	3.32E+01	2.20E-01	1.12E-01	1.67E+01	0.0002	0.0005	0.0000	0.0000	0.0001	0.0008
S	B66	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B68	61	4.38E+00	5.64E+01	3.73E-01	1.91E-01	2.83E+01	0.0003	0.0008	0.0000	0.0000	0.0002	0.0013
S	B69	56	3.99E+00	5.14E+01	3.41E-01	1.74E-01	2.58E+01	0.0002	0.0007	0.0000	0.0000	0.0002	0.0012
S	B67	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B70	45	3.22E+00	4.15E+01	2.75E-01	1.41E-01	2.08E+01	0.0002	0.0006	0.0000	0.0000	0.0001	0.0009
S	B71	85	6.06E+00	7.80E+01	5.16E-01	2.64E-01	3.91E+01	0.0004	0.0011	0.0000	0.0000	0.0002	0.0018
S	B72	85	6.06E+00	7.80E+01	5.16E-01	2.64E-01	3.91E+01	0.0004	0.0011	0.0000	0.0000	0.0002	0.0018
S	B73	121	8.63E+00	1.11E+02	7.36E-01	3.77E-01	5.58E+01	0.0005	0.0016	0.0000	0.0000	0.0004	0.0025
S	B74	36	2.58E+00	3.32E+01	2.20E-01	1.12E-01	1.67E+01	0.0002	0.0005	0.0000	0.0000	0.0001	0.0008
S	B75	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B76	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B77	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B78	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B79	14	1.03E+00	1.33E+01	8.79E-02	4.50E-02	6.66E+00	0.0001	0.0002	0.0000	0.0000	0.0000	0.0003
S	B80	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B81	43	3.09E+00	3.98E+01	2.64E-01	1.35E-01	2.00E+01	0.0002	0.0006	0.0000	0.0000	0.0001	0.0009
S	B82	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B83	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B84	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B85	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B86	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	B87	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B88	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B89	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B90	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B91	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B92	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B93	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B94	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B95	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B96	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B97	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B98	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	B99	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C01	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C03	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C07	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C08	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C09	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C10	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C11	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C12	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	C13	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C14	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C15	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C16	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C17	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C18	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C19	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C20	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C21	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C22	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C23	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C24	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C25	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C26	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C27	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C28	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C29	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C30	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C31	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C32	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C33	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C34	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C35	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C36	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C37	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	C38	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C39	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C40	112	7.99E+00	1.03E+02	6.81E-01	3.49E-01	5.16E+01	0.0005	0.0015	0.0000	0.0000	0.0003	0.0023
S	C41	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C42	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C43	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C44	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C45	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C46	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C47	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C48	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C49	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C50	58	4.12E+00	5.31E+01	3.52E-01	1.80E-01	2.66E+01	0.0003	0.0008	0.0000	0.0000	0.0002	0.0012
S	C51	36	2.58E+00	3.32E+01	2.20E-01	1.12E-01	1.67E+01	0.0002	0.0005	0.0000	0.0000	0.0001	0.0008
S	C52	152	1.08E+01	1.39E+02	9.23E-01	4.72E-01	6.99E+01	0.0007	0.0020	0.0000	0.0000	0.0004	0.0032
S	C53	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C54	43	3.09E+00	3.98E+01	2.64E-01	1.35E-01	2.00E+01	0.0002	0.0006	0.0000	0.0000	0.0001	0.0009
S	C55	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C56	47	3.35E+00	4.31E+01	2.86E-01	1.46E-01	2.16E+01	0.0002	0.0006	0.0000	0.0000	0.0001	0.0010
S	C57	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C58	63	4.51E+00	5.81E+01	3.84E-01	1.97E-01	2.91E+01	0.0003	0.0008	0.0000	0.0000	0.0002	0.0013
S	C59	240	1.71E+01	2.21E+02	1.46E+00	7.48E-01	1.11E+02	0.0011	0.0032	0.0000	0.0000	0.0007	0.0050
S	C60	81	5.80E+00	7.46E+01	4.94E-01	2.53E-01	3.75E+01	0.0004	0.0011	0.0000	0.0000	0.0002	0.0017
S	C61	211	1.51E+01	1.94E+02	1.29E+00	6.58E-01	9.74E+01	0.0009	0.0028	0.0000	0.0000	0.0006	0.0044
S	C62	83	5.93E+00	7.63E+01	5.05E-01	2.59E-01	3.83E+01	0.0004	0.0011	0.0000	0.0000	0.0002	0.0017

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	C63	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C64	137	9.79E+00	1.26E+02	8.35E-01	4.27E-01	6.33E+01	0.0006	0.0018	0.0000	0.0000	0.0004	0.0029
S	C65	31	2.19E+00	2.82E+01	1.87E-01	9.56E-02	1.42E+01	0.0001	0.0004	0.0000	0.0000	0.0001	0.0006
S	C66	96	6.83E+00	8.79E+01	5.82E-01	2.98E-01	4.41E+01	0.0004	0.0013	0.0000	0.0000	0.0003	0.0020
S	C67	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C68	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C69	31	2.19E+00	2.82E+01	1.87E-01	9.56E-02	1.42E+01	0.0001	0.0004	0.0000	0.0000	0.0001	0.0006
S	C70	101	7.22E+00	9.29E+01	6.15E-01	3.15E-01	4.66E+01	0.0004	0.0013	0.0000	0.0000	0.0003	0.0021
S	C71	229	1.64E+01	2.11E+02	1.40E+00	7.14E-01	1.06E+02	0.0010	0.0030	0.0000	0.0000	0.0007	0.0048
S	C72	249	1.78E+01	2.29E+02	1.52E+00	7.76E-01	1.15E+02	0.0011	0.0033	0.0000	0.0000	0.0007	0.0052
S	C73	440	3.14E+01	4.05E+02	2.68E+00	1.37E+00	2.03E+02	0.0019	0.0058	0.0001	0.0000	0.0013	0.0092
S	C74	352	2.51E+01	3.23E+02	2.14E+00	1.10E+00	1.62E+02	0.0015	0.0047	0.0001	0.0000	0.0010	0.0073
S	C75	438	3.13E+01	4.03E+02	2.67E+00	1.37E+00	2.02E+02	0.0019	0.0058	0.0001	0.0000	0.0013	0.0091
S	C76	135	9.66E+00	1.24E+02	8.24E-01	4.22E-01	6.25E+01	0.0006	0.0018	0.0000	0.0000	0.0004	0.0028
S	C77	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C78	5	3.87E-01	4.98E+00	3.30E-02	1.69E-02	2.50E+00	0.0000	0.0001	0.0000	0.0000	0.0000	0.0001
S	C79	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C80	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C81	139	9.92E+00	1.28E+02	8.46E-01	4.33E-01	6.41E+01	0.0006	0.0018	0.0000	0.0000	0.0004	0.0029
S	C82	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C83	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C84	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C85	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C86	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C87	49	3.48E+00	4.48E+01	2.97E-01	1.52E-01	2.25E+01	0.0002	0.0006	0.0000	0.0000	0.0001	0.0010

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	C88	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C89	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C90	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C91	134	9.54E+00	1.23E+02	8.13E-01	4.16E-01	6.16E+01	0.0006	0.0018	0.0000	0.0000	0.0004	0.0028
S	C92	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C93	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C94	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C95	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C96	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C97	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C98	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	C99	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	D01	11	7.73E-01	9.95E+00	6.59E-02	3.37E-02	5.00E+00	0.0000	0.0001	0.0000	0.0000	0.0000	0.0002
S	D02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	D03	229	1.64E+01	2.11E+02	1.40E+00	7.14E-01	1.06E+02	0.0010	0.0030	0.0000	0.0000	0.0007	0.0048
S	D04	65	4.64E+00	5.97E+01	3.95E-01	2.02E-01	3.00E+01	0.0003	0.0009	0.0000	0.0000	0.0002	0.0014
S	D05	137	9.79E+00	1.26E+02	8.35E-01	4.27E-01	6.33E+01	0.0006	0.0018	0.0000	0.0000	0.0004	0.0029
S	D06	119	8.50E+00	1.09E+02	7.25E-01	3.71E-01	5.50E+01	0.0005	0.0016	0.0000	0.0000	0.0003	0.0025
S	D07	204	1.46E+01	1.87E+02	1.24E+00	6.35E-01	9.41E+01	0.0009	0.0027	0.0000	0.0000	0.0006	0.0042
S	D08	285	2.04E+01	2.62E+02	1.74E+00	8.88E-01	1.32E+02	0.0012	0.0038	0.0000	0.0000	0.0008	0.0059
S	D09	382	2.73E+01	3.52E+02	2.33E+00	1.19E+00	1.77E+02	0.0017	0.0051	0.0001	0.0000	0.0011	0.0080
S	D10	350	2.50E+01	3.22E+02	2.13E+00	1.09E+00	1.62E+02	0.0015	0.0046	0.0001	0.0000	0.0010	0.0073
S	D11	482	3.44E+01	4.43E+02	2.93E+00	1.50E+00	2.22E+02	0.0021	0.0064	0.0001	0.0000	0.0014	0.0100
S	D12	343	2.45E+01	3.15E+02	2.09E+00	1.07E+00	1.58E+02	0.0015	0.0045	0.0001	0.0000	0.0010	0.0071
S	D13	388	2.77E+01	3.57E+02	2.36E+00	1.21E+00	1.79E+02	0.0017	0.0051	0.0001	0.0000	0.0011	0.0081

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	D14	417	2.98E+01	3.83E+02	2.54E+00	1.30E+00	1.92E+02	0.0018	0.0055	0.0001	0.0000	0.0012	0.0087
S	D15	660	4.72E+01	6.07E+02	4.02E+00	2.06E+00	3.05E+02	0.0029	0.0087	0.0001	0.0001	0.0019	0.0137
S	D16	615	4.39E+01	5.66E+02	3.75E+00	1.92E+00	2.84E+02	0.0027	0.0082	0.0001	0.0001	0.0018	0.0128
S	D17	523	3.74E+01	4.81E+02	3.19E+00	1.63E+00	2.41E+02	0.0023	0.0069	0.0001	0.0000	0.0015	0.0109
S	D18	446	3.18E+01	4.10E+02	2.71E+00	1.39E+00	2.06E+02	0.0020	0.0059	0.0001	0.0000	0.0013	0.0093
S	D19	604	4.32E+01	5.56E+02	3.68E+00	1.88E+00	2.79E+02	0.0026	0.0080	0.0001	0.0001	0.0018	0.0126
S	D20	590	4.21E+01	5.42E+02	3.59E+00	1.84E+00	2.72E+02	0.0026	0.0078	0.0001	0.0001	0.0017	0.0123
S	D21	711	5.08E+01	6.54E+02	4.33E+00	2.22E+00	3.28E+02	0.0031	0.0094	0.0001	0.0001	0.0021	0.0148
S	D22	722	5.15E+01	6.63E+02	4.39E+00	2.25E+00	3.33E+02	0.0032	0.0096	0.0001	0.0001	0.0021	0.0150
S	D23	1046	7.47E+01	9.62E+02	6.37E+00	3.26E+00	4.83E+02	0.0046	0.0139	0.0002	0.0001	0.0031	0.0218
S	D24	933	6.66E+01	8.58E+02	5.68E+00	2.91E+00	4.30E+02	0.0041	0.0124	0.0002	0.0001	0.0027	0.0194
S	D25	814	5.81E+01	7.48E+02	4.95E+00	2.54E+00	3.76E+02	0.0036	0.0108	0.0001	0.0001	0.0024	0.0169
S	D26	893	6.38E+01	8.21E+02	5.44E+00	2.78E+00	4.12E+02	0.0039	0.0118	0.0002	0.0001	0.0026	0.0186
S	D27	585	4.17E+01	5.37E+02	3.56E+00	1.82E+00	2.70E+02	0.0026	0.0077	0.0001	0.0001	0.0017	0.0122
S	D28	673	4.81E+01	6.19E+02	4.10E+00	2.10E+00	3.11E+02	0.0029	0.0089	0.0001	0.0001	0.0020	0.0140
S	D29	610	4.36E+01	5.61E+02	3.71E+00	1.90E+00	2.81E+02	0.0027	0.0081	0.0001	0.0001	0.0018	0.0127
S	D30	742	5.30E+01	6.82E+02	4.51E+00	2.31E+00	3.42E+02	0.0032	0.0098	0.0001	0.0001	0.0022	0.0154
S	D31	613	4.38E+01	5.64E+02	3.73E+00	1.91E+00	2.83E+02	0.0027	0.0081	0.0001	0.0001	0.0018	0.0128
S	D32	1037	7.41E+01	9.54E+02	6.32E+00	3.23E+00	4.79E+02	0.0045	0.0137	0.0002	0.0001	0.0030	0.0216
S	D33	814	5.81E+01	7.48E+02	4.95E+00	2.54E+00	3.76E+02	0.0036	0.0108	0.0001	0.0001	0.0024	0.0169
S	D34	852	6.08E+01	7.83E+02	5.18E+00	2.65E+00	3.93E+02	0.0037	0.0113	0.0001	0.0001	0.0025	0.0177
S	D35	567	4.05E+01	5.21E+02	3.45E+00	1.77E+00	2.61E+02	0.0025	0.0075	0.0001	0.0001	0.0017	0.0118
S	D36	806	5.76E+01	7.41E+02	4.91E+00	2.51E+00	3.72E+02	0.0035	0.0107	0.0001	0.0001	0.0024	0.0168
S	D37	926	6.61E+01	8.51E+02	5.64E+00	2.88E+00	4.27E+02	0.0041	0.0123	0.0002	0.0001	0.0027	0.0193
S	D38	700	5.00E+01	6.44E+02	4.26E+00	2.18E+00	3.23E+02	0.0031	0.0093	0.0001	0.0001	0.0020	0.0146

FSS RELEASE RECORD
CIRCULATING WATER DISCHARGE PIPE
SURVEY UNIT S1-011-102



Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	D39	1030	7.36E+01	9.47E+02	6.27E+00	3.21E+00	4.75E+02	0.0045	0.0136	0.0002	0.0001	0.0030	0.0214
S	D40	817	5.84E+01	7.51E+02	4.98E+00	2.55E+00	3.77E+02	0.0036	0.0108	0.0001	0.0001	0.0024	0.0170
S	D41	678	4.84E+01	6.24E+02	4.13E+00	2.11E+00	3.13E+02	0.0030	0.0090	0.0001	0.0001	0.0020	0.0141
S	D42	318	2.27E+01	2.92E+02	1.93E+00	9.90E-01	1.47E+02	0.0014	0.0042	0.0001	0.0000	0.0009	0.0066
S	D43	512	3.66E+01	4.71E+02	3.12E+00	1.60E+00	2.36E+02	0.0022	0.0068	0.0001	0.0000	0.0015	0.0107
S	D44	494	3.53E+01	4.54E+02	3.01E+00	1.54E+00	2.28E+02	0.0022	0.0065	0.0001	0.0000	0.0014	0.0103
S	D45	561	4.01E+01	5.16E+02	3.42E+00	1.75E+00	2.59E+02	0.0025	0.0074	0.0001	0.0001	0.0016	0.0117
S	D46	437	3.12E+01	4.01E+02	2.66E+00	1.36E+00	2.02E+02	0.0019	0.0058	0.0001	0.0000	0.0013	0.0091
S	D47	543	3.88E+01	4.99E+02	3.31E+00	1.69E+00	2.51E+02	0.0024	0.0072	0.0001	0.0001	0.0016	0.0113
S	D48	350	2.50E+01	3.22E+02	2.13E+00	1.09E+00	1.62E+02	0.0015	0.0046	0.0001	0.0000	0.0010	0.0073
S	D49	290	2.07E+01	2.67E+02	1.77E+00	9.05E-01	1.34E+02	0.0013	0.0038	0.0001	0.0000	0.0008	0.0060
S	D50	74	5.28E+00	6.80E+01	4.50E-01	2.31E-01	3.41E+01	0.0003	0.0010	0.0000	0.0000	0.0002	0.0015
S	D51	200	1.43E+01	1.84E+02	1.22E+00	6.24E-01	9.24E+01	0.0009	0.0027	0.0000	0.0000	0.0006	0.0042
S	D52	143	1.02E+01	1.31E+02	8.68E-01	4.44E-01	6.58E+01	0.0006	0.0019	0.0000	0.0000	0.0004	0.0030
S	D53	119	8.50E+00	1.09E+02	7.25E-01	3.71E-01	5.50E+01	0.0005	0.0016	0.0000	0.0000	0.0003	0.0025
S	D54	189	1.35E+01	1.74E+02	1.15E+00	5.90E-01	8.74E+01	0.0008	0.0025	0.0000	0.0000	0.0006	0.0039
S	D55	146	1.04E+01	1.34E+02	8.90E-01	4.55E-01	6.74E+01	0.0006	0.0019	0.0000	0.0000	0.0004	0.0030
S	D56	236	1.69E+01	2.17E+02	1.44E+00	7.37E-01	1.09E+02	0.0010	0.0031	0.0000	0.0000	0.0007	0.0049
S	D57	184	1.31E+01	1.69E+02	1.12E+00	5.73E-01	8.49E+01	0.0008	0.0024	0.0000	0.0000	0.0005	0.0038
S	D58	31	2.19E+00	2.82E+01	1.87E-01	9.56E-02	1.42E+01	0.0001	0.0004	0.0000	0.0000	0.0001	0.0006
S	D59	16	1.16E+00	1.49E+01	9.89E-02	5.06E-02	7.49E+00	0.0001	0.0002	0.0000	0.0000	0.0000	0.0003
S	D60	130	9.28E+00	1.19E+02	7.91E-01	4.05E-01	6.00E+01	0.0006	0.0017	0.0000	0.0000	0.0004	0.0027
S	D61	92	6.57E+00	8.46E+01	5.60E-01	2.87E-01	4.25E+01	0.0004	0.0012	0.0000	0.0000	0.0003	0.0019
S	D62	83	5.93E+00	7.63E+01	5.05E-01	2.59E-01	3.83E+01	0.0004	0.0011	0.0000	0.0000	0.0002	0.0017
S	D63	161	1.15E+01	1.48E+02	9.78E-01	5.00E-01	7.41E+01	0.0007	0.0021	0.0000	0.0000	0.0005	0.0033

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Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	D64	229	1.64E+01	2.11E+02	1.40E+00	7.14E-01	1.06E+02	0.0010	0.0030	0.0000	0.0000	0.0007	0.0048
S	D65	240	1.71E+01	2.21E+02	1.46E+00	7.48E-01	1.11E+02	0.0011	0.0032	0.0000	0.0000	0.0007	0.0050
S	D66	310	2.22E+01	2.85E+02	1.89E+00	9.67E-01	1.43E+02	0.0014	0.0041	0.0001	0.0000	0.0009	0.0065
S	D67	148	1.06E+01	1.36E+02	9.01E-01	4.61E-01	6.83E+01	0.0006	0.0020	0.0000	0.0000	0.0004	0.0031
S	D68	303	2.16E+01	2.79E+02	1.85E+00	9.45E-01	1.40E+02	0.0013	0.0040	0.0001	0.0000	0.0009	0.0063
S	D69	85	6.06E+00	7.80E+01	5.16E-01	2.64E-01	3.91E+01	0.0004	0.0011	0.0000	0.0000	0.0002	0.0018
S	D70	242	1.73E+01	2.22E+02	1.47E+00	7.53E-01	1.12E+02	0.0011	0.0032	0.0000	0.0000	0.0007	0.0050
S	D71	81	5.80E+00	7.46E+01	4.94E-01	2.53E-01	3.75E+01	0.0004	0.0011	0.0000	0.0000	0.0002	0.0017
S	D72	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	D73	312	2.23E+01	2.87E+02	1.90E+00	9.73E-01	1.44E+02	0.0014	0.0041	0.0001	0.0000	0.0009	0.0065
S	D74	180	1.29E+01	1.66E+02	1.10E+00	5.62E-01	8.33E+01	0.0008	0.0024	0.0000	0.0000	0.0005	0.0038
S	D75	197	1.40E+01	1.81E+02	1.20E+00	6.13E-01	9.08E+01	0.0009	0.0026	0.0000	0.0000	0.0006	0.0041
S	D76	43	3.09E+00	3.98E+01	2.64E-01	1.35E-01	2.00E+01	0.0002	0.0006	0.0000	0.0000	0.0001	0.0009
S	D77	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	D78	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	D79	128	9.15E+00	1.18E+02	7.80E-01	3.99E-01	5.91E+01	0.0006	0.0017	0.0000	0.0000	0.0004	0.0027
S	D80	390	2.78E+01	3.58E+02	2.37E+00	1.21E+00	1.80E+02	0.0017	0.0052	0.0001	0.0000	0.0011	0.0081
S	D81	547	3.90E+01	5.03E+02	3.33E+00	1.70E+00	2.52E+02	0.0024	0.0072	0.0001	0.0001	0.0016	0.0114
S	D82	493	3.52E+01	4.53E+02	3.00E+00	1.53E+00	2.27E+02	0.0022	0.0065	0.0001	0.0000	0.0014	0.0103
S	D83	622	4.45E+01	5.72E+02	3.79E+00	1.94E+00	2.87E+02	0.0027	0.0082	0.0001	0.0001	0.0018	0.0130
S	D84	622	4.45E+01	5.72E+02	3.79E+00	1.94E+00	2.87E+02	0.0027	0.0082	0.0001	0.0001	0.0018	0.0130
S	D85	474	3.39E+01	4.36E+02	2.89E+00	1.48E+00	2.19E+02	0.0021	0.0063	0.0001	0.0000	0.0014	0.0099
S	D86	529	3.78E+01	4.86E+02	3.22E+00	1.65E+00	2.44E+02	0.0023	0.0070	0.0001	0.0001	0.0015	0.0110
S	D87	413	2.95E+01	3.80E+02	2.52E+00	1.29E+00	1.91E+02	0.0018	0.0055	0.0001	0.0000	0.0012	0.0086
S	D88	298	2.13E+01	2.74E+02	1.81E+00	9.28E-01	1.37E+02	0.0013	0.0039	0.0001	0.0000	0.0009	0.0062

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Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	D89	772	5.52E+01	7.10E+02	4.70E+00	2.41E+00	3.56E+02	0.0034	0.0102	0.0001	0.0001	0.0023	0.0161
S	D90	734	5.24E+01	6.75E+02	4.47E+00	2.29E+00	3.39E+02	0.0032	0.0097	0.0001	0.0001	0.0021	0.0153
S	D91	873	6.24E+01	8.03E+02	5.32E+00	2.72E+00	4.03E+02	0.0038	0.0116	0.0002	0.0001	0.0026	0.0182
S	D92	898	6.42E+01	8.26E+02	5.47E+00	2.80E+00	4.15E+02	0.0039	0.0119	0.0002	0.0001	0.0026	0.0187
S	D93	761	5.44E+01	7.00E+02	4.64E+00	2.37E+00	3.51E+02	0.0033	0.0101	0.0001	0.0001	0.0022	0.0159
S	D94	810	5.79E+01	7.45E+02	4.93E+00	2.52E+00	3.74E+02	0.0035	0.0107	0.0001	0.0001	0.0024	0.0169
S	D95	579	4.14E+01	5.32E+02	3.53E+00	1.80E+00	2.67E+02	0.0025	0.0077	0.0001	0.0001	0.0017	0.0121
S	D96	244	1.74E+01	2.24E+02	1.48E+00	7.59E-01	1.12E+02	0.0011	0.0032	0.0000	0.0000	0.0007	0.0051
S	D97	648	4.63E+01	5.95E+02	3.94E+00	2.02E+00	2.99E+02	0.0028	0.0086	0.0001	0.0001	0.0019	0.0135
S	D98	628	4.48E+01	5.77E+02	3.82E+00	1.96E+00	2.90E+02	0.0028	0.0083	0.0001	0.0001	0.0018	0.0131
S	D99	74	5.28E+00	6.80E+01	4.50E-01	2.31E-01	3.41E+01	0.0003	0.0010	0.0000	0.0000	0.0002	0.0015
S	E01	60	4.25E+00	5.47E+01	3.62E-01	1.86E-01	2.75E+01	0.0003	0.0008	0.0000	0.0000	0.0002	0.0012
S	E02	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	E03	137	9.79E+00	1.26E+02	8.35E-01	4.27E-01	6.33E+01	0.0006	0.0018	0.0000	0.0000	0.0004	0.0029
S	E04	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	E05	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	E06	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	E07	112	7.99E+00	1.03E+02	6.81E-01	3.49E-01	5.16E+01	0.0005	0.0015	0.0000	0.0000	0.0003	0.0023
S	E08	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
S	E09	363	2.59E+01	3.33E+02	2.21E+00	1.13E+00	1.67E+02	0.0016	0.0048	0.0001	0.0000	0.0011	0.0075
S	E10	364	2.60E+01	3.35E+02	2.22E+00	1.14E+00	1.68E+02	0.0016	0.0048	0.0001	0.0000	0.0011	0.0076
S	E11	438	3.13E+01	4.03E+02	2.67E+00	1.37E+00	2.02E+02	0.0019	0.0058	0.0001	0.0000	0.0013	0.0091
S	E12	920	6.57E+01	8.46E+02	5.60E+00	2.87E+00	4.25E+02	0.0040	0.0122	0.0002	0.0001	0.0027	0.0192
S	E13	1019	7.28E+01	9.37E+02	6.21E+00	3.18E+00	4.70E+02	0.0045	0.0135	0.0002	0.0001	0.0030	0.0212
S	E14	1102	7.87E+01	1.01E+03	6.71E+00	3.44E+00	5.09E+02	0.0048	0.0146	0.0002	0.0001	0.0032	0.0229

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Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
S	E15	1131	8.08E+01	1.04E+03	6.89E+00	3.53E+00	5.22E+02	0.0050	0.0150	0.0002	0.0001	0.0033	0.0236
S	E16	1155	8.25E+01	1.06E+03	7.03E+00	3.60E+00	5.33E+02	0.0051	0.0153	0.0002	0.0001	0.0034	0.0240
S	E17	2324	1.66E+02	2.14E+03	1.41E+01	7.24E+00	1.07E+03	0.0102	0.0308	0.0004	0.0002	0.0068	0.0484
S	E18	4014	2.87E+02	3.69E+03	2.44E+01	1.25E+01	1.85E+03	0.0176	0.0532	0.0007	0.0004	0.0117	0.0836
S	E19	4687	3.35E+02	4.31E+03	2.85E+01	1.46E+01	2.16E+03	0.0205	0.0621	0.0008	0.0004	0.0137	0.0976
S	E20	4738	3.38E+02	4.36E+03	2.88E+01	1.48E+01	2.19E+03	0.0208	0.0628	0.0008	0.0005	0.0138	0.0986
S	E21	4561	3.26E+02	4.19E+03	2.78E+01	1.42E+01	2.10E+03	0.0200	0.0604	0.0008	0.0004	0.0133	0.0950
S	E22	4458	3.18E+02	4.10E+03	2.71E+01	1.39E+01	2.06E+03	0.0195	0.0591	0.0008	0.0004	0.0130	0.0928
S	E23	4624	3.30E+02	4.25E+03	2.82E+01	1.44E+01	2.13E+03	0.0203	0.0613	0.0008	0.0004	0.0135	0.0963
S	E24	4765	3.40E+02	4.38E+03	2.90E+01	1.48E+01	2.20E+03	0.0209	0.0631	0.0008	0.0005	0.0139	0.0992
S	E25	4725	3.37E+02	4.34E+03	2.88E+01	1.47E+01	2.18E+03	0.0207	0.0626	0.0008	0.0005	0.0138	0.0984
Q	A05QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	A12QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	A34QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	A40QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	A47QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	A66QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	A76QC	122	8.72E+00	1.12E+02	7.43E-01	3.80E-01	5.63E+01	0.0005	0.0016	0.0000	0.0000	0.0004	0.0025
Q	A95QC	295	2.11E+01	2.71E+02	1.80E+00	9.20E-01	1.36E+02	0.0013	0.0039	0.0001	0.0000	0.0009	0.0061
Q	A97QC	246	1.76E+01	2.26E+02	1.50E+00	7.67E-01	1.14E+02	0.0011	0.0033	0.0000	0.0000	0.0007	0.0051
Q	B20QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	C06QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	C24QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	C42QC	142	1.01E+01	1.31E+02	8.65E-01	4.43E-01	6.56E+01	0.0006	0.0019	0.0000	0.0000	0.0004	0.0030
Q	C56QC	15	1.04E+00	1.34E+01	8.87E-02	4.54E-02	6.73E+00	0.0001	0.0002	0.0000	0.0000	0.0000	0.0003

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Measurement Population	Measurement ID	Gamma Result	Activity ¹ (dpm/100 cm ²)					Fraction of OpDCGL					Measurement OpSOF
		dpm/100 cm ²	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	Co-60	Cs-137	Eu-152	Eu-154	Sr-90	
Q	C67QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	C85QC	0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Q	C89QC	27	1.95E+00	2.51E+01	1.66E-01	8.52E-02	1.26E+01	0.0001	0.0004	0.0000	0.0000	0.0001	0.0006
Q	C90QC	128	9.11E+00	1.17E+02	7.77E-01	3.97E-01	5.89E+01	0.0006	0.0017	0.0000	0.0000	0.0004	0.0027
Q	D32QC	802	5.73E+01	7.37E+02	4.88E+00	2.50E+00	3.70E+02	0.0035	0.0106	0.0001	0.0001	0.0023	0.0167
Q	D79QC	157	1.12E+01	1.44E+02	9.54E-01	4.88E-01	7.23E+01	0.0007	0.0021	0.0000	0.0000	0.0005	0.0033
Q	E03QC	51	3.64E+00	4.69E+01	3.11E-01	1.59E-01	2.35E+01	0.0002	0.0007	0.0000	0.0000	0.0001	0.0011
Q	E14QC	191	1.37E+01	1.76E+02	1.16E+00	5.96E-01	8.83E+01	0.0008	0.0025	0.0000	0.0000	0.0006	0.0040
Q	E19QC	2434	1.74E+02	2.24E+03	1.48E+01	7.59E+00	1.12E+03	0.0107	0.0322	0.0004	0.0002	0.0071	0.0507
Q	E20QC	3194	2.28E+02	2.94E+03	1.94E+01	9.95E+00	1.47E+03	0.0140	0.0423	0.0006	0.0003	0.0093	0.0665
Q	E24QC	4407	3.15E+02	4.05E+03	2.68E+01	1.37E+01	2.03E+03	0.0193	0.0584	0.0008	0.0004	0.0129	0.0918
J	K01Biased	5869	4.19E+02	5.40E+03	3.57E+01	1.83E+01	2.71E+03	0.0257	0.0777	0.0010	0.0006	0.0171	0.1222
J	K02Biased	6056	4.33E+02	5.57E+03	3.69E+01	1.89E+01	2.80E+03	0.0265	0.0802	0.0011	0.0006	0.0177	0.1261

ATTACHMENT 3

SIGN TEST

Table 16-2 – Survey Unit S1-011-102 Sign Test

#	SOF (Ws)	1-Ws	Sign
1	0.0125	0.99	+1
2	0.0000	1.00	+1
3	0.0002	1.00	+1
4	0.0000	1.00	+1
5	0.0000	1.00	+1
6	0.0000	1.00	+1
7	0.0000	1.00	+1
8	0.0000	1.00	+1
9	0.0000	1.00	+1
10	0.0000	1.00	+1
11	0.0000	1.00	+1
12	0.0000	1.00	+1
13	0.0000	1.00	+1
14	0.0000	1.00	+1
15	0.0000	1.00	+1
16	0.0000	1.00	+1
17	0.0094	0.99	+1
18	0.0040	1.00	+1
19	0.0066	0.99	+1
20	0.0144	0.99	+1
21	0.0036	1.00	+1
22	0.0044	1.00	+1
23	0.0031	1.00	+1
24	0.0014	1.00	+1
25	0.0000	1.00	+1
26	0.0000	1.00	+1
27	0.0000	1.00	+1
28	0.0000	1.00	+1
29	0.0000	1.00	+1
30	0.0000	1.00	+1
31	0.0009	1.00	+1
32	0.0000	1.00	+1
33	0.0000	1.00	+1
34	0.0000	1.00	+1
35	0.0000	1.00	+1
36	0.0000	1.00	+1

#	SOF (Ws)	1-Ws	Sign
37	0.0000	1.00	+1
38	0.0000	1.00	+1
39	0.0000	1.00	+1
40	0.0000	1.00	+1
41	0.0000	1.00	+1
42	0.0000	1.00	+1
43	0.0000	1.00	+1
44	0.0000	1.00	+1
45	0.0000	1.00	+1
46	0.0000	1.00	+1
47	0.0000	1.00	+1
48	0.0000	1.00	+1
49	0.0038	1.00	+1
50	0.0000	1.00	+1
51	0.0012	1.00	+1
52	0.0000	1.00	+1
53	0.0000	1.00	+1
54	0.0004	1.00	+1
55	0.0002	1.00	+1
56	0.0015	1.00	+1
57	0.0030	1.00	+1
58	0.0000	1.00	+1
59	0.0003	1.00	+1
60	0.0000	1.00	+1
61	0.0088	0.99	+1
62	0.0014	1.00	+1
63	0.0045	1.00	+1
64	0.0036	1.00	+1
65	0.0140	0.99	+1
66	0.0148	0.99	+1
67	0.0183	0.98	+1
68	0.0136	0.99	+1
69	0.0107	0.99	+1
70	0.0117	0.99	+1
71	0.0101	0.99	+1
72	0.0114	0.99	+1

#	SOF (Ws)	1-Ws	Sign
73	0.0092	0.99	+1
74	0.0048	1.00	+1
75	0.0066	0.99	+1
76	0.0044	1.00	+1
77	0.0026	1.00	+1
78	0.0045	1.00	+1
79	0.0027	1.00	+1
80	0.0063	0.99	+1
81	0.0009	1.00	+1
82	0.0000	1.00	+1
83	0.0000	1.00	+1
84	0.0000	1.00	+1
85	0.0845	0.92	+1
86	0.1131	0.89	+1
87	0.1113	0.89	+1
88	0.0956	0.90	+1
89	0.0198	0.98	+1
90	0.0082	0.99	+1
91	0.0000	1.00	+1
92	0.0000	1.00	+1
93	0.0000	1.00	+1
94	0.0000	1.00	+1
95	0.0000	1.00	+1
96	0.0000	1.00	+1
97	0.0000	1.00	+1
98	0.0000	1.00	+1
99	0.0000	1.00	+1
100	0.0000	1.00	+1
101	0.0000	1.00	+1
102	0.0000	1.00	+1
103	0.0000	1.00	+1
104	0.0000	1.00	+1
105	0.0000	1.00	+1
106	0.0000	1.00	+1
107	0.0000	1.00	+1
108	0.0000	1.00	+1

#	SOF (Ws)	1-Ws	Sign
109	0.0000	1.00	+1
110	0.0000	1.00	+1
111	0.0000	1.00	+1
112	0.0000	1.00	+1
113	0.0000	1.00	+1
114	0.0000	1.00	+1
115	0.0000	1.00	+1
116	0.0000	1.00	+1
117	0.0000	1.00	+1
118	0.0000	1.00	+1
119	0.0000	1.00	+1
120	0.0000	1.00	+1
121	0.0000	1.00	+1
122	0.0000	1.00	+1
123	0.0000	1.00	+1
124	0.0000	1.00	+1
125	0.0000	1.00	+1
126	0.0000	1.00	+1
127	0.0000	1.00	+1
128	0.0000	1.00	+1
129	0.0000	1.00	+1
130	0.0000	1.00	+1
131	0.0000	1.00	+1
132	0.0000	1.00	+1
133	0.0000	1.00	+1
134	0.0000	1.00	+1
135	0.0000	1.00	+1
136	0.0000	1.00	+1
137	0.0000	1.00	+1
138	0.0000	1.00	+1
139	0.0000	1.00	+1
140	0.0000	1.00	+1
141	0.0000	1.00	+1
142	0.0000	1.00	+1
143	0.0000	1.00	+1
144	0.0000	1.00	+1

#	SOF (Ws)	1-Ws	Sign
145	0.0000	1.00	+1
146	0.0000	1.00	+1
147	0.0000	1.00	+1
148	0.0000	1.00	+1
149	0.0000	1.00	+1
150	0.0000	1.00	+1
151	0.0000	1.00	+1
152	0.0000	1.00	+1
153	0.0000	1.00	+1
154	0.0015	1.00	+1
155	0.0033	1.00	+1
156	0.0000	1.00	+1
157	0.0018	1.00	+1
158	0.0000	1.00	+1
159	0.0000	1.00	+1
160	0.0042	1.00	+1
161	0.0124	0.99	+1
162	0.0108	0.99	+1
163	0.0096	0.99	+1
164	0.0122	0.99	+1
165	0.0071	0.99	+1
166	0.0086	0.99	+1
167	0.0110	0.99	+1
168	0.0080	0.99	+1
169	0.0068	0.99	+1
170	0.0089	0.99	+1
171	0.0075	0.99	+1
172	0.0036	1.00	+1
173	0.0058	0.99	+1
174	0.0091	0.99	+1
175	0.0080	0.99	+1
176	0.0052	0.99	+1
177	0.0112	0.99	+1
178	0.0090	0.99	+1
179	0.0074	0.99	+1
180	0.0101	0.99	+1

#	SOF (Ws)	1-Ws	Sign
181	0.0052	0.99	+1
182	0.0045	1.00	+1
183	0.0058	0.99	+1
184	0.0122	0.99	+1
185	0.0083	0.99	+1
186	0.0039	1.00	+1
187	0.0063	0.99	+1
188	0.0031	1.00	+1
189	0.0032	1.00	+1
190	0.0076	0.99	+1
191	0.0067	0.99	+1
192	0.0012	1.00	+1
193	0.0000	1.00	+1
194	0.0036	1.00	+1
195	0.0006	1.00	+1
196	0.0110	0.99	+1
197	0.0027	1.00	+1
198	0.0038	1.00	+1
199	0.0030	1.00	+1
200	0.0054	0.99	+1
201	0.0013	1.00	+1
202	0.0056	0.99	+1
203	0.0019	1.00	+1
204	0.0036	1.00	+1
205	0.0000	1.00	+1
206	0.0000	1.00	+1
207	0.0000	1.00	+1
208	0.0000	1.00	+1
209	0.0000	1.00	+1
210	0.0000	1.00	+1
211	0.0000	1.00	+1
212	0.0000	1.00	+1
213	0.0000	1.00	+1
214	0.0000	1.00	+1
215	0.0000	1.00	+1
216	0.0000	1.00	+1

#	SOF (Ws)	1-Ws	Sign
217	0.0000	1.00	+1
218	0.0000	1.00	+1
219	0.0000	1.00	+1
220	0.0000	1.00	+1
221	0.0000	1.00	+1
222	0.0000	1.00	+1
223	0.0000	1.00	+1
224	0.0000	1.00	+1
225	0.0000	1.00	+1
226	0.0000	1.00	+1
227	0.0000	1.00	+1
228	0.0000	1.00	+1
229	0.0000	1.00	+1
230	0.0000	1.00	+1
231	0.0000	1.00	+1
232	0.0000	1.00	+1
233	0.0002	1.00	+1
234	0.0000	1.00	+1
235	0.0000	1.00	+1
236	0.0000	1.00	+1
237	0.0000	1.00	+1
238	0.0000	1.00	+1
239	0.0000	1.00	+1
240	0.0000	1.00	+1
241	0.0000	1.00	+1
242	0.0000	1.00	+1
243	0.0001	1.00	+1
244	0.0011	1.00	+1
245	0.0062	0.99	+1
246	0.0012	1.00	+1
247	0.0028	1.00	+1
248	0.0007	1.00	+1
249	0.0000	1.00	+1
250	0.0010	1.00	+1
251	0.0000	1.00	+1
252	0.0007	1.00	+1

#	SOF (Ws)	1-Ws	Sign
253	0.0008	1.00	+1
254	0.0000	1.00	+1
255	0.0013	1.00	+1
256	0.0012	1.00	+1
257	0.0000	1.00	+1
258	0.0009	1.00	+1
259	0.0018	1.00	+1
260	0.0018	1.00	+1
261	0.0025	1.00	+1
262	0.0008	1.00	+1
263	0.0000	1.00	+1
264	0.0000	1.00	+1
265	0.0000	1.00	+1
266	0.0000	1.00	+1
267	0.0003	1.00	+1
268	0.0000	1.00	+1
269	0.0009	1.00	+1
270	0.0000	1.00	+1
271	0.0000	1.00	+1
272	0.0000	1.00	+1
273	0.0000	1.00	+1
274	0.0000	1.00	+1
275	0.0000	1.00	+1
276	0.0000	1.00	+1
277	0.0000	1.00	+1
278	0.0000	1.00	+1
279	0.0000	1.00	+1
280	0.0000	1.00	+1
281	0.0000	1.00	+1
282	0.0000	1.00	+1
283	0.0000	1.00	+1
284	0.0000	1.00	+1
285	0.0000	1.00	+1
286	0.0000	1.00	+1
287	0.0000	1.00	+1
288	0.0000	1.00	+1

#	SOF (Ws)	1-Ws	Sign
289	0.0000	1.00	+1
290	0.0000	1.00	+1
291	0.0000	1.00	+1
292	0.0000	1.00	+1
293	0.0000	1.00	+1
294	0.0000	1.00	+1
295	0.0000	1.00	+1
296	0.0000	1.00	+1
297	0.0000	1.00	+1
298	0.0000	1.00	+1
299	0.0000	1.00	+1
300	0.0000	1.00	+1
301	0.0000	1.00	+1
302	0.0000	1.00	+1
303	0.0000	1.00	+1
304	0.0000	1.00	+1
305	0.0000	1.00	+1
306	0.0000	1.00	+1
307	0.0000	1.00	+1
308	0.0000	1.00	+1
309	0.0000	1.00	+1
310	0.0000	1.00	+1
311	0.0000	1.00	+1
312	0.0000	1.00	+1
313	0.0000	1.00	+1
314	0.0000	1.00	+1
315	0.0000	1.00	+1
316	0.0000	1.00	+1
317	0.0000	1.00	+1
318	0.0000	1.00	+1
319	0.0000	1.00	+1
320	0.0000	1.00	+1
321	0.0000	1.00	+1
322	0.0000	1.00	+1
323	0.0000	1.00	+1
324	0.0000	1.00	+1

#	SOF (Ws)	1-Ws	Sign
325	0.0000	1.00	+1
326	0.0000	1.00	+1
327	0.0023	1.00	+1
328	0.0000	1.00	+1
329	0.0000	1.00	+1
330	0.0000	1.00	+1
331	0.0000	1.00	+1
332	0.0000	1.00	+1
333	0.0000	1.00	+1
334	0.0000	1.00	+1
335	0.0000	1.00	+1
336	0.0000	1.00	+1
337	0.0012	1.00	+1
338	0.0008	1.00	+1
339	0.0032	1.00	+1
340	0.0000	1.00	+1
341	0.0009	1.00	+1
342	0.0000	1.00	+1
343	0.0010	1.00	+1
344	0.0000	1.00	+1
345	0.0013	1.00	+1
346	0.0050	1.00	+1
347	0.0017	1.00	+1
348	0.0044	1.00	+1
349	0.0017	1.00	+1
350	0.0000	1.00	+1
351	0.0029	1.00	+1
352	0.0006	1.00	+1
353	0.0020	1.00	+1
354	0.0000	1.00	+1
355	0.0000	1.00	+1
356	0.0006	1.00	+1
357	0.0021	1.00	+1
358	0.0048	1.00	+1
359	0.0052	0.99	+1
360	0.0092	0.99	+1

#	SOF (Ws)	1-Ws	Sign
361	0.0073	0.99	+1
362	0.0091	0.99	+1
363	0.0028	1.00	+1
364	0.0000	1.00	+1
365	0.0001	1.00	+1
366	0.0000	1.00	+1
367	0.0000	1.00	+1
368	0.0029	1.00	+1
369	0.0000	1.00	+1
370	0.0000	1.00	+1
371	0.0000	1.00	+1
372	0.0000	1.00	+1
373	0.0000	1.00	+1
374	0.0010	1.00	+1
375	0.0000	1.00	+1
376	0.0000	1.00	+1
377	0.0000	1.00	+1
378	0.0028	1.00	+1
379	0.0000	1.00	+1
380	0.0000	1.00	+1
381	0.0000	1.00	+1
382	0.0000	1.00	+1
383	0.0000	1.00	+1
384	0.0000	1.00	+1
385	0.0000	1.00	+1
386	0.0000	1.00	+1
387	0.0002	1.00	+1
388	0.0000	1.00	+1
389	0.0048	1.00	+1
390	0.0014	1.00	+1
391	0.0029	1.00	+1
392	0.0025	1.00	+1
393	0.0042	1.00	+1
394	0.0059	0.99	+1
395	0.0080	0.99	+1
396	0.0073	0.99	+1

#	SOF (Ws)	1-Ws	Sign
397	0.0100	0.99	+1
398	0.0071	0.99	+1
399	0.0081	0.99	+1
400	0.0087	0.99	+1
401	0.0137	0.99	+1
402	0.0128	0.99	+1
403	0.0109	0.99	+1
404	0.0093	0.99	+1
405	0.0126	0.99	+1
406	0.0123	0.99	+1
407	0.0148	0.99	+1
408	0.0150	0.98	+1
409	0.0218	0.98	+1
410	0.0194	0.98	+1
411	0.0169	0.98	+1
412	0.0186	0.98	+1
413	0.0122	0.99	+1
414	0.0140	0.99	+1
415	0.0127	0.99	+1
416	0.0154	0.98	+1
417	0.0128	0.99	+1
418	0.0216	0.98	+1
419	0.0169	0.98	+1
420	0.0177	0.98	+1
421	0.0118	0.99	+1
422	0.0168	0.98	+1
423	0.0193	0.98	+1
424	0.0146	0.99	+1
425	0.0214	0.98	+1
426	0.0170	0.98	+1
427	0.0141	0.99	+1
428	0.0066	0.99	+1
429	0.0107	0.99	+1
430	0.0103	0.99	+1
431	0.0117	0.99	+1
432	0.0091	0.99	+1

#	SOF (Ws)	1-Ws	Sign
433	0.0113	0.99	+1
434	0.0073	0.99	+1
435	0.0060	0.99	+1
436	0.0015	1.00	+1
437	0.0042	1.00	+1
438	0.0030	1.00	+1
439	0.0025	1.00	+1
440	0.0039	1.00	+1
441	0.0030	1.00	+1
442	0.0049	1.00	+1
443	0.0038	1.00	+1
444	0.0006	1.00	+1
445	0.0003	1.00	+1
446	0.0027	1.00	+1
447	0.0019	1.00	+1
448	0.0017	1.00	+1
449	0.0033	1.00	+1
450	0.0048	1.00	+1
451	0.0050	1.00	+1
452	0.0065	0.99	+1
453	0.0031	1.00	+1
454	0.0063	0.99	+1
455	0.0018	1.00	+1
456	0.0050	0.99	+1
457	0.0017	1.00	+1
458	0.0000	1.00	+1
459	0.0065	0.99	+1
460	0.0038	1.00	+1
461	0.0041	1.00	+1
462	0.0009	1.00	+1
463	0.0000	1.00	+1
464	0.0000	1.00	+1
465	0.0027	1.00	+1
466	0.0081	0.99	+1
467	0.0114	0.99	+1
468	0.0103	0.99	+1

#	SOF (Ws)	1-Ws	Sign
469	0.0130	0.99	+1
470	0.0130	0.99	+1
471	0.0099	0.99	+1
472	0.0110	0.99	+1
473	0.0086	0.99	+1
474	0.0062	0.99	+1
475	0.0161	0.98	+1
476	0.0153	0.98	+1
477	0.0182	0.98	+1
478	0.0187	0.98	+1
479	0.0159	0.98	+1
480	0.0169	0.98	+1
481	0.0121	0.99	+1
482	0.0051	0.99	+1
483	0.0135	0.99	+1
484	0.0131	0.99	+1
485	0.0015	1.00	+1
486	0.0012	1.00	+1
487	0.0000	1.00	+1
488	0.0029	1.00	+1
489	0.0000	1.00	+1
490	0.0000	1.00	+1
491	0.0000	1.00	+1
492	0.0023	1.00	+1
493	0.0000	1.00	+1
494	0.0075	0.99	+1
495	0.0076	0.99	+1
496	0.0091	0.99	+1
497	0.0192	0.98	+1
498	0.0212	0.98	+1
499	0.0229	0.98	+1
500	0.0236	0.98	+1
501	0.0240	0.98	+1
502	0.0484	0.95	+1
503	0.0836	0.92	+1
504	0.0976	0.90	+1

#	SOF (Ws)	1-Ws	Sign
505	0.0986	0.90	+1
506	0.0950	0.91	+1
507	0.0928	0.91	+1
508	0.0963	0.90	+1
509	0.0992	0.90	+1
510	0.0984	0.90	+1

Number of positive differences (S+) 510

Critical Value 274

Survey Unit Meets
the Acceptance
Criteria

ATTACHMENT 4

QUALITY CONTROL ASSESSMENT

Table 16-3 – Survey Unit S1-011-102 QC Assessment

Standard Measurement				Replicate		
ID	Activity Value	+20%	-20%	ID	Activity Value	Acceptable (Y/N)
A05	0	0	0	A05QC	0	Y
A12	0	0	0	A12QC	0	Y
A34	0	0	0	A34QC	0	Y
A40	0	0	0	A40QC	0	Y
A47	0	0	0	A47QC	0	Y
A66	159	191	127	A66QC	0	N
A76	339	407	271	A76QC	122	N
A95	585	701	468	A95QC	295	N
A97	186	223	149	A97QC	246	N
B20	0	0	0	B20QC	0	Y
C06	0	0	0	C06QC	0	Y
C24	0	0	0	C24QC	0	Y
C42	0	0	0	C42QC	142	N
C56	47	56	38	C56QC	15	N
C67	0	0	0	C67QC	0	Y
C85	0	0	0	C85QC	0	Y
C89	0	0	0	C89QC	27	N
C90	0	0	0	C90QC	128	N
D32	1037	1245	830	D32QC	802	N
D79	128	154	102	D79QC	157	N
E03	137	165	110	E03QC	51	N
E14	1102	1323	882	E14QC	191	N
E19	4687	5625	3750	E19QC	2434	N
E20	4738	5685	3790	E20QC	3194	N
E24	4765	5718	3812	E24QC	4407	Y
Comments/Corrective Actions: The replicate measurement results are in acceptable agreement				The acceptance criteria for replicate static measurements is that the same conclusion is reached for each measurement. This is defined as the replicate measurement being within 20% of the standard measurement. In cases where the replicate measurement is not within 20% of the standard measurement, but both measurements are below the Operational DCGL, there is an acceptable agreement.		

ATTACHMENT 5

GRAPHICAL PRESENTATIONS

Figure 16-3 – Quantile Plot for Gross Gamma Activity

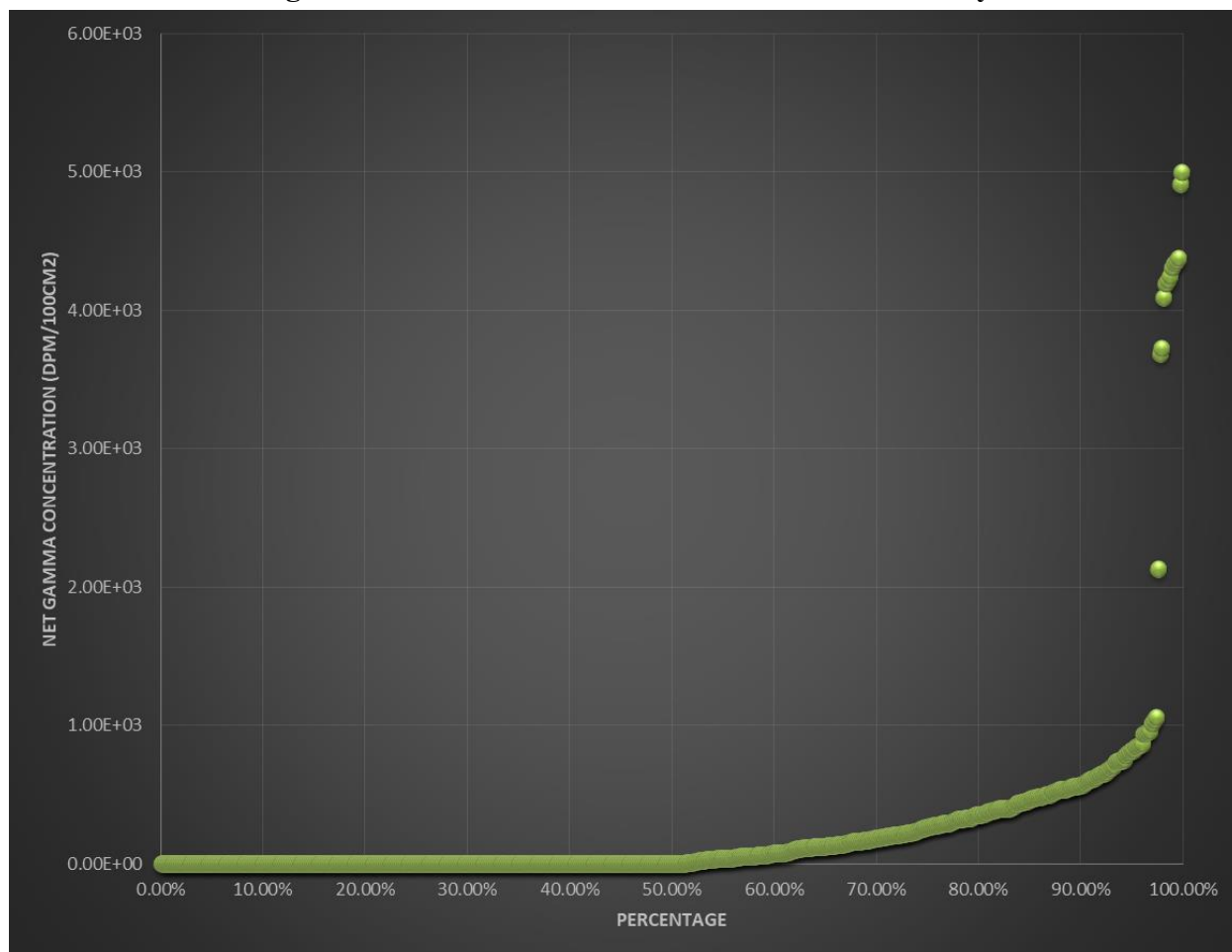


Figure 16-4 - Histogram for Gross Gamma Activity

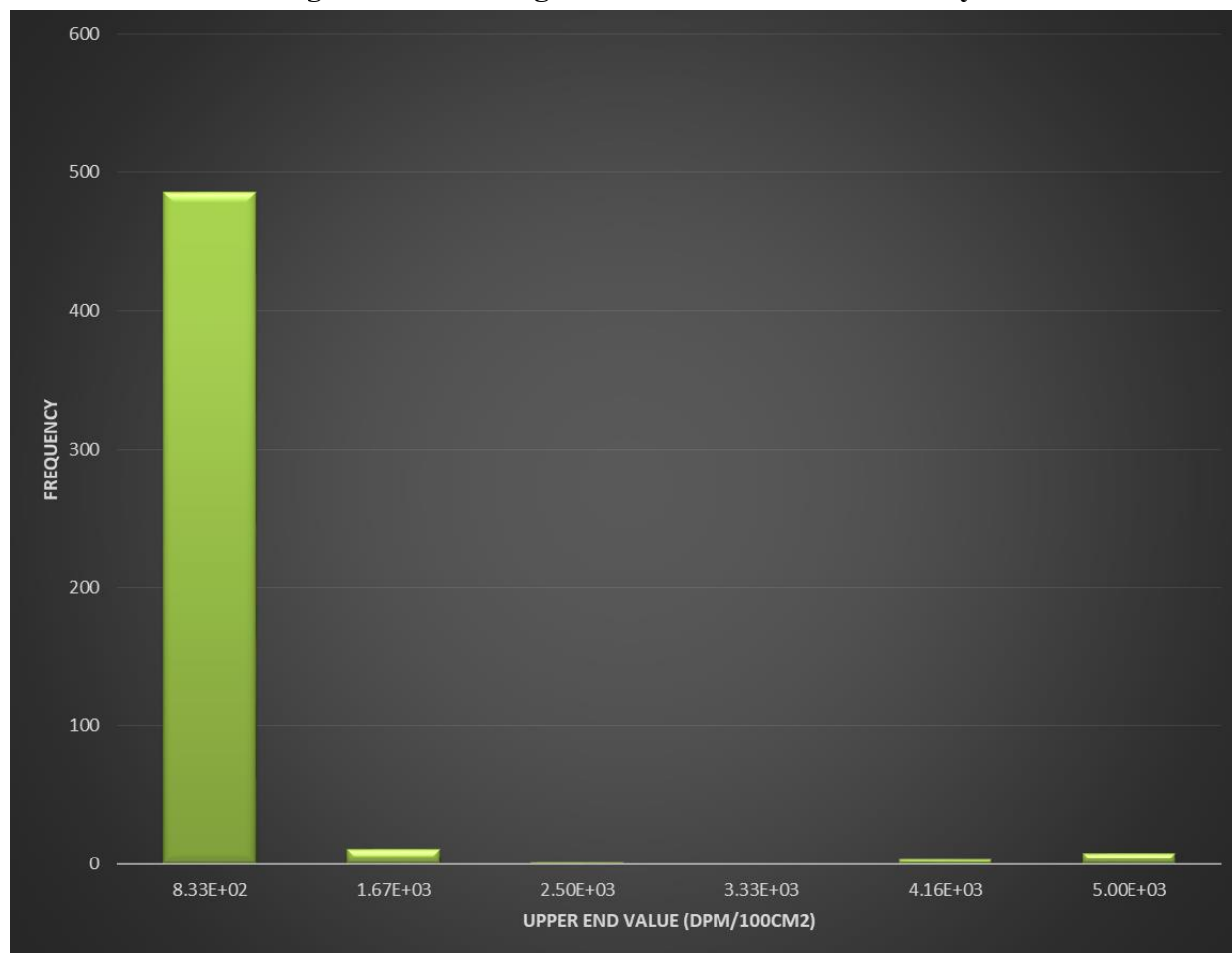


Figure 16-5 - Retrospective Power Curve for Survey Unit S1-011-102

