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TITLE: FINAL RADIOLOGICAL SURVEY REPORT FOR BUILDING T012

- APPROVALS -

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ABSTRACT

A comprehensive radiological survey of Building T012 and surrounding areas was performed in 1985. In accordance with that survey report's recommendation, remedial efforts were undertaken to remove residual radioactively contaminated components from the Building T012 structure. After the decontamination efforts were completed, a comprehensive final survey of the building interior was performed to demonstrate regulatory compliance for release without radiological restrictions.

Results of this survey are presented in this report. The results demonstrate that Building T012 meets the requirements of DOE, NRC, and State of California for releasing Building T012 for use without radiological restrictions.

1. INTRODUCTION

Decontamination and decommissioning (D&D) of a number of formerly used nuclear facilities and sites is underway at Rockwell International's Santa Susana Field Laboratory (SSFL). During D&D of these facilities, efforts are made to eliminate or reduce residual radioactive contamination to levels that are as low as reasonably achievable (ALARA). Upon completion of D&D, radiological surveys are performed under established protocols to demonstrate that any remaining radioactivity does not exceed applicable regulatory limits. Findings from the surveys are also used to perform additional D&D or radiological investigations, as needed. The scope of these surveys includes both known and suspected areas of contamination in the Building T012 interior.

A comprehensive radiological survey of Building T012 and surrounding areas was performed in 1985 (Reference 1). Subsequent decontamination and decommissioning of Building T012 was conducted based on an assessment report (Reference 2) and a D&D plan (Reference 3). The D&D work was conducted following procedures given in Reference 4. Removal of asbestos-containing tiles was conducted under a separate procedure (Reference 5). Following D&D, a final release survey was conducted following procedures given in Reference 6.

This report is organized as follows: Section 2 gives a summary of the results of the survey and the conclusions and recommendations; Section 3 gives background information concerning past radiological status, D&D efforts, and current radiological status; Section 4 presents the survey results and the technical approach used in the data collection, analysis, and limit criteria; Section 5 gives the relevant references; and Appendices A through C provide the supporting documentation and calculations for historical records and report completeness.

2. SUMMARY AND CONCLUSIONS

Survey measurements were made for alpha and beta surface contamination on the interior walls, floors, and ceilings in Building T012, and for ambient gamma exposure rate at 1 meter above the interior floors. Additional alpha and beta measurements were also conducted on the inside surfaces of the fuel storage tubes located in Room 109. All measurements were then tested statistically for compliance with acceptable contamination limits for activation products and mixed fission products and for ambient exposure rate. The results of these tests showed that the facility is suitable for release without radiological restrictions.

For statistical interpretation, the interior gamma exposure rate measurements were subdivided into two sets, one for Room 109 and one for Room 110. This subdivision was necessary because of significant local gamma shielding inside the critical cell room (Room 110). Interpretation of the Room 109 gamma exposure rate measurements is based on an average interior gamma exposure rate background value of 14.3 μR/h for three surrogate non-radiological facilities located at the SSFL site. Interpretation of the Room 110 gamma data is based on the use of the median of the dataset (8.83 μR/h) as an unbiased estimate of the "local" background. This method has been applied previously in cases where the local gamma exposure rate background is not readily obtainable due to a lack of suitable surrogate areas for comparison. The resulting probability distributions for both sets of measurements shows no local contamination. If the corresponding building-specific values are used as a reference, the tests for the gamma exposure rate are satisfactory at all locations and meet the requirements for <5 μR/h above background.

3. BACKGROUND

3.1 Location

Building T012 is located within Rockwell International's SSFL in the Simi Hills of southeastern Ventura County, California, adjacent to the Los Angeles County line and approximately 29 miles northwest of downtown Los Angeles, directly south of the City of Simi Valley. Location of the SSFL relative to Los Angeles and vicinities is shown in Figure 1. An enlarged map of neighboring SSFL communities is shown in Figure 2. Figure 3 is a plot plan of the western portion of SSFL known as Area IV, where Building T012 is located. A drawing (plan view) of Building T012 and its adjoining areas is shown in Figure 4. Building T012 is located on government-optioned land.

3.2 Topography and Building Characteristics

Building T012 is situated on B Street among several adjacent buildings on paved ground. As originally constructed, Building T012 was a complex consisting of a critical cell and equipment room, and a separate operations and control building, connected by an enclosed walkway. In 1986, the operations and control building, and the enclosed walkway, were demolished to provide space for the construction of the Sodium Component Test Installation (SCTI) cogeneration plant. Prior to demolition, a complete radiological survey of the Building T012 complex was conducted (Reference 1). The present report deals with the remaining section of T012, consisting of the critical cell (Room 110) and adjacent equipment room (Room 109).

A layout of the existing T012 facility is shown in Figure 4. The critical cell was a sealed room with 4-foot-thick concrete walls, lined with a 1/4-inch steel liner, used to test Systems for Nuclear Auxiliary Power (SNAP) critical assemblies. The floor of the cell is a mat-type concrete foundation. Sealed during operation, this room was designed to withstand the pressure release and to contain radioactive materials in the event of a burst condition from the assemblies.

The equipment room adjacent to the critical cell has 9-inch-thick concrete walls and ceiling and a spread concrete foundation. A fuel storage area was located in the west section of the room consisting of a concrete shield wall containing 1% boron by weight. Embedded in the wall were 110 cadmium-plated tubes, 3-1/2-in ID by 20 in. long. The tubes were located on 1-ft centers, 5 tubes high and 22 tubes wide.

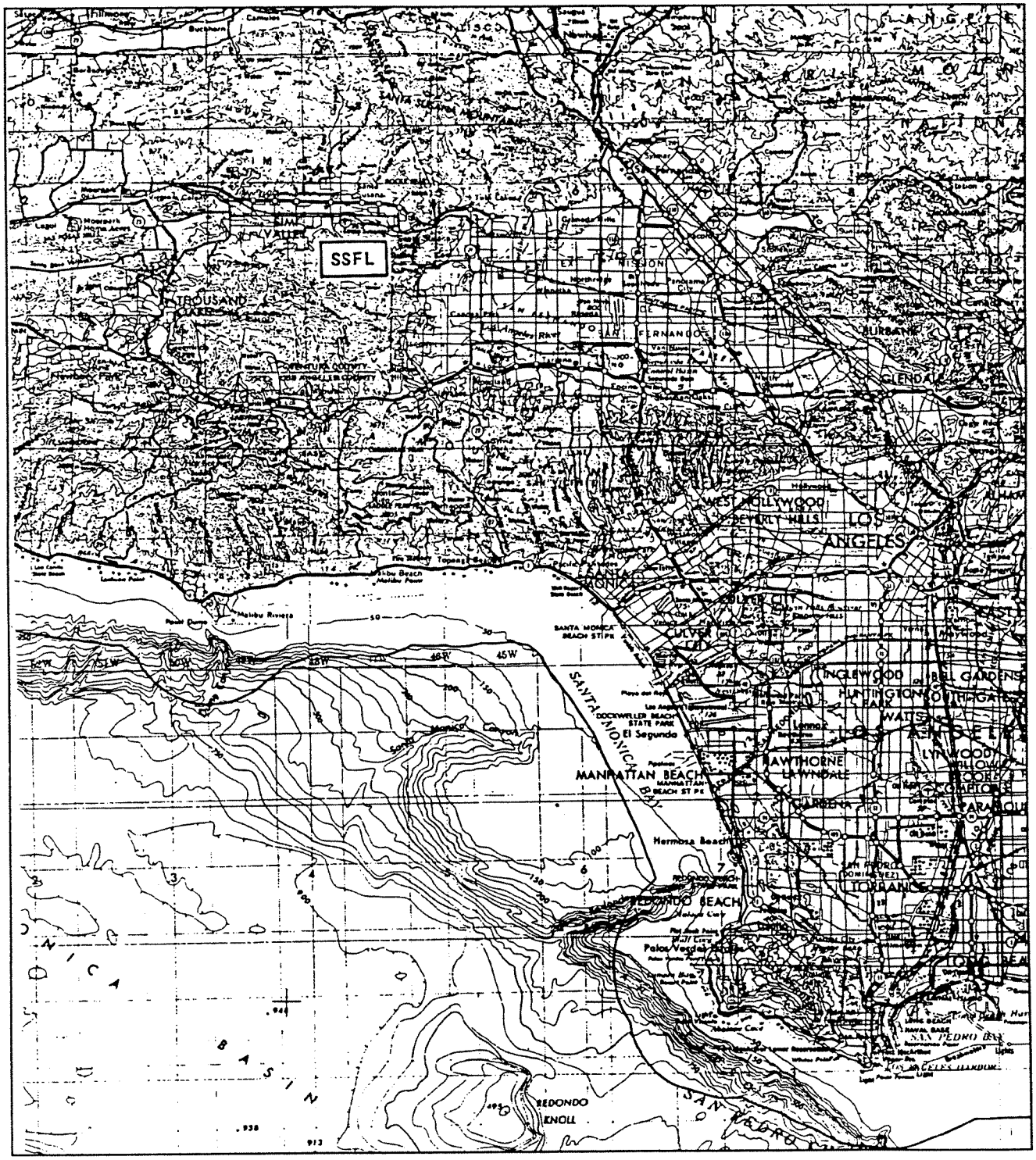

Figure 1. Location of SSFL Relative to Los Angeles and Vicinities

Figure 2. Neighboring SSFL Communities

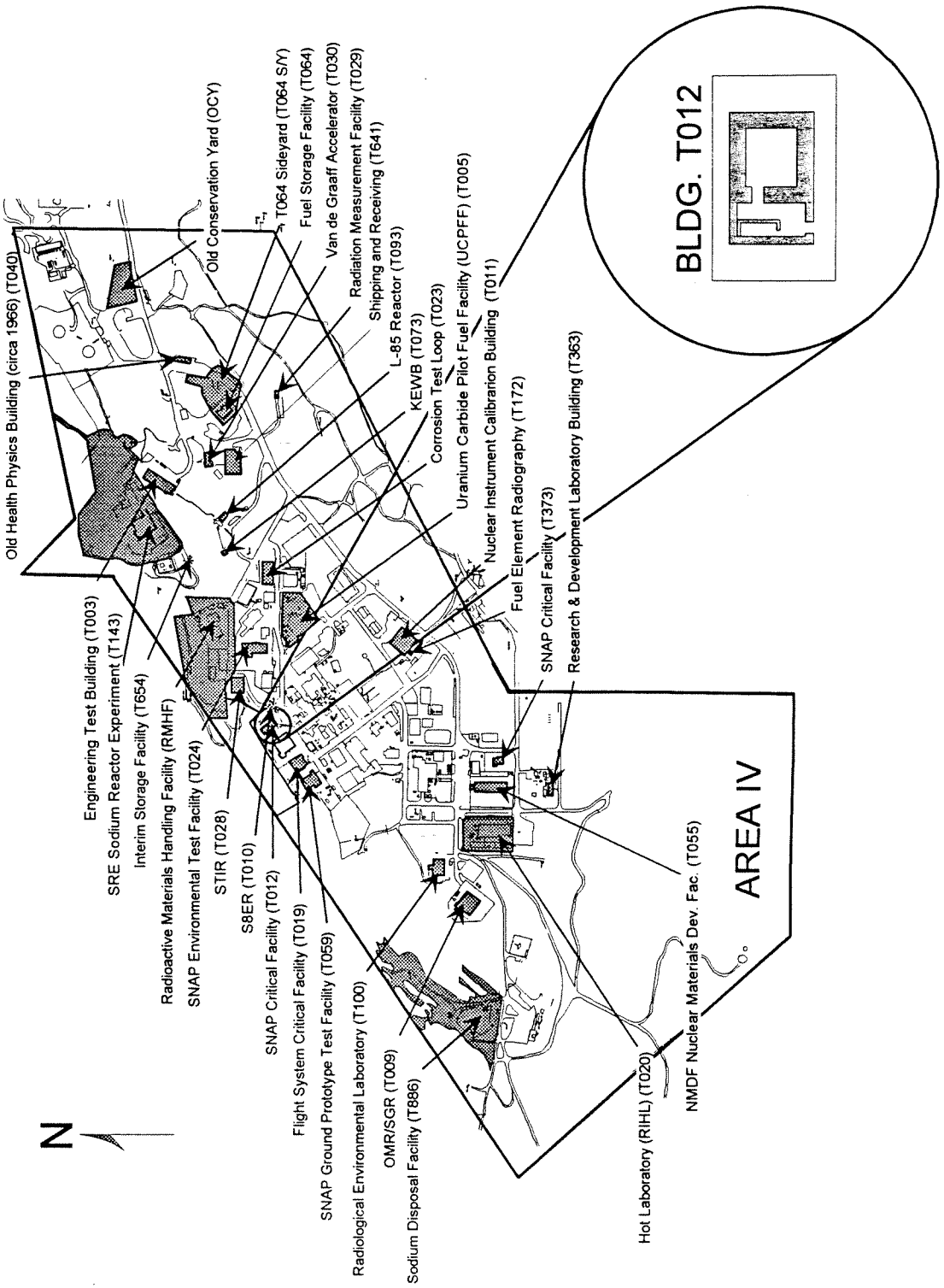

Figure 3. Santa Susana Field Laboratory (SSFL) Area IV

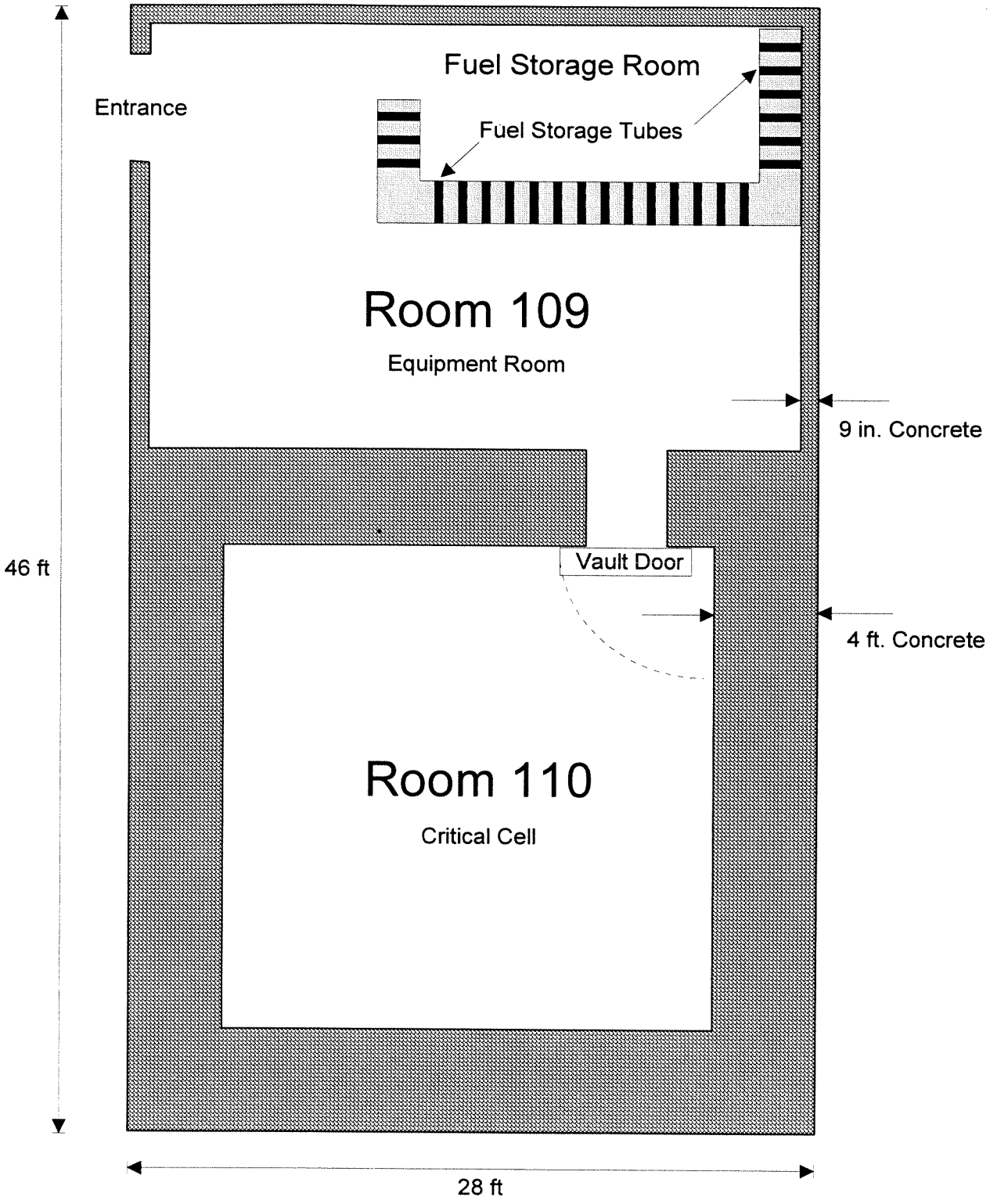

Figure 4. Layout of Building T012 Critical Cell and Equipment Room

3.3 Operating History

Operations began with SNAP critical assemblies in Building T012 in 1962. These experiments used three different critical assembly machines, SCA-4A and -4B, and SCA-5. Most tests were directed at determining criticality of various configurations and conditions, such as water immersion, and were performed well below the allowed high power limit of about 100 watts. No significant amounts of induced activity were produced by these operations.

Clad reactor fuel elements (U-ZrH) were stored as shipped, in "birdcage" packages, and in the fuel storage tubes located in Room 109. The SNAP critical experiments continued intermittently through 1968, when the fuel was shipped to the SSM Storage Vault (T064) and the facility was placed in stand-by mode.

In 1969-1970, the SCA-4A critical assembly machine was modified for use in the Heavy Metal Reflected Fast Spectrum Reactor (HMRFSR) project, and critical experiments began in 1970. These experiments used various fabrications of highly enriched uranium rods and foil to simulate reactor fuel elements. These fuel materials were stored in the fuel storage tubes, and assembled in the critical test cell (Room 110). Some extended runs, at reactor powers of up to 200 watts for several hours at a time, were used for reactivity coefficient measurements. The fuel materials were returned to the original supplier in 1972, and the facility was deactivated.

In 1979, the concrete portion of the facility was modified for use by ETEC Quality Assurance in performance of X-ray machine and source radiography under Rocketdyne Use Authorization No. 18 (Reference 7). Areas with total alpha activity at and below the limit for uranium were noted and identified. The major modification consisted of enclosure of the fuel storage room to serve as a photographic darkroom, and removal of four of the storage tubes for a film pass-through slot. This use was terminated in 1992, with all radioactive sources transferred to Radioactive Material Handling Facility (RMHF)[1] for storage. From 1992 until D&D operations in 1995, the facility was in inactive status, and remained locked and unoccupied.

3.4 Decommissioning and Demolition Efforts

3.4.1 Phase I

Initial decontamination and demolition efforts in Building T012 were completed in 1986. This operation involved the removal of the operations and control room, and the enclosed passageway connecting those structures to the Equipment Room (Room 109) and the Control Cell (Room 110). These area were removed to accommodate the construction of the ETEC/SCTI Power Pack section of the SCTI Cogeneration Project. The concrete fuel storage wall in Room 109 was retained and was used as a support structure for the Power Pack facility.

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[1] Formerly the Radioactive Materials Disposal Facility (RMDF).

3.4.2 Phase II

The second phase of decommissioning involved the removal of asbestos-containing floor tiles and pipe insulation; removal of electrical light fixtures, conduit and ventilation systems; paint removal and sampling; and scabbling of floors, walls, and ceilings surfaces (Reference 3). Prior to removal, the floor tiles were sampled for radioactive contamination (Reference 5). Survey and removal of several contaminated fuel storage tubes occurred after the above activities were completed.

4. SURVEY RESULTS

4.1 Overview

Upon D&D of radioactive constituents, releasing a facility or area for unrestricted use requires a formal radiation survey to demonstrate that the applicable regulatory limits for such a release are met. The survey is performed under an established plan, and a statistical interpretation of the resulting data is made to determine if the regulatory release criteria have been met. This document provides the necessary framework to demonstrate that Building T012 meets DOE, NRC, and State of California criteria for release of the facility for unrestricted use. All original survey and user authorization documentation is maintained in the Building T012 final survey file in Building T100.

4.2 Scope of the Survey

For the final radiological survey of Building T012, the interior rooms were separated into two sample lots as shown in Figure 5. The sample lots were treated separately for the purposes of statistical data analyses. The distinguishable property for selecting the sample lots was the known contamination of several of the fuel storage tubes relative to the other areas. The two sample lots are shown in Table 1, with the corresponding type of surveys performed on each. Because of significant local gamma shielding in the former critical cell room (Room 110), the Lot 1 ambient gamma measurements were further subdivided between the two rooms for statistical analysis (see Section 4.5.1).

Table 1. Sample Lots Surveyed

Sample Lot No.	Room or Area	Type of Survey Performed[a]				
		Total		Removable		
		Alpha	Beta	Alpha	Beta	Ambient Gamma[b]
1	Rooms 109 and 110, except for fuel storage tubes	x	x	x	x	x
2	Fuel storage tubes in Room 109	x	x	x	x	-

[a]The type of survey performed for each sample lot was dependent on the type of surface being measured (e.g., concrete floor, walls, asphalt, gravel roof, tile floors, etc.) and the type of isotope.

[b]Ambient gamma readings were performed on the floors at a distance of 1 meter from the surface.

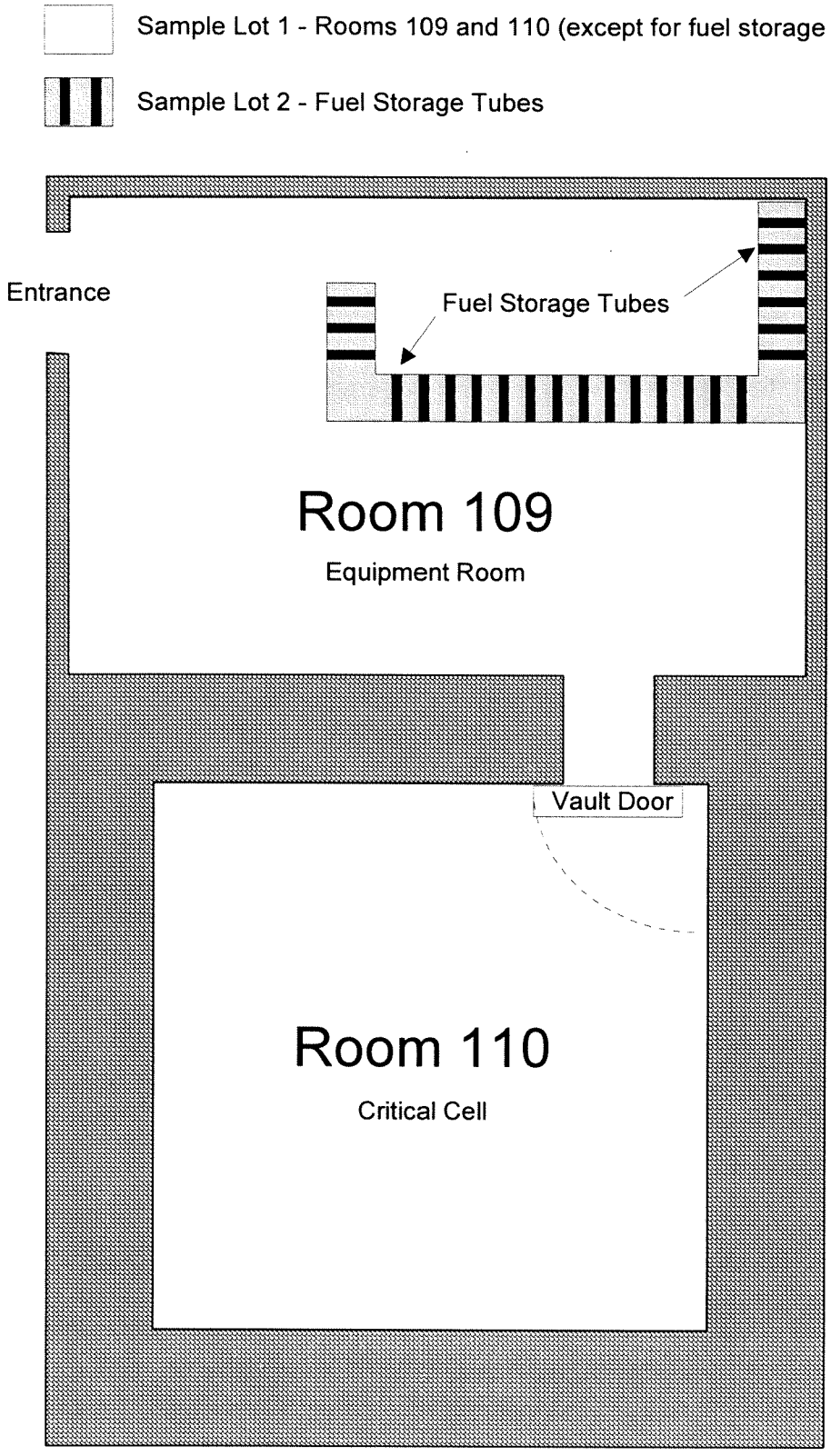


Figure 5. Building T012 Sample Lot Identification

4.3 Survey Methods

4.3.1 Sampling Methods

The method and type of survey measurement depended on the type of surfaces involved. For Sample Lot 1, a 1-m by 1-m grid was superimposed on the floors, walls, and ceilings of the entire sample lot area. For surfaces having areas less than 1-m x 1-m, a minimum area of 1-m x 1-m was surveyed by combining other adjacent remnant areas. For Sample Lot 2, each of the tubes remaining after the D&D operations was individually numbered and surveyed. All storage tubes were surveyed within Sample Lot 2.

4.3.1.1 Sample Lot 1

A 100% direct qualitative frisk of each 1-m by 1-m grid was performed using an alpha scintillation probe and a G-M pancake probe, followed by a 100% quantitative survey. This method satisfies the State of California guidelines in DECON-1 (Reference 8) that a minimum of 10% of an area shall be surveyed. Walls, floors, and ceilings were surveyed for total and removable alpha and beta activity, and for maximum alpha and beta activity, if a "hot spot" was detected when the total alpha and beta measurements were made. Additionally, the floors were surveyed for ambient gamma readings in μR/h at 1 meter. Twenty percent of all structural surfaces (pipes, conduit, light fixtures, etc.) were surveyed for total and removable alpha and beta activity.

4.3.1.2 Sample Lot 2

The 106 remaining fuel storage tubes located in Room 109 were surveyed as part of the D&D activities in 1995 (References 4 and 5), and again as part of the final survey in 1996. During D&D, a 100% quantitative survey for total alpha activity and a 100% qualitative survey for total beta activity was conducted within each tube. Any tube found to have contamination above the limits, specified in Section 4.4 below, was removed and the hole grouted in place. A total of eight contaminated tubes were removed as part of the D&D operations. A diagram showing the tubes that were removed is shown in Figure 6.

The D&D surveys were conducted using a special 3π alpha probe and a standard G-M pancake probe. As part of the final survey in 1996, a quantitative survey for removable alpha/beta was also conducted on the remaining 98 tubes.

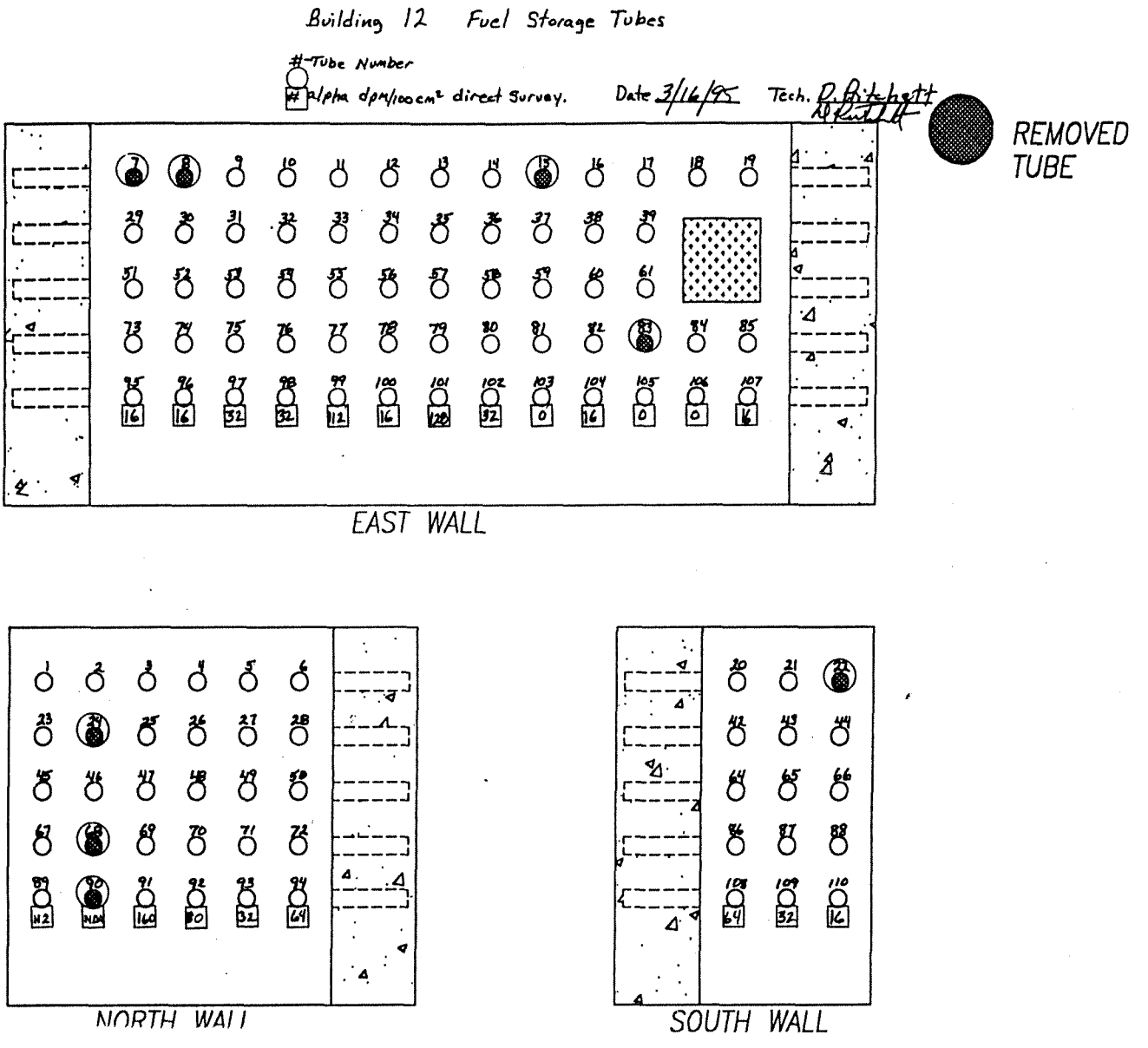


Figure 6. Map of Storage Tube Locations

4.3.2 Instrument Calibrations and Checks

Measurements of total and maximum alpha surface activity were made using alpha scintillation detectors, sensitive only to alpha particles with energies exceeding about 1.5 MeV. The detectors were calibrated with a Th-230 alpha source standard traceable to the National Institute of Standards and Technology (NIST). Measurements of the total and maximum beta surface activities were made with a thin-window pancake Geiger-Mueller (G-M) tube. The G-M detectors were calibrated with a Tc-99 beta source standard, traceable to NIST.

The internal surfaces of the fuel storage tubes were surveyed using a custom 3π alpha-scintillator pipe probe, modified from a Ludlum Large-Area alpha-scintillator, Model 43-1. The probe was constructed by machining down the outer portion of the conical light-pipe of the Model 43-1 probe, to make a cylindrical light pipe, approximately 2.75 inches in diameter. The end-face and sides of the light pipe were covered with the same ZnS(Ag) powder scintillation screen and surface aluminized mylar covering as used in the standard Ludlum alpha probes. Protective rings were placed at the front and rear of the light pipe, and the assembly was mounted on a Model 43-1 photomultiplier tube and case. The sensitive region was surrounded by a wire cage.

Calibration of the 3π probe was performed using a standard Th-230 alpha source at four locations around the circumference, and at one location on the end-face. The observed average efficiency factor was 8.0, similar to that observed for the standard rectangular Ludlum probes (7.2 to 8.1). The actual circumferential sensitive area was determined to be 86 cm^2, but this was downrated in practice to a nominal value of 50 cm^2 for conservatism.

All portable survey instruments were serviced and calibrated with NIST traceable standards on a quarterly basis. In addition, daily checks and calibrations were performed (when used) on all instrumentation to determine acceptable performance and establish a background value for the instrument on that day. Reference 9 provides further methods and procedures for environmental surveys. Measurements of removable surface activity (alpha and beta) were made by wiping approximately 100 cm^2 of surface area using standard smear disks. The activity on the disks were measured using a gas-flow proportional counter. The counters were calibrated using Th-230 and Tc-99 standard sources, traceable to NIST. A 1-min integrated count time was used. Calibration records for the survey instruments used are maintained in the Building T100 files.

The ambient exposure rates at 1 m from surfaces were measured using 1-in. NaI scintillation detectors. These instruments were calibrated against a Reuter-Stokes high-pressure ionization chamber, and daily checks were made using a Ra-226 source, traceable to NIST, placed 1-m from the detector. A 1-min integrated count time was used.

4.4 Technical Approach

4.4.1 Criteria and Their Implementation

Acceptable contamination limits and gamma exposure rates for releasing a facility for unrestricted use are prescribed in DOE, NRC, and State of California guidelines (References 8, 10, and 11). The lowest (most conservative) limits were chosen from these guidelines and incorporated into the final survey criteria for Building T012. Two specific criteria were chosen from the guidelines:

a) The surface contamination limits for alpha and beta were excerpted from DOE Order 5400.5 [Reference 10 and State of California guidelines (Reference 8)];

b) The ambient gamma exposure rate limits at 1 m were excerpted from NRC Dismantling Order for the L-85 reactor decommissioning (Reference 11) for conservatism and consistency with past decommissioning efforts. Although DOE Order 5400.5 recommends a value of 20 μR/h above background, the value of 5 μR/h from the NRC Dismantling Order was used for consistency, conservatism, and in keeping with ALARA principles.

Table 2 provides a summary of the contamination limit criteria. Table 3 summarizes the various "Statistically Significant Activity" (SSA) detection limits for the survey instruments used, and demonstrates that the detection limits and methods are well below the established limit criteria (from regulatory requirements) shown in Table 2.

As used in the tables, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute measured by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation. Where surface contamination by both alpha- and beta-gamma-emitting radionuclides existed, the limits established for alpha- and beta-gamma-emitting radionuclides were applied independently. Beta-gamma emitters include mixed fission products, including the Sr-90 which is present in them. It does not apply to Sr-90 which has been separated from the other fission products or mixtures where the Sr-90 has been enriched. No separated or enriched Sr-90 is present in T012.

Measurements of average contamination were averaged over an area of more than 1 m^2. For objects of less surface area, the average was derived for each such object. The maximum contamination level applies to an area of not more than 100 cm^2.

The amount of removable radioactivity per 100 cm^2 of surface area was determined by wiping an area of that size with dry filter or soft absorbent paper, applying moderate pressure, and measuring the amount of radioactive material on the wiping with an appropriate instrument of known efficiency. When removable contamination on objects of surface area less than 100 cm^2 was determined, the activity per unit area was based on the actual area and the entire surface was wiped.

Table 2. Building T012 Contamination Limit Criteria

Radionuclides	Average	Maximum	Removable
U-natural, U-235, U-238, and associated decay products	<5,000 α	<15,000 α	<1,000 α
Beta-gamma emitters (radionuclides with decay modes other than alpha emission or spontaneous fission)	<5,000 β-γ	<15,000 β-γ	<1,000 β-γ
Surface contamination for gamma exposure rate	≤ 5 μR/h above background at 1 m		

Table 3. Observed Detection Limits versus Established Limit Criteria

	Alpha (dpm/100 cm^2)		Beta (dpm/100 cm^2)		Ambient Gamma Exposure Rate (μR/h)
	Total	Removable	Total	Removable	
Limit criteria	5,000	1,000	5,000	1,000	<5.0 above background
Average observed detection limit (SSA)[1]	12	5.5	280	41	0.34
Observed detection limit range	3.5 - 37	3.7 - 5.9	240 - 311	27 - 44	0.23 - 0.40
Ratio of detection limit to criteria[2]	0.24%	0.55%	5.6%	4.1%	6.8%

[1]SSA = 1.645 x √(2 x background counts) x area factor x efficiency factor/time, in units of dpm/100 cm^2.

[2]Ratio of average observed detection limit to established limit criteria.

4.4.2 Data Analyses and Statistical Criteria

A statistical procedure was used to validate the applicability of the raw survey data for selected sample lots or areas. The statistical method known as "sampling inspection by variables" (Reference 12) was used. This method has been widely applied in industry and the military and is essential where the lot size is impractically large. In the case of determining residual contamination in Building T012, the small size of the sample lots lead to approximately 100% sampling. Therefore, the "sampling inspection by variables" method is actually better than the "90/90/100" test as explained elsewhere in this report.

In sampling inspection by variables, the number of data points on which measurements are obtained is first chosen to be large so that the parameters of the distribution are likely to have a

normal distribution (i.e., Gaussian). The mean of the distribution, $\bar{x}$, and its standard deviation, s, are then related to a "test statistic," TS, as follows:

$$TS = \bar{x} + ks$$

where $\bar{x}$ = average (arithmetic mean of measured values)
s = observed sample standard deviation
k = tolerance factor calculated from the number of samples to achieve the desired sensitivity for the test

TS and $\bar{x}$ are then compared with an acceptance limit, U (such as those shown in Table 2), to determine acceptance or other plans of action, including rejection of the area as contaminated and requiring further remediation.

The sample mean and standard deviation are easily calculable quantities; the value of *k*, the tolerance factor, bears further discussion. Of the various criteria for selecting plans for acceptance sampling by variables, the most appropriate is the method of Lot Tolerance Percent Defective (LTPD), also referred to as the Rejectable Quality Level (RQL). The LTPD is defined as the poorest quality that should be accepted in an individual lot. Associated with the LTPD is a parameter referred to as consumer's risk (β), the risk of accepting a lot of quality equal to or poorer than the LTPD (or 10%). USNRC Regulatory Guide 6.6 ("Acceptance Sampling Procedures for Exempted and Generally Licensed Items Containing By-Product Material") states that the value for the consumer's risk should be 0.10. Conventionally, the value assigned to the LTPD has been 10%.

The State of California has stated that the consumer's risk of acceptance (β) at 10% defective (LTPD) must be 0.1. For those choices of β and LTPD, $K_\beta = K_2 = 1.282$ (Reference 13). Values of *k* for each sample size are calculated in accordance with the following equations:

$$k = \frac{K_2 + \sqrt{K_2^2 - ab}}{a}; \quad a = 1 - \frac{K_\beta}{2(n-1)}; \quad b = K_2^2 - \frac{K_\beta^2}{n}$$

where k = tolerance factor,
K_β = the normal deviate exceeded with probability of β, 0.10 (from tables, $K_\beta = 1.282$),
K_2 = the normal deviate exceeded with probability equal to the LTPD, 10% (from tables, $K_2 = 1.282$)[2], and

[2] The values chosen for these coefficients for the survey correspond to assuring, with 90% confidence, that 90% of the area has residual contamination below 100% of the applicable limit (a 90/90/100 test). The choice of values for the two coefficients is consistent with industrial sampling practices and State of California guidelines (Reference 8).

n = number of samples.

The statistical criteria for acceptance of the Building T012 interior final survey are presented below.

a) Acceptance: If the test statistic ($\bar{x} + ks$) is less than or equal to the limit (U), accept the region as clean. If any single measured value exceeds 80% of the limit, decontaminate that location to as near background as is possible, but do not change the value in the analysis. Figure 7 gives an example of the sample lot acceptance by the test.

b) Collect additional measurements: If the test statistic ($\bar{x} + ks$) is greater that the limit (U), but $\bar{x}$ itself is less than U, independently resample and combine all measured values to determine if $\bar{x} + ks \leq U$ for the combined set; if so, accept the region as clean. If not, the region is contaminated and must be remediated. Figure 8 gives an example of additional measurements that must be taken in the sample lot to accept or reject it.

c) Rejection: If the test statistic ($\bar{x} + ks$) is greater than the limit (U) and $\bar{x} \geq U$, the region is contaminated and must be remediated. Figure 9 gives an example of sample lot rejection by the test.

Thus, based on sampling inspection, we are willing to accept the hypothesis that the probability of accepting a lot as not being contaminated which is in fact 10% or more contaminated, is 0.10. Or in other words, the Building T012 final survey corresponds to assuring with 90% confidence that 90% of the area has residual contamination below 100% (a 90/90/100 test) of the applicable limits described in Table 2.

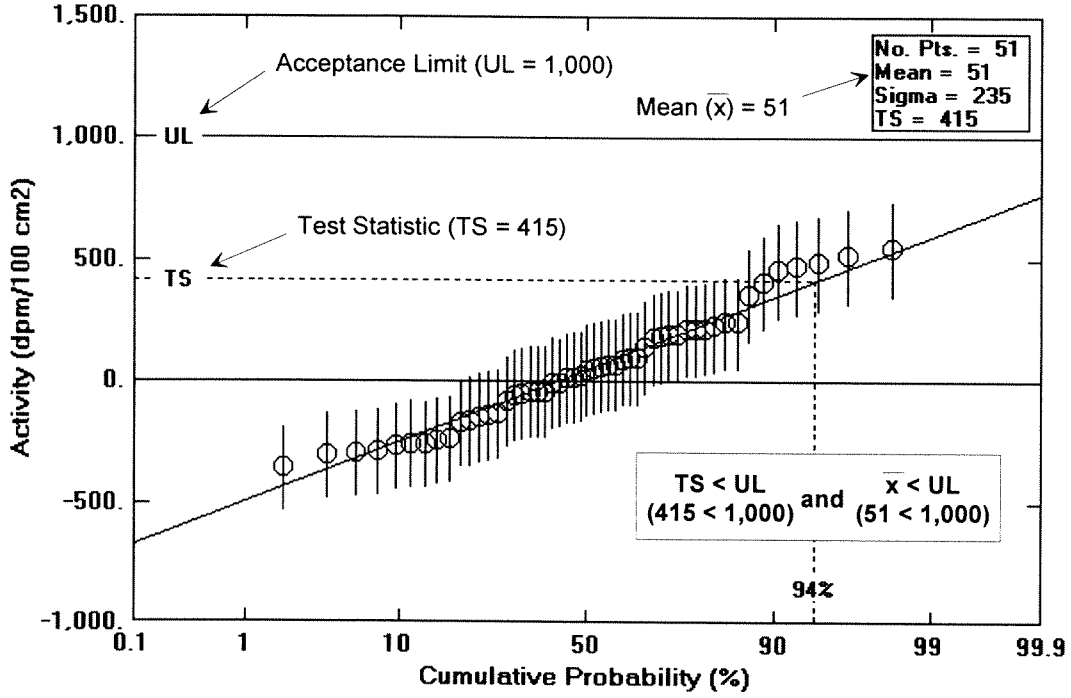


Figure 7. Example of Sample Lot Acceptance, where TS ($=\bar{x} + ks$) ≤ UL and $\bar{x}$ ≤ UL

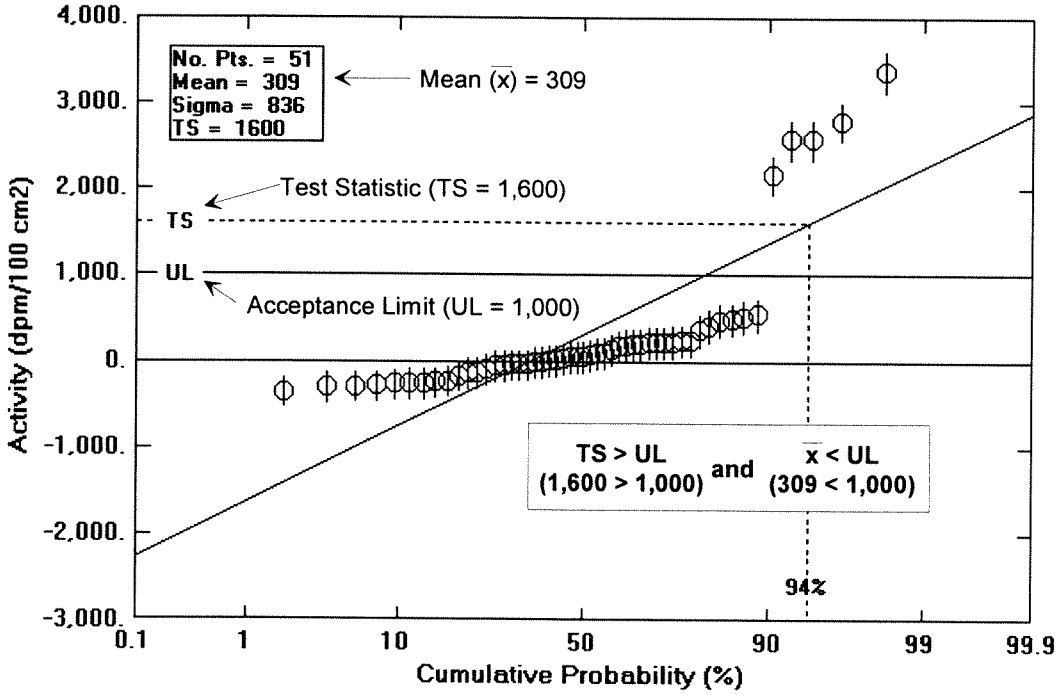


Figure 8. Example of Sample Lot Requiring Additional Measurements, where TS ($=\bar{x} + ks$) > UL and $\bar{x}$ < UL.

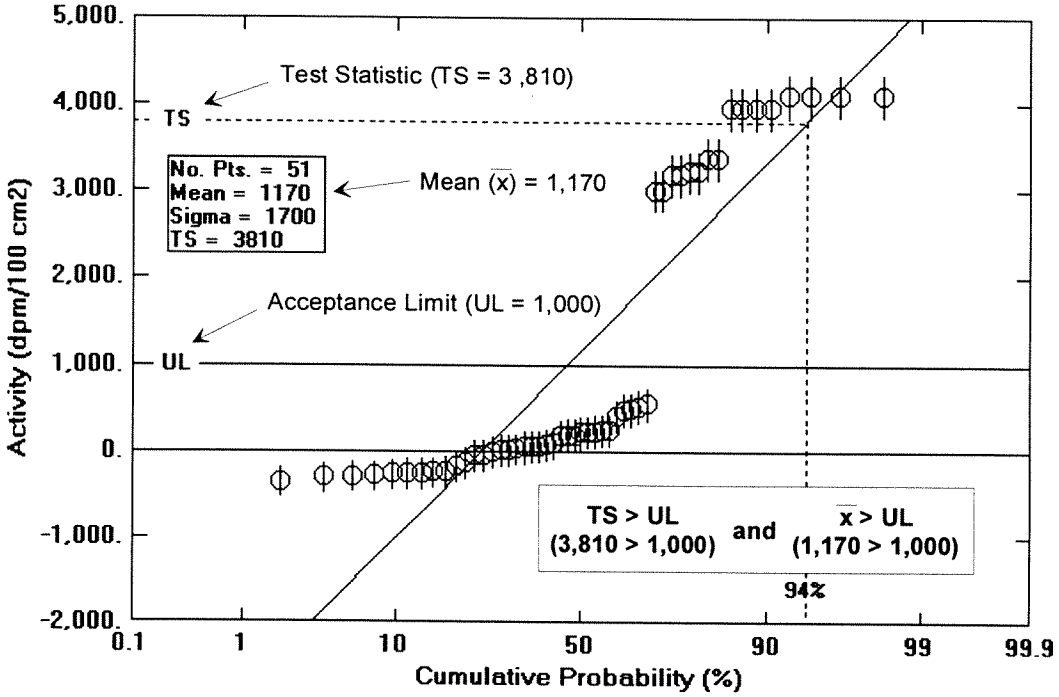


Figure 9. Example of Sample Lot Rejection, where TS ($=\bar{x} + ks$) > UL and $\bar{x}$ > UL

4.5 Sample Lot Analyses and Results

4.5.1 Sample Lot 1

4.5.1.1 Description

Sample Lot 1 consists of all surface areas in Rooms 109 (equipment room) and 110 (critical cell) with the exception of the inside surfaces of the fuel storage tubes located in Room 109, which are designated Sample Lot 2. Survey data for Lot 1 were taken in February and March of 1996.

4.5.1.2 Analyses of Sample Lot 1 Data

Raw data measurements for Sample Lot 1 were taken, adjusted for daily instrument background (except for ambient gamma exposure rates) and plotted on cumulative probability graphs as discussed previously. For statistical comparisons (using the "sampling inspection by variables" method), alpha/beta survey data from all areas within Sample Lot 1 were combined together and then analyzed for the specific type of radiation measurement made.

The cumulative plots for alpha/beta survey data are shown in Figure 10 through Figure 13. These plots are shown on two scales; a normal scale to show all the data relative to the acceptance limit, and an expanded scale showing only the data and test statistic values. The purpose of the expanded scale presentation is to allow for more detailed examination of the data to determine if deviations from a normal distribution are evident, or if the data show evidence of more than one distribution.

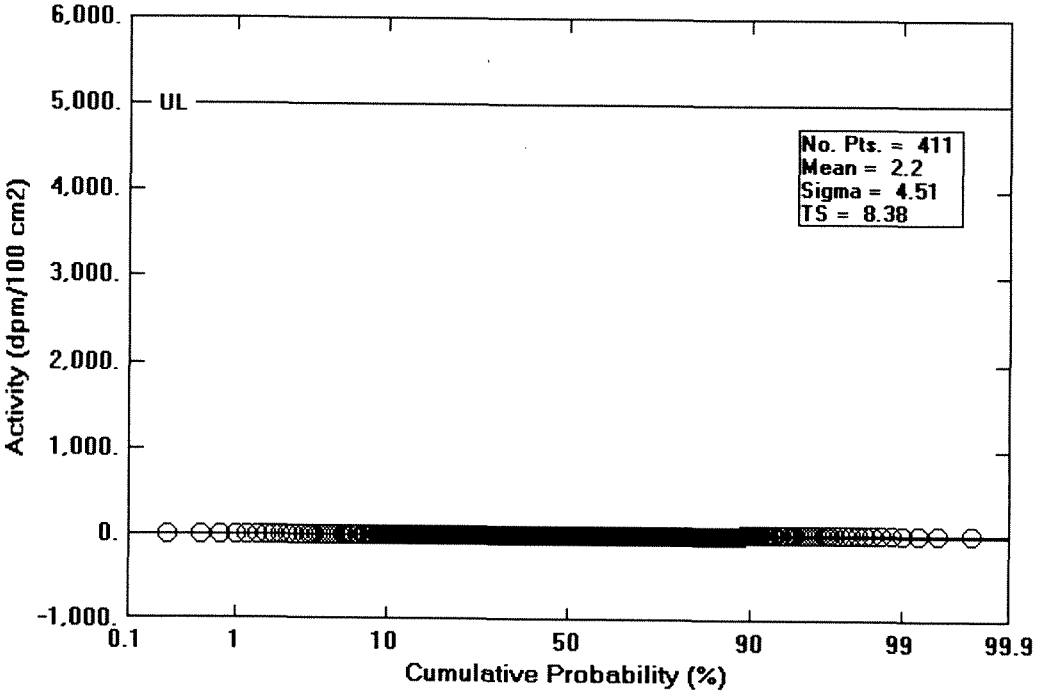
Because of physical differences in the construction of Rooms 109 and 110, the gamma survey data in Lot 1 from these two areas were separated for the purpose of statistical analysis. The two sets of gamma survey data are shown in Figure 14 and Figure 15. The gamma data are shown in two forms; 1) the raw data, and 2) the background subtracted data for comparison with the acceptance limit. For Room 109, a background value of 14.3 µR/h was used based on measurements conducted in three similarly constructed non-radiological areas located at the SSFL. The gamma exposure rate data for these three areas are shown in Table 4.

For Room 110, which clearly showed significant shielding of local gamma exposure, the median exposure rate measured in Room 110 of 8.83 µR/h was used as an unbiased estimate of the local ambient background. This method has been applied previously to final release surveys at the SSFL (e.g., see Reference 14). The combined data for Rooms 109 and 110 are shown in Figure 16, which clearly shows the two distinct data sets and the Room 110 "shielding" effect of approximately 7 µR/h.

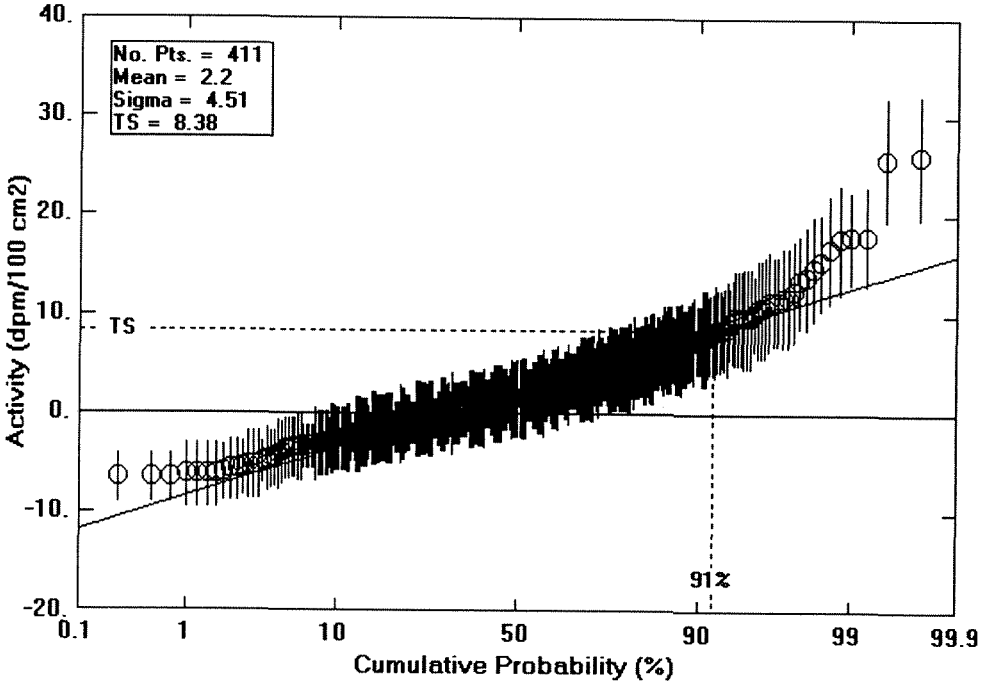
Sample lot 1 statistical results are tabulated in Table 5 for comparing the test statistics ($TS = \bar{x} + ks$) with the applicable contamination criteria or acceptance limits (U) from Table 2. The corresponding figure numbers for the graphs of each calculated cumulative probability plot are also indicated in parentheses. Individual raw measurement data and instrument backgrounds are provided in Appendix A. Individual calculated sample results used as graph data for Sample Lot 1 are provided in Appendix B. Grid location diagrams for the various survey areas in T012 are given in Appendix C.

Table 4. Gamma Exposure Rates Measured in Surrogate SSFL Facilities

Location	Data Points	Exposure Rate (µR/h)		
		Average	Range	Standard Deviation
Bravo Control Room	4	13.8	0.9	0.4
Delta Bunker	5	14.5	0.8	0.3
Cocoa Bunker	5	14.5	0.5	0.2
	Average:	**14.3**		
	± 1σ	**0.4**		

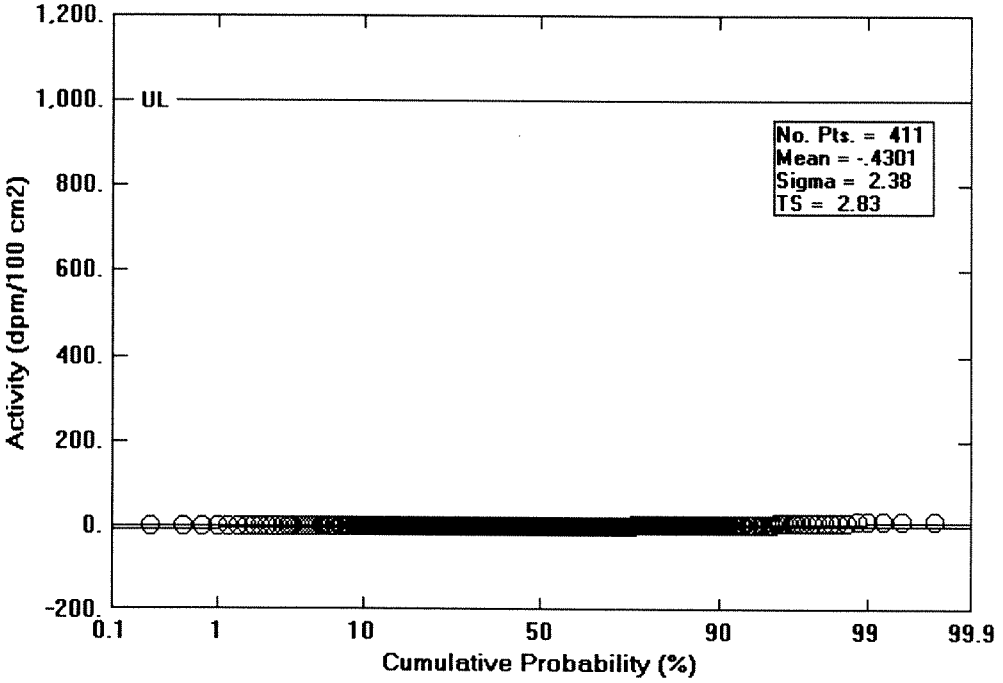


a) Normal Scale

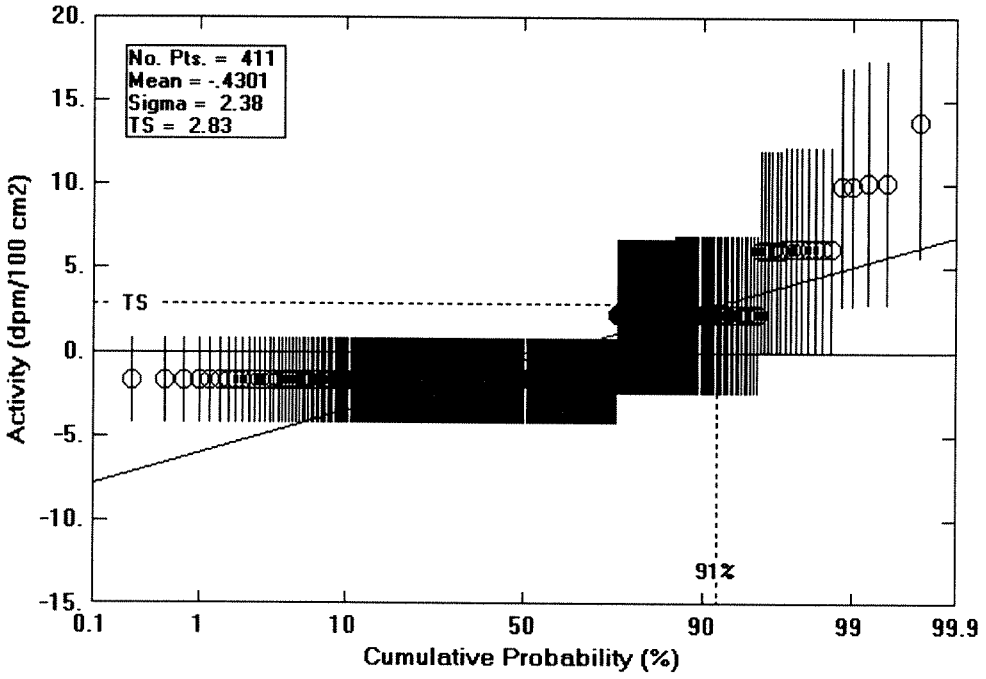


b) Expanded Scale

Figure 10. T012 - Lot 1 Total Alpha Activity

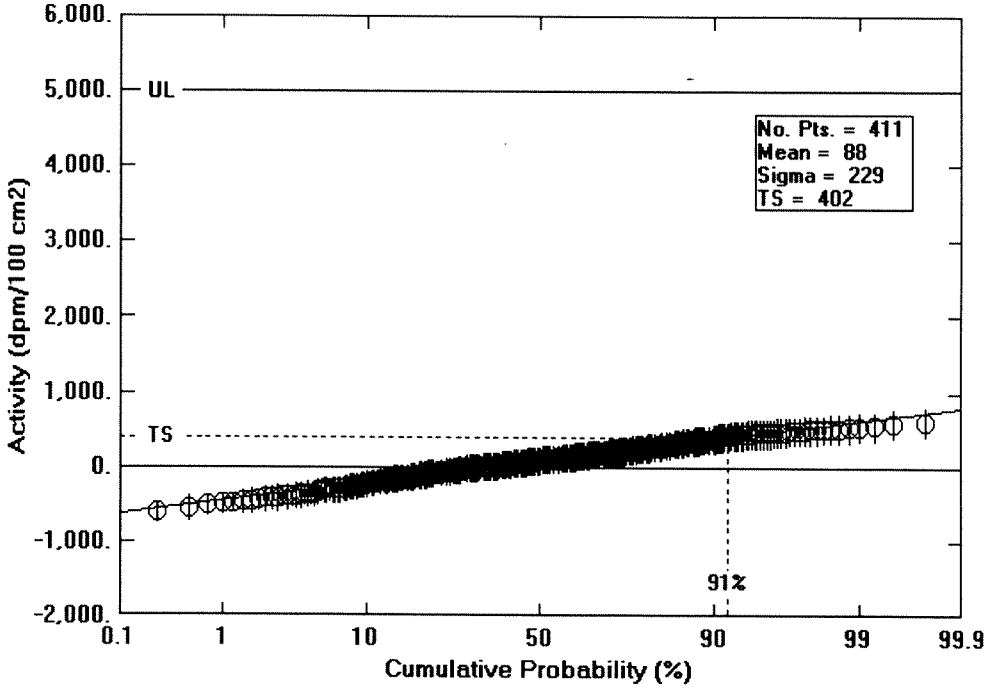


a) Normal Scale

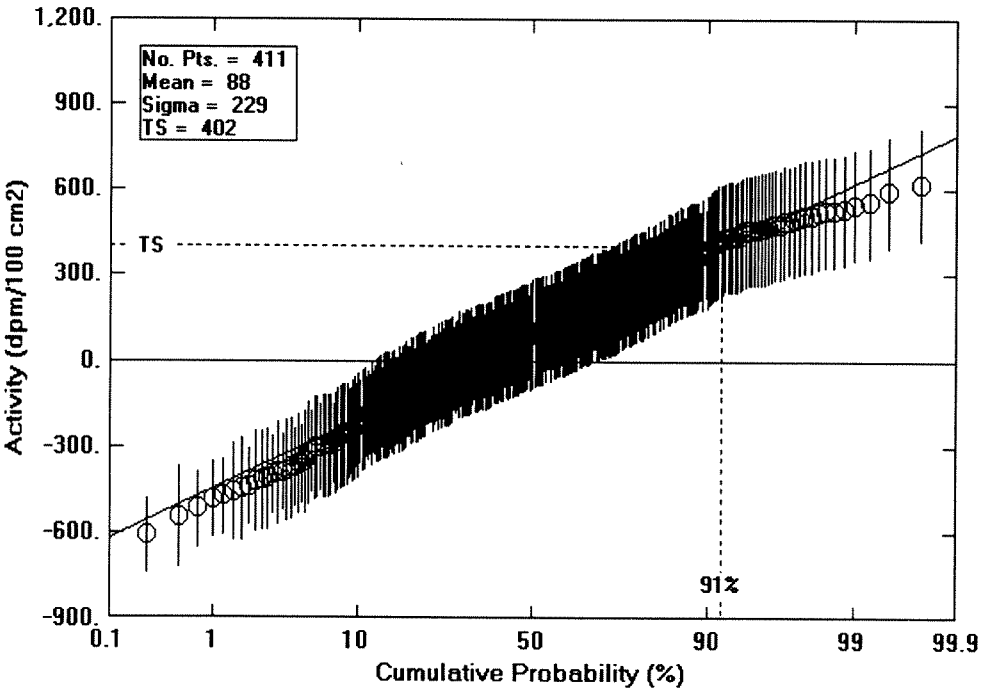


b) Expanded Scale

Figure 11. T012 - Lot 1 Removable Alpha Activity

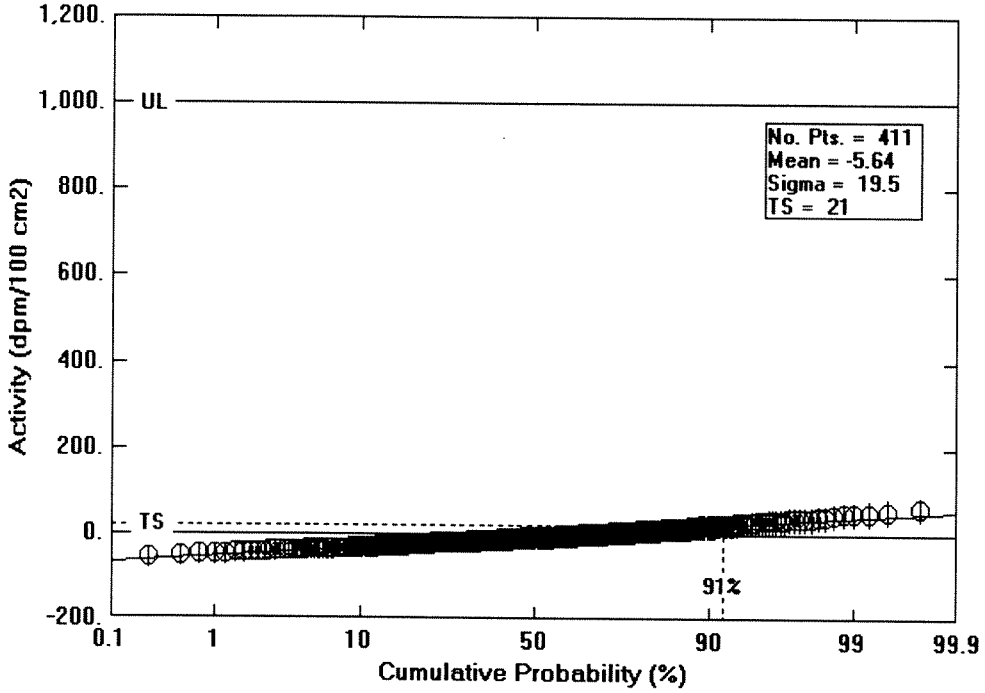


a) Normal Scale

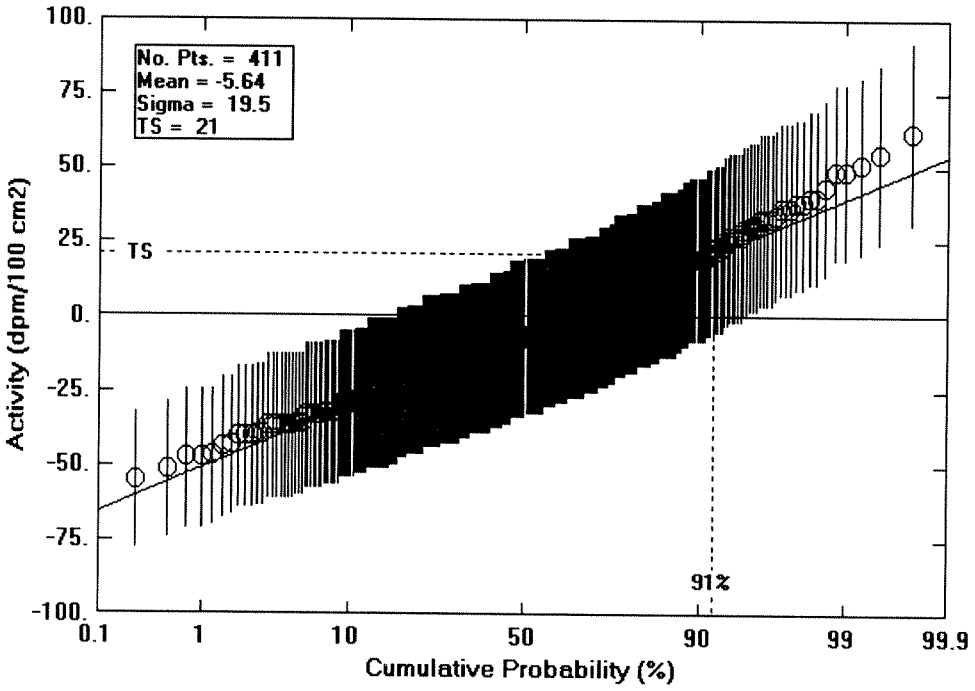


b) Expanded Scale

Figure 12. T012 - Lot 1 Total Beta Activity

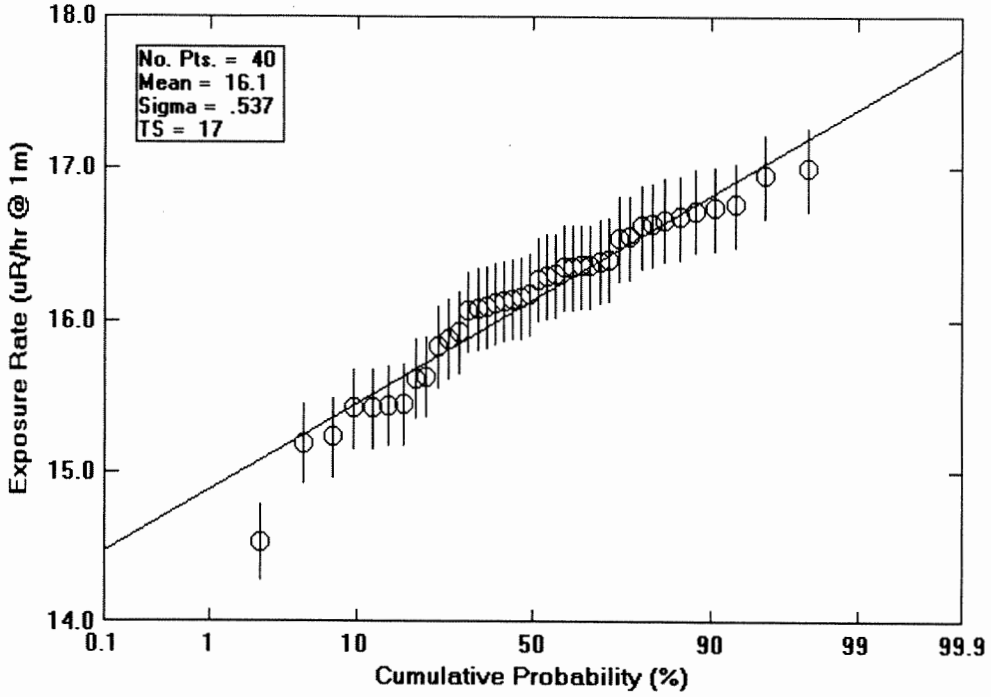


a) Normal Scale

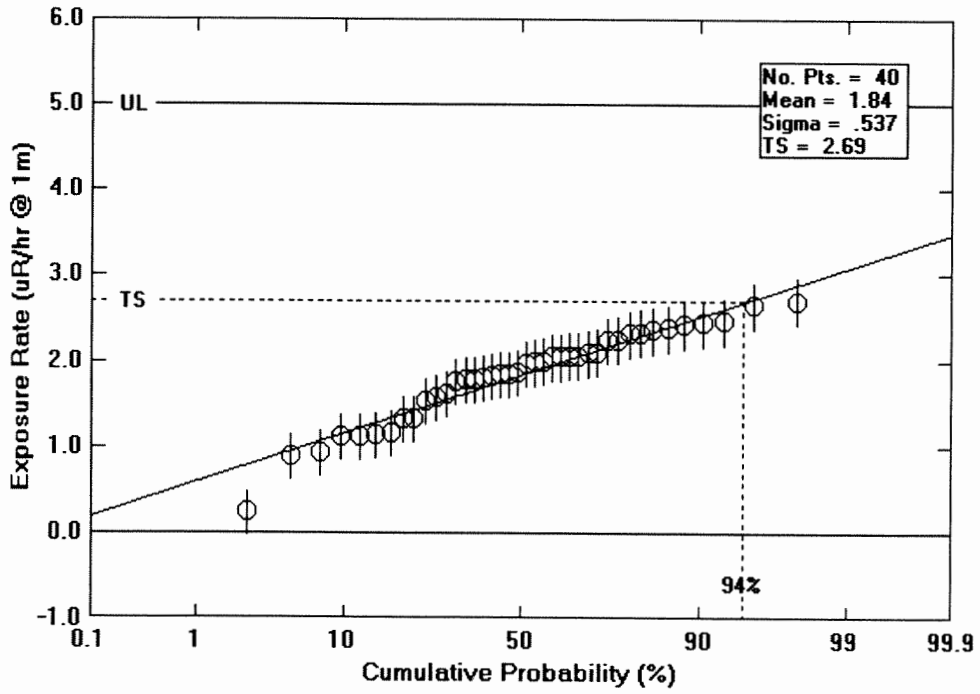


b) Expanded Scale

Figure 13. T012 - Lot 1 Removable Beta Activity

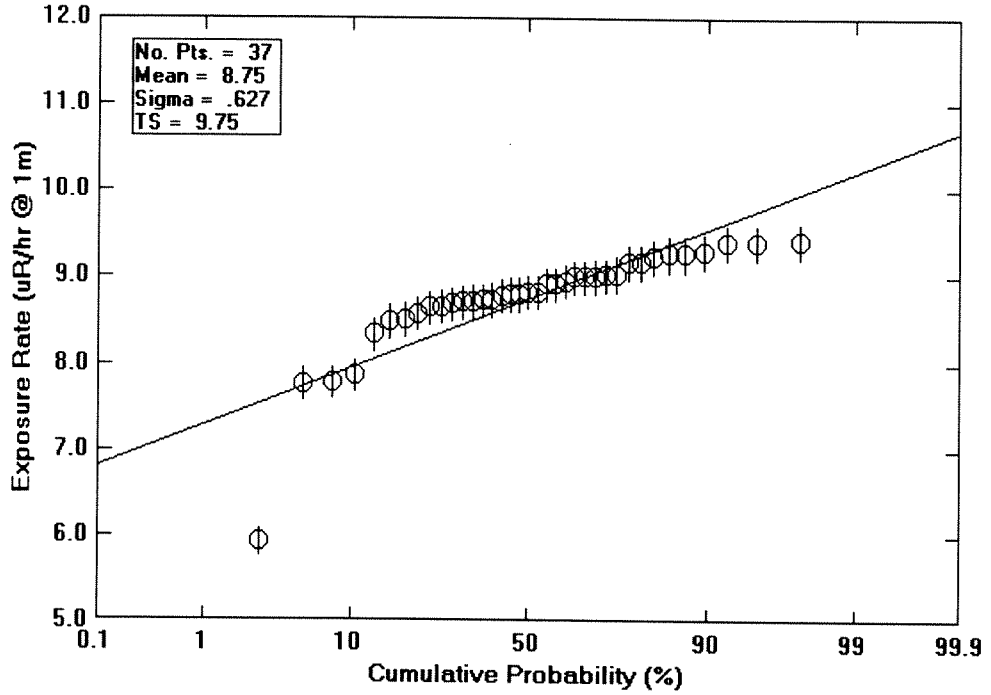


a) Gross Exposure Rate

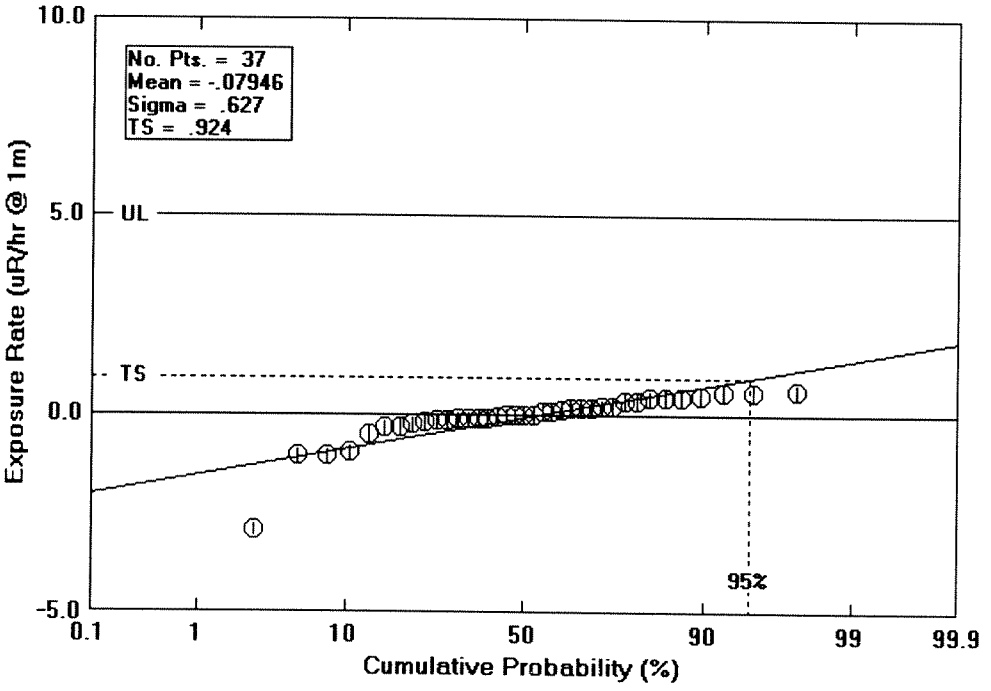


b) Net Exposure Rate

Figure 14. T012 - Lot 1 Gamma Exposure Rate (Room 109)

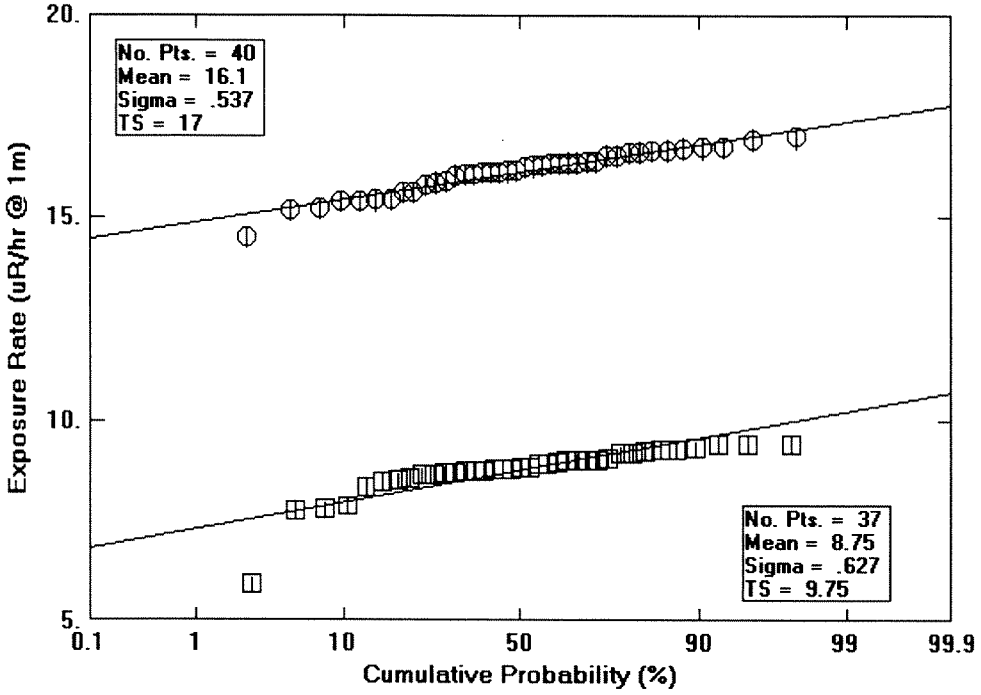


a) Gross Exposure Rate



b) Net Exposure Rate

Figure 15. T012 - Lot 1 Gamma Exposure Rate (Room 110)



○ - Room 109, □ - Room 110

Figure 16. T012 - Lot 1 Gamma Exposure Rate (Total Lot)

Table 5. Sample Lot 1 Statistical Results

	Total (dpm/100 cm^2)		Removable (dpm/100 cm^2)		Ambient Gamma Exposure Rate (μR/h)
	Alpha	**Beta**	**Alpha**	**Beta**	
Acceptance Limit (UL)	5,000	5,000	1,000	1,000	5
Calculated Test Statistic ($TS = \bar{x} + ks$)					
Entire area - floors, walls, ceiling, & structure	8.38 (Fig. 10)	402 (Fig. 12)	2.83 (Fig. 11)	21.0 (Fig. 13)	-
Floors only - Room 109	-	-	-	-	2.69 (Fig. 14b)
Floors only - Room 110	-	-	-	-	0.924 (Fig. 15b)

4.5.1.3 Interpretation of Results for Sample Lot 1

The survey data in Table 5, and Figure 10 through Figure 15, demonstrate that for each applicable acceptance limit (U) from Table 2, the corresponding test statistic (TS) value is less than the U, or TS <U. Therefore, the areas in Sample Lot 1 pass the "sampling inspection by variables" test and are "Accepted" as radiologically clean.

In other words, the Building T012 Sample Lot 1 survey corresponds to assuring with a 90% confidence that 90% of Sample Lot 1 has residual contamination below 100% (a 90/90/100 test) of the applicable NRC, DOE, and State of California limits given in Table 2.

4.5.2 Sample Lot 2

4.5.2.1 Description

Sample Lot 2 consists of the inside of the empty fuel storage tubes located in Room 109. All storage tubes were surveyed following procedures given in Reference 6. The tubes were surveyed in March 1995, immediately following the D&D of the facility. As discussed previously, tubes found to have contamination above the limits given in Table 2 were removed and the holes grouted in place. A follow-up quantitative survey for removable alpha/beta contamination was conducted on the remaining 98 tubes in April 1996 as part of the final survey of the facility.

4.5.2.2 Analyses of Sample Lot 2 Data

Raw data measurements for Sample Lot 2 were taken, adjusted for daily instrument background, and plotted on cumulative probability graphs as explained previously. For statistical comparisons (using the "sampling inspection by variables" method), all areas within Sample Lot 2 were combined together and then analyzed for the specific type of radiation measurement made.

Sample lot 2 results are tabulated in Table 6 for comparing the test statistic ($TS = \bar{x} + ks$) with applicable, established contamination criteria or acceptance limits (U) from Table 2. The corresponding figure numbers for the graphs of each calculated cumulative probability plot are also indicated in parentheses. Figure 17 and Figure 18 show a few data "outliers", indicating some remaining total and removable alpha contamination in the fuel storage tubes. These values are, however, well below the applicable acceptance limits of 5,000 and 1,000 dpm/100cm^2, respectively.

Individual raw measurement data and instrument backgrounds are provided in Appendix A. Individual calculated sample results used as graph data for Sample Lot 2 are provided in Appendix B. Grid location diagrams for the various survey areas in T012 are given in Appendix C.

Table 6. Sample Lot 2 Statistical Results

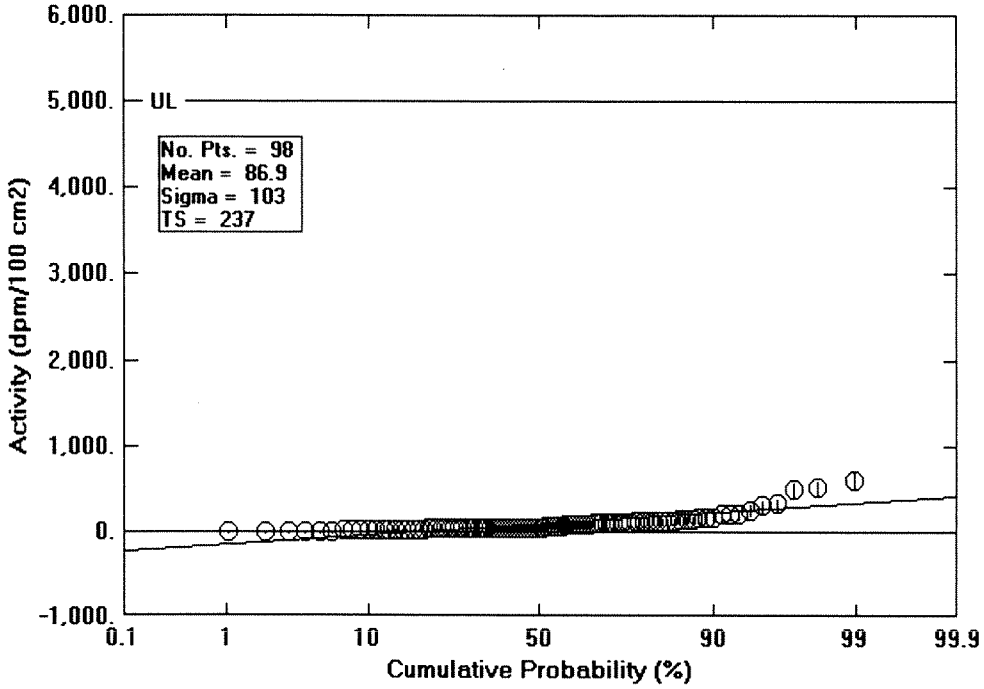
	Total (dpm/100 cm^2)		Removable (dpm/100 cm^2)	
	Alpha	**Beta**	**Alpha**	**Beta**
Acceptance Limit (UL)	5,000	5,000	1,000	1,000
Calculated Test Statistic ($TS = x + ks$)[a]				
Fuel Storage Tubes	237 (17)	<1,850[b]	21.0 (18)	24.6 (19)

[a]Numbers in parentheses refer to figure numbers.
[b]Total beta data were all "No Detectable" at a level of <50 cpm (equivalent to <1,850 dpm/100 cm^2 for the instrument used).

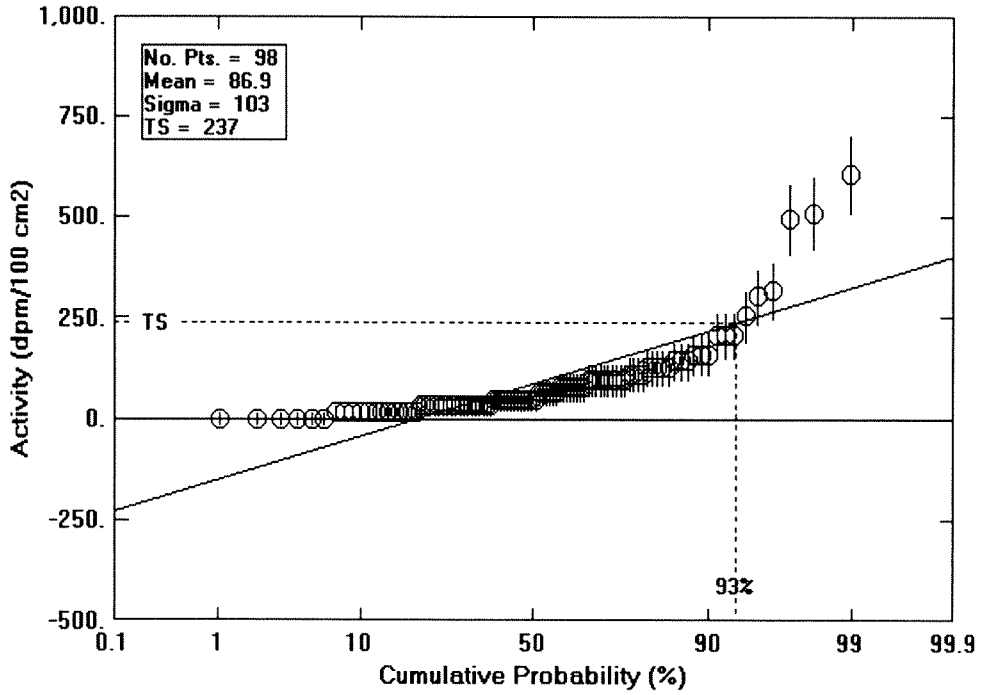
4.5.2.3 Interpretation of Results for Sample Lot 2

Table 6 and Figure 17 through Figure 19 demonstrate that for each applicable acceptance limit (U) from Table 2, the corresponding test statistic (TS) value is less than the U, or TS <U. Therefore, the survey areas in Sample Lot 2 pass the "sampling inspection by variables" test and are "Accepted" as radiologically clean.

In other words, the Building T012 Sample Lot 2 survey corresponds to assuring with a 90% confidence that 90% of Sample Lot 2 has residual contamination below 100% (a 90/90/100 test) of the applicable NRC, DOE, and State of California limits described in Table 2.

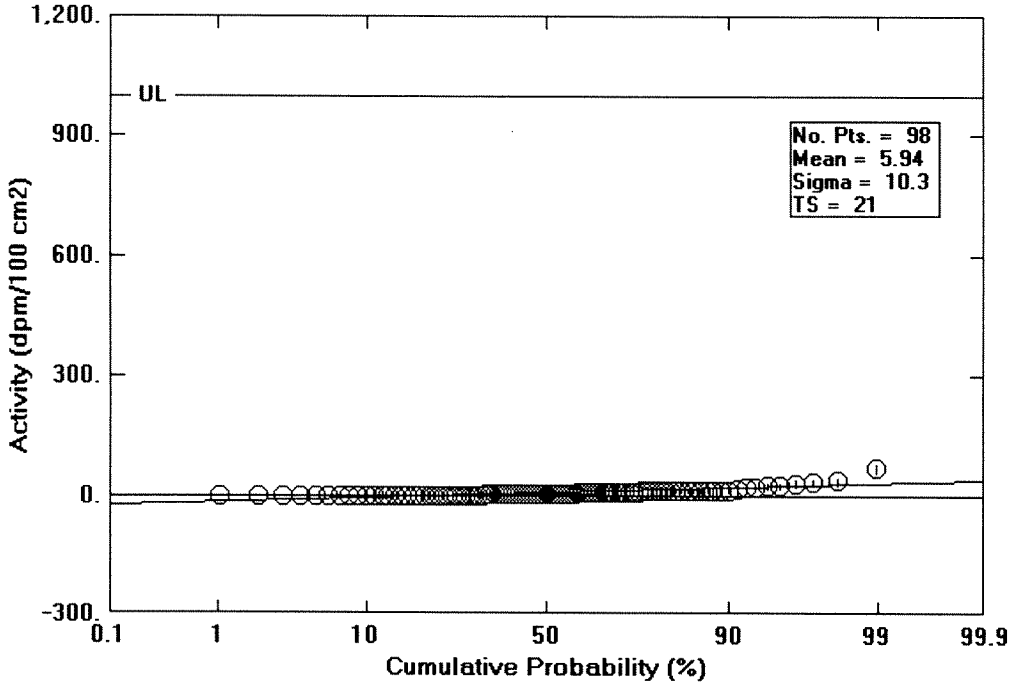


a) Normal Scale

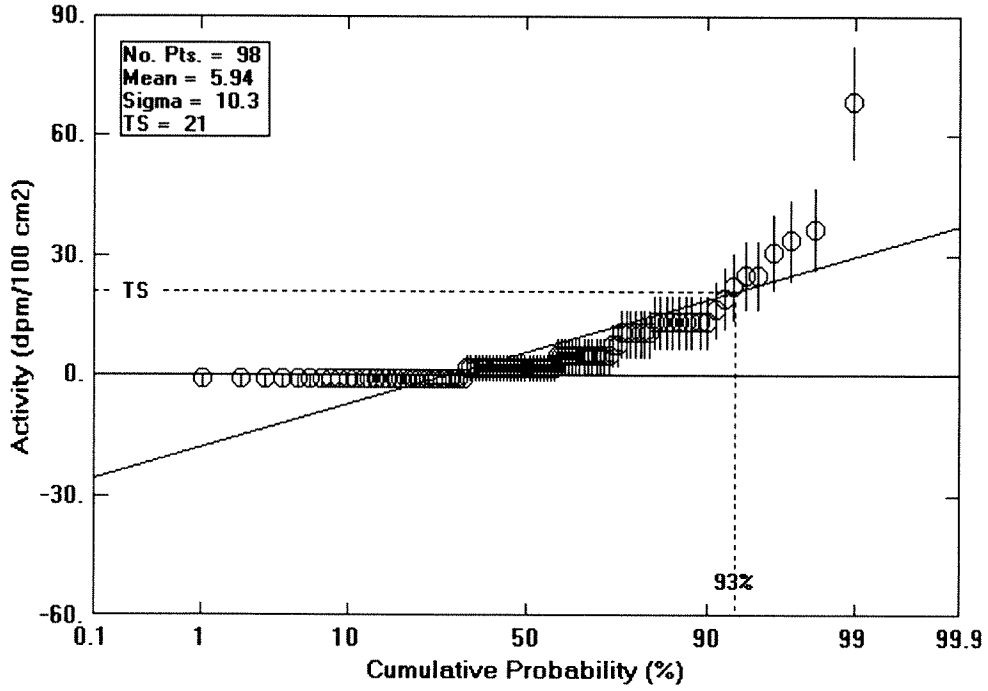


b) Expanded Scale

Figure 17. T012 - Lot 2 Total Alpha Activity

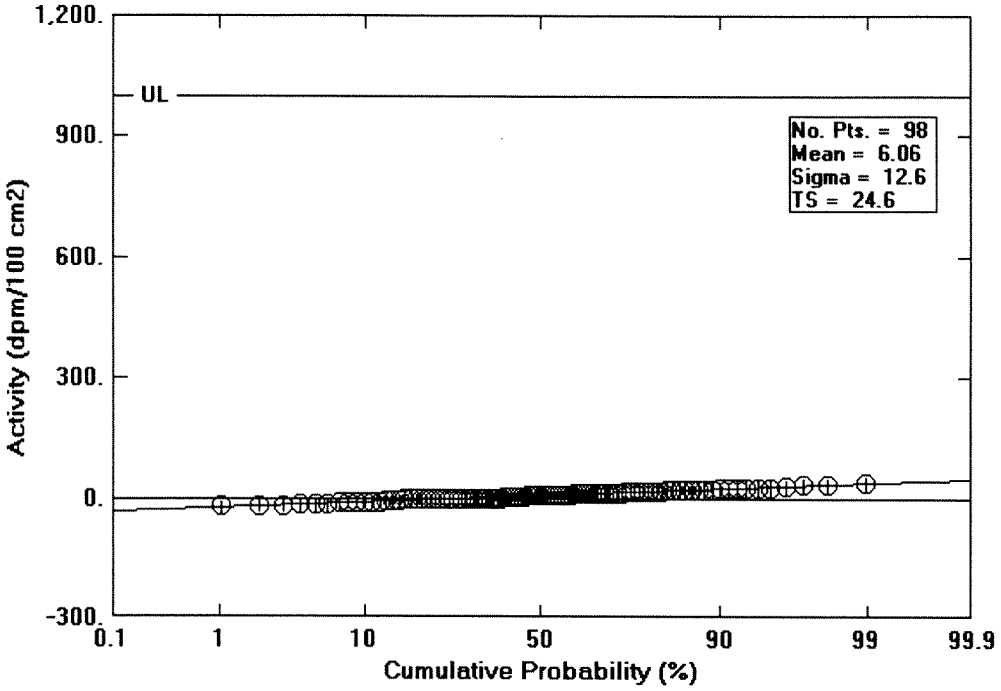


a) Normal Scale

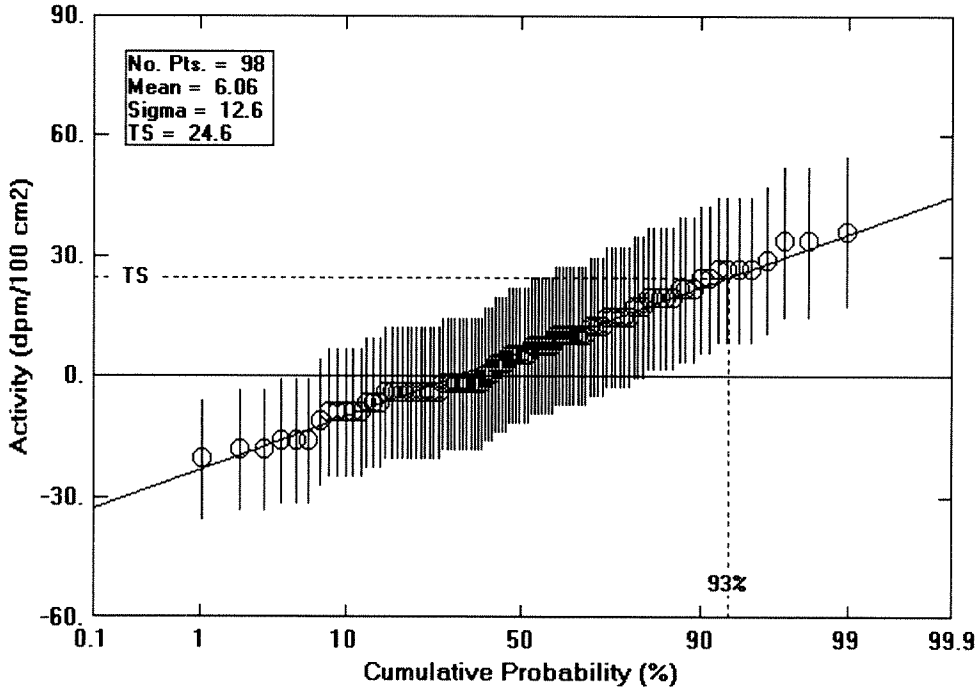


b) Expanded Scale

Figure 18. T012 Lot 2 Removable Alpha Activity



a) Normal Scale



b) Expanded Scale

Figure 19. T012 Lot 2 Removable Beta Activity

5. REFERENCES

1. Rockwell Document 355-ZR-0012, "Radiation Survey of Building T012, SCTI Cogeneration Project", June 26, 1985.

2. Rockwell Document 012-AT-0001, "Radiological Assessment Plan for Building 012", February 2, 1993.

3. Rockwell Document SSWA-AN-0004, "D&D Plan for Building 012", February 22, 1995.

4. Rockwell Document 012-SP-0003, "Decontamination and Decommissioning Procedure for Building 012", March 28, 1995.

5. Rockwell Document -12-SP-0002, "Building 012 Floor Tile Sampling Procedure", March 9, 1995.

6. Rockwell Document 012-SP-0004, "Building T012 Final Survey Procedure", June 16, 1995.

7. Rocketdyne Use Authorization No. 18, "ETEC Radiography at SSFL", terminated March 10, 1993.

8. DECON-1, State of California for Decontaminating Facilities and Equipment Prior to Release for Unrestricted Use, dated June 1977.

9. N001OP000033, Methods and Procedures for Radiological Monitoring.

10. DOE Order 5400.5, Radiation Protection of the Public and the Environment, dated February 8, 1990.

11. NRC Dismantling Order for the L-85 Reactor Decommissioning, NRC to M. E. Remley, dated March 1, 1983.

12. DOE/CH/8901, A Manual for Implementing Residual Radioactive Material Guidelines, T. L. Gilbert, et al., June 1989.

13. MIL-STD-414, Sampling Procedures and Tables for Inspection by Variables for Percent Defective, June 11, 1957.

14. Rockwell Document N704SRR990033, "Final Decontamination and Radiological Survey of Building T028", February 21, 1991.

Appendix A.

Building T012

Sample Lots 1 and 2

Final Survey Data

Lot 1 Survey Data, Room 109

SAMPLE NAME	GRID NAME	5 MIN ALPHA		1 MIN ALPHA	5 MIN BETA		1 MIN BETA	1 MIN GAM	ALPHA INSTRUMENT			ALPHA SMEAR		BETA INSTRUMENT				BETA SMEAR		GAMMA	
		TOTAL	MAX	REM	TOTAL	MAX	REM	TOTAL	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT
NORTH WALL	1	7		0	360		31		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	2	12		0	384		29		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	3	9		0	369		34		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	4	6		1	327		35		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	5	5		1	348		22		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	6	8		1	367		25		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	7	10		0	323		25		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	8	8		1	348		25		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	9	11		1	334		27		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	10	8		0	343		29		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	11	10		0	344		26		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
NORTH WALL	12	13		0	351		30		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
EAST WALL	13	2		1	324		30		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
EAST WALL	14	23		0	384		32		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
EAST WALL	15	12		1	381		31		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
EAST WALL	16	3		0	340		27		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
EAST WALL	17	7		0	342		36		0.9	3.44	1.41	0.43	3.87	64.3	7.32	5	27	3.65		
EAST WALL	18	7		0	357		27		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	19	13		0	338		23		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	20	11		0	315		25		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	21	20		0	322		20		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	22A	7		1	342		27		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	22B	7		0	357		27		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	23	13		0	320		28		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	24	14		1	305		31		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	25	11		0	355		33		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	26	12		0	354		26		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	27	8		0	319		22		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	28	16		0	318		30		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	29	12		1	323		22		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	30	12		2	342		29		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	31	5		4	376		14		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	32	13		0	332		24		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	33	6		2	343		23		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	34	11		0	315		38		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	35	5		2	261		37		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	36	4		0	313		32		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	37	8		0	357		17		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	38	4		0	339		25		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	39	9		1	342		42		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	40	6		0	347		26		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
EAST WALL	41	6		0	364		33		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
SOUTH WALL	42	8		1	347		37		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
SOUTH WALL	43	19		0	324		22		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		

Lot 1 Survey Data, Room 109

SAMPLE NAME	GRID NAME	5 MIN ALPHA		1 MIN ALPHA	5 MIN BETA		1 MIN BETA	1 MIN GAM	ALPHA INSTRUMENT			ALPHA SMEAR		BETA INSTRUMENT				BETA SMEAR		GAMMA	
		TOTAL	MAX	REM	TOTAL	MAX	REM	TOTAL	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT
SOUTH WALL	44	8		0	323		26		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
SOUTH WALL	45	7		0	370		32		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
SOUTH WALL	46	11		0	345		25		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
SOUTH WALL	47	6		0	344		29		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
SOUTH WALL	48	8		0	360		30		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
SOUTH WALL	49	12		0	345		37		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
SOUTH WALL	50	11		1	364		20		1.5	3.50	1.41	0.43	3.87	67.2	7.24	5	27	3.65		
SOUTH WALL	51	9		0	308		30		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	52	11		0	324		32		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	53	16		0	371		22		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	54	20		0	373		36		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	55	12		0	377		19		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	56	13		1	297		23		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	57	18		0	267		44		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	58	6		0	261		31		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	59	16		0	354		30		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	60	14		0	394		25		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	61	6		0	305		38		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTH WALL	62	10	32	0	296	387	24		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTHWEST WALL	63	13		0	350		27		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTHWEST WALL	64	9		0	338		21		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTHWEST WALL	65	8		0	332		28		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTHWEST WALL	66	4		0	337		31		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTHWEST WALL	67	9		1	386		22		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTHWEST WALL	68	5		0	362		32		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTHWEST WALL	69	9		1	353		21		0.9	3.52	1.41	0.43	3.87	65	7.13	5	27	3.65		
SOUTHWEST WALL	70	24		1	387		30		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
SOUTHWEST WALL	71	11		0	347		31		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
SOUTHWEST WALL	72	10		0	350		41		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
SOUTHWEST WALL	73	10		0	320		19		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
SOUTHWEST WALL	74	7		2	362		28		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	75	13		1	327		29		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	76	7		0	318		33		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	77	17		3	347		27		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	78	23		1	317		25		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	79	9		0	328		30		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	80	8		0	315		28		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	81	9		0	329		24		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	82	11		1	361		19		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	83	17		0	331		12		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	84	8		0	288		20		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	85	6		0	288		22		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	86	11		0	325		28		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		
NORTHWEST WALL	87	9		0	330		29		1.3	3.59	1.41	0.43	3.87	65.7	7.28	5	27	3.65		

Lot 1 Survey Data, Room 109

		5 MIN		1 MIN	5 MIN		1 MIN	1 MIN	ALPHA						BETA					GAMMA	
SAMPLE	GRID	ALPHA			BETA			GAM	INSTRUMENT			SMEAR			INSTRUMENT			SMEAR			
NAME	NAME	TOTAL	MAX	REM	TOTAL	MAX	REM	TOTAL	BACKG	EFACT	AFACT	BACKG	EFACT		BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT
NORTHWEST WALL	88	8		0	343		24		1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		
NORTHWEST WALL	89	6		0	327		31		1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		
NORTHWEST WALL	90	5		0	357		27		1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		
NORTHWEST WALL	91	3		0	330		23		1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		
NORTHWEST WALL	92	5		0	307		24		1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		
NORTHWEST WALL	93	4		0	271		27		1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		
NORTHWEST WALL	94	13		0	328		18		1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		
FLOOR	95	9		1	365		18	3646	1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		0.0047
FLOOR	96	7		1	324		20	3519	1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		0.0047
FLOOR	97	7		1	405		34	3601	1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		0.0047
FLOOR	98	32	372	1	410	449	18	3526	1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		0.0047
FLOOR	99	7		0	343		27	3360	1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		0.0047
FLOOR	100	21		0	368		19	3126	1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		0.0047
FLOOR	101	13		0	345		24	3415	1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		0.0047
FLOOR	102	8		0	370		21	3423	1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		0.0047
FLOOR	103	13		0	364		29	3276	1.3	3.59	1.41	0.43	3.87		65.7	7.28	5	27	3.65		0.0047
FLOOR	104	18		0	332		31	3557	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	105	11		0	388		22	3503	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	106	7		1	381		20	3477	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	107	9		0	393		27	3320	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	108	15		0	351		31	3505	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	109	13		1	353		17	3516	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	110	7		0	378		23	3470	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	111	10		0	398		27	3587	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	112	12		0	400		16	3583	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	113	12		1	384		22	3519	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	114	11		0	341		24	3525	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	115	9		1	363		17	3460	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	116	8		0	376		22	3498	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	117	10		0	365		25	3559	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	118	11		0	413		31	3577	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	119	14		0	343		19	3516	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	120	15		0	355		26	3656	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	121	17		0	340		14	3465	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	122	10		0	388		22	3323	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	123	15		3	392		29	3605	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	124	17		0	397		20	3596	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
FLOOR	125	17		0	383		20	3575	1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		0.0047
CEILING	126	9		0	359		36		1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		
CEILING	127	6		0	373		23		1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		
CEILING	128	5		0	348		27		1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		
CEILING	129	6		0	361		25		1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		
CEILING	130	7		1	352		27		1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		
CEILING	131	2		0	398		28		1.5	3.63	1.41	0.43	3.87		65.8	7.38	5	27	3.65		

Lot 1 Survey Data, Room 109

SAMPLE NAME	GRID NAME	5 MIN ALPHA TOTAL	5 MIN ALPHA MAX	1 MIN ALPHA REM	5 MIN BETA TOTAL	5 MIN BETA MAX	1 MIN BETA REM	1 MIN GAM TOTAL	ALPHA INSTRUMENT BACKG	ALPHA INSTRUMENT EFACT	ALPHA INSTRUMENT AFACT	ALPHA SMEAR BACKG	ALPHA SMEAR EFACT	BETA INSTRUMENT BACKG	BETA INSTRUMENT EFACT	BETA INSTRUMENT AFACT	BETA SMEAR BACKG	BETA SMEAR EFACT	GAMMA BACKG	GAMMA EFACT
CEILING	132	13		1	378		24		1.5	3.63	1.41	0.43	3.87	65.8	7.38	5	27	3.65		
CEILING	133	7		0	392		27		1.5	3.63	1.41	0.43	3.87	65.8	7.38	5	27	3.65		
CEILING	134	9		0	386		26		1.5	3.63	1.41	0.43	3.87	65.8	7.38	5	27	3.65		
CEILING	135	9		0	394		17		1.5	3.63	1.41	0.43	3.87	65.8	7.38	5	27	3.65		
CEILING	136	5		0	340		31		1.5	3.63	1.41	0.43	3.87	65.8	7.38	5	27	3.65		
CEILING	137	3		0	390		28		1.5	3.63	1.41	0.43	3.87	65.8	7.38	5	27	3.65		
CEILING	138	8		0	389		25		1.5	3.63	1.41	0.43	3.87	65.8	7.38	5	27	3.65		
CEILING	139	6		0	344		28		1.5	3.63	1.41	0.43	3.87	65.8	7.38	5	27	3.65		
CEILING	140	2		0	400		23		1.5	3.63	1.41	0.43	3.87	65.8	7.38	5	27	3.65		
CEILING	141	3		0	379		26		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	142	6		0	370		26		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	143	13		1	354		13		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	144	12		0	355		23		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	145	6		0	381		27		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	146	8		0	384		21		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	147	4		0	394		20		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	148	2		0	356		36		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	149	7		2	364		20		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	150	10		0	373		19		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	151	2		1	386		24		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	152	6		1	391		19		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	153	3		0	397		28		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	154	3		1	392		30		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	155	2		0	363		26		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
CEILING	156	2		0	362		27		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
NORTHWEST WALL	157	5		0	343		18		1.6	3.66	1.41	0.43	3.87	66.9	7.31	5	27	3.65		
FUEL STORAGE WALL	1	4		0	336		24		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
FUEL STORAGE WALL	2	11		0	398		27		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
FUEL STORAGE WALL	3	8		0	328		24		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
FUEL STORAGE WALL	4	8		0	342		25		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
FUEL STORAGE WALL	5	4		1	349		20		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		

Lot 1 Survey Data, Room 110

		5 MIN		1 MIN	5 MIN		1 MIN	1 MIN	ALPHA					BETA					GAMMA	
SAMPLE	GRID	ALPHA			BETA			GAM	INSTRUMENT			SMEAR		INSTRUMENT			SMEAR			
NAME	NAME	TOTAL	MAX	REM	TOTAL	MAX	REM	TOTAL	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT
NORTH WALL	1	7		0	196		24		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	2	3		1	172		22		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	3	9		1	212		21		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	4	4		0	201		23		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	5	2		0	190		21		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	6	3		1	190		22		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	7	5		0	186		25		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	8	5		1	180		25		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	9	5		1	214		30		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	10	5		0	221		31		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	11	6		1	202		24		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	12	5		0	211		28		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	13	13		0	166		36		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	14	7		0	173		25		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	15	5		1	185		24		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	16	6		1	187		33		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	17	0		2	182		25		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
NORTH WALL	18	4		3	216		15		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
EAST WALL	19	7		0	198		25		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
EAST WALL	20	5		0	218		21		1	3.45	1.41	0.42	3.94	40.7	7.98	5	25.7	3.69		
EAST WALL	21	10		2	215		28		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	22	9		0	185		20		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	23	12		0	218		30		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	24	12		0	207		18		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	25	14		0	210		34		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	26	8		0	207		21		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	27	8		0	213		27		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	28	7		0	197		19		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	29	7		1	208		36		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	30	6		0	210		26		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	31	12		0	206		24		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	32	4		0	192		22		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	33	8		0	209		22		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	34	4		2	220		20		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	35	6		0	173		17		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
EAST WALL	36	7		1	216		20		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
SOUTH WALL	37	5		0	187		28		1	3.41	1.41	0.42	3.94	43.1	7.38	5	25.7	3.69		
SOUTH WALL	38	9		0	211		18		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	39	4		0	201		17		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	40	3		1	189		24		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	41	6		0	206		23		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	42	2		1	214		31		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	43	11		0	230		22		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	44	6		0	206		28		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		

Lot 1 Survey Data, Room 110

SAMPLE NAME	GRID NAME	5 MIN ALPHA TOTAL	ALPHA MAX	1 MIN ALPHA REM	5 MIN BETA TOTAL	BETA MAX	1 MIN BETA REM	1 MIN GAM TOTAL	ALPHA INSTRUMENT BACKG	ALPHA INSTRUMENT EFACT	ALPHA INSTRUMENT AFACT	ALPHA SMEAR BACKG	ALPHA SMEAR EFACT	BETA INSTRUMENT BACKG	BETA INSTRUMENT EFACT	BETA INSTRUMENT AFACT	BETA SMEAR BACKG	BETA SMEAR EFACT	GAMMA BACKG	GAMMA EFACT
SOUTH WALL	45	6		0	193		21		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	46	12		0	208		28		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	47	5		0	195		34		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	48	4		0	229		33		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	49	10		0	163		26		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	50	6		0	209		22		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	51	6		0	199		22		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	52	5		0	211		22		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	53	5		0	176		24		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
SOUTH WALL	54	1		0	192		20		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	55	11		0	204		24		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	56	5		0	191		19		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	57	4		0	216		28		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	58	2		3	205		29		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	59	3		1	205		16		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	60	8		0	225		23		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	61	4		1	196		22		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	62	3		0	193		21		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	63	2		0	212		20		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	64	3		0	203		21		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	65	6		0	184		26		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	66	2		0	200		28		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	67	6		0	177		32		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	68	2		0	205		32		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	69	4		1	189		14		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
WEST WALL	70	4		1	178		31		0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		
FLOOR	71	4		0	202		21	1277	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	72	7		1	221		26	1692	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	73	7		0	225		25	1863	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	74	8		1	204		18	1825	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	75	11		0	213		19	1893	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	76	5		2	219		28	1873	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	77	7		0	229		26	1675	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	78	10		0	204		26	1671	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	79	5		1	247		31	1846	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	80	2		0	219		21	1918	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	81	3		0	231		21	1987	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	82	3		0	211		24	1935	0.6	3.34	1.41	0.42	3.94	40.5	7.27	5	25.7	3.69		0.0047
FLOOR	83	8		0	220		24	1793	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	84	9		0	257		26	1876	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	85	10		1	235		15	1919	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	86	13		0	238		21	1939	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	87	10		0	224		18	1899	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	88	9		0	256		21	1993	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047

Lot 1 Survey Data, Room 110

		5 MIN		1 MIN	5 MIN		1 MIN	1 MIN	ALPHA					BETA					GAMMA	
SAMPLE	GRID	ALPHA			BETA			GAM	INSTRUMENT			SMEAR		INSTRUMENT			SMEAR			
NAME	NAME	TOTAL	MAX	REM	TOTAL	MAX	REM	TOTAL	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT
FLOOR	89	6		1	203		24	1877	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	90	5		0	237		26	1879	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	91	10		0	248		22	2024	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	92	4		1	227		35	2025	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	93	7		0	251		23	1972	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	94	3		0	240		24	1935	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	95	11		0	245		26	1899	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	96	1		1	225		20	1937	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	97	11		0	242		30	1945	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	98	7		0	224		20	2001	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	99	5		0	225		21	1994	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	100	6		0	215		21	1975	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	101	6		0	216		22	1893	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	102	11		1	235		19	1925	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	103	7		0	230		26	1831	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	104	7		1	241		22	1860	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	105	5		0	232		18	1890	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
FLOOR	106	6		0	223		22	1868	0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		0.0047
CEILING	107	10		0	200		25		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	108	5		0	231		24		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	109	3		0	220		24		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	110	3		0	207		26		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	111	1		0	257		16		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	112	3		0	217		17		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	113	4		1	197		13		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	114	5		0	248		21		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	115	1		2	252		26		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	116	3		0	227		25		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	117	6		0	260		27		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	118	2		0	243		26		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	119	4		0	261		22		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	120	1		0	223		32		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	121	5		0	123		22		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	122	6		1	242		25		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	123	4		1	218		22		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	124	1		1	220		20		0.9	3.37	1.41	0.42	3.94	41.6	7.16	5	25.7	3.69		
CEILING	125	7		1	233		19		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	126	6		0	238		20		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	127	4		0	233		24		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	128	6		1	247		18		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	129	13		0	248		26		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	130	6		0	242		21		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	131	6		0	241		16		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	132	12		0	211		34		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		

Lot 1 Survey Data, Room 110

		5 MIN		1 MIN	5 MIN		1 MIN	1 MIN	ALPHA					BETA					GAMMA	
SAMPLE	GRID	ALPHA			BETA			GAM	INSTRUMENT			SMEAR		INSTRUMENT			SMEAR			
NAME	NAME	TOTAL	MAX	REM	TOTAL	MAX	REM	TOTAL	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT
CEILING	133	4		1	223		29		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	134	5		0	243		25		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	135	1		2	244		24		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	136	9		0	242		20		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	137	2		0	222		29		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	138	3		1	246		39		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	139	5		0	225		21		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	140	0		0	224		27		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	141	2		0	251		33		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
CEILING	142	3		0	245		27		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
AIRLOCK	143	7		0	222		39		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
AIRLOCK	144	6		0	183		28		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
AIRLOCK	145	2		2	191		24		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
AIRLOCK	146	2		0	201		31		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
AIRLOCK	147	0		0	257		22		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
AIRLOCK	148	7		0	249		25	2024	0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		0.0047
SHIELD DOOR	149	4		1	139		23		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
SHIELD DOOR	150	4		0	151		23		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
SHIELD DOOR	151	8		0	134		20		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
SHIELD DOOR	152	2		0	140		20		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
SHIELD DOOR	153	7		0	156		25		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
SHIELD DOOR	154	6		0	152		24		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
SHIELD DOOR	155	7		0	145		31		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
SHIELD DOOR	156	21	168	0	185	182	17		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		
SHIELD DOOR	158	6		0	154		22		0.5	3.42	1.41	0.42	3.94	41.1	7.22	5	25.7	3.69		

Lot 1 Survey Data, Room 109 Attic

SAMPLE NAME	GRID NAME	5 MIN ALPHA TOTAL	5 MIN ALPHA MAX	1 MIN ALPHA REM	5 MIN BETA TOTAL	5 MIN BETA MAX	1 MIN BETA REM	1 MIN GAM TOTAL	ALPHA INSTRUMENT BACKG	ALPHA INSTRUMENT EFACT	ALPHA INSTRUMENT AFACT	ALPHA SMEAR BACKG	ALPHA SMEAR EFACT	BETA INSTRUMENT BACKG	BETA INSTRUMENT EFACT	BETA INSTRUMENT AFACT	BETA SMEAR BACKG	BETA SMEAR EFACT	GAMMA BACKG	GAMMA EFACT
NORTH WALL	1	4		0	391		23		1.3	3.52	1.41	0.42	3.94	64.9	7.22	5	25.7	3.69		
NORTH WALL	2	8		0	340		24		1.3	3.52	1.41	0.42	3.94	64.9	7.22	5	25.7	3.69		
NORTH WALL	3	7		0	362		17		1.3	3.52	1.41	0.42	3.94	64.9	7.22	5	25.7	3.69		
EAST WALL	4	6		0	339		18		1.3	3.52	1.41	0.42	3.94	64.9	7.22	5	25.7	3.69		
EAST WALL	5	7		0	323		24		1.3	3.52	1.41	0.42	3.94	64.9	7.22	5	25.7	3.69		
EAST WALL	6	11		1	348		22		1.3	3.52	1.41	0.42	3.94	64.9	7.22	5	25.7	3.69		
EAST WALL	7	7		0	346		20		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
EAST WALL	8	9		0	345		19		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
EAST WALL	9	8		1	360		22		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
EAST WALL	10	8		0	313		24		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
EAST WALL	11	5		0	296		21		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
WEST WALL	12	9		0	354		22		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
WEST WALL	13	5		0	346		25		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
WEST WALL	14	9		0	353		18		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
WEST WALL	15	10		0	360		32		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
WEST WALL	16	8		0	368		24		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
WEST WALL	17	8		0	340		25		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
WEST WALL	18	5		2	357		29		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
WEST WALL	19	7		0	349		17		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	20	9		0	286		23		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	21	6		0	281		31		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	22	7		0	297		25		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	23	6		0	276		29		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	24	8		0	285		31		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	25	4		0	300		28		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	26	7		0	293		24		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	27	4		0	289		25		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	28	6		0	302		20		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLOOR	29	4		1	284		27		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
FLR/CEIL REMANTS	30	9		0	327		21		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	31	8		0	389		33		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	32	3		1	378		21		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	33	9		1	381		24		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	34	8		0	392		23		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	35	5		0	387		22		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	36	4		0	399		33		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	37	8		0	407		31		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	38	9		0	402		27		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	39	4		0	389		17		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		
CEILING	40	1		0	366		29		1.4	3.55	1.41	0.42	3.94	67.6	7.18	5	25.7	3.69		

Lot 1 Survey Data, Room 109 Fuel Storage Area

		5 MIN		1 MIN	5 MIN		1 MIN	1 MIN	ALPHA					BETA					GAMMA	
SAMPLE	GRID	ALPHA			BETA			GAM	INSTRUMENT			SMEAR		INSTRUMENT			SMEAR			
NAME	NAME	TOTAL	MAX	REM	TOTAL	MAX	REM	TOTAL	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT	AFACT	BACKG	EFACT	BACKG	EFACT
NORTH WALL	1	10		0	398		22		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
NORTH WALL	2	13		0	312		20		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
NORTH WALL	3	5		1	314		25		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
NORTH WALL	4	11		0	348		21		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
NORTH WALL	5	9		0	344		20		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	6	7		1	315		17		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	7	8		0	364		19		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	8	16		0	329		16		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	9	11		0	348		28		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	10	11		0	354		25		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	11	12		0	334		30		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	12	6		0	359		17		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	13	5		0	329		26		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	14	8		0	323		17		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
EAST WALL	15	6		0	327		16		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
SOUTH WALL	16	16		0	384		31		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
SOUTH WALL	17	13		0	347		25		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
SOUTH WALL	18	12		0	342		24		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	19	10		0	344		24		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	20	13		0	328		22		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	21	7		0	341		18		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	22	32		0	316		28		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	23	8		0	299		24		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	24	9		0	360		39		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	25	5		0	400		24		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	26	15		0	329		20		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	27	2		2	343		18		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
WEST WALL	28	3		0	337		18		1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		
FLOOR	29	10		0	410		30	3473	1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		0.0047
FLOOR	30	18		0	402		25	3404	1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		0.0047
FLOOR	31	11		1	391		26	3458	1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		0.0047
FLOOR	32	13		1	368		23	3317	1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		0.0047
FLOOR	33	18		1	366		22	3362	1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		0.0047
FLOOR	34	16		0	364		23	3317	1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		0.0047
FLOOR	35	8		0	406		29	3453	1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		0.0047
FLOOR	36	20		1	368		21	3267	1.3	3.62	1.41	0.43	3.87	66.9	7.25	5	27	3.65		0.0047
CEILING	37	1		0	283		25		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
CEILING	38	0		1	292		29		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
CEILING	39	3		0	301		23		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
CEILING	40	0		1	291		23		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
CEILING	41	0		0	275		15		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
CEILING	42	5		0	285		22		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
CEILING	43	3		0	288		22		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
CEILING	44	2		0	289		26		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		

Lot 1 Survey Data, Room 109 Fuel Storage Area

SAMPLE NAME	GRID NAME	5 MIN ALPHA TOTAL	5 MIN ALPHA MAX	1 MIN ALPHA REM	5 MIN BETA TOTAL	5 MIN BETA MAX	1 MIN BETA REM	1 MIN GAM TOTAL	ALPHA INSTRUMENT BACKG	ALPHA INSTRUMENT EFACT	ALPHA INSTRUMENT AFACT	ALPHA SMEAR BACKG	ALPHA SMEAR EFACT	BETA INSTRUMENT BACKG	BETA INSTRUMENT EFACT	BETA INSTRUMENT AFACT	BETA SMEAR BACKG	BETA SMEAR EFACT	GAMMA BACKG	GAMMA EFACT
SOUTH LEDGE	45	6		1	351		26		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
NORTH LEDGE	46	14		0	355		20		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
NORTH LEDGE	47	4		0	327		21		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
DOOR JAMB	48	7		1	328		33		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
DOOR JAMB	49	4		0	324		35	3468	1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		0.0047
DOOR JAMB	50	11		0	284		21		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		
DOOR JAMB	51	5		1	351		30		1.3	3.52	1.41	0.43	3.87	64.9	7.22	5	27	3.65		

Appendix B.

Building T012

Sample Lots 1 and 2

Final Survey Results

Lot 1 Survey Data, Room 109

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
NORTH WALL	1	2.43	3.29			-1.66	2.54	281.82	191.09			14.60	27.80		
NORTH WALL	2	7.28	3.94			-1.66	2.54	457.50	194.43			7.30	27.31		
NORTH WALL	3	4.37	3.56			-1.66	2.54	347.70	192.35			25.55	28.51		
NORTH WALL	4	1.46	3.14			2.21	4.63	40.26	186.41			29.20	28.74		
NORTH WALL	5	0.49	2.99			2.21	4.63	193.98	189.40			-18.25	25.55		
NORTH WALL	6	3.40	3.43			2.21	4.63	333.06	192.07			-7.30	26.32		
NORTH WALL	7	5.34	3.69			-1.66	2.54	10.98	185.83			-7.30	26.32		
NORTH WALL	8	3.40	3.43			2.21	4.63	193.98	189.40			-7.30	26.32		
NORTH WALL	9	6.31	3.82			2.21	4.63	91.50	187.41			0.00	26.82		
NORTH WALL	10	3.40	3.43			-1.66	2.54	157.38	188.69			7.30	27.31		
NORTH WALL	11	5.34	3.69			-1.66	2.54	164.70	188.84			-3.65	26.57		
NORTH WALL	12	8.25	4.06			-1.66	2.54	215.94	189.83			10.95	27.56		
EAST WALL	13	-2.43	2.47			2.21	4.63	18.30	185.98			10.95	27.56		
EAST WALL	14	17.95	5.09			-1.66	2.54	457.50	194.43			18.25	28.04		
EAST WALL	15	7.28	3.94			2.21	4.63	435.54	194.01			14.60	27.80		
EAST WALL	16	-1.46	2.66			-1.66	2.54	135.42	188.27			0.00	26.82		
EAST WALL	17	2.43	3.29			-1.66	2.54	150.06	188.55			32.85	28.97		
EAST WALL	18	-0.49	3.76			-1.66	2.54	152.04	190.59			0.00	26.82		
EAST WALL	19	5.43	4.47			-1.66	2.54	14.48	187.96			-14.60	25.81		
EAST WALL	20	3.45	4.25			-1.66	2.54	-152.04	184.73			-7.30	26.32		
EAST WALL	21	12.34	5.18			-1.66	2.54	-101.36	185.72			-25.55	25.02		
EAST WALL	22A	-0.49	3.76			2.21	4.63	43.44	188.52			0.00	26.82		
EAST WALL	22B	-0.49	3.76			-1.66	2.54	152.04	190.59			0.00	26.82		
EAST WALL	23	5.43	4.47			-1.66	2.54	-115.84	185.43			3.65	27.07		
EAST WALL	24	6.42	4.58			2.21	4.63	-224.44	183.30			14.60	27.80		
EAST WALL	25	3.45	4.25			-1.66	2.54	137.56	190.32			21.90	28.27		
EAST WALL	26	4.44	4.36			-1.66	2.54	130.32	190.18			-3.65	26.57		
EAST WALL	27	0.49	3.89			-1.66	2.54	-123.08	185.29			-18.25	25.55		
EAST WALL	28	8.39	4.78			-1.66	2.54	-130.32	185.15			10.95	27.56		
EAST WALL	29	4.44	4.36			2.21	4.63	-94.12	185.86			-18.25	25.55		
EAST WALL	30	4.44	4.36			6.08	6.03	43.44	188.52			7.30	27.31		
EAST WALL	31	-2.47	3.49			13.82	8.15	289.60	193.19			-47.45	23.37		
EAST WALL	32	5.43	4.47			-1.66	2.54	-28.96	187.12			-10.95	26.07		
EAST WALL	33	-1.48	3.63			6.08	6.03	50.68	188.66			-14.60	25.81		
EAST WALL	34	3.45	4.25			-1.66	2.54	-152.04	184.73			40.15	29.43		
EAST WALL	35	-2.47	3.49			6.08	6.03	-543.00	176.90			36.50	29.20		
EAST WALL	36	-3.45	3.35			-1.66	2.54	-166.52	184.44			18.25	28.04		
EAST WALL	37	0.49	3.89			-1.66	2.54	152.04	190.59			-36.50	24.21		
EAST WALL	38	-3.45	3.35			-1.66	2.54	21.72	188.10			-7.30	26.32		
EAST WALL	39	1.48	4.01			2.21	4.63	43.44	188.52			54.75	30.32		
EAST WALL	40	-1.48	3.63			-1.66	2.54	79.64	189.21			-3.65	26.57		
EAST WALL	41	-1.48	3.63			-1.66	2.54	202.72	191.55			21.90	28.27		
SOUTH WALL	42	0.49	3.89			2.21	4.63	79.64	189.21			36.50	29.20		
SOUTH WALL	43	11.35	5.08			-1.66	2.54	-86.88	186.00			-18.25	25.55		

Lot 1 Survey Data, Room 109

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
SOUTH WALL	44	0.49	3.89			-1.66	2.54	-94.12	185.86			-3.65	26.57		
SOUTH WALL	45	-0.49	3.76			-1.66	2.54	246.16	192.37			18.25	28.04		
SOUTH WALL	46	3.45	4.25			-1.66	2.54	65.16	188.93			-7.30	26.32		
SOUTH WALL	47	-1.48	3.63			-1.66	2.54	57.92	188.80			7.30	27.31		
SOUTH WALL	48	0.49	3.89			-1.66	2.54	173.76	191.00			10.95	27.56		
SOUTH WALL	49	4.44	4.36			-1.66	2.54	65.16	188.93			36.50	29.20		
SOUTH WALL	50	3.45	4.25			2.21	4.63	202.72	191.55			-25.55	25.02		
SOUTH WALL	51	4.47	3.65			-1.66	2.54	-121.21	179.39			10.95	27.56		
SOUTH WALL	52	6.45	3.91			-1.66	2.54	-7.13	181.64			18.25	28.04		
SOUTH WALL	53	11.42	4.49			-1.66	2.54	327.98	188.10			-18.25	25.55		
SOUTH WALL	54	15.39	4.91			-1.66	2.54	342.24	188.37			32.85	28.97		
SOUTH WALL	55	7.44	4.03			-1.66	2.54	370.76	188.91			-29.20	24.76		
SOUTH WALL	56	8.44	4.15			2.21	4.63	-199.64	177.82			-14.60	25.81		
SOUTH WALL	57	13.40	4.71			-1.66	2.54	-413.54	173.48			62.05	30.76		
SOUTH WALL	58	1.49	3.22			-1.66	2.54	-456.32	172.60			14.60	27.80		
SOUTH WALL	59	11.42	4.49			-1.66	2.54	206.77	185.79			10.95	27.56		
SOUTH WALL	60	9.43	4.27			-1.66	2.54	491.97	191.19			-7.30	26.32		
SOUTH WALL	61	1.49	3.22			-1.66	2.54	-142.60	178.96			40.15	29.43		
SOUTH WALL	62	5.46	3.78	27.30	6.00	-1.66	2.54	-206.77	177.68	442.06	190.25	-10.95	26.07		
SOUTHWEST WALL	63	8.44	4.15			-1.66	2.54	178.25	185.24			0.00	26.82		
SOUTHWEST WALL	64	4.47	3.65			-1.66	2.54	92.69	183.59			-21.90	25.29		
SOUTHWEST WALL	65	3.47	3.51			-1.66	2.54	49.91	182.76			3.65	27.07		
SOUTHWEST WALL	66	-0.50	2.89			-1.66	2.54	85.56	183.45			14.60	27.80		
SOUTHWEST WALL	67	4.47	3.65			2.21	4.63	434.93	190.12			-18.25	25.55		
SOUTHWEST WALL	68	0.50	3.06			-1.66	2.54	263.81	186.88			18.25	28.04		
SOUTHWEST WALL	69	4.47	3.65			2.21	4.63	199.64	185.65			-21.90	25.29		
SOUTHWEST WALL	70	17.72	5.59			2.21	4.63	425.88	194.73			10.95	27.56		
SOUTHWEST WALL	71	4.56	4.24			-1.66	2.54	134.68	189.21			14.60	27.80		
SOUTHWEST WALL	72	3.54	4.11			-1.66	2.54	156.52	189.63			51.10	30.10		
SOUTHWEST WALL	73	3.54	4.11			-1.66	2.54	-61.88	185.39			-29.20	24.76		
SOUTHWEST WALL	74	0.51	3.72			6.08	6.03	243.88	191.30			3.65	27.07		
NORTHWEST WALL	75	6.58	4.47			2.21	4.63	-10.92	186.39			7.30	27.31		
NORTHWEST WALL	76	0.51	3.72			-1.66	2.54	-76.44	185.10			21.90	28.27		
NORTHWEST WALL	77	10.63	4.91			9.95	7.17	134.68	189.21			0.00	26.82		
NORTHWEST WALL	78	16.70	5.50			2.21	4.63	-83.72	184.96			-7.30	26.32		
NORTHWEST WALL	79	2.53	3.99			-1.66	2.54	-3.64	186.53			10.95	27.56		
NORTHWEST WALL	80	1.52	3.86			-1.66	2.54	-98.28	184.67			3.65	27.07		
NORTHWEST WALL	81	2.53	3.99			-1.66	2.54	3.64	186.67			-10.95	26.07		
NORTHWEST WALL	82	4.56	4.24			2.21	4.63	236.60	191.16			-29.20	24.76		
NORTHWEST WALL	83	10.63	4.91			-1.66	2.54	18.20	186.96			-54.75	22.79		
NORTHWEST WALL	84	1.52	3.86			-1.66	2.54	-294.84	180.76			-25.55	25.02		
NORTHWEST WALL	85	-0.51	3.58			-1.66	2.54	-294.84	180.76			-18.25	25.55		
NORTHWEST WALL	86	4.56	4.24			-1.66	2.54	-25.48	186.10			3.65	27.07		
NORTHWEST WALL	87	2.53	3.99			-1.66	2.54	10.92	186.81			7.30	27.31		

Lot 1 Survey Data, Room 109

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
NORTHWEST WALL	88	1.52	3.86			-1.66	2.54	105.56	188.65			-10.95	26.07		
NORTHWEST WALL	89	-0.51	3.58			-1.66	2.54	-10.92	186.39			14.60	27.80		
NORTHWEST WALL	90	-1.52	3.43			-1.66	2.54	207.48	190.61			0.00	26.82		
NORTHWEST WALL	91	-3.54	3.12			-1.66	2.54	10.92	186.81			-14.60	25.81		
NORTHWEST WALL	92	-1.52	3.43			-1.66	2.54	-156.52	183.52			-10.95	26.07		
NORTHWEST WALL	93	-2.53	3.28			-1.66	2.54	-418.60	178.25			0.00	26.82		
NORTHWEST WALL	94	6.58	4.47			-1.66	2.54	-3.64	186.53			-32.85	24.48		
FLOOR	95	2.53	3.99			2.21	4.63	265.72	191.71			-32.85	24.48	16.95	0.28
FLOOR	96	0.51	3.72			2.21	4.63	-32.76	185.96			-25.55	25.02	16.36	0.28
FLOOR	97	0.51	3.72			2.21	4.63	556.92	197.17			25.55	28.51	16.74	0.28
FLOOR	98	25.82	6.28	370.02	19.70	2.21	4.63	593.32	197.84	877.24	202.99	-32.85	24.48	16.40	0.28
FLOOR	99	0.51	3.72			-1.66	2.54	105.56	188.65			0.00	26.82	15.62	0.27
FLOOR	100	14.68	5.31			-1.66	2.54	287.56	192.13			-29.20	24.76	14.54	0.26
FLOOR	101	6.58	4.47			-1.66	2.54	120.12	188.93			-10.95	26.07	15.88	0.27
FLOOR	102	1.52	3.86			-1.66	2.54	302.12	192.40			-21.90	25.29	15.92	0.27
FLOOR	103	6.58	4.47			-1.66	2.54	258.44	191.58			7.30	27.31	15.23	0.27
FLOOR	104	10.75	5.17			-1.66	2.54	22.14	189.74			14.60	27.80	16.54	0.28
FLOOR	105	3.58	4.40			-1.66	2.54	435.42	197.61			-18.25	25.55	16.29	0.28
FLOOR	106	-0.51	3.90			2.21	4.63	383.76	196.65			-25.55	25.02	16.17	0.27
FLOOR	107	1.54	4.16			-1.66	2.54	472.32	198.30			0.00	26.82	15.44	0.27
FLOOR	108	7.68	4.86			-1.66	2.54	162.36	192.45			14.60	27.80	16.30	0.28
FLOOR	109	5.63	4.63			2.21	4.63	177.12	192.73			-36.50	24.21	16.35	0.28
FLOOR	110	-0.51	3.90			-1.66	2.54	361.62	196.23			-14.60	25.81	16.14	0.27
FLOOR	111	2.56	4.28			-1.66	2.54	509.22	198.99			0.00	26.82	16.68	0.28
FLOOR	112	4.61	4.52			-1.66	2.54	523.98	199.26			-40.15	23.93	16.66	0.28
FLOOR	113	4.61	4.52			2.21	4.63	405.90	197.06			-18.25	25.55	16.36	0.28
FLOOR	114	3.58	4.40			-1.66	2.54	88.56	191.03			-10.95	26.07	16.39	0.28
FLOOR	115	1.54	4.16			2.21	4.63	250.92	194.14			-36.50	24.21	16.09	0.27
FLOOR	116	0.51	4.03			-1.66	2.54	346.86	195.95			-18.25	25.55	16.27	0.28
FLOOR	117	2.56	4.28			-1.66	2.54	265.68	194.42			-7.30	26.32	16.55	0.28
FLOOR	118	3.58	4.40			-1.66	2.54	619.92	201.03			14.60	27.80	16.63	0.28
FLOOR	119	6.65	4.75			-1.66	2.54	103.32	191.31			-29.20	24.76	16.35	0.28
FLOOR	120	7.68	4.86			-1.66	2.54	191.88	193.01			-3.65	26.57	17.00	0.28
FLOOR	121	9.72	5.07			-1.66	2.54	81.18	190.88			-47.45	23.37	16.11	0.27
FLOOR	122	2.56	4.28			-1.66	2.54	435.42	197.61			-18.25	25.55	15.45	0.27
FLOOR	123	7.68	4.86			9.95	7.17	464.94	198.16			7.30	27.31	16.76	0.28
FLOOR	124	9.72	5.07			-1.66	2.54	501.84	198.85			-25.55	25.02	16.72	0.28
FLOOR	125	9.72	5.07			-1.66	2.54	398.52	196.92			-25.55	25.02	16.62	0.28
CEILING	126	1.54	4.16			-1.66	2.54	221.40	193.58			32.85	28.97		
CEILING	127	-1.54	3.76			-1.66	2.54	324.72	195.54			-14.60	25.81		
CEILING	128	-2.56	3.62			-1.66	2.54	140.22	192.02			0.00	26.82		
CEILING	129	-1.54	3.76			-1.66	2.54	236.16	193.86			-7.30	26.32		
CEILING	130	-0.51	3.90			2.21	4.63	169.74	192.59			0.00	26.82		
CEILING	131	-5.63	3.16			-1.66	2.54	509.22	198.99			3.65	27.07		

Lot 1 Survey Data, Room 109

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
CEILING	132	5.63	4.63			2.21	4.63	361.62	196.23			-10.95	26.07		
CEILING	133	-0.51	3.90			-1.66	2.54	464.94	198.16			0.00	26.82		
CEILING	134	1.54	4.16			-1.66	2.54	420.66	197.34			-3.65	26.57		
CEILING	135	1.54	4.16			-1.66	2.54	479.70	198.44			-36.50	24.21		
CEILING	136	-2.56	3.62			-1.66	2.54	81.18	190.88			14.60	27.80		
CEILING	137	-4.61	3.32			-1.66	2.54	450.18	197.89			3.65	27.07		
CEILING	138	0.51	4.03			-1.66	2.54	442.80	197.75			-7.30	26.32		
CEILING	139	-1.54	3.76			-1.66	2.54	110.70	191.45			3.65	27.07		
CEILING	140	-5.63	3.16			-1.66	2.54	523.98	199.26			-14.60	25.81		
CEILING	141	-5.16	3.42			-1.66	2.54	325.30	195.26			-3.65	26.57		
CEILING	142	-2.06	3.86			-1.66	2.54	259.51	194.03			-3.65	26.57		
CEILING	143	5.16	4.73			2.21	4.63	142.55	191.81			-51.10	23.08		
CEILING	144	4.13	4.62			-1.66	2.54	149.86	191.95			-14.60	25.81		
CEILING	145	-2.06	3.86			-1.66	2.54	339.92	195.53			0.00	26.82		
CEILING	146	0.00	4.13			-1.66	2.54	361.85	195.94			-21.90	25.29		
CEILING	147	-4.13	3.58			-1.66	2.54	434.95	197.30			-25.55	25.02		
CEILING	148	-6.19	3.26			-1.66	2.54	157.17	192.09			32.85	28.97		
CEILING	149	-1.03	4.00			6.08	6.03	215.65	193.20			-25.55	25.02		
CEILING	150	2.06	4.38			-1.66	2.54	281.44	194.44			-29.20	24.76		
CEILING	151	-6.19	3.26			2.21	4.63	376.47	196.22			-10.95	26.07		
CEILING	152	-2.06	3.86			2.21	4.63	413.02	196.90			-29.20	24.76		
CEILING	153	-5.16	3.42			-1.66	2.54	456.88	197.71			3.65	27.07		
CEILING	154	-5.16	3.42			2.21	4.63	420.33	197.03			10.95	27.56		
CEILING	155	-6.19	3.26			-1.66	2.54	208.34	193.06			-3.65	26.57		
CEILING	156	-6.19	3.26			-1.66	2.54	201.03	192.92			0.00	26.82		
NORTHWEST WALL	157	-3.10	3.72			-1.66	2.54	62.13	190.27			-32.85	24.48		
FUEL STORAGE WALL	1	-2.48	3.22			-1.66	2.54	83.03	185.56			-10.95	26.07		
FUEL STORAGE WALL	2	4.47	4.15			-1.66	2.54	530.67	194.07			0.00	26.82		
FUEL STORAGE WALL	3	1.49	3.78			-1.66	2.54	25.27	184.43			-10.95	26.07		
FUEL STORAGE WALL	4	1.49	3.78			-1.66	2.54	126.35	186.40			-7.30	26.32		
FUEL STORAGE WALL	5	-2.48	3.22			2.21	4.63	176.89	187.37			-25.55	25.02		

Lot 1 Survey Data, Room 110

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
NORTH WALL	1	1.95	3.37			-1.65	2.55	-59.85	159.50			-6.27	26.01		
NORTH WALL	2	-1.95	2.75			2.29	4.70	-251.37	154.64			-13.65	25.49		
NORTH WALL	3	3.89	3.64			2.29	4.70	67.83	162.66			-17.34	25.22		
NORTH WALL	4	-0.97	2.92			-1.65	2.55	-19.95	160.50			-9.96	25.75		
NORTH WALL	5	-2.92	2.57			-1.65	2.55	-107.73	158.30			-17.34	25.22		
NORTH WALL	6	-1.95	2.75			2.29	4.70	-107.73	158.30			-13.65	25.49		
NORTH WALL	7	0.00	3.08			-1.65	2.55	-139.65	157.49			-2.58	26.27		
NORTH WALL	8	0.00	3.08			2.29	4.70	-187.53	156.27			-2.58	26.27		
NORTH WALL	9	0.00	3.08			2.29	4.70	83.79	163.05			15.87	27.54		
NORTH WALL	10	0.00	3.08			-1.65	2.55	139.65	164.42			19.56	27.79		
NORTH WALL	11	0.97	3.23			2.29	4.70	-11.97	160.69			-6.27	26.01		
NORTH WALL	12	0.00	3.08			-1.65	2.55	59.85	162.47			8.49	27.04		
NORTH WALL	13	7.78	4.13			-1.65	2.55	-299.25	153.39			38.01	28.98		
NORTH WALL	14	1.95	3.37			-1.65	2.55	-243.39	154.84			-2.58	26.27		
NORTH WALL	15	0.00	3.08			2.29	4.70	-147.63	157.29			-6.27	26.01		
NORTH WALL	16	0.97	3.23			2.29	4.70	-131.67	157.69			26.94	28.27		
NORTH WALL	17	-4.86	2.18			6.23	6.13	-171.57	156.68			-2.58	26.27		
NORTH WALL	18	-0.97	2.92			10.17	7.29	99.75	163.44			-39.48	23.54		
EAST WALL	19	1.95	3.37			-1.65	2.55	-43.89	159.90			-2.58	26.27		
EAST WALL	20	0.00	3.08			-1.65	2.55	115.71	163.83			-17.34	25.22		
EAST WALL	21	4.81	3.72			6.23	6.13	-3.69	153.12			8.49	27.04		
EAST WALL	22	3.85	3.60			-1.65	2.55	-225.09	147.69			-21.03	24.95		
EAST WALL	23	6.73	3.96			-1.65	2.55	18.45	153.66			15.87	27.54		
EAST WALL	24	6.73	3.96			-1.65	2.55	-62.73	151.69			-28.41	24.39		
EAST WALL	25	8.65	4.19			-1.65	2.55	-40.59	152.23			30.63	28.51		
EAST WALL	26	2.88	3.47			-1.65	2.55	-62.73	151.69			-17.34	25.22		
EAST WALL	27	2.88	3.47			-1.65	2.55	-18.45	152.77			4.80	26.79		
EAST WALL	28	1.92	3.33			-1.65	2.55	-136.53	149.89			-24.72	24.67		
EAST WALL	29	1.92	3.33			2.29	4.70	-55.35	151.87			38.01	28.98		
EAST WALL	30	0.96	3.19			-1.65	2.55	-40.59	152.23			1.11	26.53		
EAST WALL	31	6.73	3.96			-1.65	2.55	-70.11	151.51			-6.27	26.01		
EAST WALL	32	-0.96	2.88			-1.65	2.55	-173.43	148.98			-13.65	25.49		
EAST WALL	33	2.88	3.47			-1.65	2.55	-47.97	152.05			-13.65	25.49		
EAST WALL	34	-0.96	2.88			6.23	6.13	33.21	154.01			-21.03	24.95		
EAST WALL	35	0.96	3.19			-1.65	2.55	-313.65	145.46			-32.10	24.11		
EAST WALL	36	1.92	3.33			2.29	4.70	3.69	153.30			-21.03	24.95		
SOUTH WALL	37	0.00	3.04			-1.65	2.55	-210.33	148.06			8.49	27.04		
SOUTH WALL	38	5.65	3.26			-1.65	2.55	61.80	147.83			-28.41	24.39		
SOUTH WALL	39	0.94	2.49			-1.65	2.55	-10.90	146.03			-32.10	24.11		
SOUTH WALL	40	0.00	2.31			2.29	4.70	-98.15	143.85			-6.27	26.01		
SOUTH WALL	41	2.83	2.83			-1.65	2.55	25.45	146.94			-9.96	25.75		
SOUTH WALL	42	-0.94	2.11			2.29	4.70	83.60	148.37			19.56	27.79		
SOUTH WALL	43	7.54	3.52			-1.65	2.55	199.93	151.19			-13.65	25.49		
SOUTH WALL	44	2.83	2.83			-1.65	2.55	25.45	146.94			8.49	27.04		

Lot 1 Survey Data, Room 110

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
SOUTH WALL	45	2.83	2.83			-1.65	2.55	-69.06	144.58			-17.34	25.22		
SOUTH WALL	46	8.48	3.65			-1.65	2.55	39.99	147.30			8.49	27.04		
SOUTH WALL	47	1.88	2.66			-1.65	2.55	-54.53	144.94			30.63	28.51		
SOUTH WALL	48	0.94	2.49			-1.65	2.55	192.66	151.02			26.94	28.27		
SOUTH WALL	49	6.59	3.40			-1.65	2.55	-287.17	138.99			1.11	26.53		
SOUTH WALL	50	2.83	2.83			-1.65	2.55	47.25	147.48			-13.65	25.49		
SOUTH WALL	51	2.83	2.83			-1.65	2.55	-25.45	145.67			-13.65	25.49		
SOUTH WALL	52	1.88	2.66			-1.65	2.55	61.80	147.83			-13.65	25.49		
SOUTH WALL	53	1.88	2.66			-1.65	2.55	-192.66	141.44			-6.27	26.01		
SOUTH WALL	54	-1.88	1.88			-1.65	2.55	-76.34	144.40			-21.03	24.95		
WEST WALL	55	7.54	3.52			-1.65	2.55	10.90	146.58			-6.27	26.01		
WEST WALL	56	1.88	2.66			-1.65	2.55	-83.60	144.21			-24.72	24.67		
WEST WALL	57	0.94	2.49			-1.65	2.55	98.15	148.72			8.49	27.04		
WEST WALL	58	-0.94	2.11			10.17	7.29	18.18	146.76			12.18	27.29		
WEST WALL	59	0.00	2.31			2.29	4.70	18.18	146.76			-35.79	23.83		
WEST WALL	60	4.71	3.12			-1.65	2.55	163.58	150.32			-9.96	25.75		
WEST WALL	61	0.94	2.49			2.29	4.70	-47.25	145.13			-13.65	25.49		
WEST WALL	62	0.00	2.31			-1.65	2.55	-69.06	144.58			-17.34	25.22		
WEST WALL	63	-0.94	2.11			-1.65	2.55	69.06	148.01			-21.03	24.95		
WEST WALL	64	0.00	2.31			-1.65	2.55	3.64	146.40			-17.34	25.22		
WEST WALL	65	2.83	2.83			-1.65	2.55	-134.50	142.93			1.11	26.53		
WEST WALL	66	-0.94	2.11			-1.65	2.55	-18.18	145.85			8.49	27.04		
WEST WALL	67	2.83	2.83			-1.65	2.55	-185.39	141.63			23.25	28.03		
WEST WALL	68	-0.94	2.11			-1.65	2.55	18.18	146.76			23.25	28.03		
WEST WALL	69	0.94	2.49			2.29	4.70	-98.15	143.85			-43.17	23.25		
WEST WALL	70	0.94	2.49			2.29	4.70	-178.12	141.81			19.56	27.79		
FLOOR	71	0.94	2.49			-1.65	2.55	-3.64	146.22			-17.34	25.22	5.94	0.17
FLOOR	72	3.77	2.98			2.29	4.70	134.50	149.61			1.11	26.53	7.87	0.19
FLOOR	73	3.77	2.98			-1.65	2.55	163.58	150.32			-2.58	26.27	8.66	0.20
FLOOR	74	4.71	3.12			2.29	4.70	10.90	146.58			-28.41	24.39	8.49	0.20
FLOOR	75	7.54	3.52			-1.65	2.55	76.34	148.19			-24.72	24.67	8.80	0.20
FLOOR	76	1.88	2.66			6.23	6.13	119.96	149.26			8.49	27.04	8.71	0.20
FLOOR	77	3.77	2.98			-1.65	2.55	192.66	151.02			1.11	26.53	7.79	0.19
FLOOR	78	6.59	3.40			-1.65	2.55	10.90	146.58			1.11	26.53	7.77	0.19
FLOOR	79	1.88	2.66			2.29	4.70	323.52	154.13			19.56	27.79	8.58	0.20
FLOOR	80	-0.94	2.11			-1.65	2.55	119.96	149.26			-17.34	25.22	8.92	0.20
FLOOR	81	0.00	2.31			-1.65	2.55	207.20	151.37			-17.34	25.22	9.24	0.21
FLOOR	82	0.00	2.31			-1.65	2.55	61.80	147.83			-6.27	26.01	9.00	0.20
FLOOR	83	3.33	3.36			-1.65	2.55	85.92	148.13			-6.27	26.01	8.34	0.20
FLOOR	84	4.28	3.49			-1.65	2.55	350.84	154.40			1.11	26.53	8.72	0.20
FLOOR	85	5.23	3.62			2.29	4.70	193.32	150.70			-39.48	23.54	8.92	0.20
FLOOR	86	8.08	3.98			-1.65	2.55	214.80	151.21			-17.34	25.22	9.02	0.20
FLOOR	87	5.23	3.62			-1.65	2.55	114.56	148.82			-28.41	24.39	8.83	0.20
FLOOR	88	4.28	3.49			-1.65	2.55	343.68	154.23			-17.34	25.22	9.27	0.21

Lot 1 Survey Data, Room 110

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
FLOOR	89	1.43	3.08			2.29	4.70	-35.80	145.16			-6.27	26.01	8.73	0.20
FLOOR	90	0.48	2.93			-1.65	2.55	207.64	151.04			1.11	26.53	8.74	0.20
FLOOR	91	5.23	3.62			-1.65	2.55	286.40	152.90			-13.65	25.49	9.41	0.21
FLOOR	92	-0.48	2.77			2.29	4.70	136.04	149.33			34.32	28.75	9.42	0.21
FLOOR	93	2.38	3.22			-1.65	2.55	307.88	153.40			-9.96	25.75	9.17	0.21
FLOOR	94	-1.43	2.60			-1.65	2.55	229.12	151.55			-6.27	26.01	9.00	0.20
FLOOR	95	6.18	3.74			-1.65	2.55	264.92	152.39			1.11	26.53	8.83	0.20
FLOOR	96	-3.33	2.23			2.29	4.70	121.72	148.99			-21.03	24.95	9.01	0.20
FLOOR	97	6.18	3.74			-1.65	2.55	243.44	151.89			15.87	27.54	9.04	0.21
FLOOR	98	2.38	3.22			-1.65	2.55	114.56	148.82			-21.03	24.95	9.30	0.21
FLOOR	99	0.48	2.93			-1.65	2.55	121.72	148.99			-17.34	25.22	9.27	0.21
FLOOR	100	1.43	3.08			-1.65	2.55	50.12	147.26			-17.34	25.22	9.18	0.21
FLOOR	101	1.43	3.08			-1.65	2.55	57.28	147.43			-13.65	25.49	8.80	0.20
FLOOR	102	6.18	3.74			2.29	4.70	193.32	150.70			-24.72	24.67	8.95	0.20
FLOOR	103	2.38	3.22			-1.65	2.55	157.52	149.85			1.11	26.53	8.51	0.20
FLOOR	104	2.38	3.22			2.29	4.70	236.28	151.72			-13.65	25.49	8.65	0.20
FLOOR	105	0.48	2.93			-1.65	2.55	171.84	150.19			-28.41	24.39	8.79	0.20
FLOOR	106	1.43	3.08			-1.65	2.55	107.40	148.65			-13.65	25.49	8.69	0.20
CEILING	107	5.23	3.62			-1.65	2.55	-57.28	144.62			-2.58	26.27		
CEILING	108	0.48	2.93			-1.65	2.55	164.68	150.02			-6.27	26.01		
CEILING	109	-1.43	2.60			-1.65	2.55	85.92	148.13			-6.27	26.01		
CEILING	110	-1.43	2.60			-1.65	2.55	-7.16	145.86			1.11	26.53		
CEILING	111	-3.33	2.23			-1.65	2.55	350.84	154.40			-35.79	23.83		
CEILING	112	-1.43	2.60			-1.65	2.55	64.44	147.61			-32.10	24.11		
CEILING	113	-0.48	2.77			2.29	4.70	-78.76	144.09			-46.86	22.96		
CEILING	114	0.48	2.93			-1.65	2.55	286.40	152.90			-17.34	25.22		
CEILING	115	-3.33	2.23			6.23	6.13	315.04	153.56			1.11	26.53		
CEILING	116	-1.43	2.60			-1.65	2.55	136.04	149.33			-2.58	26.27		
CEILING	117	1.43	3.08			-1.65	2.55	372.32	154.89			4.80	26.79		
CEILING	118	-2.38	2.42			-1.65	2.55	250.60	152.06			1.11	26.53		
CEILING	119	-0.48	2.77			-1.65	2.55	379.48	155.06			-13.65	25.49		
CEILING	120	-3.33	2.23			-1.65	2.55	107.40	148.65			23.25	28.03		
CEILING	121	0.48	2.93			-1.65	2.55	-608.60	130.26			-13.65	25.49		
CEILING	122	1.43	3.08			2.29	4.70	243.44	151.89			-2.58	26.27		
CEILING	123	-0.48	2.77			2.29	4.70	71.60	147.78			-13.65	25.49		
CEILING	124	-3.33	2.23			2.29	4.70	85.92	148.13			-21.03	24.95		
CEILING	125	4.34	2.97			2.29	4.70	198.55	151.19			-24.72	24.67		
CEILING	126	3.38	2.81			-1.65	2.55	234.65	152.05			-21.03	24.95		
CEILING	127	1.45	2.46			-1.65	2.55	198.55	151.19			-6.27	26.01		
CEILING	128	3.38	2.81			2.29	4.70	299.63	153.58			-28.41	24.39		
CEILING	129	10.13	3.80			-1.65	2.55	306.85	153.75			1.11	26.53		
CEILING	130	3.38	2.81			-1.65	2.55	263.53	152.73			-17.34	25.22		
CEILING	131	3.38	2.81			-1.65	2.55	256.31	152.56			-35.79	23.83		
CEILING	132	9.16	3.67			-1.65	2.55	39.71	147.35			30.63	28.51		

Lot 1 Survey Data, Room 110

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
CEILING	133	1.45	2.46			2.29	4.70	126.35	149.46			12.18	27.29		
CEILING	134	2.41	2.64			-1.65	2.55	270.75	152.90			-2.58	26.27		
CEILING	135	-1.45	1.80			6.23	6.13	277.97	153.07			-6.27	26.01		
CEILING	136	6.27	3.27			-1.65	2.55	263.53	152.73			-21.03	24.95		
CEILING	137	-0.48	2.05			-1.65	2.55	119.13	149.28			12.18	27.29		
CEILING	138	0.48	2.26			2.29	4.70	292.41	153.41			49.08	29.68		
CEILING	139	2.41	2.64			-1.65	2.55	140.79	149.80			-17.34	25.22		
CEILING	140	-2.41	1.52			-1.65	2.55	133.57	149.63			4.80	26.79		
CEILING	141	-0.48	2.05			-1.65	2.55	328.51	154.26			26.94	28.27		
CEILING	142	0.48	2.26			-1.65	2.55	285.19	153.24			4.80	26.79		
AIRLOCK	143	4.34	2.97			-1.65	2.55	119.13	149.28			49.08	29.68		
AIRLOCK	144	3.38	2.81			-1.65	2.55	-162.45	142.31			8.49	27.04		
AIRLOCK	145	-0.48	2.05			6.23	6.13	-104.69	143.77			-6.27	26.01		
AIRLOCK	146	-0.48	2.05			-1.65	2.55	-32.49	145.57			19.56	27.79		
AIRLOCK	147	-2.41	1.52			-1.65	2.55	371.83	155.27			-13.65	25.49		
AIRLOCK	148	4.34	2.97			-1.65	2.55	314.07	153.92			-2.58	26.27	9.41	0.21
SHIELD DOOR	149	1.45	2.46			2.29	4.70	-480.13	134.01			-9.96	25.75		
SHIELD DOOR	150	1.45	2.46			-1.65	2.55	-393.49	136.32			-9.96	25.75		
SHIELD DOOR	151	5.30	3.13			-1.65	2.55	-516.23	133.03			-21.03	24.95		
SHIELD DOOR	152	-0.48	2.05			-1.65	2.55	-472.91	134.20			-21.03	24.95		
SHIELD DOOR	153	4.34	2.97			-1.65	2.55	-357.39	137.27			-2.58	26.27		
SHIELD DOOR	154	3.38	2.81			-1.65	2.55	-386.27	136.51			-6.27	26.01		
SHIELD DOOR	155	4.34	2.97			-1.65	2.55	-436.81	135.17			19.56	27.79		
SHIELD DOOR	156	17.84	4.68	159.61	12.59	-1.65	2.55	-148.01	142.67	-169.67	142.13	-32.10	24.11		
SHIELD DOOR	158	3.38	2.81			-1.65	2.55	-371.83	136.89			-13.65	25.49		
0	0	0.00	0.00			0.00	0.00	0.00	0.00			0.00	0.00		
0	0	0.00	0.00			0.00	0.00	0.00	0.00			0.00	0.00		
0	0	0.00	0.00			0.00	0.00	0.00	0.00			0.00	0.00		
0	0	0.00	0.00			0.00	0.00	0.00	0.00			0.00	0.00		
0	0	0.00	0.00			0.00	0.00	0.00	0.00			0.00	0.00		
0	0	0.00	0.00			0.00	0.00	0.00	0.00			0.00	0.00		

Lot 1 Survey Data, Room 109 Attic

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
NORTH WALL	1	-2.48	3.22			-1.65	2.55	480.13	193.13			-9.96	25.75		
NORTH WALL	2	1.49	3.78			-1.65	2.55	111.91	186.12			-6.27	26.01		
NORTH WALL	3	0.50	3.65			-1.65	2.55	270.75	189.17			-32.10	24.11		
EAST WALL	4	-0.50	3.51			-1.65	2.55	104.69	185.98			-28.41	24.39		
EAST WALL	5	0.50	3.65			-1.65	2.55	-10.83	183.72			-6.27	26.01		
EAST WALL	6	4.47	4.15			2.29	4.70	169.67	187.23			-13.65	25.49		
EAST WALL	7	0.00	3.75			-1.65	2.55	57.44	187.78			-21.03	24.95		
EAST WALL	8	2.00	4.00			-1.65	2.55	50.26	187.64			-24.72	24.67		
EAST WALL	9	1.00	3.88			2.29	4.70	157.96	189.69			-13.65	25.49		
EAST WALL	10	1.00	3.88			-1.65	2.55	-179.50	183.20			-6.27	26.01		
EAST WALL	11	-2.00	3.47			-1.65	2.55	-301.56	180.79			-17.34	25.22		
WEST WALL	12	2.00	4.00			-1.65	2.55	114.88	188.88			-13.65	25.49		
WEST WALL	13	-2.00	3.47			-1.65	2.55	57.44	187.78			-2.58	26.27		
WEST WALL	14	2.00	4.00			-1.65	2.55	107.70	188.74			-28.41	24.39		
WEST WALL	15	3.00	4.13			-1.65	2.55	157.96	189.69			23.25	28.03		
WEST WALL	16	1.00	3.88			-1.65	2.55	215.40	190.78			-6.27	26.01		
WEST WALL	17	1.00	3.88			-1.65	2.55	14.36	186.96			-2.58	26.27		
WEST WALL	18	-2.00	3.47			6.23	6.13	136.42	189.29			12.18	27.29		
WEST WALL	19	0.00	3.75			-1.65	2.55	78.98	188.19			-32.10	24.11		
FLOOR	20	2.00	4.00			-1.65	2.55	-373.36	179.36			-9.96	25.75		
FLOOR	21	-1.00	3.61			-1.65	2.55	-409.26	178.64			19.56	27.79		
FLOOR	22	0.00	3.75			-1.65	2.55	-294.38	180.93			-2.58	26.27		
FLOOR	23	-1.00	3.61			-1.65	2.55	-445.16	177.91			12.18	27.29		
FLOOR	24	1.00	3.88			-1.65	2.55	-380.54	179.21			19.56	27.79		
FLOOR	25	-3.00	3.32			-1.65	2.55	-272.84	181.36			8.49	27.04		
FLOOR	26	0.00	3.75			-1.65	2.55	-323.10	180.36			-6.27	26.01		
FLOOR	27	-3.00	3.32			-1.65	2.55	-351.82	179.79			-2.58	26.27		
FLOOR	28	-1.00	3.61			-1.65	2.55	-258.48	181.64			-21.03	24.95		
FLOOR	29	-3.00	3.32			2.29	4.70	-387.72	179.07			4.80	26.79		
FLR/CEIL REMANTS	30	2.00	4.00			-1.65	2.55	-78.98	185.15			-17.34	25.22		
CEILING	31	1.00	3.88			-1.65	2.55	366.18	193.59			26.94	28.27		
CEILING	32	-4.00	3.17			2.29	4.70	287.20	192.12			-17.34	25.22		
CEILING	33	2.00	4.00			2.29	4.70	308.74	192.53			-6.27	26.01		
CEILING	34	1.00	3.88			-1.65	2.55	387.72	193.99			-9.96	25.75		
CEILING	35	-2.00	3.47			-1.65	2.55	351.82	193.33			-13.65	25.49		
CEILING	36	-3.00	3.32			-1.65	2.55	437.98	194.92			26.94	28.27		
CEILING	37	1.00	3.88			-1.65	2.55	495.42	195.98			19.56	27.79		
CEILING	38	2.00	4.00			-1.65	2.55	459.52	195.32			4.80	26.79		
CEILING	39	-3.00	3.32			-1.65	2.55	366.18	193.59			-32.10	24.11		
CEILING	40	-6.01	2.83			-1.65	2.55	201.04	190.51			12.18	27.29		

Lot 1 Survey Data, Room 109 Fuel Storage Area

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
NORTH WALL	1	3.57	4.15			-1.66	2.54	460.38	196.22			-18.25	25.55		
NORTH WALL	2	6.64	4.51			-1.66	2.54	-163.13	184.34			-25.55	25.02		
NORTH WALL	3	-1.53	3.46			2.21	4.63	-148.63	184.63			-7.30	26.32		
NORTH WALL	4	4.59	4.27			-1.66	2.54	97.87	189.40			-21.90	25.29		
NORTH WALL	5	2.55	4.02			-1.66	2.54	68.87	188.85			-25.55	25.02		
EAST WALL	6	0.51	3.75			2.21	4.63	-141.38	184.77			-36.50	24.21		
EAST WALL	7	1.53	3.89			-1.66	2.54	213.88	191.61			-29.20	24.76		
EAST WALL	8	9.70	4.84			-1.66	2.54	-39.88	186.75			-40.15	23.93		
EAST WALL	9	4.59	4.27			-1.66	2.54	97.87	189.40			3.65	27.07		
EAST WALL	10	4.59	4.27			-1.66	2.54	141.38	190.23			-7.30	26.32		
EAST WALL	11	5.61	4.39			-1.66	2.54	-3.63	187.45			10.95	27.56		
EAST WALL	12	-0.51	3.61			-1.66	2.54	177.63	190.92			-36.50	24.21		
EAST WALL	13	-1.53	3.46			-1.66	2.54	-39.88	186.75			-3.65	26.57		
EAST WALL	14	1.53	3.89			-1.66	2.54	-83.38	185.90			-36.50	24.21		
EAST WALL	15	-0.51	3.61			-1.66	2.54	-54.38	186.47			-40.15	23.93		
SOUTH WALL	16	9.70	4.84			-1.66	2.54	358.88	194.34			14.60	27.80		
SOUTH WALL	17	6.64	4.51			-1.66	2.54	90.63	189.27			-7.30	26.32		
SOUTH WALL	18	5.61	4.39			-1.66	2.54	54.38	188.57			-10.95	26.07		
WEST WALL	19	3.57	4.15			-1.66	2.54	68.87	188.85			-10.95	26.07		
WEST WALL	20	6.64	4.51			-1.66	2.54	-47.13	186.61			-18.25	25.55		
WEST WALL	21	0.51	3.75			-1.66	2.54	47.12	188.43			-32.85	24.48		
WEST WALL	22	26.03	6.33			-1.66	2.54	-134.13	184.91			3.65	27.07		
WEST WALL	23	1.53	3.89			-1.66	2.54	-257.38	182.48			-10.95	26.07		
WEST WALL	24	2.55	4.02			-1.66	2.54	184.88	191.06			43.80	29.65		
WEST WALL	25	-1.53	3.46			-1.66	2.54	474.88	196.49			-10.95	26.07		
WEST WALL	26	8.68	4.73			-1.66	2.54	-39.88	186.75			-25.55	25.02		
WEST WALL	27	-4.59	2.98			6.08	6.03	61.62	188.71			-32.85	24.48		
WEST WALL	28	-3.57	3.15			-1.66	2.54	18.13	187.87			-32.85	24.48		
FLOOR	29	3.57	4.15			-1.66	2.54	547.38	197.82			10.95	27.56	16.15	0.27
FLOOR	30	11.74	5.05			-1.66	2.54	489.38	196.75			-7.30	26.32	15.83	0.27
FLOOR	31	4.59	4.27			2.21	4.63	409.63	195.28			-3.65	26.57	16.08	0.27
FLOOR	32	6.64	4.51			2.21	4.63	242.88	192.16			-14.60	25.81	15.42	0.27
FLOOR	33	11.74	5.05			2.21	4.63	228.38	191.89			-18.25	25.55	15.63	0.27
FLOOR	34	9.70	4.84			-1.66	2.54	213.88	191.61			-14.60	25.81	15.42	0.27
FLOOR	35	1.53	3.89			-1.66	2.54	518.38	197.29			7.30	27.31	16.06	0.27
FLOOR	36	13.78	5.26			2.21	4.63	242.88	192.16			-21.90	25.29	15.19	0.27
CEILING	37	-5.46	2.72			-1.66	2.54	-299.63	177.96			-7.30	26.32		
CEILING	38	-6.45	2.53			2.21	4.63	-234.65	179.27			7.30	27.31		
CEILING	39	-3.47	3.06			-1.66	2.54	-169.67	180.57			-14.60	25.81		
CEILING	40	-6.45	2.53			2.21	4.63	-241.87	179.12			-14.60	25.81		
CEILING	41	-6.45	2.53			-1.66	2.54	-357.39	176.78			-43.80	23.65		
CEILING	42	-1.49	3.37			-1.66	2.54	-285.19	178.25			-18.25	25.55		
CEILING	43	-3.47	3.06			-1.66	2.54	-263.53	178.69			-18.25	25.55		
CEILING	44	-4.47	2.89			-1.66	2.54	-256.31	178.83			-3.65	26.57		

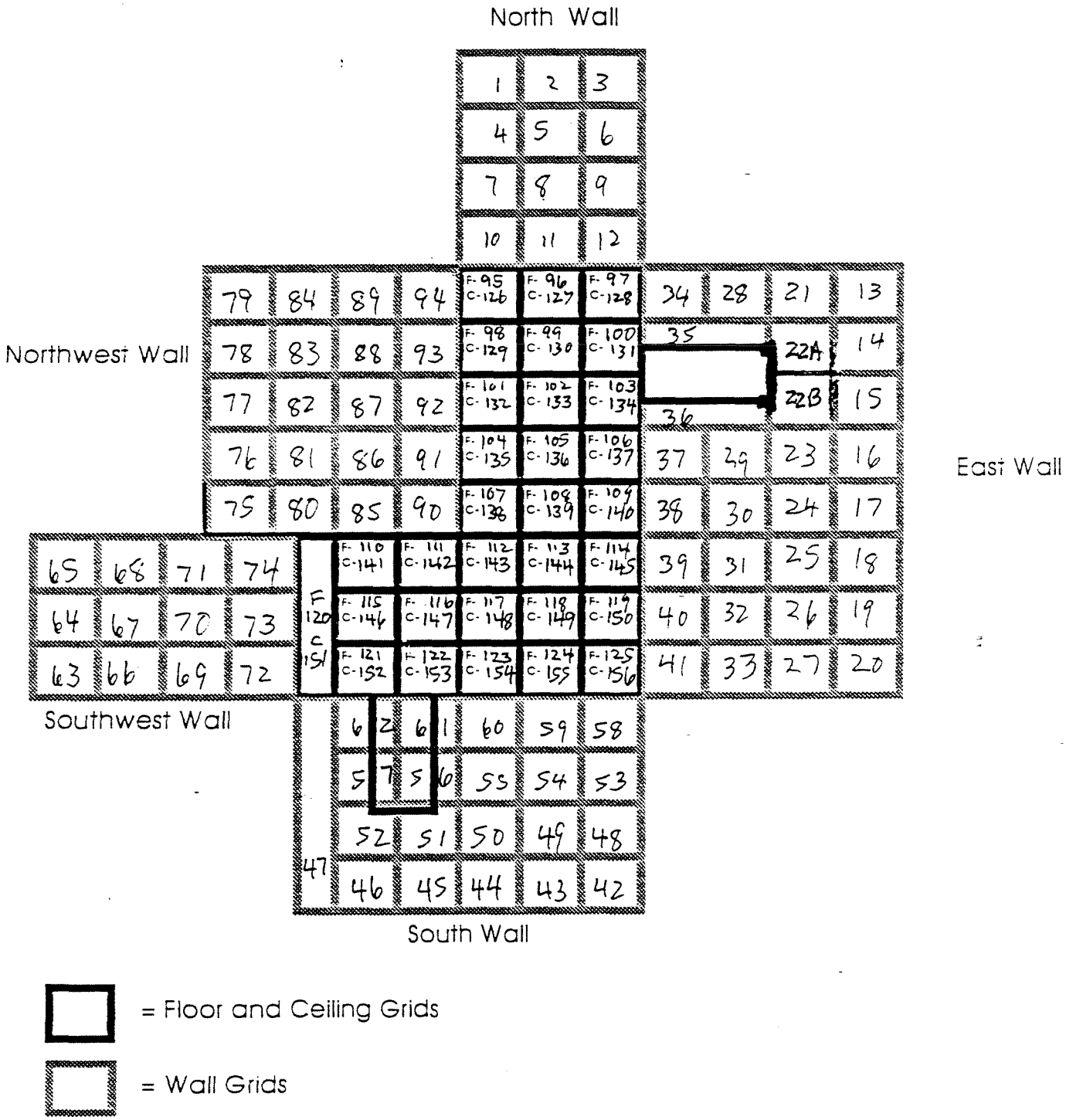
Lot 1 Survey Data, Room 109 Fuel Storage Area

SAMPLE NAME	GRID NAME	ALPHA (DPM/100CM2)						BETA (DPM/100CM2)						GAMMA (uR/hr)	
		TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV	MAX	STD DEV	REM	STD DEV	TOTAL	STD DEV
SOUTH LEDGE	45	-0.50	3.51			2.21	4.63	191.33	187.65			-3.65	26.57		
NORTH LEDGE	46	7.44	4.49			-1.66	2.54	220.21	188.21			-25.55	25.02		
NORTH LEDGE	47	-2.48	3.22			-1.66	2.54	18.05	184.29			-21.90	25.29		
DOOR JAMB	48	0.50	3.65			2.21	4.63	25.27	184.43			21.90	28.27		
DOOR JAMB	49	-2.48	3.22			-1.66	2.54	-3.61	183.86			29.20	28.74	16.13	0.27
DOOR JAMB	50	4.47	4.15			-1.66	2.54	-292.41	178.10			-21.90	25.29		
DOOR JAMB	51	-1.49	3.37			2.21	4.63	191.33	187.65			10.95	27.56		

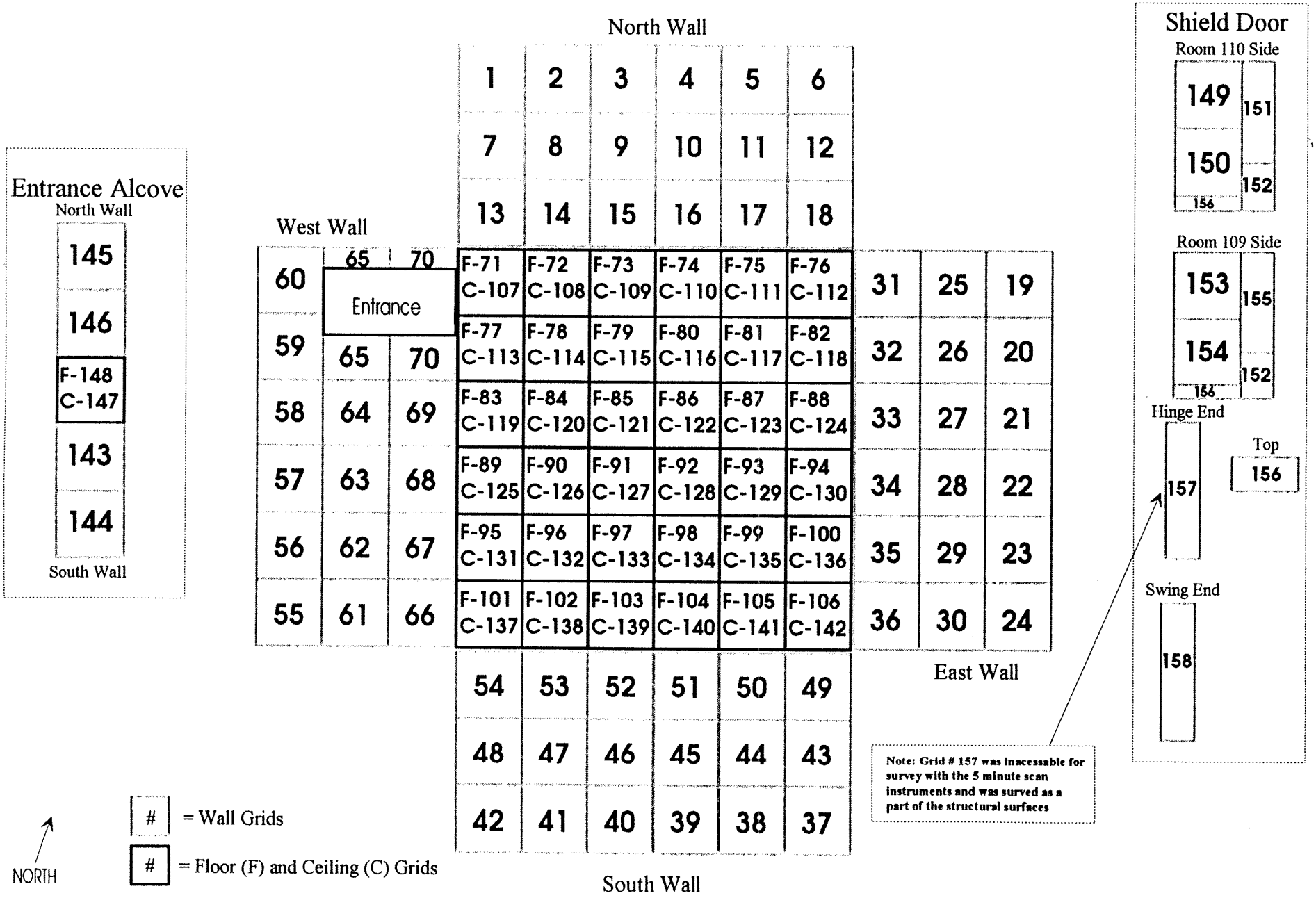
Appendix C.

Grid Locations for T012 Survey

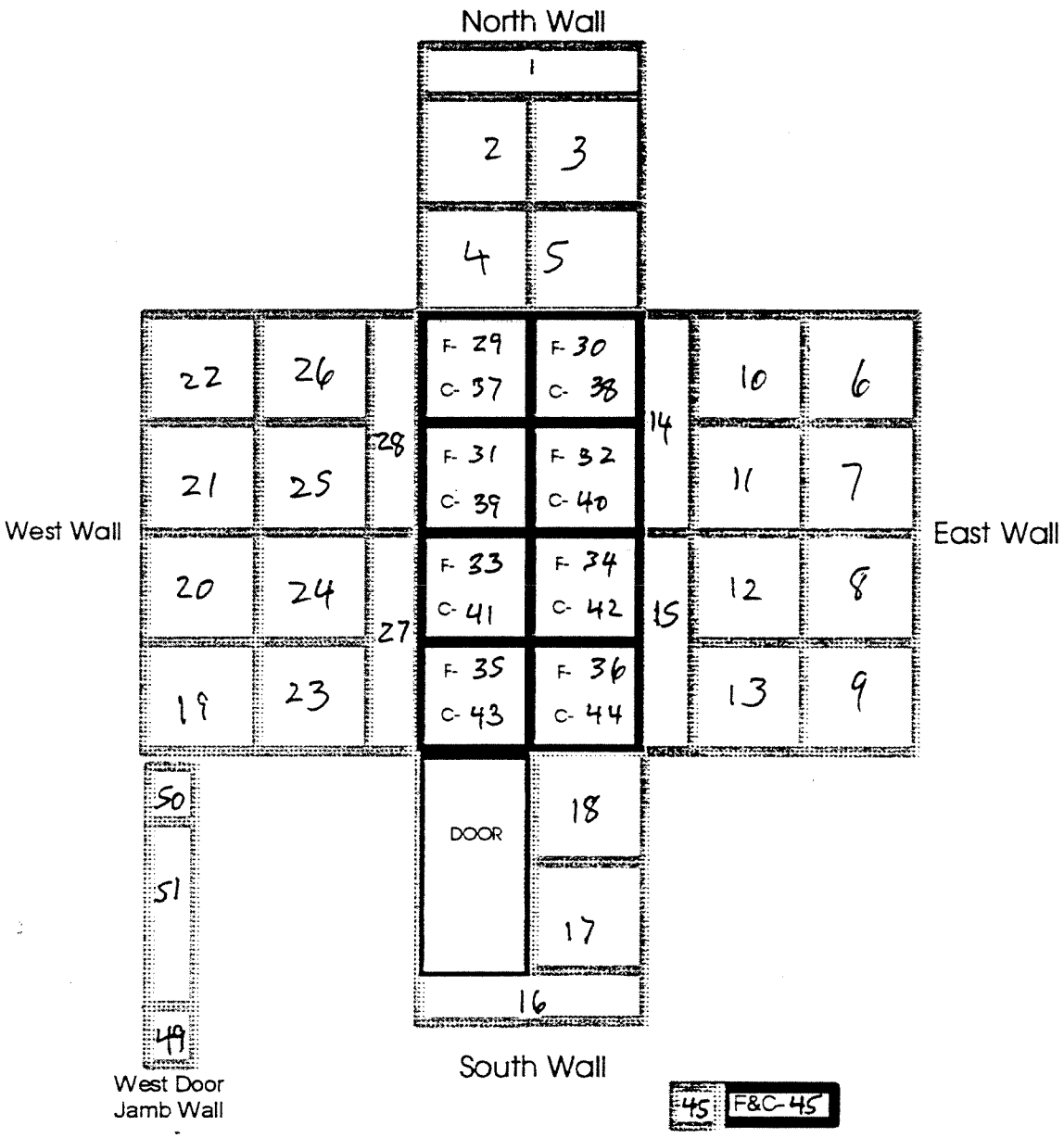
T012 ROOM 109 MAIN ROOM GRID MAP



T012 ROOM 110 GRID LOCATION DIAGRAM



T012 ROOM 109 (FUEL STORAGE) GRID MAP

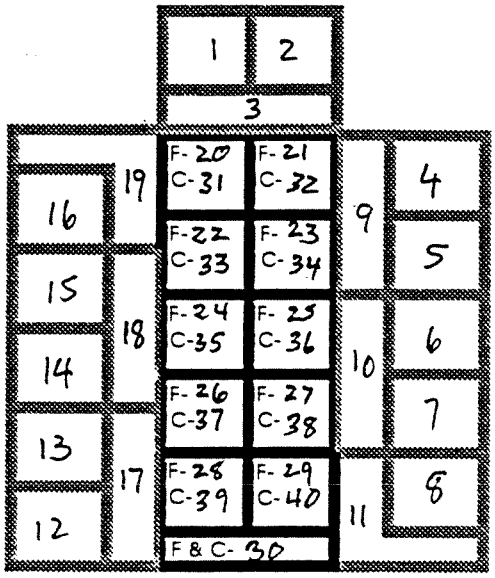


T012 ATTIC ABOVE FUEL STORAGE 109B GRID MAP

North Wall

West Wall

East Wall



= Floor and Ceiling Grids

= Wall Grids

T012 ROOM 109 WALL TO FUEL STORAGE