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Revised Methodology for Determining Cesium-137 Content of HN-200 Grout Containers

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Abstract:

This paper examines the accuracy of the current method of determining the cesium-137 content of the HN-200 grout containers filled with 324 Building B-Cell equipment dunnage and sifted debris.

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PURPOSE.

The purpose of this technical paper is to examine the accuracy of the existing method of determining the Cs-137 content of HN-200 grout containers and compare that accuracy to the accuracy attainable by other methods of measurement.

The methods of measurement to be compared include:

- Contact measurements on a grouted container (existing method)
- Measurements at 5 feet from the surface of a grouted container.
- Measurements at 10 feet from a grouted container.
- Measurements on contact with the surface of an ungrouted container.
- Measurements at 5 feet from the surface of an ungrouted container.
- Measurements at 10 feet from the surface of an ungrouted container.

Once the most accurate and useable method is determined, the precepts for an operating procedure will be provided for determining the Cs-137 content of newly generated and future HN-200 grout containers as well as the grouted legacy containers currently stored in B Cell.

BACKGROUND.

HN-200 grout containers are used to dispose of waste from the cleanup of B Cell in the 324 Building. The waste stream placed in the HN-200 grout containers consists of equipment dunnage and sifted debris generated during the dismantling of equipment racks and process equipment in B Cell. This equipment dunnage and sifted debris is coated with a strongly adherent film of contamination consisting primarily of Cs-137 and Sr-90 along with several other isotopes including transuranic isotopes.

Radioisotopic analysis of the film on the equipment dunnage and sifted debris is conducted to determine the amounts of each isotope present and the ratios between the isotopes. Since analysis of these isotopes has determined that greater than 99% of the gamma energy emitted by this waste is generated by the Cs-137 (and its daughter products) in the waste, Cs-137 is used as the target isotope for measurement and characterization of the waste in a given container. The characterization of the waste, including the transuranic (TRU) content of the waste, is dependent on obtaining as accurate a Cs-137 measurement as possible.

Obtaining an accurate Cs-137 measurement is the subject of this paper. Once an accurate Cs-137 measurement has been obtained, the ratios of the Cs-137 to the other isotopes present can be used to determine the characterization of the waste in the container. The process for characterizing the waste once an accurate Cs-137 measurement has been attained will be the subject of a separate technical paper.

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The existing method for characterizing these waste containers consists of:

- Fill the container with equipment dunnage and sifted debris.
- Conduct a pre-grout gamma radiation profile of the container. For this profile, four sets of six readings are obtained using an RO-7 radiation survey instrument in contact with the container. The four sets of readings are taken at the 0^0 , 90^0 , 180^0 , and 270^0 positions around the circumference of the container with six readings, evenly spaced vertically, being taken along the vertical axis of the container at each of these four positions. If all 24 readings are less than a preset maximum value and the average of the 24 readings is less than a preset maximum average value, the waste is grouted. If any reading exceeds the preset maximum or the average exceeds the preset maximum, the container is repackaged to produce a more homogeneous profile with all readings below the preset maximum values and the waste is grouted.
- Once the grouting operation is completed, a post-grout gamma radiation profile is conducted on the container. The post-grout gamma radiation profile is conducted in the identical manner as the pre-grout profile with six vertically evenly spaced readings taken at four positions around the circumference of the container (0^0 , 90^0 , 180^0 , and 270^0). The post-grout gamma radiation profile is considered the official profile for the container and is used to characterize the container for waste purposes. The average of the 24 readings taken on contact with the surface of the grouted container is used to calculate the Cs-137 content of the container by using a conversion factor determined assuming the container to be filled with a homogeneous mixture of grout and Cs-137 activity. Once this Cs-137 activity determination is made, all other isotopes in the container are determined by ratio to this Cs-137 value.

The reason for performing this analysis is that questions have been raised regarding optimization of the current method for determining the Cs-137 content of HN-200 grout containers from two perspectives.

1. Can an accurate determination of Cs-137 content be made in a container that is approximately 4 feet in diameter and approximately 4.5 feet tall using contact readings?
2. Can an accurate determination of Cs-137 content be made for a container under the following conditions?
 - Approximately 10% of the volume of the container is filled with material coated with activity.
 - Approximately 90% of the volume of the container is filled with essentially uncontaminated grout.

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- The assumption used to model the container is that the container is filled with a homogeneous mixture of activity and grout.

ASSUMPTIONS AND CONSTRAINTS OF THIS ANALYSIS.

1. The HN-200 grout container being measured is filled with equipment dunnage and sifted debris as defined by HNF-2570, Rev 1, Dated 06/25/98, "324 Facility Special Case Waste Analysis in support of 324 Closure (TPA Milestone M-89-05)". Use of this methodology and modeling with any other waste matrix may result in substantial error if the matrix is substantially different and should be preceded by a specific analysis of that waste matrix.
2. An HN-200 grout container filled with B Cell equipment dunnage and sifted debris can be simulated using a series of 35 randomly generated point sources in a mathematically constructed (computer generated) simulation to accurately assess the effects of geometry (i.e., the placement of the measuring device with respect to the actual position of the source) and the effects of distributed shielding (i.e., the grout) in the container. Thirty-five sources were used to attempt to make the container appear homogeneous. Statistically, seven sources should make the container start to appear homogeneous.
3. Errors that are common to all methods of measurement need not be included in the initial analysis of the effects of geometry and distributed shielding. Errors that are common to all methods of measurement will be examined after the proper measurement technique(s) are determined and these errors will be propagated through the measurement process using standard statistical techniques.
4. The errors common to all measurement techniques include:
 - The measurement error of the instrument used to conduct the measurements.
 - The measurement error caused by measurement probe placement error.
 - The error caused by the shielding effects of the waste matrix of the equipment dunnage and sifted debris loaded into the container. This assumption is true because the only change made in the analysis between the grouted case and the ungrouted case is to remove the grout. The positions and shielding characteristics of the equipment dunnage and sifted debris are maintained constant throughout the analysis.
 - The error caused by background radiation levels. For the comparison analysis conducted in this technical paper, the assumption will be that the measurements are being taken in a background radiation free environment.
 - The error caused by Compton Scatter of the gamma radiation during the measuring process.
 - The error caused by errors in weighing the waste matrix.

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5. Using different combinations of one source set to obtain multiple source sets for analysis is equivalent to providing multiple sets of random sources. In this analysis, one set of 35 random sources is generated and different combinations of these 35 random sources varying from a single source per container to 35 sources per container are analyzed. Source sets per container analyzed include single sources, 2 sources, 3 sources, 5 sources, 7 sources, 10 sources, 11 sources, 12 sources, 17 sources, 18 sources, 20 sources, 25 sources, 30 sources, and 35 sources. Each multiple source set is a different combination of the same set of 35 random sources. The individualism of the multiple source sets is obtained by randomly varying the source numbers used to comprise the source sets. In addition, individual source strength was restricted to be between 10 and 30 curies per source to prevent a single source from dominating the gamma radiation profile of the container and causing a multiple source container to appear to be a single source container.
6. Standard statistical analysis techniques using linear regression analysis and data correlation analysis provides an accurate and usable basis for using the gamma radiation profile of the container to determine the 95% assurance bounding value of the Cesium-137 (Cs-137) content of an HN-200 grout container. Waste Management Hanford has imposed the criteria that the TRU content of these containers must be known with 85% assurance to be less than 100 nanoCuries/gm for the containers to be accepted as low level waste. Use of the 95% bounding value (i.e., the value for which the measurement has 95% assurance that the actual content of the container is equal to or less than the calculated 95% bounding value) is necessary so that after chemical analysis errors and statistical assurance calculations for the isotopic results are propagated through the process in follow on technical papers, the requirement that the TRU characterization of the container be known with 85% assurance (85% assurance that the TRU content of the container is less than 100 nanoCuries/gm) can be met.

ANALYSIS METHOD.

The method of the analysis for this technical paper consists of:

1. Mathematically constructing an HN-200 grout container in an Excel¹ spread sheet, placing 35 randomly generated point sources inside the container using the random number generator included in the spread sheet, designating the X,Z,Y coordinates of contact and remote (10 Feet) measuring points to the intended measuring positions, and calculating Microshield² version 5.03 input data sheets for the entry of the data into Microshield². Attachment 1 contains these calculations and ends with the Microshield² data sheets. Attachment 3 provides the same calculations for the remote measurement at 5 feet cases but the intermediate calculations are not shown, only the initial input data and the calculated Microshield² input data sheets are displayed. The calculations consist of:

- Calculating the straight-line distance from the random source to the measuring point.

¹Excel is a trademark of the
Microsoft Corp.

²Microshield is a trademark of
Grove Engineering, Inc.

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- Calculating the distance of travel from the source to the point where the inner wall of the container is encountered along the line of travel to the measuring point. This produces the travel distance inside the container and the shield thickness for the grout during the grouted case analysis.
 - Calculating the distance from the point where the inner wall of the container is encountered to the point where the outer wall of the container is penetrated along the line of travel to the measuring point. This produces the effective shielding distance for the wall of the container along the path of travel from the source to the measuring point.
 - Calculating the distance from the exit point of the outer wall of the container to the measuring point along the line of travel to the measuring point. This produces the air gap distance from the outer wall of the container to the measuring point. Since Microshield® also automatically calculates the air gap distance after Shield 1, Shield 2, and Total Distance are entered, the Air Gap distance serves as a check number to ensure the data from the input data sheet has been entered correctly.
2. Calculating the radiation level produced by each source in the container at each measuring point. Manually entering the data calculated in Attachment 1 into Microshield® and manually entering the output of Microshield® into Attachment 2 accomplish this calculation. The Microshield® version 5.03 files used to accomplish this calculation can be provided on request, however, approximately 4100 files are included in this group.
 3. Calculating the Conversion Factors for converting the gamma radiation profile exhibited by the container to curies of Cs-137. This is accomplished by generating Microshield® calculations for a HN-200 grout container filled with a homogeneous mixture of 1 curie of Cs-137 and grout to obtain the grouted container conversion factor. This model was used because the current method for determining the Cs-137 content of the container assumes this model for the container. The ungrouted container conversion factors were obtained by removing the grout from the above model and using a homogeneous mixture of 1 curie of Cs-137 and air to simulate a material in the container with little or no shielding value. Using air as the internal source mixture was necessary to obtain a direct correlation with the grouted case since the distributed shielding effect of the waste matrix is common to both measurements and is not being considered in this comparison analysis. Conversion factors are calculated for the contact measurement method, the measurement at 5 feet from the surface of the container method, and the measurement at 10 feet from the surface of the container method. The Microshield® files used to calculate these conversion factors are available on request.
 4. Calculate the total radiation level measured at each measuring point as the contribution from each set of sources to be analyzed by summing the contributions of the sources included in each source set to be analyzed. Then using the conversion factors calculated for the homogeneous containers (grouted and ungrouted) calculate the estimated Cs-137 content that would have been attained using the current method. In addition to the current method of

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contact readings on a grouted container, the following other methods of calculating the curie content of the Cs-137 in the container are analyzed:

- Measurements taken at 5 feet from the surface of a grouted container.
- Measurements taken at 10 feet from the surface of a grouted container.
- Measurements taken on contact with the surface of an ungrouted container.
- Measurements taken at 5 feet from the surface of an ungrouted container.
- Measurements taken at 10 feet from the surface of an ungrouted container.

Attachment 2 displays these calculations and results for the contact measurement cases and the measurement at 10 feet cases. Attachment 4 displays these calculations for the measurement at 5 feet case.

5. Conduct linear regression analysis on each method of measurement for each of five source combinations with respect to the homogeneity of the container. These combinations are:
 - Heterogeneous Cases – Cases in which the container is filled in a manner resulting in a single dominating source that drives the gamma radiation profile.
 - Mostly Heterogeneous Cases – Cases in which the container is filled in a manner resulting in between 2 and 5 sources per container dominating the gamma radiation profile of the container.
 - Slightly Homogeneous Cases – Cases in which the container is filled in a manner resulting in between 7 and 10 sources per container dominating the gamma radiation profile of the container.
 - Homogeneous Cases – Cases in which the container is filled in a manner resulting in between 11 and 35 sources per container dominating the gamma radiation profile of the container.
 - All Data Analysis – In this case, all available data for all cases from 1 source per container to 35 sources per container was analyzed for the contact measurement on a grouted container method (the current method) and the contact method on an ungrouted container. As will be discussed later, the data correlation and state of homogeneity for this case made the use of all data necessary to arrive at a reasonably accurate, useable method of estimation for this case.

Figures 1 through 26 of Attachment 5 show the results of the linear regression analysis for all cases analyzed. Summary regression statistics are available on request. These statistics are included on separate sheets of Attachment 5 but are not printed in this analysis.

6. Conduct modeling to arrive at a Microshield® model that is representative of the shielding effect of the equipment dunnage and sifted debris waste matrix being placed into HN-200 grout containers. After lengthy discussions of this area with Fluor Daniel Hanford Project

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Direction and Dr. Joseph Alvarez, Auxier and Associates, a model consisting of 8 cylindrical tubes evenly spaced concentrically in the container from the center of the container outward with the wall thickness of the tubes varied to account for the varying net weight of the waste was considered the most representative model. The surfaces of the 8 cylinders are evenly coated with contamination totaling 1 curie of Cs-137. The modeling is conducted to determine conversion factors for these container models on contact with the surface of the container, at 5 feet from the surface of the container, and at 10 feet from the surface of the container. The modeling is conducted assuming 2500 lb., 2200 lb., and 1900 lb. net weight of the waste. Curves are then plotted for the variance of the conversion factors with net weight of the waste over the 1900 to 2500 lb. ranges for all three methods of measurement and for both the grouted and ungrouted cases. Attachment 6 presents the calculations and the curves derived from this analysis. Microshield® files used to calculate the conversion factors are available on request.

7. Analyze the results of the regression analyses shown in Attachment 5 and determine the most effective, useable ways to conduct the measurement of Cs-137 for HN-200 grout containers in both the grouted and ungrouted condition. Attachment 7 provides the summary results of the correlation analysis performed for each homogeneity condition and each measurement mode. Attachment 7 also provides recommended data sheets for use in determining the curie content of Cs-137 in HN-200 grout containers in both the grouted and ungrouted condition and for all three measurement modes (contact, 5 feet from the surface, and 10 feet from the surface). The reasons for the choices of measurement methods and homogeneity selections are present in the analysis section below.

ANALYSIS.

Attachments 5 and 7 provide the summary of the results for all calculations and the data correlation analysis for the relationship between the calculated (estimated) result and the actual curie content of the container being measured.

Attachment 5 Tables 1 and 2 provide the summary of the estimated (calculated) results for each source combination in each grout condition and each measurement mode. Attachment 5 provides the linear regression analysis in Figures 1 through 26. Figures 1 through 24 provide the linear regression analysis for each homogeneity condition while Figures 25 and 26 provide an analysis of the contact measurement mode for all source combinations regardless of homogeneity condition. These analyses provide best-fit lines describing the relationship between the estimated (calculated) curie content for each homogeneity condition and each measurement mode. The analyses also provide equations for the best-fit lines and the R^2 value for the data described by the equation. The R^2 value is a statistical function that provides an indicator of the percentage of the data analyzed that can be explained by the best-fit line plotted and the equation presented on the graph. An R^2 value of 1 is considered a perfect fit and the equation is expected to produce a reliable value. The data correlation coefficient is a second indicator of the

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reliability of the results attainable from the linear regression equations. By limiting the Cs-137 values used to those attained from a linear regression analysis with a data correlation coefficient of 0.9 or greater and by using the 95% assurance value from the linear regression, reliable values for the amount of Cs-137 can be attained.

CONCLUSIONS.

When combined with the correlation analysis conducted in Attachment 7, the linear regression analyses conducted in Attachment 5 leads to the following conclusions:

1. Contact Measurement of Grouted Containers.

The method of estimating the Cs-137 content of a grouted HN-200 grout container by taking contact radiation level measurements on the container results in answers that are subject to large errors, especially when the container does not exhibit a homogeneous character. In the worst case, the heterogeneous case when the container is primarily dominated by a single strong source, Figure 1 demonstrates there is no consistent relationship between the calculated curie content and the actual curie content of the container. The equation defining the best-fit line through the heterogeneous data describes only 0.06% of the data, the data correlation coefficient is only 0.024 indicating the estimated (calculated), and actual data do not correlate. Further, an examination of the estimated (calculated) curie content of heterogeneous containers compared to the actual content of the container, Attachments 2 and 4, indicates that 33 of 35 individual source calculations (94%) underestimated the curie content of the container by an average of 70% (i.e., the answer was only 30% of the actual answer), although 2 of the 35 sources did show as having been overestimated. Additionally, when the multiple source containers are examined, the results indicate that 100% (39 of 39 cases) are underestimated by an average of 73%, a factor of 3.5. When the data correlation is examined, it is clear that the best-fit line answer has a high probability of being unreliable and may not bound the content of the container. By using the statistical equation for the upper limit of the linear regression to produce a 95% probability that the bounding value is equal to or greater than the actual curie content of the container, a result of 10 times the original estimated (calculated) value is not uncommon in the lower curie content cases. This lack of data correlation remains a problem throughout all homogeneity conditions making the task of providing a reasonable estimate for the curie content of a grouted container extremely difficult. However, by taking all the data available from all multiple and single source analyses, a reasonable regression analysis with reasonable data correlation is possible. Attachment 5, Figure 25 displays this "all data" correlation and best-fit equation. By using this best-fit equation and the statistical calculation for a 95% assurance bounding value, a reasonably accurate estimate of the bounding value for the Cs-137 content of a grouted HN-200 grout container is possible. Accordingly, the data sheets provided in Attachment 7 for calculating the content of HN-200 grout container using the contact method use the "All

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Data analysis and are provided as Attachment 7 Tables 4 and 7. These data sheets correspond to the regression analyses conducted in Attachment 5 Figures 25 and 26.

2. Remote Measurement of HN-200 Grout Containers.

In general, the further away from the surface of the container the gamma radiation profile is measured, the more accurate the answer for curie content will be. However, the data correlation for the grouted container cases is always lower, generally by a substantial margin, than the data correlation for ungrouted containers at the same distance under the same homogeneity conditions. Balancing the accuracy attainable by moving away from the container with the other errors introduced by moving away from the container is the key to success in this operation. The errors present and the precepts of the procedures for performing this operation will be discussed in the next section. For the reasons discussed above, the following data sheets have been provided in Attachment 7:

- Remote measurement at 10 feet of an ungrouted container using the heterogeneous case model, Attachment 5 Figure 6.
- Remote measurement at 5 feet of an ungrouted container using the heterogeneous case model, Attachment 5 Figure 4.
- Contact measurement of an ungrouted container using the all data model, Attachment 5 Figure 26.
- Remote measurement at 10 feet of a grouted container using the homogeneous case model, Attachment 5 Figure 23.
- Remote measurement at 5 feet of a grouted container using the homogeneous case model, Attachment 5 Figure 21.
- Contact measurement of a grouted container using the all data model, Attachment 5 Figure 25.

ERROR ANALYSIS.

1. Geometric Errors. Geometric errors are errors caused by the assumption that the source is a homogeneous mixture of activity rather than the discrete sources of activity that exist within the container. These sources of error have been accounted for and compensated for by calculating a 95% assurance bounding value for the Cs-137 content of the container. Since the analyses presented in Attachments 1 through 5 contained only two sources of error, geometric error and distributed shielding error, by using only linear regression equations with a data correlation coefficient of 0.9 or better and by using the 95% upper bound as the calculated Cs-137 content, geometric errors are compensated for (bounded) by the calculated result and need not be further considered here. Geometric errors are also referred to as non-homogeneity errors; accordingly, non-homogeneity errors are accounted for in the linear regression and data correlation analyses.

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2. Shielding Effects Errors. Shielding effects errors are errors caused by two sources. The shielding of the grout in the container which is compensated for by using linear regressions with a data correlation coefficient of 0.9 or better and using the 95% assurance bounding value calculated, as explained in item 1 above, and the shielding effect of the waste matrix (equipment dunnage and sifted debris). The effect of the equipment dunnage and sifted debris was accounted for in the construction of the model used to calculate the conversion factors in Attachment 6. The 8 concentric cylinders evenly spaced through the container and evenly contaminated with Cs-137 is the model chosen to best represent this waste matrix. Accordingly, no shielding effect errors need be reconsidered in this section.
3. Instrument Error. Instrument error is the error introduced by the radiation level measurement instrument used to conduct the measurements. The RO-7 radiation survey instrument is the instrument that will be used for these measurements. The normal instrument error associated with the RO-7 radiation survey instrument is $\pm 20\%$. By using a special source check procedure and calculating a correction factor and performing this check on the same day when the measurements are taken, the instrument error can be reduced to as little as 3% depending on the calibration accuracy of the source used for the special source check. For purposes of this analysis, a 4% error will be assumed.
4. Instrument Readability Error. Instrument readability error is introduced by the smallest graduation on the meter face that can be accurately discerned by the human eye. Since the RO-7 radiation survey instrument is a digital readout instrument with a 3-digit capability, a 1% instrument readability error is assigned for the 1% of the reading that cannot be discerned between the third digits of the readout.
5. Instrument Probe Placement Error. This error is introduced by uncertainties in the exact distance from the center of the active volume of the instrument probe to the surface of the container being measured. This error is introduced by two mechanisms.
 - The container is to be placed on a turntable and turned the prescribed number of degrees for each reading while the measuring probe is maintained in a fixed position. This technique may introduce error if the rotational center of the container is not aligned with the rotational center of the turntable. Techniques for reducing this error will be introduced in the procedure precept section of this paper.
 - The second error associated with probe placement is the actual position of the probe with respect to the desired position. Care must be taken to ensure the center of the active volume of the probe is the correct distance from the surface of the container.

For purposes of this analysis, these two errors will be assumed to combine to cause a 6-inch error in the distance to the surface of the container for remote measurements at 10 feet and remote measurements at 5 feet. For contact measurements, since these measuring operations

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will be conducted remotely using manipulators, a distance error of 2.5" will be assumed for this analysis. This contact measurement error distance may be reduced to 1" if separate correction factors for high, medium, and low range RO-7 probes are developed for contact measurements. The following errors are therefore assigned for probe placement error:

- Measurements conducted at 10 feet from the surface of the container: 8.97%.
 - Measurements conducted at 5 feet from the surface of the container: 15.82%.
 - Measurements conducted on contact with the surface of the container: 20.49%.
6. Background Radiation Level Error. Errors introduced by conducting readings in high background radiation level areas are primarily statistical assurance errors in the reading caused by background fluctuation and by accepting readings too close to the background radiation level to be considered statistically accurate. The errors introduced by these issues will be eliminated by reducing the background in the area where the measurements will be taken by as much as possible and by accepting no raw data readings (reading before subtracting background) that are less than twice the value of the background measured prior to starting the measurement process. Accordingly, no error percentage is assigned to this error.
7. Gamma Scatter (Compton Scatter) during Measurements. Errors are introduced by Compton Scattering of the gamma energy off walls, floors, and ceilings during the measurement process. These errors will always result in the reading at the probe being higher than expected because Microshield® does not account for this scatter in the calculation. This scatter produces gammas of lower energy than the energy of the Cs-137 gamma which results in the RO-7 probe overresponding to this scatter radiation by as much as 60%. Discussions with experts in this field indicate that the scatter gamma from this configuration would not be expected to exceed 7% of the total and would occur in the 125 - 250 Kev range of energies. Accordingly, accounting for the overresponse of the RO-7 to these gamma energies, the total response to this scatter mechanism would be less than 10% of the total radiation level measured. Additionally, since this scatter will always result in the radiation level measurement being higher than expected, the effect of this scatter is to make the curie content calculation more conservative. Therefore, this scatter will not be accounted for in curie content calculations for HN-200 grout containers and no error percentage will be assigned.
8. Waste Matrix Weight Error. Two steps are required to determine the weight of the waste matrix in a HN-200 grout container. The container is weighed while empty and then again after filling. The device used to obtain these weights is a dynamometer with a design (and calibrated) accuracy of 0.5% of full scale. Full scale on the dynamometer is 10,000 lbs. In the worst case, one dynamometer reading 50 lbs low would be used for one step of the operation and a different dynamometer reading 50 lbs high would be used for the second step. This situation would result in an error of 100 lbs in the weight of the waste matrix.

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Using Attachment 6 to establish the conversion factors for the different weights shows that for grouted containers this 100 lb error results in a 1% error in the Cs-137 calculation while for a ungrouted container the 100 lb error results in a 2% error in the Cs-137 calculation. Accordingly, 2% is assigned as the correction factor necessary for weight uncertainty.

By employing the square root of the sum of the squares, the total error for each type of measurement technique can be assigned. The following total errors are assigned for this process:

- Measurements taken at 10 feet from the surface of the container: 10.07%.
- Measurements taken at 5 feet from the surface of the container: 16.47%.
- Measurements taken on contact with the surface of the container: 21.00%.

PROCEDURE PRECEPTS.

The purpose of this section of this technical paper is to provide the concepts and recommendations that should be incorporated into operating procedures for performing these operations. This section of this technical paper does not provide a checklist or a step by step operating procedure for performing these measurements and calculations. Other methods of meeting these principles may be used when adequate technical bases for those methods have been established.

1. The REC airlock should be free of grout containers and other sources of high radiation prior to the start of this procedure.
2. The turntable should be marked on the base with an index mark to allow aligning the turntable at specific points. The turntable should be marked with markers at the 0, 22.5, 45, 67.5, 90, 112.5, 135, 157.5, 180, 202.5, 225, 247.5, 270, 292.5, 315, and 337.5 degree points on the turntable in a manner to allow these markers to be aligned to the base index marker to determine the position of the turntable. The turntable should also be marked in a manner that will align a grout container placed on the turntable as close to the center of rotation of the turntable as possible.
3. Set up the REC airlock with the turntable in a predetermined location designated by the B-Cell Project Manager.
4. Conduct the special source check of the RO-7 and log the calculated correction factor on a datasheet. This special source check should be conducted on a new probe each day measurements are taken and the probe located in the airlock should be replaced by the new probe after the source check is completed. Additionally, the zero adjust of the RO-7 and probe should be conducted in a low background area outside the airlock before the probe is transferred into the airlock.

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5. Position an RO-7 probe at a location determined by the B-Cell Project Manager that will place the probe 10 feet from the surface of a grout container when the container is placed on the center of the turntable. The probe should also be positioned such that a horizontal line drawn from the probe to a grout container placed on the center of the turntable will intersect the y axis of the container at the vertical centerline of the container (i.e., the container is 54 inches tall, the probe should be positioned so that a horizontal line from the probe to the container intersects the container at the 27 inch point along the vertical axis).
6. Measure the radiation background at the RO-7 probe and log the background on a datasheet. This background should be less than 0.2 R/hr for conducting these measurements. If the background is greater than 0.2 R/hr, take action to reduce the background to less than or equal to 0.2 R/hr.
7. Repeat steps 5 and 6 with the RO-7 probe positioned such that the distance from the probe to the surface of a container placed on the turntable would be 5 feet and for taking contact readings on a container. Then return the RO-7 probe to the original 10-foot position.
8. Select a grout container to be measured.
9. Determine the gross and net weights of the waste matrix in the grout container and log the gross and net weights in pounds on a datasheet.
10. Move the grout container to be measured to the turntable and place the container on the center of rotation of the turntable.
11. Using the RO-7 probe placement jig, measure the distance from the RO-7 probe to the surface of the container. If the distance is not 10 feet, check the container placement to ensure it is in the center of the turntable by rotating the container in 45 degree increments and measuring the distance from the RO-7 probe to the surface of the container at each 45 degree increment. If the distances at each 45-degree increment are not equal, the container is not on the center of rotation of the turntable. Adjust the container and repeat this step until the container is on the center of rotation of the turntable within a ± 1 inch tolerance (e.g., the difference between the smallest reading and the largest reading of the 8 reading set is less than or equal to 1 inch). After assuring the container is on the center of rotation of the turntable ± 1 inch, measure the distance from the RO-7 probe to the surface of the container and adjust the position of the RO-7 probe as necessary to obtain a distance of 10 feet from the surface of the container.
12. Position the turntable so that the 0-degree marker for the turntable is aligned with the index marker on the turntable base. Record the RO-7 reading for the 0-degree position on a datasheet in the first reading column. If the reading obtained is less than twice the background recorded for 10 feet, move the RO-7 probe to a distance of 5 feet from the

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container and repeat step 12 with the probe at 5 feet, then continue the procedure with the RO-7 probe at 5 feet from the container. If readings obtained at 5 feet are less than twice background recorded for the probe at 5 feet, report the condition to management for evaluation. It may be necessary to take actions to reduce the background in the area or necessary to measure the container with the probe on contact with the surface of the container. In either case, special attention to the measurement of this container is warranted.

13. Position the turntable so that the 22.5-degree marker for the turntable is aligned with the index marker on the base. Record the RO-7 reading for the 22.5-degree position on a datasheet in the first reading column.
14. Repeat step 13 for the 45, 67.5, 90, 112.5, 135, 157.5, 180, 202.5, 225, 247.5, 270, 292.5, 315, 337.5-degree markers on the turntable until all 16 readings are obtained. If any reading obtained during this process is less than twice background, consult management for evaluation. It may be necessary to adjust the probe to 5 feet from the surface of the container, repeat step 12, and restart the procedure from step 12 with the probe at the 5-foot position.
15. Repeat steps 12 through 14 for the second reading and third reading columns of a datasheet. If any reading obtained during this process is less than twice background, consult management for evaluation. It may be necessary to adjust the probe to 5 feet from the surface of the container, repeat step 12, and restart the procedure from step 12 with the probe at the 5-foot position.
16. Average the 16 first, second, and third reading columns and log the averages of the first 16, the second 16, and the third 16 readings in the space provided under the reading columns on a datasheet.
17. Multiply each of the three readings by the correction factor determined in step 4 and log the corrected value in the corrected average reading block of the datasheet.
18. Subtract the background determined in step six from each of the three averages determined in step 17 and log the result in the above background block on the datasheet.
19. Determine the correction factor to be used for the measurement method used and multiply the corrected "above background" reading determined in step 18 by this correction factor.
20. Determine the conversion factor to be used for the net weight and type of container measured and divide the result of step 19 by this number. This is the measured Cs-137 result.
21. Determine the linear regression equation for the type of container and measurement method used and calculate the predicted value of Cs-137 from the result in step 20.

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22. Determine the equation for the 95% bounding value for the type of container and measurement method used and multiply the result of step 21 by the result of this equation. This produces a 95% Assurance Bounding Value for the Cs-137 which states with 95% assurance that the Cs-137 is equal to or less than this value.

The above calculations (steps 16 through 22) can be done automatically by using the spreadsheets provided in Attachment 7 Tables 2 through 7. The only data necessary from the operators for these spreadsheets to be used is:

- Type of container and measurement method used.
- RO-7 Special Source Check Correction Factor.
- Net weight of the waste in lbs.
- Background reading in the position the container readings were taken.
- The RO-7 digital readout (uncorrected) in each measurement position.

After the above data is provided, all the calculations for the container are performed automatically.

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**TABLE 1
DATA FOR HN-200 GROUT CONTAINER LINER
DRAWING NUMBER H-3-49415**

Outer Height	54.0000	in	137.1600	cm
Inner Height (note 1)	53.5000	in	135.8900	cm
Outer Radius	22.9375	in	58.2613	cm
Inner Radius	22.7993	in	57.9102	cm
Wall Thickness	0.1382	in	0.3510	cm
Volume (inner)	87366.8507	in ³	1431686.17	cm ³
	50.5595201	ft ³	1.43168617	m ³

Note 1 - The top and bottom closure plates for the container are constructed of 0.125" steel. A bottom stiffening plate, constructed of 0.25" steel, is inserted into the container. This yields an internal height of 53.5" for the container.

Note 2 - For purposes of the coordinates and calculations presented in this attachment, the cylinder of interest is placed in an X,Z,Y coordinate frame to match the coordinate frame use in Microshield version 5.03. The circular portion of the cylinder is centered at X=0, Z=0. The bottom of the inner height of the cylinder is placed at Y=0. This placement matches the orientation used in Microshield for a cylindrical source.

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TABLE 2
Coordinates of current contact measuring points.

Point	X	Z	Y
C01	23.9375	0.0000	49.5000
C02	23.9375	0.0000	40.5000
C03	23.9375	0.0000	31.5000
C04	23.9375	0.0000	22.5000
C05	23.9375	0.0000	13.5000
C06	23.9375	0.0000	4.5000
C07	0.0000	23.9375	49.5000
C08	0.0000	23.9375	40.5000
C09	0.0000	23.9375	31.5000
C10	0.0000	23.9375	22.5000
C11	0.0000	23.9375	13.5000
C12	0.0000	23.9375	4.5000
C13	-23.9375	0.0000	49.5000
C14	-23.9375	0.0000	40.5000
C15	-23.9375	0.0000	31.5000
C16	-23.9375	0.0000	22.5000
C17	-23.9375	0.0000	13.5000
C18	-23.9375	0.0000	4.5000
C19	0.0000	-23.9375	49.5000
C20	0.0000	-23.9375	40.5000
C21	0.0000	-23.9375	31.5000
C22	0.0000	-23.9375	22.5000
C23	0.0000	-23.9375	13.5000
C24	0.0000	-23.9375	4.5000

Note 1 - The radiation readings taken for this container are normally taken with an RO-7 radiation survey instrument. The coordinates for the contact readings are set at the center of the active portion of the RO-7 probe when the probe face is on contact with the surface of the container.

Note 2 - The center of the active portion of the RO-7 radiation survey instrument probe is one inch from the face of the probe.

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TABLE 3
Coordinates of Remote Measuring Points.

Point	X	Z	Y
R01	142.9375	0.0000	26.7500
R02	132.0570	54.6998	26.7500
R03	101.0721	101.0721	26.7500
R04	54.6998	132.0570	26.7500
R05	0.0000	142.9375	26.7500
R06	-54.6998	132.0570	26.7500
R07	-101.0721	101.0721	26.7500
R08	-132.0570	54.6998	26.7500
R09	-142.9375	0.0000	26.7500
R10	-132.0570	-54.6998	26.7500
R11	-101.0721	-101.0721	26.7500
R12	-54.6998	-132.0570	26.7500
R13	0.0000	-142.9375	26.7500
R14	54.6998	-132.0570	26.7500
R15	101.0721	-101.0721	26.7500
R16	132.0570	-54.6998	26.7500

Note 1 - Remote Measuring Points (R) are 120 inches (10 feet) from the surface of the container.

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TABLE 4
Coordinates and source strengths for random sources.

Source	X	Z	Y	Validity	Strength
S01	19.3677	0.5818	25.9034	Valid	29.4975
S02	-10.6176	-19.5689	18.8660	Valid	13.8502
S03	1.7704	-7.2590	41.8874	Valid	23.5916
S04	5.5262	-19.2179	28.6756	Valid	20.6982
S05	-12.5171	2.4304	36.3581	Valid	10.9510
S06	10.1481	-6.8169	29.6428	Valid	16.3182
S07	-3.0040	-18.4824	1.5181	Valid	25.9358
S08	-1.4468	-9.3997	20.8621	Valid	25.1678
S09	-11.3240	-1.2877	45.4810	Valid	24.9347
S10	-8.1594	10.5475	46.4380	Valid	26.8139
S11	13.0540	6.4320	29.1917	Valid	12.5933
S12	17.0889	8.7507	21.2880	Valid	17.5307
S13	3.5123	8.3040	41.4473	Valid	17.9331
S14	-18.2417	6.1323	39.9213	Valid	26.2138
S15	21.0026	5.4076	10.7056	Valid	22.7469
S16	12.7799	10.3319	39.3081	Valid	27.6556
S17	-14.4903	3.0983	8.6941	Valid	28.5227
S18	18.7646	-12.0033	10.5209	Valid	23.2528
S19	-18.2584	0.2785	21.1001	Valid	15.3416
S20	2.8644	9.2261	44.4497	Valid	16.4988
S21	3.0621	-7.9137	19.8848	Valid	28.6466
S22	-17.9782	12.8570	50.0431	Valid	20.3724
S23	5.0992	14.6169	52.0038	Valid	13.0146
S24	7.9617	19.2122	33.0332	Valid	12.5419
S25	8.3975	9.5559	39.8544	Valid	19.7625
S26	4.1090	16.2164	34.1935	Valid	24.8512
S27	2.2698	-21.1016	13.9713	Valid	10.2138
S28	18.4153	-5.6775	6.4850	Valid	15.5133
S29	-0.0904	3.6427	38.3454	Valid	18.0653
S30	7.3731	-19.7854	12.4003	Valid	15.0401
S31	5.5574	-17.7939	21.2754	Valid	22.3550
S32	-0.9171	17.9652	26.2433	Valid	21.6866
S33	-2.7939	-22.1819	29.8247	Valid	17.8281
S34	-14.1407	16.9694	5.4489	Valid	14.6776
S35	17.6331	12.8346	30.1155	Valid	28.0146

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Write the equation for the line projection in the XZ plane for the line from each source to each measuring point in the format $Z = Z_0 + SX$.

SOURCE S01		
Line	Z0	Slope
S01C01	3.04767698	-0.1273181
S01C02	3.04767698	-0.1273181
S01C03	3.04767698	-0.1273181
S01C04	3.04767698	-0.1273181
S01C05	3.04767698	-0.1273181
S01C06	3.04767698	-0.1273181
S01C07	23.9375	-1.2059087
S01C08	23.9375	-1.2059087
S01C09	23.9375	-1.2059087
S01C10	23.9375	-1.2059087
S01C11	23.9375	-1.2059087
S01C12	23.9375	-1.2059087
S01C13	0.32160713	0.01343528
S01C14	0.32160713	0.01343528
S01C15	0.32160713	0.01343528
S01C16	0.32160713	0.01343528
S01C17	0.32160713	0.01343528
S01C18	0.32160713	0.01343528
S01C19	-23.9375	1.26598991
S01C20	-23.9375	1.26598991
S01C21	-23.9375	1.26598991
S01C22	-23.9375	1.26598991
S01C23	-23.9375	1.26598991
S01C24	-23.9375	1.26598991
S01R01	0.67300891	-0.0047084
S01R02	-8.7193412	0.48024066
S01R03	-23.239006	1.22992504
S01R04	-71.487849	3.72112603
S01R05	142.9375	-7.3501579
S01R06	34.9608945	-1.7750724
S01R07	16.7414757	-0.8343611
S01R08	7.50368076	-0.357392
S01R09	0.51239007	0.00358471
S01R10	-6.488878	0.36507661
S01R11	-15.764962	0.84402261
S01R12	-34.101535	1.79078288
S01R13	-142.9375	7.41023914
S01R14	73.2893454	-3.7540603
S01R15	24.6784769	-1.2441671
S01R16	10.0829686	-0.4905667

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Line	SOURCE S02	
	Z0	Slope
S02C01	-13.556063	0.56631072
S02C02	-13.556063	0.56631072
S02C03	-13.556063	0.56631072
S02C04	-13.556063	0.56631072
S02C05	-13.556063	0.56631072
S02C06	-13.556063	0.56631072
S02C07	23.9375	4.0975702
S02C08	23.9375	4.0975702
S02C09	23.9375	4.0975702
S02C10	23.9375	4.0975702
S02C11	23.9375	4.0975702
S02C12	23.9375	4.0975702
S02C13	-35.167829	-1.4691521
S02C14	-35.167829	-1.4691521
S02C15	-35.167829	-1.4691521
S02C16	-35.167829	-1.4691521
S02C17	-35.167829	-1.4691521
S02C18	-35.167829	-1.4691521
S02C19	-23.9375	-0.4114451
S02C20	-23.9375	-0.4114451
S02C21	-23.9375	-0.4114451
S02C22	-23.9375	-0.4114451
S02C23	-23.9375	-0.4114451
S02C24	-23.9375	-0.4114451
S02R01	-18.215833	0.12743915
S02R02	-14.041973	0.52054622
S02R03	-8.1003723	1.08014449
S02R04	5.07849196	2.32137061
S02R05	142.9375	15.3053575
S02R06	-56.089498	-3.4396195
S02R07	-33.729872	-1.3337209
S02R08	-26.062354	-0.6115704
S02R09	-21.139185	-0.1478911
S02R10	-16.497392	0.28928726
S02R11	-10.002028	0.90104066
S02R12	7.52489923	2.5517808
S02R13	-142.9375	-11.619232
S02R14	-37.854336	-1.7221757
S02R15	-27.316911	-0.7297285
S02R16	-22.183317	-0.2462307

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SOURCE S03

Line	Z0	Slope
S03C01	-7.8387813	0.32746867
S03C02	-7.8387813	0.32746867
S03C03	-7.8387813	0.32746867
S03C04	-7.8387813	0.32746867
S03C05	-7.8387813	0.32746867
S03C06	-7.8387813	0.32746867
S03C07	23.9375	-17.620682
S03C08	23.9375	-17.620682
S03C09	23.9375	-17.620682
S03C10	23.9375	-17.620682
S03C11	23.9375	-17.620682
S03C12	23.9375	-17.620682
S03C13	-6.7591027	-0.2823646
S03C14	-6.7591027	-0.2823646
S03C15	-6.7591027	-0.2823646
S03C16	-6.7591027	-0.2823646
S03C17	-6.7591027	-0.2823646
S03C18	-6.7591027	-0.2823646
S03C19	-23.9375	9.42048451
S03C20	-23.9375	9.42048451
S03C21	-23.9375	9.42048451
S03C22	-23.9375	9.42048451
S03C23	-23.9375	9.42048451
S03C24	-23.9375	9.42048451
S03R01	-7.3500538	0.05142145
S03R02	-8.1009659	0.47555802
S03R03	-9.1904498	1.09092964
S03R04	-11.919035	2.63211265
S03R05	142.9375	-84.835279
S03R06	-2.891195	-2.4670693
S03R07	-5.3940796	-1.0533686
S03R08	-6.4393406	-0.4629754
S03R09	-7.1702034	-0.0501632
S03R10	-7.886625	0.35449219
S03R11	-8.8740201	0.91220109
S03R12	-11.171667	2.20997761
S03R13	-142.9375	76.6350811
S03R14	-3.0846118	-2.3578219
S03R15	-5.5864216	-0.9447284
S03R16	-6.6143475	-0.3641265

SOURCE S04

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Line	Z0	Slope
S04C01	-24.986185	1.04380929
S04C02	-24.986185	1.04380929
S04C03	-24.986185	1.04380929
S04C04	-24.986185	1.04380929
S04C05	-24.986185	1.04380929
S04C06	-24.986185	1.04380929
S04C07	23.9375	-7.8092893
S04C08	23.9375	-7.8092893
S04C09	23.9375	-7.8092893
S04C10	23.9375	-7.8092893
S04C11	23.9375	-7.8092893
S04C12	23.9375	-7.8092893
S04C13	-15.613435	-0.6522584
S04C14	-15.613435	-0.6522584
S04C15	-15.613435	-0.6522584
S04C16	-15.613435	-0.6522584
S04C17	-15.613435	-0.6522584
S04C18	-15.613435	-0.6522584
S04C19	-23.9375	0.85404208
S04C20	-23.9375	0.85404208
S04C21	-23.9375	0.85404208
S04C22	-23.9375	0.85404208
S04C23	-23.9375	0.85404208
S04C24	-23.9375	0.85404208
S04R01	-19.990795	0.13985689
S04R02	-22.446239	0.58418742
S04R03	-26.175231	1.25897583
S04R04	-36.218297	3.07634209
S04R05	142.9375	-29.34321
S04R06	-5.3373611	-2.5117891
S04R07	-12.981962	-1.1284426
S04R08	-16.248943	-0.5372585
S04R09	-18.502586	-0.1294453
S04R10	-20.643087	0.25789403
S04R11	-23.461328	0.76787533
S04R12	-29.571719	1.87359517
S04R13	-142.9375	22.3879624
S04R14	-6.5369933	-2.2947069
S04R15	-14.483658	-0.8566997
S04R16	-17.668271	-0.2804208

SOURCE S05
Line Z0 Slope

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OF HN-200 GROUT CONTAINERS.**

S05C01	1.59588055	-0.0666686
S05C02	1.59588055	-0.0666686
S05C03	1.59588055	-0.0666686
S05C04	1.59588055	-0.0666686
S05C05	1.59588055	-0.0666686
S05C06	1.59588055	-0.0666686
S05C07	23.9375	1.71822452
S05C08	23.9375	1.71822452
S05C09	23.9375	1.71822452
S05C10	23.9375	1.71822452
S05C11	23.9375	1.71822452
S05C12	23.9375	1.71822452
S05C13	5.09412429	0.21280937
S05C14	5.09412429	0.21280937
S05C15	5.09412429	0.21280937
S05C16	5.09412429	0.21280937
S05C17	5.09412429	0.21280937
S05C18	5.09412429	0.21280937
S05C19	-23.9375	-2.1065546
S05C20	-23.9375	-2.1065546
S05C21	-23.9375	-2.1065546
S05C22	-23.9375	-2.1065546
S05C23	-23.9375	-2.1065546
S05C24	-23.9375	-2.1065546
S05R01	2.23468437	-0.015634
S05R02	6.95580506	0.36154081
S05R03	13.3002919	0.86840788
S05R04	26.5693273	1.9284837
S05R05	142.9375	11.2252473
S05R06	-36.034282	-3.072978
S05R07	-11.512418	-1.113903
S05R08	-3.0427709	-0.4372549
S05R09	2.6636307	0.01863493
S05R10	8.41249392	0.47791707
S05R11	17.0602268	1.16879264
S05R12	42.3373858	3.18820884
S05R13	-142.9375	-11.613577
S05R14	-22.61374	-2.0007982
S05R15	-8.9751748	-0.9112003
S05R16	-2.5158915	-0.395162

	SOURCE S06	
Line	Z0	Slope
S06C01	-11.833666	0.4943568

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

S06C02	-11.833666	0.4943568
S06C03	-11.833666	0.4943568
S06C04	-11.833666	0.4943568
S06C05	-11.833666	0.4943568
S06C06	-11.833666	0.4943568
S06C07	23.9375	-3.030554
S06C08	23.9375	-3.030554
S06C09	23.9375	-3.030554
S06C10	23.9375	-3.030554
S06C11	23.9375	-3.030554
S06C12	23.9375	-3.030554
S06C13	-4.7873314	-0.199993
S06C14	-4.7873314	-0.199993
S06C15	-4.7873314	-0.199993
S06C16	-4.7873314	-0.199993
S06C17	-4.7873314	-0.199993
S06C18	-4.7873314	-0.199993
S06C19	-23.9375	1.6870754
S06C20	-23.9375	1.6870754
S06C21	-23.9375	1.6870754
S06C22	-23.9375	1.6870754
S06C23	-23.9375	1.6870754
S06C24	-23.9375	1.6870754
S06R01	-7.3378445	0.05133604
S06R02	-11.937736	0.50461192
S06R03	-18.858463	1.18658426
S06R04	-38.449949	3.11714026
S06R05	142.9375	-14.756881
S06R06	14.9156139	-2.1415323
S06R07	3.0272722	-0.9700484
S06R08	-2.4268997	-0.4325912
S06R09	-6.3649873	-0.0445299
S06R10	-10.233924	0.3367173
S06R11	-15.417044	0.84746489
S06R12	-26.415817	1.93129012
S06R13	-142.9375	13.4134022
S06R14	21.7106516	-2.8111191
S06R15	3.70302511	-1.0366375
S06R16	-2.8309462	-0.3927763

	SOURCE S07	
Line	Z0	Slope
S07C01	-16.421572	0.68601869
S07C02	-16.421572	0.68601869

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OF HN-200 GROUT CONTAINERS.**

S07C03	-16.421572	0.68601869
S07C04	-16.421572	0.68601869
S07C05	-16.421572	0.68601869
S07C06	-16.421572	0.68601869
S07C07	23.9375	14.1211651
S07C08	23.9375	14.1211651
S07C09	23.9375	14.1211651
S07C10	23.9375	14.1211651
S07C11	23.9375	14.1211651
S07C12	23.9375	14.1211651
S07C13	-21.134616	-0.8829083
S07C14	-21.134616	-0.8829083
S07C15	-21.134616	-0.8829083
S07C16	-21.134616	-0.8829083
S07C17	-21.134616	-0.8829083
S07C18	-21.134616	-0.8829083
S07C19	-23.9375	-1.8159612
S07C20	-23.9375	-1.8159612
S07C21	-23.9375	-1.8159612
S07C22	-23.9375	-1.8159612
S07C23	-23.9375	-1.8159612
S07C24	-23.9375	-1.8159612
S07R01	-18.101935	0.12664231
S07R02	-16.854668	0.54184532
S07R03	-15.031616	1.14872172
S07R04	-10.645463	2.60882971
S07R05	142.9375	53.7351188
S07R06	-27.23006	-2.9120227
S07R07	-22.144523	-1.2190963
S07R08	-20.185843	-0.5670706
S07R09	-18.879133	-0.1320796
S07R10	-17.639327	0.28063998
S07R11	-15.952504	0.84216709
S07R12	-11.882658	2.19697955
S07R13	-142.9375	-41.429915
S07R14	-24.39493	-1.9682352
S07R15	-20.866189	-0.7935514
S07R16	-19.287906	-0.2681561

	SOURCE S08	
Line	Z0	Slope
S08C01	-8.8639963	0.3702975
S08C02	-8.8639963	0.3702975
S08C03	-8.8639963	0.3702975

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

S08C04	-8.8639963	0.3702975
S08C05	-8.8639963	0.3702975
S08C06	-8.8639963	0.3702975
S08C07	23.9375	23.0427577
S08C08	23.9375	23.0427577
S08C09	23.9375	23.0427577
S08C10	23.9375	23.0427577
S08C11	23.9375	23.0427577
S08C12	23.9375	23.0427577
S08C13	-10.004379	-0.4179375
S08C14	-10.004379	-0.4179375
S08C15	-10.004379	-0.4179375
S08C16	-10.004379	-0.4179375
S08C17	-10.004379	-0.4179375
S08C18	-10.004379	-0.4179375
S08C19	-23.9375	-10.048539
S08C20	-23.9375	-10.048539
S08C21	-23.9375	-10.048539
S08C22	-23.9375	-10.048539
S08C23	-23.9375	-10.048539
S08C24	-23.9375	-10.048539
S08R01	-9.3055392	0.06510215
S08R02	-8.7050916	0.48013276
S08R03	-7.840738	1.07757569
S08R04	-5.7547432	2.51941951
S08R05	142.9375	105.295797
S08R06	-13.24276	-2.6563124
S08R07	-11.003993	-1.1088727
S08R08	-10.109749	-0.4907695
S08R09	-9.4958391	-0.0664335
S08R10	-8.8979422	0.346834
S08R11	-8.0684637	0.92017121
S08R12	-6.0674278	2.30329128
S08R13	-142.9375	-92.301578
S08R14	-12.560295	-2.1845913
S08R15	-10.693415	-0.8942001
S08R16	-9.8906344	-0.3393169

	SOURCE S09	
Line	Z0	Slope
S09C01	-0.8741865	0.03651954
S09C02	-0.8741865	0.03651954
S09C03	-0.8741865	0.03651954
S09C04	-0.8741865	0.03651954

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OF HN-200 GROUT CONTAINERS.**

S09C05	-0.8741865	0.03651954
S09C06	-0.8741865	0.03651954
S09C07	23.9375	2.22758955
S09C08	23.9375	2.22758955
S09C09	23.9375	2.22758955
S09C10	23.9375	2.22758955
S09C11	23.9375	2.22758955
S09C12	23.9375	2.22758955
S09C13	-2.4438214	-0.1020918
S09C14	-2.4438214	-0.1020918
S09C15	-2.4438214	-0.1020918
S09C16	-2.4438214	-0.1020918
S09C17	-2.4438214	-0.1020918
S09C18	-2.4438214	-0.1020918
S09C19	-23.9375	-2.0001552
S09C20	-23.9375	-2.0001552
S09C21	-23.9375	-2.0001552
S09C22	-23.9375	-2.0001552
S09C23	-23.9375	-2.0001552
S09C24	-23.9375	-2.0001552
S09R01	-1.1932041	0.00834773
S09R02	3.13407278	0.39048083
S09R03	9.02510763	0.91070624
S09R04	21.58275	2.01964632
S09R05	142.9375	12.7362396
S09R06	-36.099692	-3.0741738
S09R07	-14.20303	-1.1405237
S09R08	-6.5390165	-0.4637302
S09R09	-1.3985303	-0.0097842
S09R10	3.72198586	0.44239825
S09R11	11.3026013	1.11182711
S09R12	32.8518532	3.0147981
S09R13	-142.9375	-12.508805
S09R14	-23.716489	-1.9806382
S09R15	-11.341095	-0.887792
S09R16	-5.5061342	-0.3725184

SOURCE S10

Line	Z0	Slope
S10C01	7.86617835	-0.3286132
S10C02	7.86617835	-0.3286132
S10C03	7.86617835	-0.3286132
S10C04	7.86617835	-0.3286132
S10C05	7.86617835	-0.3286132

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OF HN-200 GROUT CONTAINERS.**

S10C06	7.86617835	-0.3286132
S10C07	23.9375	1.64104785
S10C08	23.9375	1.64104785
S10C09	23.9375	1.64104785
S10C10	23.9375	1.64104785
S10C11	23.9375	1.64104785
S10C12	23.9375	1.64104785
S10C13	16.0019762	0.66848987
S10C14	16.0019762	0.66848987
S10C15	16.0019762	0.66848987
S10C16	16.0019762	0.66848987
S10C17	16.0019762	0.66848987
S10C18	16.0019762	0.66848987
S10C19	-23.9375	-4.2263926
S10C20	-23.9375	-4.2263926
S10C21	-23.9375	-4.2263926
S10C22	-23.9375	-4.2263926
S10C23	-23.9375	-4.2263926
S10C24	-23.9375	-4.2263926
S10R01	9.97789869	-0.069806
S10R02	13.116776	0.31488694
S10R03	17.3095328	0.82874074
S10R04	26.320005	1.93304171
S10R05	142.9375	16.2253906
S10R06	-10.755517	-2.6108417
S10R07	2.59775502	-0.974298
S10R08	7.63976775	-0.3563615
S10R09	11.1860184	0.07825811
S10R10	14.8444206	0.52662275
S10R11	20.3497214	1.20133866
S10R12	35.5488272	3.06410311
S10R13	-142.9375	-18.810735
S10R14	-7.9632799	-2.2686321
S10R15	2.20965805	-1.0218622
S10R16	6.75062534	-0.4653326

SOURCE S11

Line	Z0	Slope
S11C01	14.1466954	-0.5909847
S11C02	14.1466954	-0.5909847
S11C03	14.1466954	-0.5909847
S11C04	14.1466954	-0.5909847
S11C05	14.1466954	-0.5909847
S11C06	14.1466954	-0.5909847

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OF HN-200 GROUT CONTAINERS.**

S11C07	23.9375	-1.3410067
S11C08	23.9375	-1.3410067
S11C09	23.9375	-1.3410067
S11C10	23.9375	-1.3410067
S11C11	23.9375	-1.3410067
S11C12	23.9375	-1.3410067
S11C13	4.16217637	0.17387682
S11C14	4.16217637	0.17387682
S11C15	4.16217637	0.17387682
S11C16	4.16217637	0.17387682
S11C17	4.16217637	0.17387682
S11C18	4.16217637	0.17387682
S11C19	-23.9375	2.32644522
S11C20	-23.9375	2.32644522
S11C21	-23.9375	2.32644522
S11C22	-23.9375	2.32644522
S11C23	-23.9375	2.32644522
S11C24	-23.9375	2.32644522
S11R01	7.0784174	-0.0495211
S11R02	1.13723219	0.40560188
S11R03	-7.6041757	1.07523516
S11R04	-32.945661	3.01651306
S11R05	142.9375	-10.456971
S11R06	30.6359457	-1.8541394
S11R07	17.2571359	-0.8292592
S11R08	10.7740875	-0.3326269
S11R09	5.8937143	0.04123281
S11R10	0.93262396	0.42127584
S11R11	-5.8646076	0.941976
S11R12	-20.250484	2.04400229
S11R13	-142.9375	11.4424093
S11R14	49.841846	-3.3254024
S11R15	22.3759717	-1.2213862
S11R16	13.1378129	-0.5136995

SOURCE S12

Line	Z0	Slope
S12C01	30.5856043	-1.2777276
S12C02	30.5856043	-1.2777276
S12C03	30.5856043	-1.2777276
S12C04	30.5856043	-1.2777276
S12C05	30.5856043	-1.2777276
S12C06	30.5856043	-1.2777276
S12C07	23.9375	-0.8886963

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OF HN-200 GROUT CONTAINERS.**

S12C08	23.9375	-0.8886963
S12C09	23.9375	-0.8886963
S12C10	23.9375	-0.8886963
S12C11	23.9375	-0.8886963
S12C12	23.9375	-0.8886963
S12C13	5.10573009	0.21329421
S12C14	5.10573009	0.21329421
S12C15	5.10573009	0.21329421
S12C16	5.10573009	0.21329421
S12C17	5.10573009	0.21329421
S12C18	5.10573009	0.21329421
S12C19	-23.9375	1.91283514
S12C20	-23.9375	1.91283514
S12C21	-23.9375	1.91283514
S12C22	-23.9375	1.91283514
S12C23	-23.9375	1.91283514
S12C24	-23.9375	1.91283514
S12R01	9.93893408	-0.0695334
S12R02	1.92080858	0.39966826
S12R03	-10.03483	1.09928388
S12R04	-47.274653	3.27847
S12R05	142.9375	-7.852294
S12R06	38.103025	-1.7176292
S12R07	22.1025442	-0.781319
S12R08	14.0154541	-0.3080817
S12R09	7.81621979	0.05468278
S12R10	1.48064293	0.42542571
S12R11	-7.1322831	0.92943371
S12R12	-24.76775	1.96141942
S12R13	-142.9375	8.87643289
S12R14	72.7279337	-3.7437968
S12R15	31.0973742	-1.3076752
S12R16	18.1819693	-0.5518963

SOURCE S13

Line	Z0	Slope
S13C01	9.73196761	-0.4065574
S13C02	9.73196761	-0.4065574
S13C03	9.73196761	-0.4065574
S13C04	9.73196761	-0.4065574
S13C05	9.73196761	-0.4065574
S13C06	9.73196761	-0.4065574
S13C07	23.9375	-4.4511199
S13C08	23.9375	-4.4511199

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OF HN-200 GROUT CONTAINERS.**

S13C09	23.9375	-4.4511199
S13C10	23.9375	-4.4511199
S13C11	23.9375	-4.4511199
S13C12	23.9375	-4.4511199
S13C13	7.24151573	0.30251763
S13C14	7.24151573	0.30251763
S13C15	7.24151573	0.30251763
S13C16	7.24151573	0.30251763
S13C17	7.24151573	0.30251763
S13C18	7.24151573	0.30251763
S13C19	-23.9375	9.17972639
S13C20	-23.9375	9.17972639
S13C21	-23.9375	9.17972639
S13C22	-23.9375	9.17972639
S13C23	-23.9375	9.17972639
S13C24	-23.9375	9.17972639
S13R01	8.51322113	-0.059559
S13R02	7.0363536	0.36093086
S13R03	4.96428918	0.95088368
S13R04	-0.1873258	2.4176382
S13R05	142.9375	-38.332492
S13R06	15.7707338	-2.1258993
S13R07	11.4194628	-0.8870167
S13R08	9.50603084	-0.3422293
S13R09	8.10488178	0.05670228
S13R10	6.67176557	0.46473542
S13R11	4.63085792	1.04581737
S13R12	-0.164721	2.41120222
S13R13	-142.9375	43.0610988
S13R14	17.9349645	-2.7420935
S13R15	12.2416875	-1.1211184
S13R16	10.0255013	-0.4901315

SOURCE S14

Line	Z0	Slope
S14C01	3.48019744	-0.1453868
S14C02	3.48019744	-0.1453868
S14C03	3.48019744	-0.1453868
S14C04	3.48019744	-0.1453868
S14C05	3.48019744	-0.1453868
S14C06	3.48019744	-0.1453868
S14C07	23.9375	0.97606906
S14C08	23.9375	0.97606906
S14C09	23.9375	0.97606906

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S14C10	23.9375	0.97606906
S14C11	23.9375	0.97606906
S14C12	23.9375	0.97606906
S14C13	25.7721479	1.07664326
S14C14	25.7721479	1.07664326
S14C15	25.7721479	1.07664326
S14C16	25.7721479	1.07664326
S14C17	25.7721479	1.07664326
S14C18	25.7721479	1.07664326
S14C19	-23.9375	-1.648407
S14C20	-23.9375	-1.648407
S14C21	-23.9375	-1.648407
S14C22	-23.9375	-1.648407
S14C23	-23.9375	-1.648407
S14C24	-23.9375	-1.648407
S14R01	5.43827156	-0.0380465
S14R02	12.0269356	0.32313974
S14R03	20.6475265	0.79571488
S14R04	37.6244454	1.72637842
S14R05	142.9375	7.49957095
S14R06	-56.873921	-3.45396
S14R07	-14.776291	-1.1461955
S14R08	-1.6518471	-0.4267222
S14R09	7.02940043	0.04917814
S14R10	15.8821687	0.53448109
S14R11	29.7419386	1.29426458
S14R12	75.2751121	3.79036326
S14R13	-142.9375	-8.1719089
S14R14	-28.427055	-1.8945215
S14R15	-10.258035	-0.8985077
S14R16	-1.2508782	-0.4047413

SOURCE S15

Line	Z0	Slope
S15C01	44.1049227	-1.8425033
S15C02	44.1049227	-1.8425033
S15C03	44.1049227	-1.8425033
S15C04	44.1049227	-1.8425033
S15C05	44.1049227	-1.8425033
S15C06	44.1049227	-1.8425033
S15C07	23.9375	-0.882267
S15C08	23.9375	-0.882267
S15C09	23.9375	-0.882267
S15C10	23.9375	-0.882267

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S15C11	23.9375	-0.882267
S15C12	23.9375	-0.882267
S15C13	2.88039592	0.12032986
S15C14	2.88039592	0.12032986
S15C15	2.88039592	0.12032986
S15C16	2.88039592	0.12032986
S15C17	2.88039592	0.12032986
S15C18	2.88039592	0.12032986
S15C19	-23.9375	1.39721668
S15C20	-23.9375	1.39721668
S15C21	-23.9375	1.39721668
S15C22	-23.9375	1.39721668
S15C23	-23.9375	1.39721668
S15C24	-23.9375	1.39721668
S15R01	6.33906339	-0.0443485
S15R02	-3.9144805	0.44385591
S15R03	-19.685545	1.19476735
S15R04	-73.529444	3.75844964
S15R05	142.9375	-6.5482422
S15R06	40.5447291	-1.672991
S15R07	21.8664031	-0.7836554
S15R08	12.1714156	-0.3220457
S15R09	4.71485299	0.03298542
S15R10	-2.8402043	0.39270615
S15R11	-12.911873	0.87225087
S15R12	-32.73001	1.81585655
S15R13	-142.9375	7.06319186
S15R14	91.0855626	-4.0794036
S15R15	33.3376948	-1.3298407
S15R16	16.7751204	-0.541243

SOURCE S16

Line	Z0	Slope
S16C01	22.1660637	-0.9259974
S16C02	22.1660637	-0.9259974
S16C03	22.1660637	-0.9259974
S16C04	22.1660637	-0.9259974
S16C05	22.1660637	-0.9259974
S16C06	22.1660637	-0.9259974
S16C07	23.9375	-1.0646083
S16C08	23.9375	-1.0646083
S16C09	23.9375	-1.0646083
S16C10	23.9375	-1.0646083
S16C11	23.9375	-1.0646083

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S16C12	23.9375	-1.0646083
S16C13	6.735754	0.2813892
S16C14	6.735754	0.2813892
S16C15	6.735754	0.2813892
S16C16	6.735754	0.2813892
S16C17	6.735754	0.2813892
S16C18	6.735754	0.2813892
S16C19	-23.9375	2.68150156
S16C20	-23.9375	2.68150156
S16C21	-23.9375	2.68150156
S16C22	-23.9375	2.68150156
S16C23	-23.9375	2.68150156
S16C24	-23.9375	2.68150156
S16R01	11.3463549	-0.0793798
S16R02	5.57809331	0.37197352
S16R03	-2.8023808	1.02772655
S16R04	-26.777902	2.90375653
S16R05	142.9375	-10.376088
S16R06	33.3852962	-1.8038769
S16R07	20.5175031	-0.7970013
S16R08	14.2467624	-0.3063301
S16R09	9.48393576	0.06635023
S16R10	4.59370884	0.44899936
S16R11	-2.1732446	0.97849808
S16R12	-16.635016	2.11009882
S16R13	-142.9375	11.9929809
S16R14	53.7413467	-3.3966915
S16R15	26.457149	-1.2617651
S16R16	17.2996968	-0.5452153

SOURCE S17

Line	Z0	Slope
S17C01	1.92999286	-0.0806263
S17C02	1.92999286	-0.0806263
S17C03	1.92999286	-0.0806263
S17C04	1.92999286	-0.0806263
S17C05	1.92999286	-0.0806263
S17C06	1.92999286	-0.0806263
S17C07	23.9375	1.43815174
S17C08	23.9375	1.43815174
S17C09	23.9375	1.43815174
S17C10	23.9375	1.43815174
S17C11	23.9375	1.43815174
S17C12	23.9375	1.43815174

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S17C13	7.85048526	0.32795761
S17C14	7.85048526	0.32795761
S17C15	7.85048526	0.32795761
S17C16	7.85048526	0.32795761
S17C17	7.85048526	0.32795761
S17C18	7.85048526	0.32795761
S17C19	-23.9375	-1.865789
S17C20	-23.9375	-1.865789
S17C21	-23.9375	-1.865789
S17C22	-23.9375	-1.865789
S17C23	-23.9375	-1.865789
S17C24	-23.9375	-1.865789
S17R01	2.81311152	-0.0196807
S17R02	8.20053411	0.35211512
S17R03	15.3831467	0.84780027
S17R04	30.105731	1.86383257
S17R05	142.9375	9.65055805
S17R06	-43.374445	-3.2071679
S17R07	-13.298535	-1.1315747
S17R08	-3.2616715	-0.4389125
S17R09	3.44781187	0.02412111
S17R10	10.2219898	0.49161945
S17R11	20.5321712	1.20314381
S17R12	51.804082	3.36127521
S17R13	-142.9375	-10.078195
S17R14	-25.206882	-1.9533914
S17R15	-9.9635502	-0.9014214
S17R16	-2.6166577	-0.394399

SOURCE S18

Line	Z0	Slope
S18C01	-55.544832	2.32041076
S18C02	-55.544832	2.32041076
S18C03	-55.544832	2.32041076
S18C04	-55.544832	2.32041076
S18C05	-55.544832	2.32041076
S18C06	-55.544832	2.32041076
S18C07	23.9375	-1.9153509
S18C08	23.9375	-1.9153509
S18C09	23.9375	-1.9153509
S18C10	23.9375	-1.9153509
S18C11	23.9375	-1.9153509
S18C12	23.9375	-1.9153509
S18C13	-6.7286728	-0.2810934

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S18C14	-6.7286728	-0.2810934
S18C15	-6.7286728	-0.2810934
S18C16	-6.7286728	-0.2810934
S18C17	-6.7286728	-0.2810934
S18C18	-6.7286728	-0.2810934
S18C19	-23.9375	0.63599709
S18C20	-23.9375	0.63599709
S18C21	-23.9375	0.63599709
S18C22	-23.9375	0.63599709
S18C23	-23.9375	0.63599709
S18C24	-23.9375	0.63599709
S18R01	-13.817169	0.09666581
S18R02	-23.051287	0.58876914
S18R03	-37.78237	1.37381602
S18R04	-87.22844	4.00888924
S18R05	142.9375	-8.2570827
S18R06	24.7932197	-1.9609538
S18R07	5.70259696	-0.9435789
S18R08	-3.7043579	-0.4422648
S18R09	-10.610365	-0.0742308
S18R10	-17.315398	0.28309292
S18R11	-25.950089	0.74325171
S18R12	-42.667914	1.63417575
S18R13	-142.9375	6.9777289
S18R14	50.6861876	-3.3408383
S18R15	8.3027703	-1.082147
S18R16	-4.9314614	-0.3768701

SOURCE S19

Line	Z0	Slope
S19C01	0.15798385	-0.0065998
S19C02	0.15798385	-0.0065998
S19C03	0.15798385	-0.0065998
S19C04	0.15798385	-0.0065998
S19C05	0.15798385	-0.0065998
S19C06	0.15798385	-0.0065998
S19C07	23.9375	1.29578803
S19C08	23.9375	1.29578803
S19C09	23.9375	1.29578803
S19C10	23.9375	1.29578803
S19C11	23.9375	1.29578803
S19C12	23.9375	1.29578803
S19C13	1.17382469	0.04903706
S19C14	1.17382469	0.04903706

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S19C15	1.17382469	0.04903706
S19C16	1.17382469	0.04903706
S19C17	1.17382469	0.04903706
S19C18	1.17382469	0.04903706
S19C19	-23.9375	-1.3262931
S19C20	-23.9375	-1.3262931
S19C21	-23.9375	-1.3262931
S19C22	-23.9375	-1.3262931
S19C23	-23.9375	-1.3262931
S19C24	-23.9375	-1.3262931
S19R01	0.24694277	-0.0017276
S19R02	6.88889375	0.3620475
S19R03	15.7006119	0.84465929
S19R04	33.2571593	1.80621941
S19R05	142.9375	7.81333685
S19R06	-65.747089	-3.6161757
S19R07	-21.944043	-1.2171128
S19R08	-8.4531322	-0.4782248
S19R09	0.31926892	0.00223363
S19R10	9.0994686	0.48311917
S19R11	22.6238145	1.22383837
S19R12	66.5831246	3.6314598
S19R13	-142.9375	-7.8438419
S19R14	-32.839573	-1.8138536
S19R15	-15.22886	-0.8493268
S19R16	-6.3995748	-0.3657529

SOURCE S20

Line	Z0	Slope
S20C01	10.4801379	-0.4378125
S20C02	10.4801379	-0.4378125
S20C03	10.4801379	-0.4378125
S20C04	10.4801379	-0.4378125
S20C05	10.4801379	-0.4378125
S20C06	10.4801379	-0.4378125
S20C07	23.9375	-5.1360239
S20C08	23.9375	-5.1360239
S20C09	23.9375	-5.1360239
S20C10	23.9375	-5.1360239
S20C11	23.9375	-5.1360239
S20C12	23.9375	-5.1360239
S20C13	8.24007883	0.34423306
S20C14	8.24007883	0.34423306
S20C15	8.24007883	0.34423306

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S20C16	8.24007883	0.34423306
S20C17	8.24007883	0.34423306
S20C18	8.24007883	0.34423306
S20C19	-23.9375	11.5780146
S20C20	-23.9375	11.5780146
S20C21	-23.9375	11.5780146
S20C22	-23.9375	11.5780146
S20C23	-23.9375	11.5780146
S20C24	-23.9375	11.5780146
S20R01	9.41475018	-0.0658662
S20R02	8.21787798	0.35198378
S20R03	6.54727532	0.93522173
S20R04	2.43861027	2.36963188
S20R05	142.9375	-46.681101
S20R06	15.3380797	-2.1338089
S20R07	11.7572469	-0.8836747
S20R08	10.1914854	-0.3370387
S20R09	9.04483417	0.06327825
S20R10	7.86894954	0.47380108
S20R11	6.18640591	1.06120785
S20R12	2.19592265	2.45435857
S20R13	-142.9375	53.1230918
S20R14	17.0332041	-2.7256078
S20R15	12.4430782	-1.1231109
S20R16	10.6434007	-0.4948106

SOURCE S21

Line	Z0	Slope
S21C01	-9.0745578	0.3790938
S21C02	-9.0745578	0.3790938
S21C03	-9.0745578	0.3790938
S21C04	-9.0745578	0.3790938
S21C05	-9.0745578	0.3790938
S21C06	-9.0745578	0.3790938
S21C07	23.9375	-10.401774
S21C08	23.9375	-10.401774
S21C09	23.9375	-10.401774
S21C10	23.9375	-10.401774
S21C11	23.9375	-10.401774
S21C12	23.9375	-10.401774
S21C13	-7.0162181	-0.2931057
S21C14	-7.0162181	-0.2931057
S21C15	-7.0162181	-0.2931057
S21C16	-7.0162181	-0.2931057

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S21C17	-7.0162181	-0.2931057
S21C18	-7.0162181	-0.2931057
S21C19	-23.9375	5.23293891
S21C20	-23.9375	5.23293891
S21C21	-23.9375	5.23293891
S21C22	-23.9375	5.23293891
S21C23	-23.9375	5.23293891
S21C24	-23.9375	5.23293891
S21R01	-8.0869804	0.05657704
S21R02	-9.4000637	0.48539543
S21R03	-11.318747	1.11198686
S21R04	-16.213948	2.71063054
S21R05	142.9375	-49.264037
S21R06	-0.493552	-2.4232365
S21R07	-4.7089757	-1.0465903
S21R08	-6.4947753	-0.4633952
S21R09	-7.7477587	-0.0542038
S21R10	-8.9740114	0.34625797
S21R11	-10.653085	0.89459915
S21R12	-14.494868	2.14922417
S21R13	-142.9375	44.095202
S21R14	-0.5520869	-2.4041205
S21R15	-5.0032178	-0.9504985
S21R16	-6.8031228	-0.362697

SOURCE S22

Line	Z0	Slope
S22C01	7.34245033	-0.3067342
S22C02	7.34245033	-0.3067342
S22C03	7.34245033	-0.3067342
S22C04	7.34245033	-0.3067342
S22C05	7.34245033	-0.3067342
S22C06	7.34245033	-0.3067342
S22C07	23.9375	0.61633122
S22C08	23.9375	0.61633122
S22C09	23.9375	0.61633122
S22C10	23.9375	0.61633122
S22C11	23.9375	0.61633122
S22C12	23.9375	0.61633122
S22C13	51.6442541	2.15746231
S22C14	51.6442541	2.15746231
S22C15	51.6442541	2.15746231
S22C16	51.6442541	2.15746231
S22C17	51.6442541	2.15746231

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S22C18	51.6442541	2.15746231
S22C19	-23.9375	-2.046617
S22C20	-23.9375	-2.046617
S22C21	-23.9375	-2.046617
S22C22	-23.9375	-2.046617
S22C23	-23.9375	-2.046617
S22C24	-23.9375	-2.046617
S22R01	11.4205408	-0.0798988
S22R02	17.8708572	0.27888671
S22R03	26.1786466	0.74099038
S22R04	42.3432228	1.64011161
S22R05	142.9375	7.23546096
S22R06	-45.501068	-3.246046
S22R07	-6.2292427	-1.0616317
S22R08	6.26277833	-0.3667887
S22R09	14.7067418	0.10288932
S22R10	23.5035554	0.59219394
S22R11	37.5066684	1.37108825
S22R12	83.804083	3.94628651
S22R13	-142.9375	-8.6657467
S22R14	-22.990072	-1.9939182
S22R15	-4.347844	-0.9569827
S22R16	4.76188454	-0.4502729

SOURCE S23

Line	Z0	Slope
S23C01	18.573468	-0.7759151
S23C02	18.573468	-0.7759151
S23C03	18.573468	-0.7759151
S23C04	18.573468	-0.7759151
S23C05	18.573468	-0.7759151
S23C06	18.573468	-0.7759151
S23C07	23.9375	-1.8278555
S23C08	23.9375	-1.8278555
S23C09	23.9375	-1.8278555
S23C10	23.9375	-1.8278555
S23C11	23.9375	-1.8278555
S23C12	23.9375	-1.8278555
S23C13	12.0500337	0.50339566
S23C14	12.0500337	0.50339566
S23C15	12.0500337	0.50339566
S23C16	12.0500337	0.50339566
S23C17	12.0500337	0.50339566
S23C18	12.0500337	0.50339566

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S23C19	-23.9375	7.5609114
S23C20	-23.9375	7.5609114
S23C21	-23.9375	7.5609114
S23C22	-23.9375	7.5609114
S23C23	-23.9375	7.5609114
S23C24	-23.9375	7.5609114
S23R01	15.1576759	-0.1060441
S23R02	13.007036	0.31571794
S23R03	10.0234517	0.9008287
S23R04	2.54354387	2.36771352
S23R05	142.9375	-25.164947
S23R06	24.6312874	-1.9639142
S23R07	18.7691941	-0.814299
S23R08	16.1071348	-0.2922425
S23R09	14.1134523	0.09873863
S23R10	12.0398874	0.50538546
S23R11	9.06064193	1.08964533
S23R12	2.10975771	2.45278333
S23R13	-142.9375	30.898003
S23R14	29.6957133	-2.9570988
S23R15	20.7636624	-1.2054342
S23R16	17.4010001	-0.5459824

SOURCE S24

Line	Z0	Slope
S24C01	28.786894	-1.2025857
S24C02	28.786894	-1.2025857
S24C03	28.786894	-1.2025857
S24C04	28.786894	-1.2025857
S24C05	28.786894	-1.2025857
S24C06	28.786894	-1.2025857
S24C07	23.9375	-0.5934991
S24C08	23.9375	-0.5934991
S24C09	23.9375	-0.5934991
S24C10	23.9375	-0.5934991
S24C11	23.9375	-0.5934991
S24C12	23.9375	-0.5934991
S24C13	14.4170254	0.60227782
S24C14	14.4170254	0.60227782
S24C15	14.4170254	0.60227782
S24C16	14.4170254	0.60227782
S24C17	14.4170254	0.60227782
S24C18	14.4170254	0.60227782
S24C19	-23.9375	5.41962749

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S24C20	-23.9375	5.41962749
S24C21	-23.9375	5.41962749
S24C22	-23.9375	5.41962749
S24C23	-23.9375	5.41962749
S24C24	-23.9375	5.41962749
S24R01	20.345471	-0.1423382
S24R02	16.9353841	0.28597057
S24R03	12.2124742	0.87917067
S24R04	-0.0107099	2.41440937
S24R05	142.9375	-15.539965
S24R06	33.5502183	-1.8008618
S24R07	25.1896916	-0.750775
S24R08	21.2301057	-0.2534488
S24R09	18.1985349	0.12731813
S24R10	15.0094239	0.52787224
S24R11	10.4289428	1.1031832
S24R12	-0.0079883	2.41406754
S24R13	-142.9375	20.3660935
S24R14	44.9806645	-3.2365322
S24R15	29.4975688	-1.2918468
S24R16	23.9542834	-0.5956071

SOURCE S25

Line	Z0	Slope
S25C01	14.7196853	-0.6149216
S25C02	14.7196853	-0.6149216
S25C03	14.7196853	-0.6149216
S25C04	14.7196853	-0.6149216
S25C05	14.7196853	-0.6149216
S25C06	14.7196853	-0.6149216
S25C07	23.9375	-1.7126132
S25C08	23.9375	-1.7126132
S25C09	23.9375	-1.7126132
S25C10	23.9375	-1.7126132
S25C11	23.9375	-1.7126132
S25C12	23.9375	-1.7126132
S25C13	7.07422045	0.29552879
S25C14	7.07422045	0.29552879
S25C15	7.07422045	0.29552879
S25C16	7.07422045	0.29552879
S25C17	7.07422045	0.29552879
S25C18	7.07422045	0.29552879
S25C19	-23.9375	3.98851973
S25C20	-23.9375	3.98851973

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S25C21	-23.9375	3.98851973
S25C22	-23.9375	3.98851973
S25C23	-23.9375	3.98851973
S25C24	-23.9375	3.98851973
S25R01	10.1523516	-0.0710265
S25R02	6.49028535	0.36506595
S25R03	1.26342634	0.98749975
S25R04	-12.661047	2.64567781
S25R05	142.9375	-15.883576
S25R06	25.8592697	-1.9414647
S25R07	16.5761537	-0.8359967
S25R08	12.2549608	-0.321413
S25R09	9.02566012	0.0631441
S25R10	5.71420642	0.45748432
S25R11	1.06959045	1.01058245
S25R12	-9.2909937	2.24435933
S25R13	-142.9375	18.159482
S25R14	35.2390112	-3.0584392
S25R15	19.5801573	-1.1937247
S25R16	13.9193768	-0.5196179

SOURCE S26

Line	Z0	Slope
S26C01	19.5768637	-0.8178324
S26C02	19.5768637	-0.8178324
S26C03	19.5768637	-0.8178324
S26C04	19.5768637	-0.8178324
S26C05	19.5768637	-0.8178324
S26C06	19.5768637	-0.8178324
S26C07	23.9375	-1.8790741
S26C08	23.9375	-1.8790741
S26C09	23.9375	-1.8790741
S26C10	23.9375	-1.8790741
S26C11	23.9375	-1.8790741
S26C12	23.9375	-1.8790741
S26C13	13.840587	0.57819685
S26C14	13.840587	0.57819685
S26C15	13.840587	0.57819685
S26C16	13.840587	0.57819685
S26C17	13.840587	0.57819685
S26C18	13.840587	0.57819685
S26C19	-23.9375	9.77219464
S26C20	-23.9375	9.77219464
S26C21	-23.9375	9.77219464

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OF HN-200 GROUT CONTAINERS.**

S26C22	-23.9375	9.77219464
S26C23	-23.9375	9.77219464
S26C24	-23.9375	9.77219464
S26R01	16.6963616	-0.1168088
S26R02	14.9805169	0.30077378
S26R03	12.6204741	0.87513395
S26R04	6.80779935	2.2897561
S26R05	142.9375	-30.83993
S26R06	24.3102253	-1.9697837
S26R07	19.5313596	-0.8067582
S26R08	17.377684	-0.2826213
S26R09	15.7632518	0.11028073
S26R10	14.0764018	0.52080694
S26R11	11.6344136	1.11511004
S26R12	5.85647189	2.52127927
S26R13	-142.9375	38.7330506
S26R14	28.2591873	-2.9308368
S26R15	21.186716	-1.2096198
S26R16	18.4938375	-0.5542579

SOURCE S27

Line	Z0	Slope
S27C01	-23.312077	0.97387266
S27C02	-23.312077	0.97387266
S27C03	-23.312077	0.97387266
S27C04	-23.312077	0.97387266
S27C05	-23.312077	0.97387266
S27C06	-23.312077	0.97387266
S27C07	23.9375	-19.842767
S27C08	23.9375	-19.842767
S27C09	23.9375	-19.842767
S27C10	23.9375	-19.842767
S27C11	23.9375	-19.842767
S27C12	23.9375	-19.842767
S27C13	-19.273987	-0.8051796
S27C14	-19.273987	-0.8051796
S27C15	-19.273987	-0.8051796
S27C16	-19.273987	-0.8051796
S27C17	-19.273987	-0.8051796
S27C18	-19.273987	-0.8051796
S27C19	-23.9375	1.24941394
S27C20	-23.9375	1.24941394
S27C21	-23.9375	1.24941394
S27C22	-23.9375	1.24941394

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S27C23	-23.9375	1.24941394
S27C24	-23.9375	1.24941394
S27R01	-21.442075	0.15001014
S27R02	-22.427243	0.58404358
S27R03	-23.908294	1.23654693
S27R04	-27.73212	2.92120118
S27R05	142.9375	-72.270328
S27R06	-14.999396	-2.6884266
S27R07	-18.418163	-1.182228
S27R08	-19.820722	-0.5643057
S27R09	-20.771734	-0.1453204
S27R10	-21.669311	0.25012297
S27R11	-22.858052	0.77384409
S27R12	-25.522299	1.94762506
S27R13	-142.9375	53.6769752
S27R14	-16.298103	-2.1162581
S27R15	-19.264409	-0.8093993
S27R16	-20.513996	-0.2588716

SOURCE S28

Line	Z0	Slope
S28C01	-24.610722	1.02812415
S28C02	-24.610722	1.02812415
S28C03	-24.610722	1.02812415
S28C04	-24.610722	1.02812415
S28C05	-24.610722	1.02812415
S28C06	-24.610722	1.02812415
S28C07	23.9375	-1.6081701
S28C08	23.9375	-1.6081701
S28C09	23.9375	-1.6081701
S28C10	23.9375	-1.6081701
S28C11	23.9375	-1.6081701
S28C12	23.9375	-1.6081701
S28C13	-3.2088683	-0.1340519
S28C14	-3.2088683	-0.1340519
S28C15	-3.2088683	-0.1340519
S28C16	-3.2088683	-0.1340519
S28C17	-3.2088683	-0.1340519
S28C18	-3.2088683	-0.1340519
S28C19	-23.9375	0.99156646
S28C20	-23.9375	0.99156646
S28C21	-23.9375	0.99156646
S28C22	-23.9375	0.99156646
S28C23	-23.9375	0.99156646

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OF HN-200 GROUT CONTAINERS.**

S28C24	-23.9375	0.99156646
S28R01	-6.5171093	0.04559412
S28R02	-15.461455	0.53129523
S28R03	-29.460508	1.29148013
S28R04	-75.581363	3.79596202
S28R05	142.9375	-8.0701783
S28R06	29.0133663	-1.8838028
S28R07	10.7746997	-0.8933959
S28R08	1.71170304	-0.4012517
S28R09	-5.0295035	-0.0351867
S28R10	-11.677001	0.32578961
S28R11	-20.379638	0.79836534
S28R12	-37.508378	1.72850032
S28R13	-142.9375	7.45357473
S28R14	58.4634652	-3.4830194
S28R15	15.5757492	-1.1541053
S28R16	2.2664568	-0.4313763

SOURCE S29

Line	Z0	Slope
S29C01	3.62896645	-0.1516017
S29C02	3.62896645	-0.1516017
S29C03	3.62896645	-0.1516017
S29C04	3.62896645	-0.1516017
S29C05	3.62896645	-0.1516017
S29C06	3.62896645	-0.1516017
S29C07	23.9375	224.60776
S29C08	23.9375	224.60776
S29C09	23.9375	224.60776
S29C10	23.9375	224.60776
S29C11	23.9375	224.60776
S29C12	23.9375	224.60776
S29C13	3.65646675	0.15275057
S29C14	3.65646675	0.15275057
S29C15	3.65646675	0.15275057
S29C16	3.65646675	0.15275057
S29C17	3.65646675	0.15275057
S29C18	3.65646675	0.15275057
S29C19	-23.9375	-305.23623
S29C20	-23.9375	-305.23623
S29C21	-23.9375	-305.23623
S29C22	-23.9375	-305.23623
S29C23	-23.9375	-305.23623
S29C24	-23.9375	-305.23623

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OF HN-200 GROUT CONTAINERS.**

S29R01	3.64036347	-0.0254682
S29R02	3.67757541	0.38636516
S29R03	3.7296872	0.96309875
S29R04	3.85443826	2.34374827
S29R05	142.9375	1541.60901
S29R06	3.43019033	-2.3515042
S29R07	3.55548645	-0.9648223
S29R08	3.60770617	-0.3868942
S29R09	3.64496883	0.02550044
S29R10	3.68261144	0.44210009
S29R11	3.73636173	1.03696729
S29R12	3.86719336	2.48491207
S29R13	-142.9375	-1622.2375
S29R14	3.41887659	-2.4767161
S29R15	3.54913504	-1.0351149
S29R16	3.60277258	-0.4414955

SOURCE S30

Line	Z0	Slope
S30C01	-28.592121	1.19444893
S30C02	-28.592121	1.19444893
S30C03	-28.592121	1.19444893
S30C04	-28.592121	1.19444893
S30C05	-28.592121	1.19444893
S30C06	-28.592121	1.19444893
S30C07	23.9375	-5.9300759
S30C08	23.9375	-5.9300759
S30C09	23.9375	-5.9300759
S30C10	23.9375	-5.9300759
S30C11	23.9375	-5.9300759
S30C12	23.9375	-5.9300759
S30C13	-15.126272	-0.6319069
S30C14	-15.126272	-0.6319069
S30C15	-15.126272	-0.6319069
S30C16	-15.126272	-0.6319069
S30C17	-15.126272	-0.6319069
S30C18	-15.126272	-0.6319069
S30C19	-23.9375	0.56314864
S30C20	-23.9375	0.56314864
S30C21	-23.9375	0.56314864
S30C22	-23.9375	0.56314864
S30C23	-23.9375	0.56314864
S30C24	-23.9375	0.56314864
S30R01	-20.861451	0.14594806

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OF HN-200 GROUT CONTAINERS.**

S30R02	-24.189978	0.59739187
S30R03	-29.295502	1.28984757
S30R04	-43.441012	3.2083849
S30R05	142.9375	-22.069893
S30R06	-1.7493958	-2.4461953
S30R07	-11.568397	-1.1144569
S30R08	-15.846586	-0.5342116
S30R09	-18.814849	-0.1316299
S30R10	-21.631643	0.25040821
S30R11	-25.311963	0.74956528
S30R12	-33.121089	1.808707
S30R13	-142.9375	16.7029653
S30R14	-2.2944754	-2.3722669
S30R15	-13.389005	-0.8675302
S30R16	-17.720732	-0.2800235

SOURCE S31

Line	Z0	Slope
S31C01	-23.174045	0.96810631
S31C02	-23.174045	0.96810631
S31C03	-23.174045	0.96810631
S31C04	-23.174045	0.96810631
S31C05	-23.174045	0.96810631
S31C06	-23.174045	0.96810631
S31C07	23.9375	-7.5092297
S31C08	23.9375	-7.5092297
S31C09	23.9375	-7.5092297
S31C10	23.9375	-7.5092297
S31C11	23.9375	-7.5092297
S31C12	23.9375	-7.5092297
S31C13	-14.441244	-0.6032896
S31C14	-14.441244	-0.6032896
S31C15	-14.441244	-0.6032896
S31C16	-14.441244	-0.6032896
S31C17	-14.441244	-0.6032896
S31C18	-14.441244	-0.6032896
S31C19	-23.9375	1.1054838
S31C20	-23.9375	1.1054838
S31C21	-23.9375	1.1054838
S31C22	-23.9375	1.1054838
S31C23	-23.9375	1.1054838
S31C24	-23.9375	1.1054838
S31R01	-18.513744	0.12952335
S31R02	-20.978714	0.57307462

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OF HN-200 GROUT CONTAINERS.**

S31R03	-24.709942	1.24447837
S31R04	-34.74007	3.04931774
S31R05	142.9375	-28.922304
S31R06	-3.9735944	-2.4868573
S31R07	-11.598834	-1.114758
S31R08	-14.866384	-0.5267891
S31R09	-17.128007	-0.1198286
S31R10	-19.284326	0.26818324
S31R11	-22.134258	0.78100526
S31R12	-28.332107	1.89625726
S31R13	-142.9375	22.5185577
S31R14	-4.872315	-2.3251399
S31R15	-12.948548	-0.871888
S31R16	-16.172597	-0.2917468

SOURCE S32

Line	Z0	Slope
S32C01	17.3023328	-0.7228129
S32C02	17.3023328	-0.7228129
S32C03	17.3023328	-0.7228129
S32C04	17.3023328	-0.7228129
S32C05	17.3023328	-0.7228129
S32C06	17.3023328	-0.7228129
S32C07	23.9375	6.51236306
S32C08	23.9375	6.51236306
S32C09	23.9375	6.51236306
S32C10	23.9375	6.51236306
S32C11	23.9375	6.51236306
S32C12	23.9375	6.51236306
S32C13	18.6808875	0.78040261
S32C14	18.6808875	0.78040261
S32C15	18.6808875	0.78040261
S32C16	18.6808875	0.78040261
S32C17	18.6808875	0.78040261
S32C18	18.6808875	0.78040261
S32C19	-23.9375	-45.691905
S32C20	-23.9375	-45.691905
S32C21	-23.9375	-45.691905
S32C22	-23.9375	-45.691905
S32C23	-23.9375	-45.691905
S32C24	-23.9375	-45.691905
S32R01	17.8506753	-0.1248845
S32R02	18.2185475	0.27625383
S32R03	18.7124874	0.81486001

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OF HN-200 GROUT CONTAINERS.**

S32R04	19.8464711	2.05138828
S32R05	142.9375	136.273363
S32R06	16.0197788	-2.1213464
S32R07	17.204234	-0.8297826
S32R08	17.7083156	-0.2801176
S32R09	18.0812102	0.12649732
S32R10	18.4733546	0.55410281
S32R11	19.0551696	1.18853046
S32R12	20.5232912	2.78941223
S32R13	-142.9375	-175.4529
S32R14	15.4914762	-2.6974226
S32R15	16.8948385	-1.1671563
S32R16	17.4640608	-0.5464599

SOURCE S33

Line	Z0	Slope
S33C01	-19.863487	0.82980623
S33C02	-19.863487	0.82980623
S33C03	-19.863487	0.82980623
S33C04	-19.863487	0.82980623
S33C05	-19.863487	0.82980623
S33C06	-19.863487	0.82980623
S33C07	23.9375	16.5071074
S33C08	23.9375	16.5071074
S33C09	23.9375	16.5071074
S33C10	23.9375	16.5071074
S33C11	23.9375	16.5071074
S33C12	23.9375	16.5071074
S33C13	-25.113004	-1.0491072
S33C14	-25.113004	-1.0491072
S33C15	-25.113004	-1.0491072
S33C16	-25.113004	-1.0491072
S33C17	-25.113004	-1.0491072
S33C18	-25.113004	-1.0491072
S33C19	-23.9375	-0.6283694
S33C20	-23.9375	-0.6283694
S33C21	-23.9375	-0.6283694
S33C22	-23.9375	-0.6283694
S33C23	-23.9375	-0.6283694
S33C24	-23.9375	-0.6283694
S33R01	-21.756628	0.15221078
S33R02	-20.589017	0.57012363
S33R03	-18.86646	1.18666338
S33R04	-14.686641	2.68270892

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OF HN-200 GROUT CONTAINERS.**

S33R05	142.9375	59.0997288
S33R06	-30.484028	-2.9715105
S33R07	-25.68583	-1.2541337
S33R08	-23.843624	-0.5947691
S33R09	-22.624111	-0.1582797
S33R10	-21.479045	0.25156376
S33R11	-19.939154	0.80272347
S33R12	-16.267702	2.11681393
S33R13	-142.9375	-43.220991
S33R14	-27.521281	-1.9110805
S33R15	-24.303974	-0.7595383
S33R16	-22.855614	-0.2411397

SOURCE S34

Line	Z0	Slope
S34C01	10.6676482	-0.4456459
S34C02	10.6676482	-0.4456459
S34C03	10.6676482	-0.4456459
S34C04	10.6676482	-0.4456459
S34C05	10.6676482	-0.4456459
S34C06	10.6676482	-0.4456459
S34C07	23.9375	0.49277287
S34C08	23.9375	0.49277287
S34C09	23.9375	0.49277287
S34C10	23.9375	0.49277287
S34C11	23.9375	0.49277287
S34C12	23.9375	0.49277287
S34C13	41.4627507	1.73212535
S34C14	41.4627507	1.73212535
S34C15	41.4627507	1.73212535
S34C16	41.4627507	1.73212535
S34C17	41.4627507	1.73212535
S34C18	41.4627507	1.73212535
S34C19	-23.9375	-2.8928563
S34C20	-23.9375	-2.8928563
S34C21	-23.9375	-2.8928563
S34C22	-23.9375	-2.8928563
S34C23	-23.9375	-2.8928563
S34C24	-23.9375	-2.8928563
S34R01	15.4417368	-0.1080314
S34R02	20.6187649	0.25807822
S34R03	27.2917295	0.72997762
S34R04	40.6097445	1.67180237
S34R05	142.9375	8.90822716

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S34R06	-23.155089	-2.8375257
S34R07	3.28885227	-0.9674603
S34R08	12.4446989	-0.3199762
S34R09	18.8324441	0.131753
S34R10	25.5640122	0.60779673
S34R11	36.1705143	1.35786844
S34R12	68.9263253	3.67429726
S34R13	-142.9375	-11.308311
S34R14	-13.642425	-2.1648082
S34R15	2.48153692	-1.0245521
S34R16	10.0373258	-0.4902211

SOURCE S35

Line	Z0	Slope
S35C01	48.7324743	-2.0358214
S35C02	48.7324743	-2.0358214
S35C03	48.7324743	-2.0358214
S35C04	48.7324743	-2.0358214
S35C05	48.7324743	-2.0358214
S35C06	48.7324743	-2.0358214
S35C07	23.9375	-0.6296619
S35C08	23.9375	-0.6296619
S35C09	23.9375	-0.6296619
S35C10	23.9375	-0.6296619
S35C11	23.9375	-0.6296619
S35C12	23.9375	-0.6296619
S35C13	7.39051263	0.30874204
S35C14	7.39051263	0.30874204
S35C15	7.39051263	0.30874204
S35C16	7.39051263	0.30874204
S35C17	7.39051263	0.30874204
S35C18	7.39051263	0.30874204
S35C19	-23.9375	2.08539969
S35C20	-23.9375	2.08539969
S35C21	-23.9375	2.08539969
S35C22	-23.9375	2.08539969
S35C23	-23.9375	2.08539969
S35C24	-23.9375	2.08539969
S35R01	14.6407109	-0.1024274
S35R02	6.3830243	0.36587819
S35R03	-5.8125887	1.05750933
S35R04	-43.881096	3.21643033
S35R05	142.9375	-7.3783269
S35R06	41.8983027	-1.6482455

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S35R07	25.9418748	-0.743333
S35R08	17.7662123	-0.2796791
S35R09	11.4251616	0.07993117
S35R10	4.87921606	0.45116136
S35R11	-4.0857218	0.95957617
S35R12	-22.486673	2.00312116
S35R13	-142.9375	8.83406464
S35R14	81.7614698	-3.9089443
S35R15	36.9064409	-1.3651496
S35R16	23.2418821	-0.5902124

TABLE 6 - Determine the coefficients of the quadratic equation (a, b, and c) for the intersection of each line in Table 5 to the inner surface (ai, bi, ci) and outer surface (ao, bo, co) of the cylinder wall.

Line	Source S01			ao	bo	co
	ai	bi	ci			
S01C01	1.0162099	-0.7760489	-510.51975	1.0162099	-0.7760489	-516.84057
S01C02	1.0162099	-0.7760489	-510.51975	1.0162099	-0.7760489	-516.84057
S01C03	1.0162099	-0.7760489	-510.51975	1.0162099	-0.7760489	-516.84057
S01C04	1.0162099	-0.7760489	-510.51975	1.0162099	-0.7760489	-516.84057
S01C05	1.0162099	-0.7760489	-510.51975	1.0162099	-0.7760489	-516.84057
S01C06	1.0162099	-0.7760489	-510.51975	1.0162099	-0.7760489	-516.84057
S01C07	2.45421574	-57.732878	53.1958258	2.45421574	-57.732878	46.875
S01C08	2.45421574	-57.732878	53.1958258	2.45421574	-57.732878	46.875
S01C09	2.45421574	-57.732878	53.1958258	2.45421574	-57.732878	46.875
S01C10	2.45421574	-57.732878	53.1958258	2.45421574	-57.732878	46.875
S01C11	2.45421574	-57.732878	53.1958258	2.45421574	-57.732878	46.875
S01C12	2.45421574	-57.732878	53.1958258	2.45421574	-57.732878	46.875
S01C13	1.00018051	0.00864177	-519.70465	1.00018051	0.00864177	-526.02548
S01C14	1.00018051	0.00864177	-519.70465	1.00018051	0.00864177	-526.02548
S01C15	1.00018051	0.00864177	-519.70465	1.00018051	0.00864177	-526.02548
S01C16	1.00018051	0.00864177	-519.70465	1.00018051	0.00864177	-526.02548
S01C17	1.00018051	0.00864177	-519.70465	1.00018051	0.00864177	-526.02548
S01C18	1.00018051	0.00864177	-519.70465	1.00018051	0.00864177	-526.02548
S01C19	2.60273045	-60.609267	53.1958258	2.60273045	-60.609267	46.875
S01C20	2.60273045	-60.609267	53.1958258	2.60273045	-60.609267	46.875
S01C21	2.60273045	-60.609267	53.1958258	2.60273045	-60.609267	46.875
S01C22	2.60273045	-60.609267	53.1958258	2.60273045	-60.609267	46.875
S01C23	2.60273045	-60.609267	53.1958258	2.60273045	-60.609267	46.875
S01C24	2.60273045	-60.609267	53.1958258	2.60273045	-60.609267	46.875
S01R01	1.00002217	-0.0063376	-519.35514	1.00002217	-0.0063376	-525.67597
S01R02	1.23063109	-8.3747644	-443.78117	1.23063109	-8.3747644	-450.10199
S01R03	2.51271559	-57.164471	20.2433286	2.51271559	-57.164471	13.9225028
S01R04	14.8467789	-532.03059	4590.70453	14.8467789	-532.03059	4584.38371
S01R05	55.0248213	-2101.2264	19911.3208	55.0248213	-2101.2264	19905
S01R06	4.15088204	-124.11624	702.456065	4.15088204	-124.11624	696.135239
S01R07	1.69615838	-27.936871	-239.53107	1.69615838	-27.936871	-245.8519

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S01R08	1.12772906	-5.3635114	-463.50286	1.12772906	-5.3635114	-469.82368
S01R09	1.00001285	0.00367354	-519.54554	1.00001285	0.00367354	-525.86636
S01R10	1.13328093	-4.7378752	-477.70254	1.13328093	-4.7378752	-484.02337
S01R11	1.71237417	-26.611969	-271.27404	1.71237417	-26.611969	-277.59487
S01R12	4.20690331	-122.13689	643.106596	4.20690331	-122.13689	636.78577
S01R13	55.9116442	-2118.4021	19911.3208	55.9116442	-2118.4021	19905
S01R14	15.0929684	-550.26524	4851.52007	15.0929684	-550.26524	4845.19924
S01R15	2.54795166	-61.408296	89.2191407	2.54795166	-61.408296	82.8983149
S01R16	1.2406557	-9.8927376	-418.14182	1.2406557	-9.8927376	-424.46265

Source S02

Line	ai	bi	ci	ao	bo	co
S02C01	1.32070783	-15.353887	-336.04124	1.32070783	-15.353887	-342.36207
S02C02	1.32070783	-15.353887	-336.04124	1.32070783	-15.353887	-342.36207
S02C03	1.32070783	-15.353887	-336.04124	1.32070783	-15.353887	-342.36207
S02C04	1.32070783	-15.353887	-336.04124	1.32070783	-15.353887	-342.36207
S02C05	1.32070783	-15.353887	-336.04124	1.32070783	-15.353887	-342.36207
S02C06	1.32070783	-15.353887	-336.04124	1.32070783	-15.353887	-342.36207
S02C07	17.7900815	196.171173	53.1958258	17.7900815	196.171173	46.875
S02C08	17.7900815	196.171173	53.1958258	17.7900815	196.171173	46.875
S02C09	17.7900815	196.171173	53.1958258	17.7900815	196.171173	46.875
S02C10	17.7900815	196.171173	53.1958258	17.7900815	196.171173	46.875
S02C11	17.7900815	196.171173	53.1958258	17.7900815	196.171173	46.875
S02C12	17.7900815	196.171173	53.1958258	17.7900815	196.171173	46.875
S02C13	3.15840797	103.333781	716.968116	3.15840797	103.333781	710.64729
S02C14	3.15840797	103.333781	716.968116	3.15840797	103.333781	710.64729
S02C15	3.15840797	103.333781	716.968116	3.15840797	103.333781	710.64729
S02C16	3.15840797	103.333781	716.968116	3.15840797	103.333781	710.64729
S02C17	3.15840797	103.333781	716.968116	3.15840797	103.333781	710.64729
S02C18	3.15840797	103.333781	716.968116	3.15840797	103.333781	710.64729
S02C19	1.16928705	19.697933	53.1958258	1.16928705	19.697933	46.875
S02C20	1.16928705	19.697933	53.1958258	1.16928705	19.697933	46.875
S02C21	1.16928705	19.697933	53.1958258	1.16928705	19.697933	46.875
S02C22	1.16928705	19.697933	53.1958258	1.16928705	19.697933	46.875
S02C23	1.16928705	19.697933	53.1958258	1.16928705	19.697933	46.875
S02C24	1.16928705	19.697933	53.1958258	1.16928705	19.697933	46.875
S02R01	1.01624074	-4.6428206	-187.9915	1.01624074	-4.6428206	-194.31232
S02R02	1.27096837	-14.618992	-322.63108	1.27096837	-14.618992	-328.95191
S02R03	2.16671213	-17.499145	-454.19205	2.16671213	-17.499145	-460.51287
S02R04	6.3887615	23.578124	-494.017	6.3887615	23.578124	-500.33783
S02R05	235.253968	4375.41908	19911.3208	235.253968	4375.41908	19905
S02R06	12.8309822	385.85306	2626.2237	12.8309822	385.85306	2619.90287
S02R07	2.77881143	89.9724704	617.896186	2.77881143	89.9724704	611.57536
S02R08	1.37401837	31.8779297	159.438232	1.37401837	31.8779297	153.117407

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S02R09	1.02187178	6.25259473	-72.942951	1.02187178	6.25259473	-79.263776
S02R10	1.08368712	-9.5449707	-247.64414	1.08368712	-9.5449707	-253.96496
S02R11	1.81187427	-18.024468	-419.76751	1.81187427	-18.024468	-426.08834
S02R12	7.51158524	38.4037867	-463.18397	7.51158524	38.4037867	-469.5048
S02R13	136.006561	3321.64806	19911.3208	136.006561	3321.64806	19905
S02R14	3.96588899	130.383632	913.14268	3.96588899	130.383632	906.821854
S02R15	1.53250364	39.8678557	226.405565	1.53250364	39.8678557	220.084739
S02R16	1.06062954	10.9244258	-27.708545	1.06062954	10.9244258	-34.029371

Source S03

Line	ai	bi	ci	ao	bo	co
S03C01	1.10723573	-5.1339105	-458.36159	1.10723573	-5.1339105	-464.68241
S03C02	1.10723573	-5.1339105	-458.36159	1.10723573	-5.1339105	-464.68241
S03C03	1.10723573	-5.1339105	-458.36159	1.10723573	-5.1339105	-464.68241
S03C04	1.10723573	-5.1339105	-458.36159	1.10723573	-5.1339105	-464.68241
S03C05	1.10723573	-5.1339105	-458.36159	1.10723573	-5.1339105	-464.68241
S03C06	1.10723573	-5.1339105	-458.36159	1.10723573	-5.1339105	-464.68241
S03C07	311.488433	-843.59015	53.1958258	311.488433	-843.59015	46.875
S03C08	311.488433	-843.59015	53.1958258	311.488433	-843.59015	46.875
S03C09	311.488433	-843.59015	53.1958258	311.488433	-843.59015	46.875
S03C10	311.488433	-843.59015	53.1958258	311.488433	-843.59015	46.875
S03C11	311.488433	-843.59015	53.1958258	311.488433	-843.59015	46.875
S03C12	311.488433	-843.59015	53.1958258	311.488433	-843.59015	46.875
S03C13	1.07972977	3.8170627	-474.12261	1.07972977	3.8170627	-480.44344
S03C14	1.07972977	3.8170627	-474.12261	1.07972977	3.8170627	-480.44344
S03C15	1.07972977	3.8170627	-474.12261	1.07972977	3.8170627	-480.44344
S03C16	1.07972977	3.8170627	-474.12261	1.07972977	3.8170627	-480.44344
S03C17	1.07972977	3.8170627	-474.12261	1.07972977	3.8170627	-480.44344
S03C18	1.07972977	3.8170627	-474.12261	1.07972977	3.8170627	-480.44344
S03C19	89.7455285	-451.0057	53.1958258	89.7455285	-451.0057	46.875
S03C20	89.7455285	-451.0057	53.1958258	89.7455285	-451.0057	46.875
S03C21	89.7455285	-451.0057	53.1958258	89.7455285	-451.0057	46.875
S03C22	89.7455285	-451.0057	53.1958258	89.7455285	-451.0057	46.875
S03C23	89.7455285	-451.0057	53.1958258	89.7455285	-451.0057	46.875
S03C24	89.7455285	-451.0057	53.1958258	89.7455285	-451.0057	46.875
S03R01	1.00264417	-0.7559009	-465.78479	1.00264417	-0.7559009	-472.10562
S03R02	1.22615543	-7.7049586	-454.18243	1.22615543	-7.7049586	-460.50326
S03R03	2.19012748	-20.052268	-435.34371	2.19012748	-20.052268	-441.66454
S03R04	7.92801699	-62.744487	-377.74468	7.92801699	-62.744487	-384.0655
S03R05	7198.02448	-24252.285	19911.3208	7198.02448	-24252.285	19905
S03R06	7.08643073	14.2655567	-511.44907	7.08643073	14.2655567	-517.7699
S03R07	2.10958547	11.3639084	-490.71199	2.10958547	11.3639084	-497.03281
S03R08	1.21434621	5.96251236	-478.34297	1.21434621	5.96251236	-484.6638
S03R09	1.00251635	0.71936079	-468.39626	1.00251635	0.71936079	-474.71709

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S03R10	1.12566471	-5.5914939	-457.60923	1.12566471	-5.5914939	-463.93005
S03R11	1.83211083	-16.189782	-441.05985	1.83211083	-16.189782	-447.38067
S03R12	5.88400102	-49.378267	-395.00194	5.88400102	-49.378267	-401.32276
S03R13	5873.93565	-21908.054	19911.3208	5873.93565	-21908.054	19905
S03R14	6.55932427	14.5459308	-510.29325	6.55932427	14.5459308	-516.61408
S03R15	1.89251166	10.5553017	-488.59997	1.89251166	10.5553017	-494.9208
S03R16	1.1325881	4.81691831	-476.05849	1.1325881	4.81691831	-482.37931

Source S04

Line	ai	bi	ci	ao	bo	co
S04C01	2.08953784	-52.161624	104.501358	2.08953784	-52.161624	98.1805327
S04C02	2.08953784	-52.161624	104.501358	2.08953784	-52.161624	98.1805327
S04C03	2.08953784	-52.161624	104.501358	2.08953784	-52.161624	98.1805327
S04C04	2.08953784	-52.161624	104.501358	2.08953784	-52.161624	98.1805327
S04C05	2.08953784	-52.161624	104.501358	2.08953784	-52.161624	98.1805327
S04C06	2.08953784	-52.161624	104.501358	2.08953784	-52.161624	98.1805327
S04C07	61.9849997	-373.86973	53.1958258	61.9849997	-373.86973	46.875
S04C08	61.9849997	-373.86973	53.1958258	61.9849997	-373.86973	46.875
S04C09	61.9849997	-373.86973	53.1958258	61.9849997	-373.86973	46.875
S04C10	61.9849997	-373.86973	53.1958258	61.9849997	-373.86973	46.875
S04C11	61.9849997	-373.86973	53.1958258	61.9849997	-373.86973	46.875
S04C12	61.9849997	-373.86973	53.1958258	61.9849997	-373.86973	46.875
S04C13	1.42544099	20.3679875	-276.02873	1.42544099	20.3679875	-282.34956
S04C14	1.42544099	20.3679875	-276.02873	1.42544099	20.3679875	-282.34956
S04C15	1.42544099	20.3679875	-276.02873	1.42544099	20.3679875	-282.34956
S04C16	1.42544099	20.3679875	-276.02873	1.42544099	20.3679875	-282.34956
S04C17	1.42544099	20.3679875	-276.02873	1.42544099	20.3679875	-282.34956
S04C18	1.42544099	20.3679875	-276.02873	1.42544099	20.3679875	-282.34956
S04C19	1.72938787	-40.887265	53.1958258	1.72938787	-40.887265	46.875
S04C20	1.72938787	-40.887265	53.1958258	1.72938787	-40.887265	46.875
S04C21	1.72938787	-40.887265	53.1958258	1.72938787	-40.887265	46.875
S04C22	1.72938787	-40.887265	53.1958258	1.72938787	-40.887265	46.875
S04C23	1.72938787	-40.887265	53.1958258	1.72938787	-40.887265	46.875
S04C24	1.72938787	-40.887265	53.1958258	1.72938787	-40.887265	46.875
S04R01	1.01955995	-5.5917009	-120.17621	1.01955995	-5.5917009	-126.49703
S04R02	1.34127495	-26.225621	-15.974453	1.34127495	-26.225621	-22.295279
S04R03	2.58502013	-65.907966	165.334625	2.58502013	-65.907966	159.013799
S04R04	10.4638806	-222.83974	791.956945	10.4638806	-222.83974	785.636119
S04R05	862.023954	-8388.4901	19911.3208	862.023954	-8388.4901	19905
S04R06	7.30908445	26.8126508	-491.32066	7.30908445	26.8126508	-497.64148
S04R07	2.27338268	29.2987984	-351.27673	2.27338268	29.2987984	-357.59756
S04R08	1.28864668	17.4597653	-255.77992	1.28864668	17.4597653	-262.10075
S04R09	1.01675608	4.79014538	-177.46238	1.01675608	4.79014538	-183.7832
S04R10	1.06650933	-10.647458	-93.671021	1.06650933	-10.647458	-99.991847

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S04R11	1.58963252	-36.03075	30.6258446	1.58963252	-36.03075	24.3050188
S04R12	4.51035887	-110.81086	354.67847	4.51035887	-110.81086	348.357644
S04R13	502.220862	-6400.1588	19911.3208	502.220862	-6400.1588	19905
S04R14	6.2656796	30.000967	-477.0758	6.2656796	30.000967	-483.39662
S04R15	1.73393444	24.8162924	-310.03173	1.73393444	24.8162924	-316.35255
S04R16	1.07863582	9.90910116	-207.64029	1.07863582	9.90910116	-213.96111

Source S05

Line	ai	bi	ci	ao	bo	co
S05C01	1.00444471	-0.2127904	-517.26125	1.00444471	-0.2127904	-523.58207
S05C02	1.00444471	-0.2127904	-517.26125	1.00444471	-0.2127904	-523.58207
S05C03	1.00444471	-0.2127904	-517.26125	1.00444471	-0.2127904	-523.58207
S05C04	1.00444471	-0.2127904	-517.26125	1.00444471	-0.2127904	-523.58207
S05C05	1.00444471	-0.2127904	-517.26125	1.00444471	-0.2127904	-523.58207
S05C06	1.00444471	-0.2127904	-517.26125	1.00444471	-0.2127904	-523.58207
S05C07	3.9522955	82.2599989	53.1958258	3.9522955	82.2599989	46.875
S05C08	3.9522955	82.2599989	53.1958258	3.9522955	82.2599989	46.875
S05C09	3.9522955	82.2599989	53.1958258	3.9522955	82.2599989	46.875
S05C10	3.9522955	82.2599989	53.1958258	3.9522955	82.2599989	46.875
S05C11	3.9522955	82.2599989	53.1958258	3.9522955	82.2599989	46.875
S05C12	3.9522955	82.2599989	53.1958258	3.9522955	82.2599989	46.875
S05C13	1.04528783	2.16815476	-493.85798	1.04528783	2.16815476	-500.1788
S05C14	1.04528783	2.16815476	-493.85798	1.04528783	2.16815476	-500.1788
S05C15	1.04528783	2.16815476	-493.85798	1.04528783	2.16815476	-500.1788
S05C16	1.04528783	2.16815476	-493.85798	1.04528783	2.16815476	-500.1788
S05C17	1.04528783	2.16815476	-493.85798	1.04528783	2.16815476	-500.1788
S05C18	1.04528783	2.16815476	-493.85798	1.04528783	2.16815476	-500.1788
S05C19	5.43757236	100.851302	53.1958258	5.43757236	100.851302	46.875
S05C20	5.43757236	100.851302	53.1958258	5.43757236	100.851302	46.875
S05C21	5.43757236	100.851302	53.1958258	5.43757236	100.851302	46.875
S05C22	5.43757236	100.851302	53.1958258	5.43757236	100.851302	46.875
S05C23	5.43757236	100.851302	53.1958258	5.43757236	100.851302	46.875
S05C24	5.43757236	100.851302	53.1958258	5.43757236	100.851302	46.875
S05R01	1.00024442	-0.0698741	-514.81427	1.00024442	-0.0698741	-521.13509
S05R02	1.13071176	5.02961481	-471.42486	1.13071176	5.02961481	-477.74568
S05R03	1.75413225	23.1001566	-342.91032	1.75413225	23.1001566	-349.23114
S05R04	4.71904938	102.477029	186.121074	4.71904938	102.477029	179.800248
S05R05	127.006178	3209.01758	19911.3208	127.006178	3209.01758	19905
S05R06	10.4431938	221.465112	778.661398	10.4431938	221.465112	772.340572
S05R07	2.24077995	25.6474341	-387.27232	2.24077995	25.6474341	-393.59314
S05R08	1.19119185	2.66093304	-510.54963	1.19119185	2.66093304	-516.87045
S05R09	1.00034726	0.09927316	-512.71315	1.00034726	0.09927316	-519.03398
S05R10	1.22840472	8.04094881	-449.03803	1.22840472	8.04094881	-455.35885
S05R11	2.36607624	39.879735	-228.75674	2.36607624	39.879735	-235.07757

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S05R12	11.1646756	269.960855	1272.64615	11.1646756	269.960855	1266.32533
S05R13	135.875181	3320.03145	19911.3208	135.875181	3320.03145	19905
S05R14	5.00319334	90.4910594	-8.4268446	5.00319334	90.4910594	-14.74767
S05R15	1.83028594	16.3563635	-439.25432	1.83028594	16.3563635	-445.57514
S05R16	1.15615301	1.98836941	-513.47837	1.15615301	1.98836941	-519.7992

Source S06

Line	ai	bi	ci	ao	bo	co
S06C01	1.24438865	-11.700107	-379.77243	1.24438865	-11.700107	-386.09326
S06C02	1.24438865	-11.700107	-379.77243	1.24438865	-11.700107	-386.09326
S06C03	1.24438865	-11.700107	-379.77243	1.24438865	-11.700107	-386.09326
S06C04	1.24438865	-11.700107	-379.77243	1.24438865	-11.700107	-386.09326
S06C05	1.24438865	-11.700107	-379.77243	1.24438865	-11.700107	-386.09326
S06C06	1.24438865	-11.700107	-379.77243	1.24438865	-11.700107	-386.09326
S06C07	10.1842574	-145.08777	53.1958258	10.1842574	-145.08777	46.875
S06C08	10.1842574	-145.08777	53.1958258	10.1842574	-145.08777	46.875
S06C09	10.1842574	-145.08777	53.1958258	10.1842574	-145.08777	46.875
S06C10	10.1842574	-145.08777	53.1958258	10.1842574	-145.08777	46.875
S06C11	10.1842574	-145.08777	53.1958258	10.1842574	-145.08777	46.875
S06C12	10.1842574	-145.08777	53.1958258	10.1842574	-145.08777	46.875
S06C13	1.03999718	1.91486516	-496.88954	1.03999718	1.91486516	-503.21036
S06C14	1.03999718	1.91486516	-496.88954	1.03999718	1.91486516	-503.21036
S06C15	1.03999718	1.91486516	-496.88954	1.03999718	1.91486516	-503.21036
S06C16	1.03999718	1.91486516	-496.88954	1.03999718	1.91486516	-503.21036
S06C17	1.03999718	1.91486516	-496.88954	1.03999718	1.91486516	-503.21036
S06C18	1.03999718	1.91486516	-496.88954	1.03999718	1.91486516	-503.21036
S06C19	3.84622342	-80.768735	53.1958258	3.84622342	-80.768735	46.875
S06C20	3.84622342	-80.768735	53.1958258	3.84622342	-80.768735	46.875
S06C21	3.84622342	-80.768735	53.1958258	3.84622342	-80.768735	46.875
S06C22	3.84622342	-80.768735	53.1958258	3.84622342	-80.768735	46.875
S06C23	3.84622342	-80.768735	53.1958258	3.84622342	-80.768735	46.875
S06C24	3.84622342	-80.768735	53.1958258	3.84622342	-80.768735	46.875
S06R01	1.00263539	-0.7533917	-465.96412	1.00263539	-0.7533917	-472.28494
S06R02	1.25463319	-12.047848	-377.29854	1.25463319	-12.047848	-383.61937
S06R03	2.40798221	-44.754311	-164.16645	2.40798221	-44.754311	-170.48727
S06R04	10.7165634	-239.70777	958.590484	10.7165634	-239.70777	952.269658
S06R05	218.765531	-4218.6233	19911.3208	218.765531	-4218.6233	19905
S06R06	5.5861604	-63.884537	-297.33254	5.5861604	-63.884537	-303.65337
S06R07	1.94099388	-5.873201	-510.6437	1.94099388	-5.873201	-516.96453
S06R08	1.18713517	2.09971104	-513.91824	1.18713517	2.09971104	-520.23906
S06R09	1.00198291	0.56686403	-479.29502	1.00198291	0.56686403	-485.61584
S06R10	1.11337854	-6.8918783	-415.07489	1.11337854	-6.8918783	-421.39571
S06R11	1.71819674	-26.130807	-282.12283	1.71819674	-26.130807	-288.44366
S06R12	4.72988153	-102.03321	177.98729	4.72988153	-102.03321	171.666464

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S06R13	180.919359	-3834.5564	19911.3208	180.919359	-3834.5564	19905
S06R14	8.90239049	-122.06245	-48.45569	8.90239049	-122.06245	-54.776515
S06R15	2.07461723	-7.6773891	-506.09569	2.07461723	-7.6773891	-512.41651
S06R16	1.15427319	2.22385692	-511.79382	1.15427319	2.22385692	-518.11465

Source S07

Line	ai	bi	ci	ao	bo	co
S07C01	1.47062164	-22.531011	-250.14004	1.47062164	-22.531011	-256.46087
S07C02	1.47062164	-22.531011	-250.14004	1.47062164	-22.531011	-256.46087
S07C03	1.47062164	-22.531011	-250.14004	1.47062164	-22.531011	-256.46087
S07C04	1.47062164	-22.531011	-250.14004	1.47062164	-22.531011	-256.46087
S07C05	1.47062164	-22.531011	-250.14004	1.47062164	-22.531011	-256.46087
S07C06	1.47062164	-22.531011	-250.14004	1.47062164	-22.531011	-256.46087
S07C07	200.407304	676.05078	53.1958258	200.407304	676.05078	46.875
S07C08	200.407304	676.05078	53.1958258	200.407304	676.05078	46.875
S07C09	200.407304	676.05078	53.1958258	200.407304	676.05078	46.875
S07C10	200.407304	676.05078	53.1958258	200.407304	676.05078	46.875
S07C11	200.407304	676.05078	53.1958258	200.407304	676.05078	46.875
S07C12	200.407304	676.05078	53.1958258	200.407304	676.05078	46.875
S07C13	1.77952699	37.3198546	-73.136071	1.77952699	37.3198546	-79.456896
S07C14	1.77952699	37.3198546	-73.136071	1.77952699	37.3198546	-79.456896
S07C15	1.77952699	37.3198546	-73.136071	1.77952699	37.3198546	-79.456896
S07C16	1.77952699	37.3198546	-73.136071	1.77952699	37.3198546	-79.456896
S07C17	1.77952699	37.3198546	-73.136071	1.77952699	37.3198546	-79.456896
S07C18	1.77952699	37.3198546	-73.136071	1.77952699	37.3198546	-79.456896
S07C19	4.29771512	86.939143	53.1958258	4.29771512	86.939143	46.875
S07C20	4.29771512	86.939143	53.1958258	4.29771512	86.939143	46.875
S07C21	4.29771512	86.939143	53.1958258	4.29771512	86.939143	46.875
S07C22	4.29771512	86.939143	53.1958258	4.29771512	86.939143	46.875
S07C23	4.29771512	86.939143	53.1958258	4.29771512	86.939143	46.875
S07C24	4.29771512	86.939143	53.1958258	4.29771512	86.939143	46.875
S07R01	1.01603827	-4.5849415	-192.12805	1.01603827	-4.5849415	-198.44887
S07R02	1.29359636	-18.265246	-235.72825	1.29359636	-18.265246	-242.04907
S07R03	2.31956158	-34.534288	-293.85859	2.31956158	-34.534288	-300.17942
S07R04	7.80599247	-55.544403	-406.48219	7.80599247	-55.544403	-412.80301
S07R05	2888.463	15361.5271	19911.3208	2888.463	15361.5271	19905
S07R06	9.47987628	158.589106	221.668086	9.47987628	158.589106	215.34726
S07R07	2.48619577	53.9926108	-29.428201	2.48619577	53.9926108	-35.749027
S07R08	1.32156907	22.8935959	-112.33984	1.32156907	22.8935959	-118.66066
S07R09	1.01744503	4.98709816	-163.38641	1.01744503	4.98709816	-169.70723
S07R10	1.0787588	-9.9006005	-208.66223	1.0787588	-9.9006005	-214.98306
S07R11	1.7092454	-26.869347	-265.3257	1.7092454	-26.869347	-271.64653
S07R12	5.82671914	-52.211914	-378.61052	5.82671914	-52.211914	-384.93134
S07R13	1717.43785	11843.7769	19911.3208	1717.43785	11843.7769	19905

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S07R14	4.87394969	96.0299175	75.3045175	4.87394969	96.0299175	68.9836917
S07R15	1.62972389	33.1167891	-84.410227	1.62972389	33.1167891	-90.731053
S07R16	1.07190771	10.3443404	-147.78477	1.07190771	10.3443404	-154.10559

Source S08

Line	ai	bi	ci	ao	bo	co
S08C01	1.13712023	-6.5646312	-441.23765	1.13712023	-6.5646312	-447.55848
S08C02	1.13712023	-6.5646312	-441.23765	1.13712023	-6.5646312	-447.55848
S08C03	1.13712023	-6.5646312	-441.23765	1.13712023	-6.5646312	-447.55848
S08C04	1.13712023	-6.5646312	-441.23765	1.13712023	-6.5646312	-447.55848
S08C05	1.13712023	-6.5646312	-441.23765	1.13712023	-6.5646312	-447.55848
S08C06	1.13712023	-6.5646312	-441.23765	1.13712023	-6.5646312	-447.55848
S08C07	531.968681	1103.17202	53.1958258	531.968681	1103.17202	46.875
S08C08	531.968681	1103.17202	53.1958258	531.968681	1103.17202	46.875
S08C09	531.968681	1103.17202	53.1958258	531.968681	1103.17202	46.875
S08C10	531.968681	1103.17202	53.1958258	531.968681	1103.17202	46.875
S08C11	531.968681	1103.17202	53.1958258	531.968681	1103.17202	46.875
S08C12	531.968681	1103.17202	53.1958258	531.968681	1103.17202	46.875
S08C13	1.17467177	8.36241083	-419.72048	1.17467177	8.36241083	-426.0413
S08C14	1.17467177	8.36241083	-419.72048	1.17467177	8.36241083	-426.0413
S08C15	1.17467177	8.36241083	-419.72048	1.17467177	8.36241083	-426.0413
S08C16	1.17467177	8.36241083	-419.72048	1.17467177	8.36241083	-426.0413
S08C17	1.17467177	8.36241083	-419.72048	1.17467177	8.36241083	-426.0413
S08C18	1.17467177	8.36241083	-419.72048	1.17467177	8.36241083	-426.0413
S08C19	101.973127	481.073784	53.1958258	101.973127	481.073784	46.875
S08C20	101.973127	481.073784	53.1958258	101.973127	481.073784	46.875
S08C21	101.973127	481.073784	53.1958258	101.973127	481.073784	46.875
S08C22	101.973127	481.073784	53.1958258	101.973127	481.073784	46.875
S08C23	101.973127	481.073784	53.1958258	101.973127	481.073784	46.875
S08C24	101.973127	481.073784	53.1958258	101.973127	481.073784	46.875
S08R01	1.00423829	-1.2116213	-433.21502	1.00423829	-1.2116213	-439.53585
S08R02	1.23052746	-8.3591992	-444.02946	1.23052746	-8.3591992	-450.35029
S08R03	2.16116937	-16.897977	-458.33091	2.16116937	-16.897977	-464.65173
S08R04	7.34747465	-28.997224	-486.69101	7.34747465	-28.997224	-493.01184
S08R05	11088.2048	30101.4359	19911.3208	11088.2048	30101.4359	19905
S08R06	8.05599581	70.3538138	-344.4374	8.05599581	70.3538138	-350.75823
S08R07	2.22959868	24.4040556	-398.72021	2.22959868	24.4040556	-405.04104
S08R08	1.24085471	9.92311347	-417.60105	1.24085471	9.92311347	-423.92187
S08R09	1.00441341	1.26168374	-429.63712	1.00441341	1.26168374	-435.95795
S08R10	1.12029382	-6.1722178	-440.6347	1.12029382	-6.1722178	-446.95553
S08R11	1.84671505	-14.848736	-454.70797	1.84671505	-14.848736	-461.0288
S08R12	6.30515071	-27.950107	-482.9944	6.30515071	-27.950107	-489.31523
S08R13	8520.58126	26386.7135	19911.3208	8520.58126	26386.7135	19905
S08R14	5.77243901	54.8782195	-362.04708	5.77243901	54.8782195	-368.36791

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S08R15	1.79959388	19.1241056	-405.45896	1.79959388	19.1241056	-411.77979
S08R16	1.11513593	6.71211789	-421.98343	1.11513593	6.71211789	-428.30426

Source S09

Line	ai	bi	ci	ao	bo	co
S09C01	1.00133368	-0.0638498	-519.04388	1.00133368	-0.0638498	-525.3647
S09C02	1.00133368	-0.0638498	-519.04388	1.00133368	-0.0638498	-525.3647
S09C03	1.00133368	-0.0638498	-519.04388	1.00133368	-0.0638498	-525.3647
S09C04	1.00133368	-0.0638498	-519.04388	1.00133368	-0.0638498	-525.3647
S09C05	1.00133368	-0.0638498	-519.04388	1.00133368	-0.0638498	-525.3647
S09C06	1.00133368	-0.0638498	-519.04388	1.00133368	-0.0638498	-525.3647
S09C07	5.96215519	106.64585	53.1958258	5.96215519	106.64585	46.875
S09C08	5.96215519	106.64585	53.1958258	5.96215519	106.64585	46.875
S09C09	5.96215519	106.64585	53.1958258	5.96215519	106.64585	46.875
S09C10	5.96215519	106.64585	53.1958258	5.96215519	106.64585	46.875
S09C11	5.96215519	106.64585	53.1958258	5.96215519	106.64585	46.875
S09C12	5.96215519	106.64585	53.1958258	5.96215519	106.64585	46.875
S09C13	1.01042273	0.49898802	-513.83582	1.01042273	0.49898802	-520.15664
S09C14	1.01042273	0.49898802	-513.83582	1.01042273	0.49898802	-520.15664
S09C15	1.01042273	0.49898802	-513.83582	1.01042273	0.49898802	-520.15664
S09C16	1.01042273	0.49898802	-513.83582	1.01042273	0.49898802	-520.15664
S09C17	1.01042273	0.49898802	-513.83582	1.01042273	0.49898802	-520.15664
S09C18	1.01042273	0.49898802	-513.83582	1.01042273	0.49898802	-520.15664
S09C19	5.00062074	95.7574292	53.1958258	5.00062074	95.7574292	46.875
S09C20	5.00062074	95.7574292	53.1958258	5.00062074	95.7574292	46.875
S09C21	5.00062074	95.7574292	53.1958258	5.00062074	95.7574292	46.875
S09C22	5.00062074	95.7574292	53.1958258	5.00062074	95.7574292	46.875
S09C23	5.00062074	95.7574292	53.1958258	5.00062074	95.7574292	46.875
S09C24	5.00062074	95.7574292	53.1958258	5.00062074	95.7574292	46.875
S09R01	1.00006968	-0.0199211	-518.38434	1.00006968	-0.0199211	-524.70517
S09R02	1.15247528	2.44759069	-509.98567	1.15247528	2.44759069	-516.30649
S09R03	1.82938586	16.4384437	-438.35551	1.82938586	16.4384437	-444.67634
S09R04	5.07897127	87.1790435	-53.992982	5.07897127	87.1790435	-60.313808
S09R05	163.2118	3640.9725	19911.3208	163.2118	3640.9725	19905
S09R06	10.4505445	221.953451	783.379647	10.4505445	221.953451	777.058821
S09R07	2.30079441	32.3977854	-318.08202	2.30079441	32.3977854	-324.40285
S09R08	1.21504568	6.06467863	-477.04934	1.21504568	6.06467863	-483.37017
S09R09	1.00009573	0.02736702	-517.85219	1.00009573	0.02736702	-524.17302
S09R10	1.19571621	3.29320007	-505.9549	1.19571621	3.29320007	-512.27573
S09R11	2.23615953	25.1330771	-392.05928	2.23615953	25.1330771	-398.38011
S09R12	10.0890076	198.083409	559.436175	10.0890076	198.083409	553.115349
S09R13	157.470209	3575.9547	19911.3208	157.470209	3575.9547	19905
S09R14	4.9229275	93.9475664	42.6637756	4.9229275	93.9475664	36.3429499
S09R15	1.78817469	20.1370673	-391.18765	1.78817469	20.1370673	-397.50847

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S09R16 1.13876998 4.10227289 -489.49057 1.13876998 4.10227289 -495.81139

Source S10						
Line	ai	bi	ci	ao	bo	co
S10C01	1.10798663	-5.16986	-457.93132	1.10798663	-5.16986	-464.25214
S10C02	1.10798663	-5.16986	-457.93132	1.10798663	-5.16986	-464.25214
S10C03	1.10798663	-5.16986	-457.93132	1.10798663	-5.16986	-464.25214
S10C04	1.10798663	-5.16986	-457.93132	1.10798663	-5.16986	-464.25214
S10C05	1.10798663	-5.16986	-457.93132	1.10798663	-5.16986	-464.25214
S10C06	1.10798663	-5.16986	-457.93132	1.10798663	-5.16986	-464.25214
S10C07	3.69303804	78.5651657	53.1958258	3.69303804	78.5651657	46.875
S10C08	3.69303804	78.5651657	53.1958258	3.69303804	78.5651657	46.875
S10C09	3.69303804	78.5651657	53.1958258	3.69303804	78.5651657	46.875
S10C10	3.69303804	78.5651657	53.1958258	3.69303804	78.5651657	46.875
S10C11	3.69303804	78.5651657	53.1958258	3.69303804	78.5651657	46.875
S10C12	3.69303804	78.5651657	53.1958258	3.69303804	78.5651657	46.875
S10C13	1.4468787	21.3943178	-263.74484	1.4468787	21.3943178	-270.06567
S10C14	1.4468787	21.3943178	-263.74484	1.4468787	21.3943178	-270.06567
S10C15	1.4468787	21.3943178	-263.74484	1.4468787	21.3943178	-270.06567
S10C16	1.4468787	21.3943178	-263.74484	1.4468787	21.3943178	-270.06567
S10C17	1.4468787	21.3943178	-263.74484	1.4468787	21.3943178	-270.06567
S10C18	1.4468787	21.3943178	-263.74484	1.4468787	21.3943178	-270.06567
S10C19	18.8623943	202.338545	53.1958258	18.8623943	202.338545	46.875
S10C20	18.8623943	202.338545	53.1958258	18.8623943	202.338545	46.875
S10C21	18.8623943	202.338545	53.1958258	18.8623943	202.338545	46.875
S10C22	18.8623943	202.338545	53.1958258	18.8623943	202.338545	46.875
S10C23	18.8623943	202.338545	53.1958258	18.8623943	202.338545	46.875
S10C24	18.8623943	202.338545	53.1958258	18.8623943	202.338545	46.875
S10R01	1.00487288	-1.3930349	-420.24962	1.00487288	-1.3930349	-426.57044
S10R02	1.09915378	8.26060277	-347.75827	1.09915378	8.26060277	-354.07909
S10R03	1.68681122	28.6902301	-220.18815	1.68681122	28.6902301	-226.50898
S10R04	4.73665026	101.755335	172.934583	4.73665026	101.755335	166.613757
S10R05	264.263302	4638.43355	19911.3208	264.263302	4638.43355	19905
S10R06	7.81649421	56.1619037	-404.12694	7.81649421	56.1619037	-410.44776
S10R07	1.94925659	-5.061975	-513.05975	1.94925659	-5.061975	-519.38058
S10R08	1.12699353	-5.4450384	-461.44203	1.12699353	-5.4450384	-467.76285
S10R09	1.00612433	1.75079328	-394.68107	1.00612433	1.75079328	-401.0019
S10R10	1.27733152	15.6348193	-299.45126	1.27733152	15.6348193	-305.77208
S10R11	2.44321458	48.8938141	-105.69692	2.44321458	48.8938141	-112.01775
S10R12	10.3887279	217.850544	743.911033	10.3887279	217.850544	737.590207
S10R13	354.843766	5377.51898	19911.3208	354.843766	5377.51898	19905
S10R14	6.14669144	36.1315041	-456.39425	6.14669144	36.1315041	-462.71508
S10R15	2.04420235	-4.5159321	-514.92549	2.04420235	-4.5159321	-521.24632
S10R16	1.21653442	-6.2825719	-474.23714	1.21653442	-6.2825719	-480.55796

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Source S11						
Line	ai	bi	ci	ao	bo	co
S11C01	1.34926287	-16.72096	-319.67909	1.34926287	-16.72096	-325.99992
S11C02	1.34926287	-16.72096	-319.67909	1.34926287	-16.72096	-325.99992
S11C03	1.34926287	-16.72096	-319.67909	1.34926287	-16.72096	-325.99992
S11C04	1.34926287	-16.72096	-319.67909	1.34926287	-16.72096	-325.99992
S11C05	1.34926287	-16.72096	-319.67909	1.34926287	-16.72096	-325.99992
S11C06	1.34926287	-16.72096	-319.67909	1.34926287	-16.72096	-325.99992
S11C07	2.79829899	-64.200696	53.1958258	2.79829899	-64.200696	46.875
S11C08	2.79829899	-64.200696	53.1958258	2.79829899	-64.200696	46.875
S11C09	2.79829899	-64.200696	53.1958258	2.79829899	-64.200696	46.875
S11C10	2.79829899	-64.200696	53.1958258	2.79829899	-64.200696	46.875
S11C11	2.79829899	-64.200696	53.1958258	2.79829899	-64.200696	46.875
S11C12	2.79829899	-64.200696	53.1958258	2.79829899	-64.200696	46.875
S11C13	1.03023315	1.44741198	-502.48437	1.03023315	1.44741198	-508.80519
S11C14	1.03023315	1.44741198	-502.48437	1.03023315	1.44741198	-508.80519
S11C15	1.03023315	1.44741198	-502.48437	1.03023315	1.44741198	-508.80519
S11C16	1.03023315	1.44741198	-502.48437	1.03023315	1.44741198	-508.80519
S11C17	1.03023315	1.44741198	-502.48437	1.03023315	1.44741198	-508.80519
S11C18	1.03023315	1.44741198	-502.48437	1.03023315	1.44741198	-508.80519
S11C19	6.41234738	-111.37857	53.1958258	6.41234738	-111.37857	46.875
S11C20	6.41234738	-111.37857	53.1958258	6.41234738	-111.37857	46.875
S11C21	6.41234738	-111.37857	53.1958258	6.41234738	-111.37857	46.875
S11C22	6.41234738	-111.37857	53.1958258	6.41234738	-111.37857	46.875
S11C23	6.41234738	-111.37857	53.1958258	6.41234738	-111.37857	46.875
S11C24	6.41234738	-111.37857	53.1958258	6.41234738	-111.37857	46.875
S11R01	1.00245234	-0.7010616	-469.70409	1.00245234	-0.7010616	-476.02491
S11R02	1.16451289	0.92252703	-518.51478	1.16451289	0.92252703	-524.83561
S11R03	2.15613065	-16.352554	-461.98459	2.15613065	-16.352554	-468.30542
S11R04	10.099351	-198.76203	565.608501	10.099351	-198.76203	559.287676
S11R05	110.348238	-2989.3865	19911.3208	110.348238	-2989.3865	19905
S11R06	4.43783291	-113.60663	418.753089	4.43783291	-113.60663	412.432263
S11R07	1.68767074	-28.621276	-221.99934	1.68767074	-28.621276	-228.32017
S11R08	1.11064066	-7.167503	-403.72712	1.11064066	-7.167503	-410.04794
S11R09	1.00170014	0.48602876	-485.07221	1.00170014	0.48602876	-491.39304
S11R10	1.17747334	0.78578389	-518.93829	1.17747334	0.78578389	-525.25912
S11R11	1.88731878	-11.048639	-485.41446	1.88731878	-11.048639	-491.73528
S11R12	5.17794536	-82.78407	-109.726	5.17794536	-82.78407	-116.04682
S11R13	131.92873	-3271.0988	19911.3208	131.92873	-3271.0988	19905
S11R14	12.0583011	-331.48839	1964.40153	12.0583011	-331.48839	1958.0807
S11R15	2.49178433	-54.659408	-19.123972	2.49178433	-54.659408	-25.444798
S11R16	1.26388716	-13.497775	-347.20595	1.26388716	-13.497775	-353.52678

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Line	Source S12					
	ai	bi	ci	ao	bo	co
S12C01	2.63258781	-78.160141	415.671109	2.63258781	-78.160141	409.350283
S12C02	2.63258781	-78.160141	415.671109	2.63258781	-78.160141	409.350283
S12C03	2.63258781	-78.160141	415.671109	2.63258781	-78.160141	409.350283
S12C04	2.63258781	-78.160141	415.671109	2.63258781	-78.160141	409.350283
S12C05	2.63258781	-78.160141	415.671109	2.63258781	-78.160141	409.350283
S12C06	2.63258781	-78.160141	415.671109	2.63258781	-78.160141	409.350283
S12C07	1.78978111	-42.546335	53.1958258	1.78978111	-42.546335	46.875
S12C08	1.78978111	-42.546335	53.1958258	1.78978111	-42.546335	46.875
S12C09	1.78978111	-42.546335	53.1958258	1.78978111	-42.546335	46.875
S12C10	1.78978111	-42.546335	53.1958258	1.78978111	-42.546335	46.875
S12C11	1.78978111	-42.546335	53.1958258	1.78978111	-42.546335	46.875
S12C12	1.78978111	-42.546335	53.1958258	1.78978111	-42.546335	46.875
S12C13	1.04549442	2.17804531	-493.7396	1.04549442	2.17804531	-500.06043
S12C14	1.04549442	2.17804531	-493.7396	1.04549442	2.17804531	-500.06043
S12C15	1.04549442	2.17804531	-493.7396	1.04549442	2.17804531	-500.06043
S12C16	1.04549442	2.17804531	-493.7396	1.04549442	2.17804531	-500.06043
S12C17	1.04549442	2.17804531	-493.7396	1.04549442	2.17804531	-500.06043
S12C18	1.04549442	2.17804531	-493.7396	1.04549442	2.17804531	-500.06043
S12C19	4.65893829	-91.576983	53.1958258	4.65893829	-91.576983	46.875
S12C20	4.65893829	-91.576983	53.1958258	4.65893829	-91.576983	46.875
S12C21	4.65893829	-91.576983	53.1958258	4.65893829	-91.576983	46.875
S12C22	4.65893829	-91.576983	53.1958258	4.65893829	-91.576983	46.875
S12C23	4.65893829	-91.576983	53.1958258	4.65893829	-91.576983	46.875
S12C24	4.65893829	-91.576983	53.1958258	4.65893829	-91.576983	46.875
S12R01	1.0048349	-1.3821763	-421.02567	1.0048349	-1.3821763	-427.3465
S12R02	1.15973472	1.53537244	-516.11857	1.15973472	1.53537244	-522.4394
S12R03	2.20842505	-22.062254	-419.11027	2.20842505	-22.062254	-425.43109
S12R04	11.7483655	-309.97706	1715.08476	11.7483655	-309.97706	1708.76393
S12R05	62.6585217	-2244.7746	19911.3208	62.6585217	-2244.7746	19905
S12R06	3.95025015	-130.89374	932.032434	3.95025015	-130.89374	925.711608
S12R07	1.61045944	-34.538277	-31.285622	1.61045944	-34.538277	-37.606448
S12R08	1.09491434	-8.63581	-323.37513	1.09491434	-8.63581	-329.69595
S12R09	1.00299021	0.85482525	-458.71479	1.00299021	0.85482525	-465.03561
S12R10	1.18098703	1.25980714	-517.61578	1.18098703	1.25980714	-523.9366
S12R11	1.86384702	-13.257969	-468.93862	1.86384702	-13.257969	-475.25944
S12R12	4.84716613	-97.159892	93.6333694	4.84716613	-97.159892	87.3125436
S12R13	79.7910608	-2537.5503	19911.3208	79.7910608	-2537.5503	19905
S12R14	15.0160141	-544.5572	4769.54426	15.0160141	-544.5572	4763.22344
S12R15	2.71001432	-81.330527	447.238603	2.71001432	-81.330527	440.917777
S12R16	1.30458952	-20.069123	-189.22407	1.30458952	-20.069123	-195.5449

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Line	Source S13					
	ai	bi	ci	ao	bo	co
S13C01	1.16528891	-7.9132068	-425.09689	1.16528891	-7.9132068	-431.41771
S13C02	1.16528891	-7.9132068	-425.09689	1.16528891	-7.9132068	-431.41771
S13C03	1.16528891	-7.9132068	-425.09689	1.16528891	-7.9132068	-431.41771
S13C04	1.16528891	-7.9132068	-425.09689	1.16528891	-7.9132068	-431.41771
S13C05	1.16528891	-7.9132068	-425.09689	1.16528891	-7.9132068	-431.41771
S13C06	1.16528891	-7.9132068	-425.09689	1.16528891	-7.9132068	-431.41771
S13C07	20.8124679	-213.09736	53.1958258	20.8124679	-213.09736	46.875
S13C08	20.8124679	-213.09736	53.1958258	20.8124679	-213.09736	46.875
S13C09	20.8124679	-213.09736	53.1958258	20.8124679	-213.09736	46.875
S13C10	20.8124679	-213.09736	53.1958258	20.8124679	-213.09736	46.875
S13C11	20.8124679	-213.09736	53.1958258	20.8124679	-213.09736	46.875
S13C12	20.8124679	-213.09736	53.1958258	20.8124679	-213.09736	46.875
S13C13	1.09151692	4.38137233	-467.36853	1.09151692	4.38137233	-473.68936
S13C14	1.09151692	4.38137233	-467.36853	1.09151692	4.38137233	-473.68936
S13C15	1.09151692	4.38137233	-467.36853	1.09151692	4.38137233	-473.68936
S13C16	1.09151692	4.38137233	-467.36853	1.09151692	4.38137233	-473.68936
S13C17	1.09151692	4.38137233	-467.36853	1.09151692	4.38137233	-473.68936
S13C18	1.09151692	4.38137233	-467.36853	1.09151692	4.38137233	-473.68936
S13C19	85.2673766	-439.4794	53.1958258	85.2673766	-439.4794	46.875
S13C20	85.2673766	-439.4794	53.1958258	85.2673766	-439.4794	46.875
S13C21	85.2673766	-439.4794	53.1958258	85.2673766	-439.4794	46.875
S13C22	85.2673766	-439.4794	53.1958258	85.2673766	-439.4794	46.875
S13C23	85.2673766	-439.4794	53.1958258	85.2673766	-439.4794	46.875
S13C24	85.2673766	-439.4794	53.1958258	85.2673766	-439.4794	46.875
S13R01	1.00354728	-1.0140787	-447.33315	1.00354728	-1.0140787	-453.65397
S13R02	1.13027108	5.0792743	-470.29781	1.13027108	5.0792743	-476.61863
S13R03	1.90417978	9.44092318	-495.16391	1.90417978	9.44092318	-501.48474
S13R04	6.84497445	-0.9057722	-519.77299	6.84497445	-0.9057722	-526.09382
S13R05	1470.37996	-10958.301	19911.3208	1470.37996	-10958.301	19905
S13R06	5.51944781	-67.053984	-271.09204	5.51944781	-67.053984	-277.41286
S13R07	1.78679857	-20.258508	-389.40395	1.78679857	-20.258508	-395.72478
S13R08	1.11712087	-6.5064838	-429.44346	1.11712087	-6.5064838	-435.76428
S13R09	1.00321515	0.91913051	-454.11897	1.00321515	0.91913051	-460.4398
S13R10	1.21597901	6.20121157	-475.29562	1.21597901	6.20121157	-481.61645
S13R11	2.09373397	9.68606332	-498.36324	2.09373397	9.68606332	-504.68406
S13R12	6.81389613	-0.7943515	-519.78095	6.81389613	-0.7943515	-526.10177
S13R13	1855.25823	-12310.092	19911.3208	1855.25823	-12310.092	19905
S13R14	8.51907661	-98.358698	-198.14513	8.51907661	-98.358698	-204.46595
S13R15	2.25690639	-27.448761	-369.94917	2.25690639	-27.448761	-376.26999
S13R16	1.24022893	-9.8276289	-419.2974	1.24022893	-9.8276289	-425.61823

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Source S14						
Line	ai	bi	ci	ao	bo	co
S14C01	1.02113733	-1.0119498	-507.69631	1.02113733	-1.0119498	-514.01713
S14C02	1.02113733	-1.0119498	-507.69631	1.02113733	-1.0119498	-514.01713
S14C03	1.02113733	-1.0119498	-507.69631	1.02113733	-1.0119498	-514.01713
S14C04	1.02113733	-1.0119498	-507.69631	1.02113733	-1.0119498	-514.01713
S14C05	1.02113733	-1.0119498	-507.69631	1.02113733	-1.0119498	-514.01713
S14C06	1.02113733	-1.0119498	-507.69631	1.02113733	-1.0119498	-514.01713
S14C07	1.95271081	46.7293063	53.1958258	1.95271081	46.7293063	46.875
S14C08	1.95271081	46.7293063	53.1958258	1.95271081	46.7293063	46.875
S14C09	1.95271081	46.7293063	53.1958258	1.95271081	46.7293063	46.875
S14C10	1.95271081	46.7293063	53.1958258	1.95271081	46.7293063	46.875
S14C11	1.95271081	46.7293063	53.1958258	1.95271081	46.7293063	46.875
S14C12	1.95271081	46.7293063	53.1958258	1.95271081	46.7293063	46.875
S14C13	2.1591607	55.4948185	144.395528	2.1591607	55.4948185	138.074702
S14C14	2.1591607	55.4948185	144.395528	2.1591607	55.4948185	138.074702
S14C15	2.1591607	55.4948185	144.395528	2.1591607	55.4948185	138.074702
S14C16	2.1591607	55.4948185	144.395528	2.1591607	55.4948185	138.074702
S14C17	2.1591607	55.4948185	144.395528	2.1591607	55.4948185	138.074702
S14C18	2.1591607	55.4948185	144.395528	2.1591607	55.4948185	138.074702
S14C19	3.71724569	78.9174858	53.1958258	3.71724569	78.9174858	46.875
S14C20	3.71724569	78.9174858	53.1958258	3.71724569	78.9174858	46.875
S14C21	3.71724569	78.9174858	53.1958258	3.71724569	78.9174858	46.875
S14C22	3.71724569	78.9174858	53.1958258	3.71724569	78.9174858	46.875
S14C23	3.71724569	78.9174858	53.1958258	3.71724569	78.9174858	46.875
S14C24	3.71724569	78.9174858	53.1958258	3.71724569	78.9174858	46.875
S14R01	1.00144754	-0.4138144	-490.23328	1.00144754	-0.4138144	-496.55411
S14R02	1.10441929	7.77276164	-375.1609	1.10441929	7.77276164	-381.48173
S14R03	1.63316216	32.859088	-93.487728	1.63316216	32.859088	-99.808554
S14R04	3.98038247	129.908062	895.790814	3.98038247	129.908062	889.469988
S14R05	57.2435644	2143.93985	19911.3208	57.2435644	2143.93985	19905
S14R06	12.9298397	392.880496	2714.83481	12.9298397	392.880496	2708.51399
S14R07	2.31376423	33.8730377	-301.46931	2.31376423	33.8730377	-307.79013
S14R08	1.18209179	1.4097595	-517.07948	1.18209179	1.4097595	-523.40031
S14R09	1.00241849	0.69138568	-470.39561	1.00241849	0.69138568	-476.71644
S14R10	1.28567003	16.9774375	-267.5648	1.28567003	16.9774375	-273.88562
S14R11	2.67512079	76.9878751	364.774833	2.67512079	76.9878751	358.454007
S14R12	15.3668536	570.640038	5146.53442	15.3668536	570.640038	5140.21359
S14R13	67.7800951	2336.14446	19911.3208	67.7800951	2336.14446	19905
S14R14	4.58921158	107.711331	288.289366	4.58921158	107.711331	281.96854
S14R15	1.80731617	18.4338485	-414.58079	1.80731617	18.4338485	-420.90162
S14R16	1.16381552	1.01256414	-518.24338	1.16381552	1.01256414	-524.56421

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

Source S15						
Line	ai	bi	ci	ao	bo	co
S15C01	4.39481841	-162.52693	1425.43613	4.39481841	-162.52693	1419.1153
S15C02	4.39481841	-162.52693	1425.43613	4.39481841	-162.52693	1419.1153
S15C03	4.39481841	-162.52693	1425.43613	4.39481841	-162.52693	1419.1153
S15C04	4.39481841	-162.52693	1425.43613	4.39481841	-162.52693	1419.1153
S15C05	4.39481841	-162.52693	1425.43613	4.39481841	-162.52693	1419.1153
S15C06	4.39481841	-162.52693	1425.43613	4.39481841	-162.52693	1419.1153
S15C07	1.77839511	-42.238534	53.1958258	1.77839511	-42.238534	46.875
S15C08	1.77839511	-42.238534	53.1958258	1.77839511	-42.238534	46.875
S15C09	1.77839511	-42.238534	53.1958258	1.77839511	-42.238534	46.875
S15C10	1.77839511	-42.238534	53.1958258	1.77839511	-42.238534	46.875
S15C11	1.77839511	-42.238534	53.1958258	1.77839511	-42.238534	46.875
S15C12	1.77839511	-42.238534	53.1958258	1.77839511	-42.238534	46.875
S15C13	1.01447927	0.69319525	-511.5114	1.01447927	0.69319525	-517.83223
S15C14	1.01447927	0.69319525	-511.5114	1.01447927	0.69319525	-517.83223
S15C15	1.01447927	0.69319525	-511.5114	1.01447927	0.69319525	-517.83223
S15C16	1.01447927	0.69319525	-511.5114	1.01447927	0.69319525	-517.83223
S15C17	1.01447927	0.69319525	-511.5114	1.01447927	0.69319525	-517.83223
S15C18	1.01447927	0.69319525	-511.5114	1.01447927	0.69319525	-517.83223
S15C19	2.95221446	-66.891749	53.1958258	2.95221446	-66.891749	46.875
S15C20	2.95221446	-66.891749	53.1958258	2.95221446	-66.891749	46.875
S15C21	2.95221446	-66.891749	53.1958258	2.95221446	-66.891749	46.875
S15C22	2.95221446	-66.891749	53.1958258	2.95221446	-66.891749	46.875
S15C23	2.95221446	-66.891749	53.1958258	2.95221446	-66.891749	46.875
S15C24	2.95221446	-66.891749	53.1958258	2.95221446	-66.891749	46.875
S15R01	1.00196679	-0.5622559	-479.62436	1.00196679	-0.5622559	-485.94518
S15R02	1.19700807	-3.4749306	-504.48492	1.19700807	-3.4749306	-510.80575
S15R03	2.42746902	-47.039293	-132.28739	2.42746902	-47.039293	-138.60822
S15R04	15.1259437	-552.71342	4886.77102	15.1259437	-552.71342	4880.4502
S15R05	43.8794759	-1871.9787	19911.3208	43.8794759	-1871.9787	19905
S15R06	3.79889875	-135.66193	1124.06698	3.79889875	-135.66193	1117.74615
S15R07	1.61411579	-34.27145	-41.668496	1.61411579	-34.27145	-47.989322
S15R08	1.10371341	-7.8395033	-371.66472	1.10371341	-7.8395033	-377.98555
S15R09	1.00108804	0.31104278	-497.57824	1.00108804	0.31104278	-503.89907
S15R10	1.15421812	-2.2307314	-511.74132	1.15421812	-2.2307314	-518.06215
S15R11	1.76082159	-22.524784	-353.09163	1.76082159	-22.524784	-359.41245
S15R12	4.297335	-118.86601	551.445479	4.297335	-118.86601	545.124653
S15R13	50.8886792	-2019.19	19911.3208	50.8886792	-2019.19	19905
S15R14	17.641534	-743.14955	7776.77164	17.641534	-743.14955	7770.45081
S15R15	2.76847635	-88.667648	591.593812	2.76847635	-88.667648	585.272986
S15R16	1.29294393	-18.158831	-238.40342	1.29294393	-18.158831	-244.72424

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

Source S16						
Line	ai	bi	ci	ao	bo	co
S16C01	1.85747126	-41.051437	-28.4737	1.85747126	-41.051437	-34.794525
S16C02	1.85747126	-41.051437	-28.4737	1.85747126	-41.051437	-34.794525
S16C03	1.85747126	-41.051437	-28.4737	1.85747126	-41.051437	-34.794525
S16C04	1.85747126	-41.051437	-28.4737	1.85747126	-41.051437	-34.794525
S16C05	1.85747126	-41.051437	-28.4737	1.85747126	-41.051437	-34.794525
S16C06	1.85747126	-41.051437	-28.4737	1.85747126	-41.051437	-34.794525
S16C07	2.13339083	-50.968122	53.1958258	2.13339083	-50.968122	46.875
S16C08	2.13339083	-50.968122	53.1958258	2.13339083	-50.968122	46.875
S16C09	2.13339083	-50.968122	53.1958258	2.13339083	-50.968122	46.875
S16C10	2.13339083	-50.968122	53.1958258	2.13339083	-50.968122	46.875
S16C11	2.13339083	-50.968122	53.1958258	2.13339083	-50.968122	46.875
S16C12	2.13339083	-50.968122	53.1958258	2.13339083	-50.968122	46.875
S16C13	1.07917988	3.79073687	-474.4377	1.07917988	3.79073687	-480.75852
S16C14	1.07917988	3.79073687	-474.4377	1.07917988	3.79073687	-480.75852
S16C15	1.07917988	3.79073687	-474.4377	1.07917988	3.79073687	-480.75852
S16C16	1.07917988	3.79073687	-474.4377	1.07917988	3.79073687	-480.75852
S16C17	1.07917988	3.79073687	-474.4377	1.07917988	3.79073687	-480.75852
S16C18	1.07917988	3.79073687	-474.4377	1.07917988	3.79073687	-480.75852
S16C19	8.19045063	-128.37689	53.1958258	8.19045063	-128.37689	46.875
S16C20	8.19045063	-128.37689	53.1958258	8.19045063	-128.37689	46.875
S16C21	8.19045063	-128.37689	53.1958258	8.19045063	-128.37689	46.875
S16C22	8.19045063	-128.37689	53.1958258	8.19045063	-128.37689	46.875
S16C23	8.19045063	-128.37689	53.1958258	8.19045063	-128.37689	46.875
S16C24	8.19045063	-128.37689	53.1958258	8.19045063	-128.37689	46.875
S16R01	1.00630116	-1.8013435	-391.06831	1.00630116	-1.8013435	-397.38914
S16R02	1.1383643	4.14980597	-488.69296	1.1383643	4.14980597	-495.01378
S16R03	2.05622186	-5.7601622	-511.95474	2.05622186	-5.7601622	-518.27557
S16R04	9.43180201	-155.51301	197.247939	9.43180201	-155.51301	190.927113
S16R05	108.663195	-2966.2641	19911.3208	108.663195	-2966.2641	19905
S16R06	4.25397175	-120.44593	594.769923	4.25397175	-120.44593	588.449097
S16R07	1.6352111	-32.704954	-98.840148	1.6352111	-32.704954	-105.16097
S16R08	1.09383815	-8.7284251	-316.83784	1.09383815	-8.7284251	-323.15867
S16R09	1.00440235	1.25852261	-429.86304	1.00440235	1.25852261	-436.18387
S16R10	1.20160043	4.12514468	-498.70592	1.20160043	4.12514468	-505.02675
S16R11	1.95745849	-4.2530313	-515.08509	1.95745849	-4.2530313	-521.40591
S16R12	5.45251705	-70.203057	-243.08431	5.45251705	-70.203057	-249.40514
S16R13	144.831591	-3428.4934	19911.3208	144.831591	-3428.4934	19905
S16R14	12.5375133	-365.08555	2368.32427	12.5375133	-365.08555	2362.00344
S16R15	2.59205118	-66.765415	180.172655	2.59205118	-66.765415	173.851829
S16R16	1.29725972	-18.864119	-220.52857	1.29725972	-18.864119	-226.8494

Source S17

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OF HN-200 GROUT CONTAINERS.**

Line	ai	bi	ci	ao	bo	co
S17C01	1.00650061	-0.3112165	-516.08321	1.00650061	-0.3112165	-522.40403
S17C02	1.00650061	-0.3112165	-516.08321	1.00650061	-0.3112165	-522.40403
S17C03	1.00650061	-0.3112165	-516.08321	1.00650061	-0.3112165	-522.40403
S17C04	1.00650061	-0.3112165	-516.08321	1.00650061	-0.3112165	-522.40403
S17C05	1.00650061	-0.3112165	-516.08321	1.00650061	-0.3112165	-522.40403
S17C06	1.00650061	-0.3112165	-516.08321	1.00650061	-0.3112165	-522.40403
S17C07	3.06828042	68.8515145	53.1958258	3.06828042	68.8515145	46.875
S17C08	3.06828042	68.8515145	53.1958258	3.06828042	68.8515145	46.875
S17C09	3.06828042	68.8515145	53.1958258	3.06828042	68.8515145	46.875
S17C10	3.06828042	68.8515145	53.1958258	3.06828042	68.8515145	46.875
S17C11	3.06828042	68.8515145	53.1958258	3.06828042	68.8515145	46.875
S17C12	3.06828042	68.8515145	53.1958258	3.06828042	68.8515145	46.875
S17C13	1.10755619	5.14925275	-458.17796	1.10755619	5.14925275	-464.49879
S17C14	1.10755619	5.14925275	-458.17796	1.10755619	5.14925275	-464.49879
S17C15	1.10755619	5.14925275	-458.17796	1.10755619	5.14925275	-464.49879
S17C16	1.10755619	5.14925275	-458.17796	1.10755619	5.14925275	-464.49879
S17C17	1.10755619	5.14925275	-458.17796	1.10755619	5.14925275	-464.49879
S17C18	1.10755619	5.14925275	-458.17796	1.10755619	5.14925275	-464.49879
S17C19	4.48116873	89.3246501	53.1958258	4.48116873	89.3246501	46.875
S17C20	4.48116873	89.3246501	53.1958258	4.48116873	89.3246501	46.875
S17C21	4.48116873	89.3246501	53.1958258	4.48116873	89.3246501	46.875
S17C22	4.48116873	89.3246501	53.1958258	4.48116873	89.3246501	46.875
S17C23	4.48116873	89.3246501	53.1958258	4.48116873	89.3246501	46.875
S17C24	4.48116873	89.3246501	53.1958258	4.48116873	89.3246501	46.875
S17R01	1.00038733	-0.1107281	-511.89448	1.00038733	-0.1107281	-518.21531
S17R02	1.12398505	5.77506404	-452.55932	1.12398505	5.77506404	-458.88015
S17R03	1.71876529	26.0836717	-283.16688	1.71876529	26.0836717	-289.4877
S17R04	4.47387186	112.224084	386.54696	4.47387186	112.224084	380.226134
S17R05	94.1332707	2758.85328	19911.3208	94.1332707	2758.85328	19905
S17R06	11.2859262	278.218259	1361.5344	11.2859262	278.218259	1355.21357
S17R07	2.28046139	30.0965731	-342.95704	2.28046139	30.0965731	-349.27787
S17R08	1.19264421	2.86317692	-509.16958	1.19264421	2.86317692	-515.49041
S17R09	1.00058183	0.16633013	-507.92067	1.00058183	0.16633013	-514.2415
S17R10	1.24168968	10.0506581	-415.319	1.24168968	10.0506581	-421.63983
S17R11	2.44755502	49.4063092	-98.238027	2.44755502	49.4063092	-104.55885
S17R12	12.2981711	348.255553	2163.85483	12.2981711	348.255553	2157.534
S17R13	102.570022	2881.1041	19911.3208	102.570022	2881.1041	19905
S17R14	4.81573791	98.4778118	115.578812	4.81573791	98.4778118	109.257987
S17R15	1.81256047	17.9627139	-420.53575	1.81256047	17.9627139	-426.85657
S17R16	1.15555053	2.06401408	-512.96118	1.15555053	2.06401408	-519.28201

Source S18

Line	ai	bi	ci	ao	bo	co
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S18C01	6.38430607	-257.77365	2565.42033	6.38430607	-257.77365	2559.09951
S18C02	6.38430607	-257.77365	2565.42033	6.38430607	-257.77365	2559.09951
S18C03	6.38430607	-257.77365	2565.42033	6.38430607	-257.77365	2559.09951
S18C04	6.38430607	-257.77365	2565.42033	6.38430607	-257.77365	2559.09951
S18C05	6.38430607	-257.77365	2565.42033	6.38430607	-257.77365	2559.09951
S18C06	6.38430607	-257.77365	2565.42033	6.38430607	-257.77365	2559.09951
S18C07	4.66856904	-91.697424	53.1958258	4.66856904	-91.697424	46.875
S18C08	4.66856904	-91.697424	53.1958258	4.66856904	-91.697424	46.875
S18C09	4.66856904	-91.697424	53.1958258	4.66856904	-91.697424	46.875
S18C10	4.66856904	-91.697424	53.1958258	4.66856904	-91.697424	46.875
S18C11	4.66856904	-91.697424	53.1958258	4.66856904	-91.697424	46.875
S18C12	4.66856904	-91.697424	53.1958258	4.66856904	-91.697424	46.875
S18C13	1.07901349	3.78277081	-474.53304	1.07901349	3.78277081	-480.85387
S18C14	1.07901349	3.78277081	-474.53304	1.07901349	3.78277081	-480.85387
S18C15	1.07901349	3.78277081	-474.53304	1.07901349	3.78277081	-480.85387
S18C16	1.07901349	3.78277081	-474.53304	1.07901349	3.78277081	-480.85387
S18C17	1.07901349	3.78277081	-474.53304	1.07901349	3.78277081	-480.85387
S18C18	1.07901349	3.78277081	-474.53304	1.07901349	3.78277081	-480.85387
S18C19	1.4044923	-30.448361	53.1958258	1.4044923	-30.448361	46.875
S18C20	1.4044923	-30.448361	53.1958258	1.4044923	-30.448361	46.875
S18C21	1.4044923	-30.448361	53.1958258	1.4044923	-30.448361	46.875
S18C22	1.4044923	-30.448361	53.1958258	1.4044923	-30.448361	46.875
S18C23	1.4044923	-30.448361	53.1958258	1.4044923	-30.448361	46.875
S18C24	1.4044923	-30.448361	53.1958258	1.4044923	-30.448361	46.875
S18R01	1.00934428	-2.6712958	-328.89391	1.00934428	-2.6712958	-335.21474
S18R02	1.34664911	-27.143773	11.5537456	1.34664911	-27.143773	5.23291985
S18R03	2.88737045	-103.81205	907.699395	2.88737045	-103.81205	901.378569
S18R04	17.0711929	-699.37831	7088.99261	17.0711929	-699.37831	7082.67178
S18R05	69.1794148	-2360.4935	19911.3208	69.1794148	-2360.4935	19905
S18R06	4.84533978	-97.236717	94.8956643	4.84533978	-97.236717	88.5748385
S18R07	1.89034118	-10.761701	-487.28847	1.89034118	-10.761701	-493.60929
S18R08	1.19559812	3.27661392	-506.08581	1.19559812	3.27661392	-512.40664
S18R09	1.00551021	1.57523163	-407.22825	1.00551021	1.57523163	-413.54907
S18R10	1.0801416	-9.8037332	-219.98508	1.0801416	-9.8037332	-226.30591
S18R11	1.5524231	-38.574896	153.599035	1.5524231	-38.574896	147.278209
S18R12	3.67053037	-139.45374	1300.74277	3.67053037	-139.45374	1294.42194
S18R13	49.6887007	-1994.7583	19911.3208	49.6887007	-1994.7583	19905
S18R14	12.1612006	-338.66872	2049.28153	12.1612006	-338.66872	2042.96071
S18R15	2.17104214	-17.969636	-450.87209	2.17104214	-17.969636	-457.19291
S18R16	1.14203109	3.717041	-495.48877	1.14203109	3.717041	-501.80959

Line	Source S19					
	ai	bi	ci	ao	bo	co
S19C01	1.00004356	-0.0020853	-519.78312	1.00004356	-0.0020853	-526.10395

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S19C02	1.00004356	-0.0020853	-519.78312	1.00004356	-0.0020853	-526.10395
S19C03	1.00004356	-0.0020853	-519.78312	1.00004356	-0.0020853	-526.10395
S19C04	1.00004356	-0.0020853	-519.78312	1.00004356	-0.0020853	-526.10395
S19C05	1.00004356	-0.0020853	-519.78312	1.00004356	-0.0020853	-526.10395
S19C06	1.00004356	-0.0020853	-519.78312	1.00004356	-0.0020853	-526.10395
S19C07	2.67906662	62.035852	53.1958258	2.67906662	62.035852	46.875
S19C08	2.67906662	62.035852	53.1958258	2.67906662	62.035852	46.875
S19C09	2.67906662	62.035852	53.1958258	2.67906662	62.035852	46.875
S19C10	2.67906662	62.035852	53.1958258	2.67906662	62.035852	46.875
S19C11	2.67906662	62.035852	53.1958258	2.67906662	62.035852	46.875
S19C12	2.67906662	62.035852	53.1958258	2.67906662	62.035852	46.875
S19C13	1.00240463	0.11512183	-518.43022	1.00240463	0.11512183	-524.75104
S19C14	1.00240463	0.11512183	-518.43022	1.00240463	0.11512183	-524.75104
S19C15	1.00240463	0.11512183	-518.43022	1.00240463	0.11512183	-524.75104
S19C16	1.00240463	0.11512183	-518.43022	1.00240463	0.11512183	-524.75104
S19C17	1.00240463	0.11512183	-518.43022	1.00240463	0.11512183	-524.75104
S19C18	1.00240463	0.11512183	-518.43022	1.00240463	0.11512183	-524.75104
S19C19	2.75905328	63.4962802	53.1958258	2.75905328	63.4962802	46.875
S19C20	2.75905328	63.4962802	53.1958258	2.75905328	63.4962802	46.875
S19C21	2.75905328	63.4962802	53.1958258	2.75905328	63.4962802	46.875
S19C22	2.75905328	63.4962802	53.1958258	2.75905328	63.4962802	46.875
S19C23	2.75905328	63.4962802	53.1958258	2.75905328	63.4962802	46.875
S19C24	2.75905328	63.4962802	53.1958258	2.75905328	63.4962802	46.875
S19R01	1.00000298	-0.0008533	-519.7471	1.00000298	-0.0008533	-526.06793
S19R02	1.13107839	4.98821347	-472.35122	1.13107839	4.98821347	-478.67205
S19R03	1.71344931	26.5233354	-273.29887	1.71344931	26.5233354	-279.61969
S19R04	4.26242857	120.139454	586.230565	4.26242857	120.139454	579.90974
S19R05	62.0482327	2233.63767	19911.3208	62.0482327	2233.63767	19905
S19R06	14.0767269	475.506054	3802.87163	14.0767269	475.506054	3796.5508
S19R07	2.48136347	53.4167486	-38.267073	2.48136347	53.4167486	-44.587899
S19R08	1.22869896	8.08499488	-448.35264	1.22869896	8.08499488	-454.67346
S19R09	1.00000499	0.00142625	-519.70615	1.00000499	0.00142625	-526.02697
S19R10	1.23340414	8.79225548	-437.00775	1.23340414	8.79225548	-443.32858
S19R11	2.49778037	55.3757848	-7.9710959	2.49778037	55.3757848	-14.291922
S19R12	14.1875003	483.58788	3913.5044	14.1875003	483.58788	3907.18357
S19R13	62.5258554	2242.3583	19911.3208	62.5258554	2242.3583	19905
S19R14	4.29006471	119.132354	558.629506	4.29006471	119.132354	552.30868
S19R15	1.72135596	25.8685564	-287.88991	1.72135596	25.8685564	-294.21074
S19R16	1.13377515	4.68132552	-478.85352	1.13377515	4.68132552	-485.17435

Source S20

Line	ai	bi	ci	ao	bo	co
S20C01	1.19167983	-9.1766718	-409.97479	1.19167983	-9.1766718	-416.29562
S20C02	1.19167983	-9.1766718	-409.97479	1.19167983	-9.1766718	-416.29562

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S20C03	1.19167983	-9.1766718	-409.97479	1.19167983	-9.1766718	-416.29562
S20C04	1.19167983	-9.1766718	-409.97479	1.19167983	-9.1766718	-416.29562
S20C05	1.19167983	-9.1766718	-409.97479	1.19167983	-9.1766718	-416.29562
S20C06	1.19167983	-9.1766718	-409.97479	1.19167983	-9.1766718	-416.29562
S20C07	27.3787413	-245.88714	53.1958258	27.3787413	-245.88714	46.875
S20C08	27.3787413	-245.88714	53.1958258	27.3787413	-245.88714	46.875
S20C09	27.3787413	-245.88714	53.1958258	27.3787413	-245.88714	46.875
S20C10	27.3787413	-245.88714	53.1958258	27.3787413	-245.88714	46.875
S20C11	27.3787413	-245.88714	53.1958258	27.3787413	-245.88714	46.875
S20C12	27.3787413	-245.88714	53.1958258	27.3787413	-245.88714	46.875
S20C13	1.1184964	5.67301507	-451.90918	1.1184964	5.67301507	-458.23001
S20C14	1.1184964	5.67301507	-451.90918	1.1184964	5.67301507	-458.23001
S20C15	1.1184964	5.67301507	-451.90918	1.1184964	5.67301507	-458.23001
S20C16	1.1184964	5.67301507	-451.90918	1.1184964	5.67301507	-458.23001
S20C17	1.1184964	5.67301507	-451.90918	1.1184964	5.67301507	-458.23001
S20C18	1.1184964	5.67301507	-451.90918	1.1184964	5.67301507	-458.23001
S20C19	135.050421	-554.29745	53.1958258	135.050421	-554.29745	46.875
S20C20	135.050421	-554.29745	53.1958258	135.050421	-554.29745	46.875
S20C21	135.050421	-554.29745	53.1958258	135.050421	-554.29745	46.875
S20C22	135.050421	-554.29745	53.1958258	135.050421	-554.29745	46.875
S20C23	135.050421	-554.29745	53.1958258	135.050421	-554.29745	46.875
S20C24	135.050421	-554.29745	53.1958258	135.050421	-554.29745	46.875
S20R01	1.00433836	-1.2402277	-431.17056	1.00433836	-1.2402277	-437.49139
S20R02	1.12389258	5.78511951	-452.27456	1.12389258	5.78511951	-458.59539
S20R03	1.87463969	12.2463084	-476.94127	1.87463969	12.2463084	-483.26209
S20R04	6.61515523	11.5572173	-513.86126	6.61515523	11.5572173	-520.18209
S20R05	2180.1252	-13344.96	19911.3208	2180.1252	-13344.96	19905
S20R06	5.55314044	-65.457062	-284.55139	5.55314044	-65.457062	-290.87222
S20R07	1.7808809	-20.779162	-381.57523	1.7808809	-20.779162	-387.89605
S20R08	1.11359506	-6.8698492	-415.94171	1.11359506	-6.8698492	-422.26253
S20R09	1.00400414	1.14468247	-437.99906	1.00400414	1.14468247	-444.31988
S20R10	1.22448747	7.45663362	-457.88771	1.22448747	7.45663362	-464.20854
S20R11	2.1261621	13.130125	-481.53646	2.1261621	13.130125	-487.85729
S20R12	7.02387597	10.7791631	-514.986	7.02387597	10.7791631	-521.30683
S20R13	2823.06289	-15186.564	19911.3208	2823.06289	-15186.564	19905
S20R14	8.42893813	-92.851669	-229.67804	8.42893813	-92.851669	-235.99887
S20R15	2.26137812	-27.949914	-364.97789	2.26137812	-27.949914	-371.29871
S20R16	1.24483751	-10.532935	-406.5261	1.24483751	-10.532935	-412.84693

Source S21

Line	ai	bi	ci	ao	bo	co
S21C01	1.14371211	-6.8802172	-437.46048	1.14371211	-6.8802172	-443.78131
S21C02	1.14371211	-6.8802172	-437.46048	1.14371211	-6.8802172	-443.78131
S21C03	1.14371211	-6.8802172	-437.46048	1.14371211	-6.8802172	-443.78131

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S21C04	1.14371211	-6.8802172	-437.46048	1.14371211	-6.8802172	-443.78131
S21C05	1.14371211	-6.8802172	-437.46048	1.14371211	-6.8802172	-443.78131
S21C06	1.14371211	-6.8802172	-437.46048	1.14371211	-6.8802172	-443.78131
S21C07	109.196904	-497.98493	53.1958258	109.196904	-497.98493	46.875
S21C08	109.196904	-497.98493	53.1958258	109.196904	-497.98493	46.875
S21C09	109.196904	-497.98493	53.1958258	109.196904	-497.98493	46.875
S21C10	109.196904	-497.98493	53.1958258	109.196904	-497.98493	46.875
S21C11	109.196904	-497.98493	53.1958258	109.196904	-497.98493	46.875
S21C12	109.196904	-497.98493	53.1958258	109.196904	-497.98493	46.875
S21C13	1.08591096	4.11298722	-470.58076	1.08591096	4.11298722	-476.90159
S21C14	1.08591096	4.11298722	-470.58076	1.08591096	4.11298722	-476.90159
S21C15	1.08591096	4.11298722	-470.58076	1.08591096	4.11298722	-476.90159
S21C16	1.08591096	4.11298722	-470.58076	1.08591096	4.11298722	-476.90159
S21C17	1.08591096	4.11298722	-470.58076	1.08591096	4.11298722	-476.90159
S21C18	1.08591096	4.11298722	-470.58076	1.08591096	4.11298722	-476.90159
S21C19	28.3836496	-250.52695	53.1958258	28.3836496	-250.52695	46.875
S21C20	28.3836496	-250.52695	53.1958258	28.3836496	-250.52695	46.875
S21C21	28.3836496	-250.52695	53.1958258	28.3836496	-250.52695	46.875
S21C22	28.3836496	-250.52695	53.1958258	28.3836496	-250.52695	46.875
S21C23	28.3836496	-250.52695	53.1958258	28.3836496	-250.52695	46.875
S21C24	28.3836496	-250.52695	53.1958258	28.3836496	-250.52695	46.875
S21R01	1.00320096	-0.9150748	-454.40883	1.00320096	-0.9150748	-460.72965
S21R02	1.23560872	-9.1254958	-431.44688	1.23560872	-9.1254958	-437.76771
S21R03	2.23651478	-25.172596	-391.69404	2.23651478	-25.172596	-398.01487
S21R04	8.34751792	-87.900047	-256.91596	8.34751792	-87.900047	-263.23679
S21R05	2427.94535	-14083.357	19911.3208	2427.94535	-14083.357	19905
S21R06	6.87207514	2.39198648	-519.56449	6.87207514	2.39198648	-525.88531
S21R07	2.09535118	9.85673612	-497.63363	2.09535118	9.85673612	-503.95445
S21R08	1.21473508	6.01929496	-477.62597	1.21473508	6.01929496	-483.9468
S21R09	1.00293805	0.83991626	-459.78032	1.00293805	0.83991626	-466.10114
S21R10	1.11989458	-6.2146459	-439.2752	1.11989458	-6.2146459	-445.59603
S21R11	1.80030764	-19.060482	-406.31986	1.80030764	-19.060482	-412.64069
S21R12	5.61916452	-62.305441	-309.70689	5.61916452	-62.305441	-316.02771
S21R13	1945.38684	-12605.716	19911.3208	1945.38684	-12605.716	19905
S21R14	6.7797956	2.65456695	-519.50328	6.7797956	2.65456695	-525.82411
S21R15	1.90344745	9.51110233	-494.77589	1.90344745	9.51110233	-501.09672
S21R16	1.13154911	4.93494443	-473.5256	1.13154911	4.93494443	-479.84643

Source S22

Line	ai	bi	ci	ao	bo	co
S22C01	1.09408588	-4.5043615	-465.8965	1.09408588	-4.5043615	-472.21733
S22C02	1.09408588	-4.5043615	-465.8965	1.09408588	-4.5043615	-472.21733
S22C03	1.09408588	-4.5043615	-465.8965	1.09408588	-4.5043615	-472.21733
S22C04	1.09408588	-4.5043615	-465.8965	1.09408588	-4.5043615	-472.21733

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S22C05	1.09408588	-4.5043615	-465.8965	1.09408588	-4.5043615	-472.21733
S22C06	1.09408588	-4.5043615	-465.8965	1.09408588	-4.5043615	-472.21733
S22C07	1.37986417	29.5068571	53.1958258	1.37986417	29.5068571	46.875
S22C08	1.37986417	29.5068571	53.1958258	1.37986417	29.5068571	46.875
S22C09	1.37986417	29.5068571	53.1958258	1.37986417	29.5068571	46.875
S22C10	1.37986417	29.5068571	53.1958258	1.37986417	29.5068571	46.875
S22C11	1.37986417	29.5068571	53.1958258	1.37986417	29.5068571	46.875
S22C12	1.37986417	29.5068571	53.1958258	1.37986417	29.5068571	46.875
S22C13	5.65464363	222.841064	2147.3209	5.65464363	222.841064	2141.00008
S22C14	5.65464363	222.841064	2147.3209	5.65464363	222.841064	2141.00008
S22C15	5.65464363	222.841064	2147.3209	5.65464363	222.841064	2141.00008
S22C16	5.65464363	222.841064	2147.3209	5.65464363	222.841064	2141.00008
S22C17	5.65464363	222.841064	2147.3209	5.65464363	222.841064	2141.00008
S22C18	5.65464363	222.841064	2147.3209	5.65464363	222.841064	2141.00008
S22C19	5.18864109	97.9817883	53.1958258	5.18864109	97.9817883	46.875
S22C20	5.18864109	97.9817883	53.1958258	5.18864109	97.9817883	46.875
S22C21	5.18864109	97.9817883	53.1958258	5.18864109	97.9817883	46.875
S22C22	5.18864109	97.9817883	53.1958258	5.18864109	97.9817883	46.875
S22C23	5.18864109	97.9817883	53.1958258	5.18864109	97.9817883	46.875
S22C24	5.18864109	97.9817883	53.1958258	5.18864109	97.9817883	46.875
S22R01	1.00638382	-1.824976	-389.37933	1.00638382	-1.824976	-395.70015
S22R02	1.0777778	9.96788928	-200.44054	1.0777778	9.96788928	-206.76137
S22R03	1.54906674	38.7962503	165.513455	1.54906674	38.7962503	159.192629
S22R04	3.6899661	138.895223	1273.14043	3.6899661	138.895223	1266.81961
S22R05	53.3518953	2068.4374	19911.3208	53.3518953	2068.4374	19905
S22R06	11.5368148	295.397122	1550.53912	11.5368148	295.397122	1544.21829
S22R07	2.12706181	13.2263228	-481.00462	2.12706181	13.2263228	-487.32544
S22R08	1.13453399	-4.5942332	-480.58569	1.13453399	-4.5942332	-486.90651
S22R09	1.01058621	3.02633325	-303.51983	1.01058621	3.02633325	-309.84065
S22R10	1.35069366	27.8373262	32.6090339	1.35069366	27.8373262	26.2882081
S22R11	2.87988298	102.849905	886.942098	2.87988298	102.849905	880.621272
S22R12	16.5731772	661.429845	6503.31624	16.5731772	661.429845	6496.99542
S22R13	76.0951664	2477.32035	19911.3208	76.0951664	2477.32035	19905
S22R14	4.97570991	91.6806455	8.73530826	4.97570991	91.6806455	2.4144825
S22R15	1.91581598	8.32162344	-500.90433	1.91581598	8.32162344	-507.22516
S22R16	1.20274566	-4.2882949	-497.13254	1.20274566	-4.2882949	-503.45336

Source S23

Line	ai	bi	ci	ao	bo	co
S23C01	1.60204426	-28.822869	-174.83437	1.60204426	-28.822869	-181.15519
S23C02	1.60204426	-28.822869	-174.83437	1.60204426	-28.822869	-181.15519
S23C03	1.60204426	-28.822869	-174.83437	1.60204426	-28.822869	-181.15519
S23C04	1.60204426	-28.822869	-174.83437	1.60204426	-28.822869	-181.15519
S23C05	1.60204426	-28.822869	-174.83437	1.60204426	-28.822869	-181.15519

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S23C06	1.60204426	-28.822869	-174.83437	1.60204426	-28.822869	-181.15519
S23C07	4.34105576	-87.508582	53.1958258	4.34105576	-87.508582	46.875
S23C08	4.34105576	-87.508582	53.1958258	4.34105576	-87.508582	46.875
S23C09	4.34105576	-87.508582	53.1958258	4.34105576	-87.508582	46.875
S23C10	4.34105576	-87.508582	53.1958258	4.34105576	-87.508582	46.875
S23C11	4.34105576	-87.508582	53.1958258	4.34105576	-87.508582	46.875
S23C12	4.34105576	-87.508582	53.1958258	4.34105576	-87.508582	46.875
S23C13	1.2534072	12.1318695	-374.60477	1.2534072	12.1318695	-380.92559
S23C14	1.2534072	12.1318695	-374.60477	1.2534072	12.1318695	-380.92559
S23C15	1.2534072	12.1318695	-374.60477	1.2534072	12.1318695	-380.92559
S23C16	1.2534072	12.1318695	-374.60477	1.2534072	12.1318695	-380.92559
S23C17	1.2534072	12.1318695	-374.60477	1.2534072	12.1318695	-380.92559
S23C18	1.2534072	12.1318695	-374.60477	1.2534072	12.1318695	-380.92559
S23C19	58.1673812	-361.97863	53.1958258	58.1673812	-361.97863	46.875
S23C20	58.1673812	-361.97863	53.1958258	58.1673812	-361.97863	46.875
S23C21	58.1673812	-361.97863	53.1958258	58.1673812	-361.97863	46.875
S23C22	58.1673812	-361.97863	53.1958258	58.1673812	-361.97863	46.875
S23C23	58.1673812	-361.97863	53.1958258	58.1673812	-361.97863	46.875
S23C24	58.1673812	-361.97863	53.1958258	58.1673812	-361.97863	46.875
S23R01	1.01124535	-3.2147636	-290.05294	1.01124535	-3.2147636	-296.37377
S23R02	1.09967782	8.21310921	-350.6251	1.09967782	8.21310921	-356.94592
S23R03	1.81149234	18.0588259	-419.3385	1.81149234	18.0588259	-425.65932
S23R04	6.60606732	12.0447664	-513.33847	6.60606732	12.0447664	-519.65929
S23R05	634.274565	-7194.0293	19911.3208	634.274565	-7194.0293	19905
S23R06	4.85695888	-96.747469	86.8922408	4.85695888	-96.747469	80.571415
S23R07	1.6630828	-30.56747	-167.52543	1.6630828	-30.56747	-173.84626
S23R08	1.08540567	-9.414378	-260.36829	1.08540567	-9.414378	-266.68912
S23R09	1.00974932	2.78708576	-320.61855	1.00974932	2.78708576	-326.93937
S23R10	1.25541446	12.169568	-374.84919	1.25541446	12.169568	-381.17002
S23R11	2.18732695	19.7457724	-437.71285	2.18732695	19.7457724	-444.03367
S23R12	7.01614607	10.3495571	-515.357	7.01614607	10.3495571	-521.67783
S23R13	955.686591	-8832.9666	19911.3208	955.686591	-8832.9666	19905
S23R14	9.74443336	-175.62632	362.027311	9.74443336	-175.62632	355.706485
S23R15	2.45307152	-50.058456	-88.678406	2.45307152	-50.058456	-94.999232
S23R16	1.2980968	-19.00128	-217.01328	1.2980968	-19.00128	-223.3341

Source S24

Line	ai	bi	ci	ao	bo	co
S24C01	2.44621225	-69.237411	308.877187	2.44621225	-69.237411	302.556361
S24C02	2.44621225	-69.237411	308.877187	2.44621225	-69.237411	302.556361
S24C03	2.44621225	-69.237411	308.877187	2.44621225	-69.237411	302.556361
S24C04	2.44621225	-69.237411	308.877187	2.44621225	-69.237411	302.556361
S24C05	2.44621225	-69.237411	308.877187	2.44621225	-69.237411	302.556361
S24C06	2.44621225	-69.237411	308.877187	2.44621225	-69.237411	302.556361

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S24C07	1.35224115	-28.413768	53.1958258	1.35224115	-28.413768	46.875
S24C08	1.35224115	-28.413768	53.1958258	1.35224115	-28.413768	46.875
S24C09	1.35224115	-28.413768	53.1958258	1.35224115	-28.413768	46.875
S24C10	1.35224115	-28.413768	53.1958258	1.35224115	-28.413768	46.875
S24C11	1.35224115	-28.413768	53.1958258	1.35224115	-28.413768	46.875
S24C12	1.35224115	-28.413768	53.1958258	1.35224115	-28.413768	46.875
S24C13	1.36273858	17.3661093	-311.95746	1.36273858	17.3661093	-318.27829
S24C14	1.36273858	17.3661093	-311.95746	1.36273858	17.3661093	-318.27829
S24C15	1.36273858	17.3661093	-311.95746	1.36273858	17.3661093	-318.27829
S24C16	1.36273858	17.3661093	-311.95746	1.36273858	17.3661093	-318.27829
S24C17	1.36273858	17.3661093	-311.95746	1.36273858	17.3661093	-318.27829
S24C18	1.36273858	17.3661093	-311.95746	1.36273858	17.3661093	-318.27829
S24C19	30.3723621	-259.46467	53.1958258	30.3723621	-259.46467	46.875
S24C20	30.3723621	-259.46467	53.1958258	30.3723621	-259.46467	46.875
S24C21	30.3723621	-259.46467	53.1958258	30.3723621	-259.46467	46.875
S24C22	30.3723621	-259.46467	53.1958258	30.3723621	-259.46467	46.875
S24C23	30.3723621	-259.46467	53.1958258	30.3723621	-259.46467	46.875
S24C24	30.3723621	-259.46467	53.1958258	30.3723621	-259.46467	46.875
S24R01	1.02026017	-5.7918767	-105.86989	1.02026017	-5.7918767	-112.19072
S24R02	1.08177917	9.68604297	-233.00085	1.08177917	9.68604297	-239.32167
S24R03	1.77294107	21.4736983	-370.66355	1.77294107	21.4736983	-376.98438
S24R04	6.82937262	-0.051716	-519.80797	6.82937262	-0.051716	-526.12879
S24R05	242.490515	-4442.4875	19911.3208	242.490515	-4442.4875	19905
S24R06	4.24310331	-120.83861	605.809069	4.24310331	-120.83861	599.488243
S24R07	1.56366314	-37.823583	114.71248	1.56366314	-37.823583	108.391654
S24R08	1.06423632	-10.761492	-69.090692	1.06423632	-10.761492	-75.411518
S24R09	1.01620991	4.63400679	-188.62141	1.01620991	4.63400679	-194.94223
S24R10	1.2786491	15.8461163	-294.52527	1.2786491	15.8461163	-300.8461
S24R11	2.21701318	23.0100691	-411.04523	2.21701318	23.0100691	-417.36606
S24R12	6.8277221	-0.0385685	-519.80802	6.8277221	-0.0385685	-526.12884
S24R13	415.777765	-5822.157	19911.3208	415.777765	-5822.157	19905
S24R14	11.4751407	-291.16274	1503.4521	11.4751407	-291.16274	1497.13127
S24R15	2.66886815	-76.21268	350.298485	2.66886815	-76.21268	343.977659
S24R16	1.35474779	-28.534681	53.9996119	1.35474779	-28.534681	47.6787862

Source S25

Line	ai	bi	ci	ao	bo	co
S25C01	1.37812855	-18.102904	-303.13895	1.37812855	-18.102904	-309.45977
S25C02	1.37812855	-18.102904	-303.13895	1.37812855	-18.102904	-309.45977
S25C03	1.37812855	-18.102904	-303.13895	1.37812855	-18.102904	-309.45977
S25C04	1.37812855	-18.102904	-303.13895	1.37812855	-18.102904	-309.45977
S25C05	1.37812855	-18.102904	-303.13895	1.37812855	-18.102904	-309.45977
S25C06	1.37812855	-18.102904	-303.13895	1.37812855	-18.102904	-309.45977
S25C07	3.93304403	-81.991358	53.1958258	3.93304403	-81.991358	46.875

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S25C08	3.93304403	-81.991358	53.1958258	3.93304403	-81.991358	46.875
S25C09	3.93304403	-81.991358	53.1958258	3.93304403	-81.991358	46.875
S25C10	3.93304403	-81.991358	53.1958258	3.93304403	-81.991358	46.875
S25C11	3.93304403	-81.991358	53.1958258	3.93304403	-81.991358	46.875
S25C12	3.93304403	-81.991358	53.1958258	3.93304403	-81.991358	46.875
S25C13	1.08733727	4.18127164	-469.76349	1.08733727	4.18127164	-476.08431
S25C14	1.08733727	4.18127164	-469.76349	1.08733727	4.18127164	-476.08431
S25C15	1.08733727	4.18127164	-469.76349	1.08733727	4.18127164	-476.08431
S25C16	1.08733727	4.18127164	-469.76349	1.08733727	4.18127164	-476.08431
S25C17	1.08733727	4.18127164	-469.76349	1.08733727	4.18127164	-476.08431
S25C18	1.08733727	4.18127164	-469.76349	1.08733727	4.18127164	-476.08431
S25C19	16.9082896	-190.95038	53.1958258	16.9082896	-190.95038	46.875
S25C20	16.9082896	-190.95038	53.1958258	16.9082896	-190.95038	46.875
S25C21	16.9082896	-190.95038	53.1958258	16.9082896	-190.95038	46.875
S25C22	16.9082896	-190.95038	53.1958258	16.9082896	-190.95038	46.875
S25C23	16.9082896	-190.95038	53.1958258	16.9082896	-190.95038	46.875
S25C24	16.9082896	-190.95038	53.1958258	16.9082896	-190.95038	46.875
S25R01	1.00504476	-1.4421722	-416.73784	1.00504476	-1.4421722	-423.05866
S25R02	1.13327315	4.73876442	-477.68428	1.13327315	4.73876442	-484.0051
S25R03	1.97515576	2.4952664	-518.21183	1.97515576	2.4952664	-524.53266
S25R04	7.99961108	-66.994103	-359.50597	7.99961108	-66.994103	-365.82679
S25R05	253.287972	-4540.7172	19911.3208	253.287972	-4540.7172	19905
S25R06	4.76928515	-100.40972	148.893747	4.76928515	-100.40972	142.572921
S25R07	1.69889055	-27.715221	-245.03921	1.69889055	-27.715221	-251.36003
S25R08	1.10330633	-7.8778079	-369.62402	1.10330633	-7.8778079	-375.94484
S25R09	1.00398718	1.13983441	-438.34554	1.00398718	1.13983441	-444.66637
S25R10	1.2092919	5.22831964	-487.15593	1.2092919	5.22831964	-493.47675
S25R11	2.02127689	2.16181868	-518.66406	2.02127689	2.16181868	-524.98488
S25R12	6.03714878	-41.704657	-433.48552	6.03714878	-41.704657	-439.80634
S25R13	330.766788	-5191.3419	19911.3208	330.766788	-5191.3419	19905
S25R14	10.3540502	-215.55274	721.979828	10.3540502	-215.55274	715.659003
S25R15	2.42497854	-46.746633	-136.42552	2.42497854	-46.746633	-142.74635
S25R16	1.27000273	-14.465514	-326.05903	1.27000273	-14.465514	-332.37986

Source S26

Line	ai	bi	ci	ao	bo	co
S26C01	1.66884988	-32.021188	-136.55449	1.66884988	-32.021188	-142.87531
S26C02	1.66884988	-32.021188	-136.55449	1.66884988	-32.021188	-142.87531
S26C03	1.66884988	-32.021188	-136.55449	1.66884988	-32.021188	-142.87531
S26C04	1.66884988	-32.021188	-136.55449	1.66884988	-32.021188	-142.87531
S26C05	1.66884988	-32.021188	-136.55449	1.66884988	-32.021188	-142.87531
S26C06	1.66884988	-32.021188	-136.55449	1.66884988	-32.021188	-142.87531
S26C07	4.53091948	-89.960673	53.1958258	4.53091948	-89.960673	46.875
S26C08	4.53091948	-89.960673	53.1958258	4.53091948	-89.960673	46.875

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S26C09	4.53091948	-89.960673	53.1958258	4.53091948	-89.960673	46.875
S26C10	4.53091948	-89.960673	53.1958258	4.53091948	-89.960673	46.875
S26C11	4.53091948	-89.960673	53.1958258	4.53091948	-89.960673	46.875
S26C12	4.53091948	-89.960673	53.1958258	4.53091948	-89.960673	46.875
S26C13	1.33431159	16.0051675	-328.24623	1.33431159	16.0051675	-334.56706
S26C14	1.33431159	16.0051675	-328.24623	1.33431159	16.0051675	-334.56706
S26C15	1.33431159	16.0051675	-328.24623	1.33431159	16.0051675	-334.56706
S26C16	1.33431159	16.0051675	-328.24623	1.33431159	16.0051675	-334.56706
S26C17	1.33431159	16.0051675	-328.24623	1.33431159	16.0051675	-334.56706
S26C18	1.33431159	16.0051675	-328.24623	1.33431159	16.0051675	-334.56706
S26C19	96.4957882	-467.84382	53.1958258	96.4957882	-467.84382	46.875
S26C20	96.4957882	-467.84382	53.1958258	96.4957882	-467.84382	46.875
S26C21	96.4957882	-467.84382	53.1958258	96.4957882	-467.84382	46.875
S26C22	96.4957882	-467.84382	53.1958258	96.4957882	-467.84382	46.875
S26C23	96.4957882	-467.84382	53.1958258	96.4957882	-467.84382	46.875
S26C24	96.4957882	-467.84382	53.1958258	96.4957882	-467.84382	46.875
S26R01	1.0136443	-3.9005648	-241.03959	1.0136443	-3.9005648	-247.36042
S26R02	1.09046487	9.01149339	-295.39219	1.09046487	9.01149339	-301.71302
S26R03	1.76585943	22.0892106	-360.53171	1.76585943	22.0892106	-366.85254
S26R04	6.24298299	31.1764002	-473.46195	6.24298299	31.1764002	-479.78277
S26R05	952.101288	-8816.365	19911.3208	952.101288	-8816.365	19905
S26R06	4.88004785	-95.771771	71.1789722	4.88004785	-95.771771	64.8581464
S26R07	1.65085871	-31.514167	-138.33407	1.65085871	-31.514167	-144.6549
S26R08	1.07987478	-9.822606	-217.82418	1.07987478	-9.822606	-224.14501
S26R09	1.01216184	3.47676582	-271.32797	1.01216184	3.47676582	-277.6488
S26R10	1.27123987	14.6621755	-321.66299	1.27123987	14.6621755	-327.98382
S26R11	2.2434704	25.9473029	-384.4485	2.2434704	25.9473029	-390.76933
S26R12	7.35684916	29.5316024	-485.50982	7.35684916	29.5316024	-491.83064
S26R13	1501.24921	-11072.811	19911.3208	1501.24921	-11072.811	19905
S26R14	9.5898044	-165.64613	278.773584	9.5898044	-165.64613	272.452758
S26R15	2.46318012	-51.255743	-70.931145	2.46318012	-51.255743	-77.251971
S26R16	1.30720184	-20.500712	-177.78606	1.30720184	-20.500712	-184.10688

Source S27

Line	ai	bi	ci	ao	bo	co
S27C01	1.94842796	-45.405989	23.6448451	1.94842796	-45.405989	17.3240193
S27C02	1.94842796	-45.405989	23.6448451	1.94842796	-45.405989	17.3240193
S27C03	1.94842796	-45.405989	23.6448451	1.94842796	-45.405989	17.3240193
S27C04	1.94842796	-45.405989	23.6448451	1.94842796	-45.405989	17.3240193
S27C05	1.94842796	-45.405989	23.6448451	1.94842796	-45.405989	17.3240193
S27C06	1.94842796	-45.405989	23.6448451	1.94842796	-45.405989	17.3240193
S27C07	394.73539	-949.97246	53.1958258	394.73539	-949.97246	46.875
S27C08	394.73539	-949.97246	53.1958258	394.73539	-949.97246	46.875
S27C09	394.73539	-949.97246	53.1958258	394.73539	-949.97246	46.875

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S27C10	394.73539	-949.97246	53.1958258	394.73539	-949.97246	46.875
S27C11	394.73539	-949.97246	53.1958258	394.73539	-949.97246	46.875
S27C12	394.73539	-949.97246	53.1958258	394.73539	-949.97246	46.875
S27C13	1.64831419	31.0380417	-148.32152	1.64831419	31.0380417	-154.64234
S27C14	1.64831419	31.0380417	-148.32152	1.64831419	31.0380417	-154.64234
S27C15	1.64831419	31.0380417	-148.32152	1.64831419	31.0380417	-154.64234
S27C16	1.64831419	31.0380417	-148.32152	1.64831419	31.0380417	-154.64234
S27C17	1.64831419	31.0380417	-148.32152	1.64831419	31.0380417	-154.64234
S27C18	1.64831419	31.0380417	-148.32152	1.64831419	31.0380417	-154.64234
S27C19	2.56103519	-59.815692	53.1958258	2.56103519	-59.815692	46.875
S27C20	2.56103519	-59.815692	53.1958258	2.56103519	-59.815692	46.875
S27C21	2.56103519	-59.815692	53.1958258	2.56103519	-59.815692	46.875
S27C22	2.56103519	-59.815692	53.1958258	2.56103519	-59.815692	46.875
S27C23	2.56103519	-59.815692	53.1958258	2.56103519	-59.815692	46.875
S27C24	2.56103519	-59.815692	53.1958258	2.56103519	-59.815692	46.875
S27R01	1.02250304	-6.4330575	-60.045504	1.02250304	-6.4330575	-66.36633
S27R02	1.34110691	-26.196975	-16.826836	1.34110691	-26.196975	-23.147662
S27R03	2.5290483	-59.127456	51.7984639	2.5290483	-59.127456	45.4776382
S27R04	9.53341632	-162.0222	249.262409	9.53341632	-162.0222	242.941583
S27R05	5224.0003	-20660.28	19911.3208	5224.0003	-20660.28	19905
S27R06	8.2276374	80.6495468	-294.82621	8.2276374	80.6495468	-301.14704
S27R07	2.39766296	43.5489343	-180.57936	2.39766296	43.5489343	-186.90018
S27R08	1.31844096	22.3698938	-126.94707	1.31844096	22.3698938	-133.26789
S27R09	1.02111802	6.03711325	-88.343143	1.02111802	6.03711325	-94.663969
S27R10	1.0625615	-10.839985	-50.249048	1.0625615	-10.839985	-56.569873
S27R11	1.59883468	-35.377138	2.68247344	1.59883468	-35.377138	-3.6383523
S27R12	4.79324339	-99.415737	131.579643	4.79324339	-99.415737	125.258818
S27R13	2882.21766	-15344.905	19911.3208	2882.21766	-15344.905	19905
S27R14	5.47854855	68.9819846	-254.17993	5.47854855	68.9819846	-260.50076
S27R15	1.6551273	31.1851995	-148.69064	1.6551273	31.1851995	-155.01146
S27R16	1.06701449	10.620981	-98.984057	1.06701449	10.620981	-105.30488

Source S28

Line	ai	bi	ci	ao	bo	co
S28C01	2.05703927	-50.605755	85.8795491	2.05703927	-50.605755	79.5587234
S28C02	2.05703927	-50.605755	85.8795491	2.05703927	-50.605755	79.5587234
S28C03	2.05703927	-50.605755	85.8795491	2.05703927	-50.605755	79.5587234
S28C04	2.05703927	-50.605755	85.8795491	2.05703927	-50.605755	79.5587234
S28C05	2.05703927	-50.605755	85.8795491	2.05703927	-50.605755	79.5587234
S28C06	2.05703927	-50.605755	85.8795491	2.05703927	-50.605755	79.5587234
S28C07	3.58621094	-76.991142	53.1958258	3.58621094	-76.991142	46.875
S28C08	3.58621094	-76.991142	53.1958258	3.58621094	-76.991142	46.875
S28C09	3.58621094	-76.991142	53.1958258	3.58621094	-76.991142	46.875
S28C10	3.58621094	-76.991142	53.1958258	3.58621094	-76.991142	46.875

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S28C11	3.58621094	-76.991142	53.1958258	3.58621094	-76.991142	46.875
S28C12	3.58621094	-76.991142	53.1958258	3.58621094	-76.991142	46.875
S28C13	1.01796992	0.86031003	-509.51124	1.01796992	0.86031003	-515.83207
S28C14	1.01796992	0.86031003	-509.51124	1.01796992	0.86031003	-515.83207
S28C15	1.01796992	0.86031003	-509.51124	1.01796992	0.86031003	-515.83207
S28C16	1.01796992	0.86031003	-509.51124	1.01796992	0.86031003	-515.83207
S28C17	1.01796992	0.86031003	-509.51124	1.01796992	0.86031003	-515.83207
S28C18	1.01796992	0.86031003	-509.51124	1.01796992	0.86031003	-515.83207
S28C19	1.98320404	-47.471244	53.1958258	1.98320404	-47.471244	46.875
S28C20	1.98320404	-47.471244	53.1958258	1.98320404	-47.471244	46.875
S28C21	1.98320404	-47.471244	53.1958258	1.98320404	-47.471244	46.875
S28C22	1.98320404	-47.471244	53.1958258	1.98320404	-47.471244	46.875
S28C23	1.98320404	-47.471244	53.1958258	1.98320404	-47.471244	46.875
S28C24	1.98320404	-47.471244	53.1958258	1.98320404	-47.471244	46.875
S28R01	1.00207882	-0.5942837	-477.33537	1.00207882	-0.5942837	-483.65619
S28R02	1.28227462	-16.429194	-280.75151	1.28227462	-16.429194	-287.07233
S28R03	2.66792092	-76.095322	348.113477	2.66792092	-76.095322	341.792652
S28R04	15.4093277	-573.80797	5192.73439	15.4093277	-573.80797	5186.41357
S28R05	66.1277783	-2307.0622	19911.3208	66.1277783	-2307.0622	19905
S28R06	4.5487128	-109.31092	321.967345	4.5487128	-109.31092	315.646519
S28R07	1.79815624	-19.252145	-403.71393	1.79815624	-19.252145	-410.03475
S28R08	1.16100293	-1.3736475	-516.87815	1.16100293	-1.3736475	-523.19898
S28R09	1.00123811	0.35394358	-494.51218	1.00123811	0.35394358	-500.833
S28R10	1.10613887	-7.6084914	-383.45572	1.10613887	-7.6084914	-389.77655
S28R11	1.63738722	-32.540794	-104.47843	1.63738722	-32.540794	-110.79926
S28R12	3.98771334	-129.66649	887.070374	3.98771334	-129.66649	880.749548
S28R13	56.5557762	-2130.7907	19911.3208	56.5557762	-2130.7907	19905
S28R14	13.1314242	-407.25877	2898.16869	13.1314242	-407.25877	2891.84786
S28R15	2.33195911	-35.95211	-277.20412	2.33195911	-35.95211	-283.52494
S28R16	1.18608549	-1.9553914	-514.67125	1.18608549	-1.9553914	-520.99208

Source S29

Line	ai	bi	ci	ao	bo	co
S29C01	1.02298309	-1.1003152	-506.63868	1.02298309	-1.1003152	-512.95951
S29C02	1.02298309	-1.1003152	-506.63868	1.02298309	-1.1003152	-512.95951
S29C03	1.02298309	-1.1003152	-506.63868	1.02298309	-1.1003152	-512.95951
S29C04	1.02298309	-1.1003152	-506.63868	1.02298309	-1.1003152	-512.95951
S29C05	1.02298309	-1.1003152	-506.63868	1.02298309	-1.1003152	-512.95951
S29C06	1.02298309	-1.1003152	-506.63868	1.02298309	-1.1003152	-512.95951
S29C07	50449.6458	10753.0965	53.1958258	50449.6458	10753.0965	46.875
S29C08	50449.6458	10753.0965	53.1958258	50449.6458	10753.0965	46.875
S29C09	50449.6458	10753.0965	53.1958258	50449.6458	10753.0965	46.875
S29C10	50449.6458	10753.0965	53.1958258	50449.6458	10753.0965	46.875
S29C11	50449.6458	10753.0965	53.1958258	50449.6458	10753.0965	46.875

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S29C12	50449.6458	10753.0965	53.1958258	50449.6458	10753.0965	46.875
S29C13	1.02333274	1.11705475	-506.43833	1.02333274	1.11705475	-512.75916
S29C14	1.02333274	1.11705475	-506.43833	1.02333274	1.11705475	-512.75916
S29C15	1.02333274	1.11705475	-506.43833	1.02333274	1.11705475	-512.75916
S29C16	1.02333274	1.11705475	-506.43833	1.02333274	1.11705475	-512.75916
S29C17	1.02333274	1.11705475	-506.43833	1.02333274	1.11705475	-512.75916
S29C18	1.02333274	1.11705475	-506.43833	1.02333274	1.11705475	-512.75916
S29C19	93170.1558	14613.1845	53.1958258	93170.1558	14613.1845	46.875
S29C20	93170.1558	14613.1845	53.1958258	93170.1558	14613.1845	46.875
S29C21	93170.1558	14613.1845	53.1958258	93170.1558	14613.1845	46.875
S29C22	93170.1558	14613.1845	53.1958258	93170.1558	14613.1845	46.875
S29C23	93170.1558	14613.1845	53.1958258	93170.1558	14613.1845	46.875
S29C24	93170.1558	14613.1845	53.1958258	93170.1558	14613.1845	46.875
S29R01	1.00064863	-0.1854271	-506.55583	1.00064863	-0.1854271	-512.87666
S29R02	1.14927804	2.84177406	-506.28352	1.14927804	2.84177406	-512.60435
S29R03	1.9275592	7.18411414	-505.89751	1.9275592	7.18411414	-512.21834
S29R04	6.49315596	18.067666	-504.95139	6.49315596	18.067666	-511.27221
S29R05	2376559.33	440707.475	19911.3208	2376559.33	440707.475	19905
S29R06	6.52957202	-16.132214	-508.04187	6.52957202	-16.132214	-514.3627
S29R07	1.93088202	-6.8608251	-507.1666	1.93088202	-6.8608251	-513.48742
S29R08	1.14968716	-2.7916015	-506.79254	1.14968716	-2.7916015	-513.11336
S29R09	1.00065027	0.1858966	-506.52228	1.00065027	0.1858966	-512.84311
S29R10	1.19545249	3.25616569	-506.24645	1.19545249	3.25616569	-512.56728
S29R11	2.07530116	7.74896979	-505.84768	2.07530116	7.74896979	-512.16851
S29R12	7.17478801	19.2192709	-504.8529	7.17478801	19.2192709	-511.17372
S29R13	2631655.43	463757.139	19911.3208	2631655.43	463757.139	19905
S29R14	7.13412275	-16.935174	-508.11936	7.13412275	-16.935174	-514.44019
S29R15	2.07146282	-7.347525	-507.21172	2.07146282	-7.347525	-513.53255
S29R16	1.19491829	-3.1812158	-506.82811	1.19491829	-3.1812158	-513.14894

Source S30

Line	ai	bi	ci	ao	bo	co
S30C01	2.42670825	-68.303658	297.701321	2.42670825	-68.303658	291.380495
S30C02	2.42670825	-68.303658	297.701321	2.42670825	-68.303658	291.380495
S30C03	2.42670825	-68.303658	297.701321	2.42670825	-68.303658	291.380495
S30C04	2.42670825	-68.303658	297.701321	2.42670825	-68.303658	291.380495
S30C05	2.42670825	-68.303658	297.701321	2.42670825	-68.303658	291.380495
S30C06	2.42670825	-68.303658	297.701321	2.42670825	-68.303658	291.380495
S30C07	36.1658004	-283.90238	53.1958258	36.1658004	-283.90238	46.875
S30C08	36.1658004	-283.90238	53.1958258	36.1658004	-283.90238	46.875
S30C09	36.1658004	-283.90238	53.1958258	36.1658004	-283.90238	46.875
S30C10	36.1658004	-283.90238	53.1958258	36.1658004	-283.90238	46.875
S30C11	36.1658004	-283.90238	53.1958258	36.1658004	-283.90238	46.875
S30C12	36.1658004	-283.90238	53.1958258	36.1658004	-283.90238	46.875

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S30C13	1.39930634	19.1167911	-291.00399	1.39930634	19.1167911	-297.32481
S30C14	1.39930634	19.1167911	-291.00399	1.39930634	19.1167911	-297.32481
S30C15	1.39930634	19.1167911	-291.00399	1.39930634	19.1167911	-297.32481
S30C16	1.39930634	19.1167911	-291.00399	1.39930634	19.1167911	-297.32481
S30C17	1.39930634	19.1167911	-291.00399	1.39930634	19.1167911	-297.32481
S30C18	1.39930634	19.1167911	-291.00399	1.39930634	19.1167911	-297.32481
S30C19	1.31713639	-26.960741	53.1958258	1.31713639	-26.960741	46.875
S30C20	1.31713639	-26.960741	53.1958258	1.31713639	-26.960741	46.875
S30C21	1.31713639	-26.960741	53.1958258	1.31713639	-26.960741	46.875
S30C22	1.31713639	-26.960741	53.1958258	1.31713639	-26.960741	46.875
S30C23	1.31713639	-26.960741	53.1958258	1.31713639	-26.960741	46.875
S30C24	1.31713639	-26.960741	53.1958258	1.31713639	-26.960741	46.875
S30R01	1.02130084	-6.0893766	-84.607948	1.02130084	-6.0893766	-90.928774
S30R02	1.35687704	-28.901792	65.3469409	1.35687704	-28.901792	59.0261151
S30R03	2.66370674	-75.573464	338.418365	2.66370674	-75.573464	332.097539
S30R04	11.2937337	-278.75098	1367.31348	11.2937337	-278.75098	1360.99266
S30R05	488.080158	-6309.2305	19911.3208	488.080158	-6309.2305	19905
S30R06	6.98387164	8.55872774	-516.74769	6.98387164	8.55872774	-523.06852
S30R07	2.24201413	25.7849589	-385.98027	2.24201413	25.7849589	-392.3011
S30R08	1.28538207	16.9308609	-268.6938	1.28538207	16.9308609	-275.01463
S30R09	1.01732643	4.95319347	-165.80953	1.01732643	4.95319347	-172.13036
S30R10	1.06270427	-10.833482	-51.880107	1.06270427	-10.833482	-58.200933
S30R11	1.56184811	-37.945937	120.887388	1.56184811	-37.945937	114.566563
S30R12	4.271421	-119.81269	577.198462	4.271421	-119.81269	570.877637
S30R13	279.98905	-4774.9602	19911.3208	279.98905	-4774.9602	19905
S30R14	6.62765021	10.8862162	-514.54346	6.62765021	10.8862162	-520.86429
S30R15	1.75260858	23.2307311	-340.54263	1.75260858	23.2307311	-346.86345
S30R16	1.07841318	9.92444417	-205.78372	1.07841318	9.92444417	-212.10455

Source S31

Line	ai	bi	ci	ao	bo	co
S31C01	1.93722983	-44.869878	17.2282756	1.93722983	-44.869878	10.9074498
S31C02	1.93722983	-44.869878	17.2282756	1.93722983	-44.869878	10.9074498
S31C03	1.93722983	-44.869878	17.2282756	1.93722983	-44.869878	10.9074498
S31C04	1.93722983	-44.869878	17.2282756	1.93722983	-44.869878	10.9074498
S31C05	1.93722983	-44.869878	17.2282756	1.93722983	-44.869878	10.9074498
S31C06	1.93722983	-44.869878	17.2282756	1.93722983	-44.869878	10.9074498
S31C07	57.3885314	-359.50437	53.1958258	57.3885314	-359.50437	46.875
S31C08	57.3885314	-359.50437	53.1958258	57.3885314	-359.50437	46.875
S31C09	57.3885314	-359.50437	53.1958258	57.3885314	-359.50437	46.875
S31C10	57.3885314	-359.50437	53.1958258	57.3885314	-359.50437	46.875
S31C11	57.3885314	-359.50437	53.1958258	57.3885314	-359.50437	46.875
S31C12	57.3885314	-359.50437	53.1958258	57.3885314	-359.50437	46.875
S31C13	1.3639583	17.4245037	-311.25855	1.3639583	17.4245037	-317.57938

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S31C14	1.3639583	17.4245037	-311.25855	1.3639583	17.4245037	-317.57938
S31C15	1.3639583	17.4245037	-311.25855	1.3639583	17.4245037	-317.57938
S31C16	1.3639583	17.4245037	-311.25855	1.3639583	17.4245037	-317.57938
S31C17	1.3639583	17.4245037	-311.25855	1.3639583	17.4245037	-317.57938
S31C18	1.3639583	17.4245037	-311.25855	1.3639583	17.4245037	-317.57938
S31C19	2.22209443	-52.925037	53.1958258	2.22209443	-52.925037	46.875
S31C20	2.22209443	-52.925037	53.1958258	2.22209443	-52.925037	46.875
S31C21	2.22209443	-52.925037	53.1958258	2.22209443	-52.925037	46.875
S31C22	2.22209443	-52.925037	53.1958258	2.22209443	-52.925037	46.875
S31C23	2.22209443	-52.925037	53.1958258	2.22209443	-52.925037	46.875
S31C24	2.22209443	-52.925037	53.1958258	2.22209443	-52.925037	46.875
S31R01	1.0167763	-4.7959242	-177.04937	1.0167763	-4.7959242	-183.3702
S31R02	1.32841451	-24.044737	-79.701619	1.32841451	-24.044737	-86.022445
S31R03	2.5487264	-61.501976	90.7731431	2.5487264	-61.501976	84.4523174
S31R04	10.2983387	-211.86703	687.064413	10.2983387	-211.86703	680.743587
S31R05	837.499647	-8268.1635	19911.3208	837.499647	-8268.1635	19905
S31R06	7.184459	19.7635241	-504.01863	7.184459	19.7635241	-510.33945
S31R07	2.24268543	25.8597854	-385.27514	2.24268543	25.8597854	-391.59597
S31R08	1.27750672	15.6628975	-298.7987	1.27750672	15.6628975	-305.11953
S31R09	1.0143589	4.10485166	-226.43946	1.0143589	4.10485166	-232.76029
S31R10	1.07192225	-10.343466	-147.92287	1.07192225	-10.343466	-154.24369
S31R11	1.60996921	-34.573944	-29.882687	1.60996921	-34.573944	-36.203513
S31R12	4.59579161	-107.44993	282.900201	4.59579161	-107.44993	276.579375
S31R13	508.08544	-6437.4927	19911.3208	508.08544	-6437.4927	19905
S31R14	6.40627534	22.6576276	-496.06863	6.40627534	22.6576276	-502.38945
S31R15	1.7601887	22.5793672	-352.14319	1.7601887	22.5793672	-358.46402
S31R16	1.08511618	9.43660589	-258.25518	1.08511618	9.43660589	-264.57601

Source S32

Line	ai	bi	ci	ao	bo	co
S32C01	1.52245843	-25.012697	-220.43736	1.52245843	-25.012697	-226.75819
S32C02	1.52245843	-25.012697	-220.43736	1.52245843	-25.012697	-226.75819
S32C03	1.52245843	-25.012697	-220.43736	1.52245843	-25.012697	-226.75819
S32C04	1.52245843	-25.012697	-220.43736	1.52245843	-25.012697	-226.75819
S32C05	1.52245843	-25.012697	-220.43736	1.52245843	-25.012697	-226.75819
S32C06	1.52245843	-25.012697	-220.43736	1.52245843	-25.012697	-226.75819
S32C07	43.4108726	311.779382	53.1958258	43.4108726	311.779382	46.875
S32C08	43.4108726	311.779382	53.1958258	43.4108726	311.779382	46.875
S32C09	43.4108726	311.779382	53.1958258	43.4108726	311.779382	46.875
S32C10	43.4108726	311.779382	53.1958258	43.4108726	311.779382	46.875
S32C11	43.4108726	311.779382	53.1958258	43.4108726	311.779382	46.875
S32C12	43.4108726	311.779382	53.1958258	43.4108726	311.779382	46.875
S32C13	1.60902824	29.1572268	-170.83252	1.60902824	29.1572268	-177.15335
S32C14	1.60902824	29.1572268	-170.83252	1.60902824	29.1572268	-177.15335

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S32C15	1.60902824	29.1572268	-170.83252	1.60902824	29.1572268	-177.15335
S32C16	1.60902824	29.1572268	-170.83252	1.60902824	29.1572268	-177.15335
S32C17	1.60902824	29.1572268	-170.83252	1.60902824	29.1572268	-177.15335
S32C18	1.60902824	29.1572268	-170.83252	1.60902824	29.1572268	-177.15335
S32C19	2088.75016	2187.49994	53.1958258	2088.75016	2187.49994	46.875
S32C20	2088.75016	2187.49994	53.1958258	2088.75016	2187.49994	46.875
S32C21	2088.75016	2187.49994	53.1958258	2088.75016	2187.49994	46.875
S32C22	2088.75016	2187.49994	53.1958258	2088.75016	2187.49994	46.875
S32C23	2088.75016	2187.49994	53.1958258	2088.75016	2187.49994	46.875
S32C24	2088.75016	2187.49994	53.1958258	2088.75016	2187.49994	46.875
S32R01	1.01559613	-4.4585446	-201.16147	1.01559613	-4.4585446	-207.4823
S32R02	1.07631618	10.0658872	-187.89261	1.07631618	10.0658872	-194.21343
S32R03	1.66399684	30.4961154	-169.6509	1.66399684	30.4961154	-175.97172
S32R04	5.20819389	81.4256367	-125.92566	5.20819389	81.4256367	-132.24649
S32R05	18571.4295	38957.1476	19911.3208	18571.4295	38957.1476	19905
S32R06	5.50011035	-67.966999	-263.17477	5.50011035	-67.966999	-269.49559
S32R07	1.6885391	-28.551547	-223.82241	1.6885391	-28.551547	-230.14324
S32R08	1.07846585	-9.9208203	-206.22364	1.07846585	-9.9208203	-212.54446
S32R09	1.01600157	4.57444913	-192.87792	1.01600157	4.57444913	-199.19874
S32R10	1.30702992	20.4722753	-178.54325	1.30702992	20.4722753	-184.86408
S32R11	2.41260466	45.2952989	-156.70859	2.41260466	45.2952989	-163.02942
S32R12	8.7808206	114.495839	-98.602599	8.7808206	114.495839	-104.92342
S32R13	30784.7218	50157.5991	19911.3208	30784.7218	50157.5991	19905
S32R14	8.27608863	-83.574116	-279.82225	8.27608863	-83.574116	-286.14307
S32R15	2.36225383	-39.437834	-234.37251	2.36225383	-39.437834	-240.69334
S32R16	1.29861847	-19.086819	-214.81466	1.29861847	-19.086819	-221.13549

Source S33

Line	ai	bi	ci	ao	bo	co
S33C01	1.68857838	-32.96569	-125.24998	1.68857838	-32.96569	-131.5708
S33C02	1.68857838	-32.96569	-125.24998	1.68857838	-32.96569	-131.5708
S33C03	1.68857838	-32.96569	-125.24998	1.68857838	-32.96569	-131.5708
S33C04	1.68857838	-32.96569	-125.24998	1.68857838	-32.96569	-131.5708
S33C05	1.68857838	-32.96569	-125.24998	1.68857838	-32.96569	-131.5708
S33C06	1.68857838	-32.96569	-125.24998	1.68857838	-32.96569	-131.5708
S33C07	273.484595	790.277768	53.1958258	273.484595	790.277768	46.875
S33C08	273.484595	790.277768	53.1958258	273.484595	790.277768	46.875
S33C09	273.484595	790.277768	53.1958258	273.484595	790.277768	46.875
S33C10	273.484595	790.277768	53.1958258	273.484595	790.277768	46.875
S33C11	273.484595	790.277768	53.1958258	273.484595	790.277768	46.875
S33C12	273.484595	790.277768	53.1958258	273.484595	790.277768	46.875
S33C13	2.10062595	52.6924672	110.854886	2.10062595	52.6924672	104.534061
S33C14	2.10062595	52.6924672	110.854886	2.10062595	52.6924672	104.534061
S33C15	2.10062595	52.6924672	110.854886	2.10062595	52.6924672	104.534061

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S33C16	2.10062595	52.6924672	110.854886	2.10062595	52.6924672	104.534061
S33C17	2.10062595	52.6924672	110.854886	2.10062595	52.6924672	104.534061
S33C18	2.10062595	52.6924672	110.854886	2.10062595	52.6924672	104.534061
S33C19	1.39484816	30.0831873	53.1958258	1.39484816	30.0831873	46.875
S33C20	1.39484816	30.0831873	53.1958258	1.39484816	30.0831873	46.875
S33C21	1.39484816	30.0831873	53.1958258	1.39484816	30.0831873	46.875
S33C22	1.39484816	30.0831873	53.1958258	1.39484816	30.0831873	46.875
S33C23	1.39484816	30.0831873	53.1958258	1.39484816	30.0831873	46.875
S33C24	1.39484816	30.0831873	53.1958258	1.39484816	30.0831873	46.875
S33R01	1.02316812	-6.6231866	-46.45721	1.02316812	-6.6231866	-52.778036
S33R02	1.32504096	-23.47657	-95.900467	1.32504096	-23.47657	-102.22129
S33R03	2.40816997	-44.776273	-163.86478	2.40816997	-44.776273	-170.18561
S33R04	8.19692713	-78.799967	-304.11065	8.19692713	-78.799967	-310.43148
S33R05	3493.77794	16895.135	19911.3208	3493.77794	16895.135	19905
S33R06	9.82987441	181.167215	409.467871	9.82987441	181.167215	403.147046
S33R07	2.57285141	64.4269311	139.953773	2.57285141	64.4269311	133.632947
S33R08	1.35375029	28.3629013	48.7103072	1.35375029	28.3629013	42.3894814
S33R09	1.02505248	7.16187711	-7.9576758	1.02505248	7.16187711	-14.278502
S33R10	1.06328432	-10.806698	-58.458715	1.06328432	-10.806698	-64.779541
S33R11	1.64436496	-32.011253	-122.23824	1.64436496	-32.011253	-128.55906
S33R12	5.4809012	-68.871394	-255.16997	5.4809012	-68.871394	-261.49079
S33R13	1869.05404	12355.8007	19911.3208	1869.05404	12355.8007	19905
S33R14	4.65222855	105.190764	237.612807	4.65222855	105.190764	231.291981
S33R15	1.57689835	36.9195958	70.8750709	1.57689835	36.9195958	64.5542451
S33R16	1.05814836	11.0227921	2.57103328	1.05814836	11.0227921	-3.7497925

Source S34

Line	ai	bi	ci	ao	bo	co
S34C01	1.19860025	-9.507987	-406.00936	1.19860025	-9.507987	-412.33019
S34C02	1.19860025	-9.507987	-406.00936	1.19860025	-9.507987	-412.33019
S34C03	1.19860025	-9.507987	-406.00936	1.19860025	-9.507987	-412.33019
S34C04	1.19860025	-9.507987	-406.00936	1.19860025	-9.507987	-412.33019
S34C05	1.19860025	-9.507987	-406.00936	1.19860025	-9.507987	-412.33019
S34C06	1.19860025	-9.507987	-406.00936	1.19860025	-9.507987	-412.33019
S34C07	1.2428251	23.591501	53.1958258	1.2428251	23.591501	46.875
S34C08	1.2428251	23.591501	53.1958258	1.2428251	23.591501	46.875
S34C09	1.2428251	23.591501	53.1958258	1.2428251	23.591501	46.875
S34C10	1.2428251	23.591501	53.1958258	1.2428251	23.591501	46.875
S34C11	1.2428251	23.591501	53.1958258	1.2428251	23.591501	46.875
S34C12	1.2428251	23.591501	53.1958258	1.2428251	23.591501	46.875
S34C13	4.00025824	143.637363	1199.35161	4.00025824	143.637363	1193.03079
S34C14	4.00025824	143.637363	1199.35161	4.00025824	143.637363	1193.03079
S34C15	4.00025824	143.637363	1199.35161	4.00025824	143.637363	1193.03079
S34C16	4.00025824	143.637363	1199.35161	4.00025824	143.637363	1193.03079

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S34C17	4.00025824	143.637363	1199.35161	4.00025824	143.637363	1193.03079
S34C18	4.00025824	143.637363	1199.35161	4.00025824	143.637363	1193.03079
S34C19	9.36861773	138.495497	53.1958258	9.36861773	138.495497	46.875
S34C20	9.36861773	138.495497	53.1958258	9.36861773	138.495497	46.875
S34C21	9.36861773	138.495497	53.1958258	9.36861773	138.495497	46.875
S34C22	9.36861773	138.495497	53.1958258	9.36861773	138.495497	46.875
S34C23	9.36861773	138.495497	53.1958258	9.36861773	138.495497	46.875
S34C24	9.36861773	138.495497	53.1958258	9.36861773	138.495497	46.875
S34R01	1.01167078	-3.3363846	-281.36084	1.01167078	-3.3363846	-287.68167
S34R02	1.06660437	10.6425082	-94.674614	1.06660437	10.6425082	-100.99544
S34R03	1.53286732	39.8447032	225.030418	1.53286732	39.8447032	218.709592
S34R04	3.79492318	135.782934	1129.34327	3.79492318	135.782934	1123.02244
S34R05	80.3565111	2546.63944	19911.3208	80.3565111	2546.63944	19905
S34R06	9.05155219	131.406322	16.3500735	9.05155219	131.406322	10.0292477
S34R07	1.9359795	-6.3636682	-508.99153	1.9359795	-6.3636682	-515.31236
S34R08	1.10238479	-7.9640157	-364.93755	1.10238479	-7.9640157	-371.25838
S34R09	1.01735885	4.96246193	-165.14713	1.01735885	4.96246193	-171.46796
S34R10	1.36941686	31.0754458	133.71064	1.36941686	31.0754458	127.389814
S34R11	2.84380669	98.2295993	788.498024	2.84380669	98.2295993	782.177198
S34R12	14.5004604	506.511616	4231.03024	14.5004604	506.511616	4224.70941
S34R13	128.877889	3232.7633	19911.3208	128.877889	3232.7633	19905
S34R14	5.68639446	59.0664684	-333.69231	5.68639446	59.0664684	-340.01313
S34R15	2.0497071	-5.0849279	-513.65006	2.0497071	-5.0849279	-519.97088
S34R16	1.24031671	-9.8410175	-419.06017	1.24031671	-9.8410175	-425.381

Source S35

Line	ai	bi	ci	ao	bo	co
S35C01	5.14456869	-198.42123	1855.04597	5.14456869	-198.42123	1848.72514
S35C02	5.14456869	-198.42123	1855.04597	5.14456869	-198.42123	1848.72514
S35C03	5.14456869	-198.42123	1855.04597	5.14456869	-198.42123	1848.72514
S35C04	5.14456869	-198.42123	1855.04597	5.14456869	-198.42123	1848.72514
S35C05	5.14456869	-198.42123	1855.04597	5.14456869	-198.42123	1848.72514
S35C06	5.14456869	-198.42123	1855.04597	5.14456869	-198.42123	1848.72514
S35C07	1.39647416	-30.145065	53.1958258	1.39647416	-30.145065	46.875
S35C08	1.39647416	-30.145065	53.1958258	1.39647416	-30.145065	46.875
S35C09	1.39647416	-30.145065	53.1958258	1.39647416	-30.145065	46.875
S35C10	1.39647416	-30.145065	53.1958258	1.39647416	-30.145065	46.875
S35C11	1.39647416	-30.145065	53.1958258	1.39647416	-30.145065	46.875
S35C12	1.39647416	-30.145065	53.1958258	1.39647416	-30.145065	46.875
S35C13	1.09532165	4.56352392	-465.1884	1.09532165	4.56352392	-471.50923
S35C14	1.09532165	4.56352392	-465.1884	1.09532165	4.56352392	-471.50923
S35C15	1.09532165	4.56352392	-465.1884	1.09532165	4.56352392	-471.50923
S35C16	1.09532165	4.56352392	-465.1884	1.09532165	4.56352392	-471.50923
S35C17	1.09532165	4.56352392	-465.1884	1.09532165	4.56352392	-471.50923

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S35C18	1.09532165	4.56352392	-465.1884	1.09532165	4.56352392	-471.50923
S35C19	5.34889188	-99.83851	53.1958258	5.34889188	-99.83851	46.875
S35C20	5.34889188	-99.83851	53.1958258	5.34889188	-99.83851	46.875
S35C21	5.34889188	-99.83851	53.1958258	5.34889188	-99.83851	46.875
S35C22	5.34889188	-99.83851	53.1958258	5.34889188	-99.83851	46.875
S35C23	5.34889188	-99.83851	53.1958258	5.34889188	-99.83851	46.875
S35C24	5.34889188	-99.83851	53.1958258	5.34889188	-99.83851	46.875
S35R01	1.01049136	-2.9992188	-305.45766	1.01049136	-2.9992188	-311.77849
S35R02	1.13386685	4.67081871	-479.06508	1.13386685	4.67081871	-485.38591
S35R03	2.11832598	-12.293734	-486.02189	2.11832598	-12.293734	-492.34272
S35R04	11.3454241	-282.28097	1405.74249	11.3454241	-282.28097	1399.42166
S35R05	55.4397075	-2109.2792	19911.3208	55.4397075	-2109.2792	19905
S35R06	3.71671311	-138.11737	1235.65969	3.71671311	-138.11737	1229.33887
S35R07	1.55254392	-38.566902	153.172788	1.55254392	-38.566902	146.851962
S35R08	1.07822042	-9.9376778	-204.16978	1.07822042	-9.9376778	-210.49061
S35R09	1.00638899	1.82645306	-389.27376	1.00638899	1.82645306	-395.59459
S35R10	1.20354658	4.40262753	-496.00133	1.20354658	4.40262753	-502.32216
S35R11	1.92078642	-7.8411225	-503.11496	1.92078642	-7.8411225	-509.43578
S35R12	5.01249439	-90.087061	-14.157617	5.01249439	-90.087061	-20.478443
S35R13	79.040698	-2525.4382	19911.3208	79.040698	-2525.4382	19905
S35R14	16.2798453	-639.20206	6165.12986	16.2798453	-639.20206	6158.80903
S35R15	2.86363354	-100.76563	842.277297	2.86363354	-100.76563	835.956471
S35R16	1.34835071	-27.435295	20.3770037	1.34835071	-27.435295	14.056178

TABLE 7

Determine the two possible X intercepts of the line from each source to each measurement point and the inner and outer radius of the cylinder (XZ Plane).

Source S01					
Line	X1i	X2i	X1o	X2o	
S01C01	22.7988391	-22.035169	22.9371464	-22.173477	
S01C02	22.7988391	-22.035169	22.9371464	-22.173477	
S01C03	22.7988391	-22.035169	22.9371464	-22.173477	
S01C04	22.7988391	-22.035169	22.9371464	-22.173477	
S01C05	22.7988391	-22.035169	22.9371464	-22.173477	
S01C06	22.7988391	-22.035169	22.9371464	-22.173477	
S01C07	22.5633195	0.96064256	22.6818899	0.84207215	
S01C08	22.5633195	0.96064256	22.6818899	0.84207215	
S01C09	22.5633195	0.96064256	22.6818899	0.84207215	
S01C10	22.5633195	0.96064256	22.6818899	0.84207215	
S01C11	22.5633195	0.96064256	22.6818899	0.84207215	
S01C12	22.5633195	0.96064256	22.6818899	0.84207215	
S01C13	22.7906547	-22.799295	22.9288559	-22.937496	
S01C14	22.7906547	-22.799295	22.9288559	-22.937496	
S01C15	22.7906547	-22.799295	22.9288559	-22.937496	
S01C16	22.7906547	-22.799295	22.9288559	-22.937496	
S01C17	22.7906547	-22.799295	22.9288559	-22.937496	
S01C18	22.7906547	-22.799295	22.9288559	-22.937496	

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S01C19	22.37328	0.91352136	22.4858564	0.80094493
S01C20	22.37328	0.91352136	22.4858564	0.80094493
S01C21	22.37328	0.91352136	22.4858564	0.80094493
S01C22	22.37328	0.91352136	22.4858564	0.80094493
S01C23	22.37328	0.91352136	22.4858564	0.80094493
S01C24	22.37328	0.91352136	22.4858564	0.80094493
S01R01	22.792281	-22.785943	22.9305393	-22.924202
S01R02	22.694871	-15.889611	22.8275318	-16.022272
S01R03	22.390261	0.35981514	22.5038597	0.24621639
S01R04	21.3563984	14.4783505	21.4177491	14.4169998
S01R05	20.7362415	17.4506411	20.7708395	17.4160431
S01R06	22.3187248	7.58244723	22.4213448	7.47982728
S01R07	22.6935706	-6.2228972	22.8218744	-6.3512009
S01R08	22.7902766	-18.034248	22.9271108	-18.171082
S01R09	22.7915584	-22.795232	22.9297923	-22.933466
S01R10	22.7274682	-18.546797	22.8621602	-18.681489
S01R11	22.5623902	-7.0214122	22.6866415	-7.1456635
S01R12	22.1222999	6.91019269	22.2204361	6.8120565
S01R13	20.6059164	17.2824724	20.6395912	17.2487976
S01R14	21.5248004	14.9335835	21.5877375	14.8706465
S01R15	22.5480961	1.55294822	22.6655966	1.43544767
S01R16	22.7732846	-14.799487	22.9083955	-14.934598

Source S02

Line	X1i	X2i	X1o	X2o
S02C01	22.7900376	-11.164539	22.9304085	-11.30491
S02C02	22.7900376	-11.164539	22.9304085	-11.30491
S02C03	22.7900376	-11.164539	22.9304085	-11.30491
S02C04	22.7900376	-11.164539	22.9304085	-11.30491
S02C05	22.7900376	-11.164539	22.9304085	-11.30491
S02C06	22.7900376	-11.164539	22.9304085	-11.30491
S02C07	-0.2781886	-10.748808	-0.2443647	-10.782632
S02C08	-0.2781886	-10.748808	-0.2443647	-10.782632
S02C09	-0.2781886	-10.748808	-0.2443647	-10.782632
S02C10	-0.2781886	-10.748808	-0.2443647	-10.782632
S02C11	-0.2781886	-10.748808	-0.2443647	-10.782632
S02C12	-0.2781886	-10.748808	-0.2443647	-10.782632
S02C13	-9.9868456	-22.730201	-9.8316905	-22.885356
S02C14	-9.9868456	-22.730201	-9.8316905	-22.885356
S02C15	-9.9868456	-22.730201	-9.8316905	-22.885356
S02C16	-9.9868456	-22.730201	-9.8316905	-22.885356
S02C17	-9.9868456	-22.730201	-9.8316905	-22.885356
S02C18	-9.9868456	-22.730201	-9.8316905	-22.885356
S02C19	-3.3778989	-13.468207	-2.8679392	-13.978166

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S02C20	-3.3778989	-13.468207	-2.8679392	-13.978166
S02C21	-3.3778989	-13.468207	-2.8679392	-13.978166
S02C22	-3.3778989	-13.468207	-2.8679392	-13.978166
S02C23	-3.3778989	-13.468207	-2.8679392	-13.978166
S02C24	-3.3778989	-13.468207	-2.8679392	-13.978166
S02R01	16.0758032	-11.50718	16.2994838	-11.730861
S02R02	22.6898979	-11.187651	22.8360676	-11.333821
S02R03	19.0691341	-10.992775	19.165864	-11.089505
S02R04	7.13976211	-10.830325	7.19465075	-10.885213
S02R05	-7.9427396	-10.655965	-7.9328728	-10.665832
S02R06	-10.409684	-19.662297	-10.356746	-19.715236
S02R07	-9.8862829	-22.491758	-9.7083452	-22.669696
S02R08	-7.2958373	-15.904675	-6.7910701	-16.409442
S02R09	5.92624594	-12.045012	6.26408548	-12.382852
S02R10	20.1492365	-11.341371	20.3333801	-11.525514
S02R11	20.9869906	-11.039022	21.0955514	-11.147583
S02R12	5.70186202	-10.814469	5.752654	-10.865261
S02R13	-10.562894	-13.859811	-10.548857	-13.873848
S02R14	-10.116498	-22.75977	-9.9916717	-22.884597
S02R15	-8.3752138	-17.639638	-7.9495708	-18.065281
S02R16	2.10584163	-12.405786	2.50550544	-12.80545

Source S03

Line	X1i	X2i	X1o	X2o
S03C01	22.7962367	-18.159545	22.9351513	-18.29846
S03C02	22.7962367	-18.159545	22.9351513	-18.29846
S03C03	22.7962367	-18.159545	22.9351513	-18.29846
S03C04	22.7962367	-18.159545	22.9351513	-18.29846
S03C05	22.7962367	-18.159545	22.9351513	-18.29846
S03C06	22.7962367	-18.159545	22.9351513	-18.29846
S03C07	2.6436554	0.06459974	2.65149966	0.05675548
S03C08	2.6436554	0.06459974	2.65149966	0.05675548
S03C09	2.6436554	0.06459974	2.65149966	0.05675548
S03C10	2.6436554	0.06459974	2.65149966	0.05675548
S03C11	2.6436554	0.06459974	2.65149966	0.05675548
S03C12	2.6436554	0.06459974	2.65149966	0.05675548
S03C13	19.2618238	-22.797026	19.400554	-22.935756
S03C14	19.2618238	-22.797026	19.400554	-22.935756
S03C15	19.2618238	-22.797026	19.400554	-22.935756
S03C16	19.2618238	-22.797026	19.400554	-22.935756
S03C17	19.2618238	-22.797026	19.400554	-22.935756
S03C18	19.2618238	-22.797026	19.400554	-22.935756
S03C19	4.90452767	0.12085581	4.91920574	0.10617774
S03C20	4.90452767	0.12085581	4.91920574	0.10617774

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S03C21	4.90452767	0.12085581	4.91920574	0.10617774
S03C22	4.90452767	0.12085581	4.91920574	0.10617774
S03C23	4.90452767	0.12085581	4.91920574	0.10617774
S03C24	4.90452767	0.12085581	4.91920574	0.10617774
S03R01	21.9338208	-21.179913	22.0795498	-21.325642
S03R02	22.642775	-16.35894	22.7745036	-16.490668
S03R03	19.4012527	-10.245499	19.4982832	-10.342529
S03R04	11.9136262	-3.9993537	11.9635718	-4.0492992
S03R05	1.95264319	1.41665422	1.95427656	1.41502085
S03R06	7.54834941	-9.5614301	7.60032323	-9.6134039
S03R07	12.7941777	-18.180975	12.890608	-18.277405
S03R08	17.5433965	-22.453456	17.6731142	-22.583174
S03R09	21.2594854	-21.977041	21.4048218	-22.122377
S03R10	22.7984639	-17.831182	22.9362013	-17.968919
S03R11	20.5509283	-11.714246	20.6575035	-11.820821
S03R12	13.4012878	-5.0093336	13.459453	-5.0674987
S03R13	2.16133553	1.5683706	2.16314475	1.56656138
S03R14	7.78086186	-9.9984578	7.83489767	-10.052494
S03R15	13.5193412	-19.096745	13.6214225	-19.198826
S03R16	18.4853814	-22.7384	18.6203195	-22.873338

Source S04

Line	X1i	X2i	X1o	X2o
S04C01	22.7665125	2.19672244	22.9125357	2.05069933
S04C02	22.7665125	2.19672244	22.9125357	2.05069933
S04C03	22.7665125	2.19672244	22.9125357	2.05069933
S04C04	22.7665125	2.19672244	22.9125357	2.05069933
S04C05	22.7665125	2.19672244	22.9125357	2.05069933
S04C06	22.7665125	2.19672244	22.9125357	2.05069933
S04C07	5.88580696	0.1458092	5.90351774	0.12809843
S04C08	5.88580696	0.1458092	5.90351774	0.12809843
S04C09	5.88580696	0.1458092	5.90351774	0.12809843
S04C10	5.88580696	0.1458092	5.90351774	0.12809843
S04C11	5.88580696	0.1458092	5.90351774	0.12809843
S04C12	5.88580696	0.1458092	5.90351774	0.12809843
S04C13	8.49804307	-22.786946	8.63914541	-22.928048
S04C14	8.49804307	-22.786946	8.63914541	-22.928048
S04C15	8.49804307	-22.786946	8.63914541	-22.928048
S04C16	8.49804307	-22.786946	8.63914541	-22.928048
S04C17	8.49804307	-22.786946	8.63914541	-22.928048
S04C18	8.49804307	-22.786946	8.63914541	-22.928048
S04C19	22.2608267	1.38179576	22.4344367	1.20818573
S04C20	22.2608267	1.38179576	22.4344367	1.20818573
S04C21	22.2608267	1.38179576	22.4344367	1.20818573

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S04C22	22.2608267	1.38179576	22.4344367	1.20818573
S04C23	22.2608267	1.38179576	22.4344367	1.20818573
S04C24	22.2608267	1.38179576	22.4344367	1.20818573
S04R01	13.9399981	-8.4555723	14.2134795	-8.7290537
S04R02	20.1439935	-0.5912384	20.3688282	-0.8160731
S04R03	22.6755037	2.82060935	22.7979014	2.69821165
S04R04	16.7877548	4.50833497	16.8367523	4.45933749
S04R05	5.62420459	4.10695199	5.62902206	4.10213451
S04R06	6.56727797	-10.235679	6.61858785	-10.286989
S04R07	7.55757825	-20.445333	7.65651699	-20.544272
S04R08	8.85821684	-22.407133	9.01432071	-22.563236
S04R09	11.0640354	-15.775239	11.2936957	-16.0049
S04R10	15.609968	-5.6265033	15.8854726	-5.9020079
S04R11	21.7815794	0.88450841	21.970157	0.69593081
S04R12	20.7847004	3.78337997	20.8667335	3.70134678
S04R13	7.34859394	5.39511953	7.35501558	5.38869789
S04R14	6.65428146	-11.442424	6.70985582	-11.497998
S04R15	8.01007256	-22.322201	8.12978123	-22.44191
S04R16	10.0217644	-19.208462	10.220886	-19.407584

Source S05

Line	X1i	X2i	X1o	X2o
S05C01	22.7991737	-22.587325	22.9374031	-22.725554
S05C02	22.7991737	-22.587325	22.9374031	-22.725554
S05C03	22.7991737	-22.587325	22.9374031	-22.725554
S05C04	22.7991737	-22.587325	22.9374031	-22.725554
S05C05	22.7991737	-22.587325	22.9374031	-22.725554
S05C06	22.7991737	-22.587325	22.9374031	-22.725554
S05C07	-0.6681267	-20.145094	-0.5863587	-20.226862
S05C08	-0.6681267	-20.145094	-0.5863587	-20.226862
S05C09	-0.6681267	-20.145094	-0.5863587	-20.226862
S05C10	-0.6681267	-20.145094	-0.5863587	-20.226862
S05C11	-0.6681267	-20.145094	-0.5863587	-20.226862
S05C12	-0.6681267	-20.145094	-0.5863587	-20.226862
S05C13	20.7237924	-22.79801	20.8622929	-22.936511
S05C14	20.7237924	-22.79801	20.8622929	-22.936511
S05C15	20.7237924	-22.79801	20.8622929	-22.936511
S05C16	20.7237924	-22.79801	20.8622929	-22.936511
S05C17	20.7237924	-22.79801	20.8622929	-22.936511
S05C18	20.7237924	-22.79801	20.8622929	-22.936511
S05C19	-0.5433879	-18.003731	-0.4770641	-18.070055
S05C20	-0.5433879	-18.003731	-0.4770641	-18.070055
S05C21	-0.5433879	-18.003731	-0.4770641	-18.070055
S05C22	-0.5433879	-18.003731	-0.4770641	-18.070055

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S05C23	-0.5433879	-18.003731	-0.4770641	-18.070055
S05C24	-0.5433879	-18.003731	-0.4770641	-18.070055
S05R01	22.7217019	-22.651845	22.8605493	-22.790692
S05R02	18.3154819	-22.763667	18.451116	-22.899301
S05R03	8.87004131	-22.039035	8.98618526	-22.155179
S05R04	-2.0005169	-19.715092	-1.9252253	-19.790383
S05R05	-10.952192	-14.314434	-10.937454	-14.329172
S05R06	-4.4495565	-16.757089	-4.4005736	-16.806072
S05R07	8.61520171	-20.060964	8.71323451	-20.158997
S05R08	19.6159409	-21.849782	19.7435168	-21.977358
S05R09	22.5896746	-22.688913	22.7287972	-22.828036
S05R10	16.1244399	-22.670286	16.2566249	-22.802471
S05R11	4.52261862	-21.377416	4.62535528	-21.480152
S05R12	-6.4173562	-17.762554	-6.367672	-17.812238
S05R13	-10.568279	-13.866142	-10.554233	-13.880188
S05R14	0.09264891	-18.179309	0.16153116	-18.248192
S05R15	11.6549431	-20.59145	11.7616859	-20.698193
S05R16	20.2319415	-21.951757	20.3611484	-22.080964

Source S06

Line	X1i	X2i	X1o	X2o
S06C01	22.7922696	-13.389977	22.9321146	-13.529822
S06C02	22.7922696	-13.389977	22.9321146	-13.529822
S06C03	22.7922696	-13.389977	22.9321146	-13.529822
S06C04	22.7922696	-13.389977	22.9321146	-13.529822
S06C05	22.7922696	-13.389977	22.9321146	-13.529822
S06C06	22.7922696	-13.389977	22.9321146	-13.529822
S06C07	13.8696776	0.3766013	13.9155193	0.33075963
S06C08	13.8696776	0.3766013	13.9155193	0.33075963
S06C09	13.8696776	0.3766013	13.9155193	0.33075963
S06C10	13.8696776	0.3766013	13.9155193	0.33075963
S06C11	13.8696776	0.3766013	13.9155193	0.33075963
S06C12	13.8696776	0.3766013	13.9155193	0.33075963
S06C13	20.9569399	-22.798161	21.0954051	-22.936627
S06C14	20.9569399	-22.798161	21.0954051	-22.936627
S06C15	20.9569399	-22.798161	21.0954051	-22.936627
S06C16	20.9569399	-22.798161	21.0954051	-22.936627
S06C17	20.9569399	-22.798161	21.0954051	-22.936627
S06C18	20.9569399	-22.798161	21.0954051	-22.936627
S06C19	20.3188084	0.68068286	20.4021382	0.59735305
S06C20	20.3188084	0.68068286	20.4021382	0.59735305
S06C21	20.3188084	0.68068286	20.4021382	0.59735305
S06C22	20.3188084	0.68068286	20.4021382	0.59735305
S06C23	20.3188084	0.68068286	20.4021382	0.59735305

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S06C24	20.3188084	0.68068286	20.4021382	0.59735305
S06R01	21.9367934	-21.185382	22.0824953	-21.331084
S06R02	22.7951492	-13.192464	22.9346011	-13.331916
S06R03	21.7240805	-3.1382658	21.8292151	-3.2434004
S06R04	17.1532469	5.2147229	17.2024488	5.16552104
S06R05	11.0380164	8.24574956	11.0483259	8.23544006
S06R06	14.9875954	-3.5513795	15.0484302	-3.6122143
S06R07	17.8031974	-14.777324	17.9028447	-14.876972
S06R08	19.9408248	-21.709546	20.0682713	-21.836992
S06R09	21.590092	-22.155834	21.7338233	-22.299566
S06R10	22.6497172	-16.459659	22.7943435	-16.604285
S06R11	22.5044709	-7.2961968	22.6274092	-7.419135
S06R12	19.6577679	1.91427586	19.7327664	1.83927735
S06R13	12.0970686	9.09776861	12.1086721	9.08616503
S06R14	14.0973018	-0.3861021	14.1461596	-0.4349599
S06R15	17.5783215	-13.877692	17.6748823	-13.974253
S06R16	20.1155496	-22.042179	20.2450455	-22.171675

Source S07

Line	X1i	X2i	X1o	X2o
S07C01	22.7856013	-7.4648618	22.9270227	-7.6062832
S07C02	22.7856013	-7.4648618	22.9270227	-7.6062832
S07C03	22.7856013	-7.4648618	22.9270227	-7.6062832
S07C04	22.7856013	-7.4648618	22.9270227	-7.6062832
S07C05	22.7856013	-7.4648618	22.9270227	-7.6062832
S07C06	22.7856013	-7.4648618	22.9270227	-7.6062832
S07C07	-0.0806125	-3.2927714	-0.0708234	-3.3025605
S07C08	-0.0806125	-3.2927714	-0.0708234	-3.3025605
S07C09	-0.0806125	-3.2927714	-0.0708234	-3.3025605
S07C10	-0.0806125	-3.2927714	-0.0708234	-3.3025605
S07C11	-0.0806125	-3.2927714	-0.0708234	-3.3025605
S07C12	-0.0806125	-3.2927714	-0.0708234	-3.3025605
S07C13	1.8044511	-22.776235	1.94811392	-22.919897
S07C14	1.8044511	-22.776235	1.94811392	-22.919897
S07C15	1.8044511	-22.776235	1.94811392	-22.919897
S07C16	1.8044511	-22.776235	1.94811392	-22.919897
S07C17	1.8044511	-22.776235	1.94811392	-22.919897
S07C18	1.8044511	-22.776235	1.94811392	-22.919897
S07C19	-0.6315939	-19.597561	-0.5543621	-19.674792
S07C20	-0.6315939	-19.597561	-0.5543621	-19.674792
S07C21	-0.6315939	-19.597561	-0.5543621	-19.674792
S07C22	-0.6315939	-19.597561	-0.5543621	-19.674792
S07C23	-0.6315939	-19.597561	-0.5543621	-19.674792
S07C24	-0.6315939	-19.597561	-0.5543621	-19.674792

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S07R01	16.1913511	-11.678783	16.4128071	-11.900239
S07R02	22.293676	-8.1739345	22.4532156	-8.3334741
S07R03	20.9386722	-6.0503898	21.0392644	-6.150982
S07R04	11.6033677	-4.4877571	11.6535334	-4.5379228
S07R05	-2.237797	-3.0804387	-2.235208	-3.0830277
S07R06	-1.5394075	-15.189619	-1.4907348	-15.238292
S07R07	0.53200845	-22.248967	0.64306754	-22.360026
S07R08	3.98865062	-21.311692	4.17630051	-21.499342
S07R09	10.456234	-15.357824	10.6946927	-15.596282
S07R10	19.2342235	-10.056453	19.4329172	-10.255147
S07R11	22.5912409	-6.8712352	22.7162269	-6.9962213
S07R12	13.7027622	-4.7419882	13.7613894	-4.8006153
S07R13	-2.9042767	-3.9919128	-2.9009033	-3.9952862
S07R14	-0.8181513	-18.884538	-0.7466513	-18.956038
S07R15	2.29064918	-22.61114	2.44543745	-22.765928
S07R16	7.8694182	-17.51982	8.09958747	-17.74999

Source S08

Line	X1i	X2i	X1o	X2o
S08C01	22.795377	-17.022345	22.9344928	-17.161461
S08C02	22.795377	-17.022345	22.9344928	-17.161461
S08C03	22.795377	-17.022345	22.9344928	-17.161461
S08C04	22.795377	-17.022345	22.9344928	-17.161461
S08C05	22.795377	-17.022345	22.9344928	-17.161461
S08C06	22.795377	-17.022345	22.9344928	-17.161461
S08C07	-0.0493975	-2.0243563	-0.0433994	-2.0303543
S08C08	-0.0493975	-2.0243563	-0.0433994	-2.0303543
S08C09	-0.0493975	-2.0243563	-0.0433994	-2.0303543
S08C10	-0.0493975	-2.0243563	-0.0433994	-2.0303543
S08C11	-0.0493975	-2.0243563	-0.0433994	-2.0303543
S08C12	-0.0493975	-2.0243563	-0.0433994	-2.0303543
S08C13	15.6753591	-22.794293	15.8147288	-22.933663
S08C14	15.6753591	-22.794293	15.8147288	-22.933663
S08C15	15.6753591	-22.794293	15.8147288	-22.933663
S08C16	15.6753591	-22.794293	15.8147288	-22.933663
S08C17	15.6753591	-22.794293	15.8147288	-22.933663
S08C18	15.6753591	-22.794293	15.8147288	-22.933663
S08C19	-0.1132982	-4.6043543	-0.0995385	-4.6181141
S08C20	-0.1132982	-4.6043543	-0.0995385	-4.6181141
S08C21	-0.1132982	-4.6043543	-0.0995385	-4.6181141
S08C22	-0.1132982	-4.6043543	-0.0995385	-4.6181141
S08C23	-0.1132982	-4.6043543	-0.0995385	-4.6181141
S08C24	-0.1132982	-4.6043543	-0.0995385	-4.6181141
S08R01	21.3818629	-20.175355	21.5327724	-20.326265

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S08R02	22.6937849	-15.900601	22.826423	-16.033239
S08R03	18.9878886	-11.168984	19.0845624	-11.265658
S08R04	10.347826	-6.4012695	10.3990318	-6.4524752
S08R05	-1.1412306	-1.5734953	-1.1399158	-1.57481
S08R06	3.49615755	-12.229257	3.54589471	-12.278994
S08R07	8.97652489	-19.922017	9.0742946	-20.019787
S08R08	14.7773112	-22.77431	14.9124761	-22.909475
S08R09	20.0635651	-21.319705	20.2150779	-21.471218
S08R10	22.7774489	-17.267986	22.9178495	-17.408386
S08R11	20.2187117	-12.178091	20.32402	-12.283399
S08R12	11.2450605	-6.8121598	11.300408	-6.8675074
S08R13	-1.3019865	-1.7948344	-1.3004859	-1.796335
S08R14	4.48316551	-13.990103	4.54225141	-14.049189
S08R15	10.6094441	-21.236345	10.7193576	-21.346258
S08R16	16.6747505	-22.693853	16.8182058	-22.837309

Source S09

Line	X1i	X2i	X1o	X2o
S09C01	22.7992621	-22.735497	22.9374709	-22.873706
S09C02	22.7992621	-22.735497	22.9374709	-22.873706
S09C03	22.7992621	-22.735497	22.9374709	-22.873706
S09C04	22.7992621	-22.735497	22.9374709	-22.873706
S09C05	22.7992621	-22.735497	22.9374709	-22.873706
S09C06	22.7992621	-22.735497	22.9374709	-22.873706
S09C07	-0.5135527	-17.373578	-0.4509055	-17.436225
S09C08	-0.5135527	-17.373578	-0.4509055	-17.436225
S09C09	-0.5135527	-17.373578	-0.4509055	-17.436225
S09C10	-0.5135527	-17.373578	-0.4509055	-17.436225
S09C11	-0.5135527	-17.373578	-0.4509055	-17.436225
S09C12	-0.5135527	-17.373578	-0.4509055	-17.436225
S09C13	22.3051629	-22.799004	22.4434318	-22.937273
S09C14	22.3051629	-22.799004	22.4434318	-22.937273
S09C15	22.3051629	-22.799004	22.4434318	-22.937273
S09C16	22.3051629	-22.799004	22.4434318	-22.937273
S09C17	22.3051629	-22.799004	22.4434318	-22.937273
S09C18	22.3051629	-22.799004	22.4434318	-22.937273
S09C19	-0.572652	-18.576457	-0.5027158	-18.646393
S09C20	-0.572652	-18.576457	-0.5027158	-18.646393
S09C21	-0.572652	-18.576457	-0.5027158	-18.646393
S09C22	-0.572652	-18.576457	-0.5027158	-18.646393
S09C23	-0.572652	-18.576457	-0.5027158	-18.646393
S09C24	-0.572652	-18.576457	-0.5027158	-18.646393
S09R01	22.7772241	-22.757304	22.9156078	-22.895688
S09R02	20.000901	-22.12467	20.1306967	-22.254465

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

S09R03	11.6255809	-20.611353	11.7324071	-20.718179
S09R04	0.59846811	-17.763173	0.66599741	-17.830702
S09R05	-9.5991807	-12.709087	-9.5867772	-12.72149
S09R06	-4.4704591	-16.767999	-4.4214711	-16.816987
S09R07	6.66411802	-20.745248	6.76398399	-20.845114
S09R08	17.4754894	-22.466807	17.6053086	-22.596626
S09R09	22.7415987	-22.768963	22.8800513	-22.907416
S09R10	19.239318	-21.993483	19.3671262	-22.121291
S09R11	8.76460214	-20.003996	8.86252332	-20.101917
S09R12	-3.4199689	-16.213618	-3.3711848	-16.262402
S09R13	-9.7805191	-12.928251	-9.7678184	-12.940951
S09R14	-0.4654769	-18.618202	-0.3950196	-18.688659
S09R15	10.195546	-21.456788	10.3068303	-21.568072
S09R16	19.0095264	-22.611898	19.1424603	-22.744832

Source S10

Line	X1i	X2i	X1o	X2o
S10C01	22.7962151	-18.13022	22.9351348	-18.26914
S10C02	22.7962151	-18.13022	22.9351348	-18.26914
S10C03	22.7962151	-18.13022	22.9351348	-18.26914
S10C04	22.7962151	-18.13022	22.9351348	-18.26914
S10C05	22.7962151	-18.13022	22.9351348	-18.26914
S10C06	22.7962151	-18.13022	22.9351348	-18.26914
S10C07	-0.7001335	-20.573724	-0.6143816	-20.659476
S10C08	-0.7001335	-20.573724	-0.6143816	-20.659476
S10C09	-0.7001335	-20.573724	-0.6143816	-20.659476
S10C10	-0.7001335	-20.573724	-0.6143816	-20.659476
S10C11	-0.7001335	-20.573724	-0.6143816	-20.659476
S10C12	-0.7001335	-20.573724	-0.6143816	-20.659476
S10C13	7.99977685	-22.786309	8.14103033	-22.927562
S10C14	7.99977685	-22.786309	8.14103033	-22.927562
S10C15	7.99977685	-22.786309	8.14103033	-22.927562
S10C16	7.99977685	-22.786309	8.14103033	-22.927562
S10C17	7.99977685	-22.786309	8.14103033	-22.927562
S10C18	7.99977685	-22.786309	8.14103033	-22.927562
S10C19	-0.2696851	-10.457402	-0.2368979	-10.490189
S10C20	-0.2696851	-10.457402	-0.2368979	-10.490189
S10C21	-0.2696851	-10.457402	-0.2368979	-10.490189
S10C22	-0.2696851	-10.457402	-0.2368979	-10.490189
S10C23	-0.2696851	-10.457402	-0.2368979	-10.490189
S10C24	-0.2696851	-10.457402	-0.2368979	-10.490189
S10R01	21.1551086	-19.768829	21.3082397	-19.92196
S10R02	14.4221594	-21.93758	14.5796366	-22.095057
S10R03	5.73854018	-22.7471	5.86948536	-22.878046

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
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S10R04	-1.8606725	-19.621879	-1.7858547	-19.696697
S10R05	-7.4821553	-10.070163	-7.472946	-10.079372
S10R06	4.44538825	-11.630439	4.49553421	-11.680584
S10R07	17.5739971	-14.977122	17.6733124	-15.076438
S10R08	22.794179	-17.962706	22.931328	-18.099855
S10R09	18.9550586	-20.695195	19.1128746	-20.853011
S10R10	10.3690008	-22.609221	10.5183766	-22.758597
S10R11	1.96819253	-21.980276	2.07573712	-22.087821
S10R12	-4.2940987	-16.675797	-4.2451526	-16.724743
S10R13	-6.4359768	-8.7186335	-6.4281997	-8.7264106
S10R14	6.165222	-12.043426	6.22152272	-12.099726
S10R15	17.014179	-14.805038	17.1110603	-14.901919
S10R16	22.4943134	-17.329994	22.6243559	-17.460037

Source S11

Line	X1i	X2i	X1o	X2o
S11C01	22.789198	-10.396535	22.9297671	-10.537104
S11C02	22.789198	-10.396535	22.9297671	-10.537104
S11C03	22.789198	-10.396535	22.9297671	-10.537104
S11C04	22.789198	-10.396535	22.9297671	-10.537104
S11C05	22.789198	-10.396535	22.9297671	-10.537104
S11C06	22.789198	-10.396535	22.9297671	-10.537104
S11C07	22.0818679	0.86088994	22.1877816	0.75497624
S11C08	22.0818679	0.86088994	22.1877816	0.75497624
S11C09	22.0818679	0.86088994	22.1877816	0.75497624
S11C10	22.0818679	0.86088994	22.1877816	0.75497624
S11C11	22.0818679	0.86088994	22.1877816	0.75497624
S11C12	22.0818679	0.86088994	22.1877816	0.75497624
S11C13	21.3935034	-22.79844	21.5319038	-22.93684
S11C14	21.3935034	-22.79844	21.5319038	-22.93684
S11C15	21.3935034	-22.79844	21.5319038	-22.93684
S11C16	21.3935034	-22.79844	21.5319038	-22.93684
S11C17	21.3935034	-22.79844	21.5319038	-22.93684
S11C18	21.3935034	-22.79844	21.5319038	-22.93684
S11C19	16.8778685	0.49152195	16.9378046	0.43158577
S11C20	16.8778685	0.49152195	16.9378046	0.43158577
S11C21	16.8778685	0.49152195	16.9378046	0.43158577
S11C22	16.8778685	0.49152195	16.9378046	0.43158577
S11C23	16.8778685	0.49152195	16.9378046	0.43158577
S11C24	16.8778685	0.49152195	16.9378046	0.43158577
S11R01	21.9986295	-21.299283	22.1437703	-21.444424
S11R02	20.708879	-21.501079	20.8370818	-21.629282
S11R03	18.9131401	-11.328927	19.0097678	-11.425555
S11R04	16.2299997	3.45067414	16.2787882	3.40188563

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OF HN-200 GROUT CONTAINERS.**

S11R05	15.2867133	11.8037648	15.3030824	11.7873957
S11R06	21.1349363	4.4646368	21.2199425	4.37963061
S11R07	22.7429038	-5.7838637	22.8735956	-5.9145555
S11R08	22.5637585	-16.110273	22.7103597	-16.256875
S11R09	21.7643918	-22.249596	21.9072936	-22.392497
S11R10	20.6623555	-21.329703	20.7898054	-21.457153
S11R11	19.2293939	-13.375248	19.3317909	-13.477645
S11R12	17.2185327	-1.2307106	17.2844636	-1.2966414
S11R13	14.0604132	10.734025	14.0747547	10.7196836
S11R14	18.846497	8.64397496	18.8976192	8.59285277
S11R15	22.280316	-0.344466	22.3918848	-0.4560347
S11R16	22.7531751	-12.073602	22.8961871	-12.216614

Source S12

Line	X1i	X2i	X1o	X2o
S12C01	22.7486395	6.94083223	22.899094	6.79037766
S12C02	22.7486395	6.94083223	22.899094	6.79037766
S12C03	22.7486395	6.94083223	22.899094	6.79037766
S12C04	22.7486395	6.94083223	22.899094	6.79037766
S12C05	22.7486395	6.94083223	22.899094	6.79037766
S12C06	22.7486395	6.94083223	22.899094	6.79037766
S12C07	22.4477585	1.32405081	22.6136433	1.15816603
S12C08	22.4477585	1.32405081	22.6136433	1.15816603
S12C09	22.4477585	1.32405081	22.6136433	1.15816603
S12C10	22.4477585	1.32405081	22.6136433	1.15816603
S12C11	22.4477585	1.32405081	22.6136433	1.15816603
S12C12	22.4477585	1.32405081	22.6136433	1.15816603
S12C13	20.7147363	-22.798004	20.8532381	-22.936506
S12C14	20.7147363	-22.798004	20.8532381	-22.936506
S12C15	20.7147363	-22.798004	20.8532381	-22.936506
S12C16	20.7147363	-22.798004	20.8532381	-22.936506
S12C17	20.7147363	-22.798004	20.8532381	-22.936506
S12C18	20.7147363	-22.798004	20.8532381	-22.936506
S12C19	19.057042	0.59914937	19.1302545	0.52593682
S12C20	19.057042	0.59914937	19.1302545	0.52593682
S12C21	19.057042	0.59914937	19.1302545	0.52593682
S12C22	19.057042	0.59914937	19.1302545	0.52593682
S12C23	19.057042	0.59914937	19.1302545	0.52593682
S12C24	19.057042	0.59914937	19.1302545	0.52593682
S12R01	21.1687996	-19.793274	21.3217949	-19.946269
S12R02	20.4442047	-21.768104	20.5729269	-21.896827
S12R03	19.6486243	-9.6585845	19.745961	-9.7559213
S12R04	18.4888654	7.89583158	18.5394139	7.84528305
S12R05	19.6711578	16.1543692	19.6996121	16.1259149

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S12R06	22.776534	10.3590228	22.9040829	10.231474
S12R07	22.3167178	-0.8704918	22.4847681	-1.0385421
S12R08	21.5758111	-13.68861	21.7387613	-13.85156
S12R09	20.9637849	-21.816062	21.1105931	-21.96287
S12R10	20.4088192	-21.47556	20.5362157	-21.602957
S12R11	19.8122795	-12.699052	19.9162577	-12.80303
S12R12	19.029568	1.01511166	19.1016671	0.94301253
S12R13	17.7193253	14.0831125	17.740982	14.0614559
S12R14	21.4730269	14.7920698	21.5354495	14.7296472
S12R15	22.7602163	7.25088994	22.9091723	7.1019339
S12R16	21.9818664	-6.5983893	22.1503976	-6.7669205

Source S13

Line	X1i	X2i	X1o	X2o
S13C01	22.7945643	-16.003796	22.9338705	-16.143102
S13C02	22.7945643	-16.003796	22.9338705	-16.143102
S13C03	22.7945643	-16.003796	22.9338705	-16.143102
S13C04	22.7945643	-16.003796	22.9338705	-16.143102
S13C05	22.7945643	-16.003796	22.9338705	-16.143102
S13C06	22.7945643	-16.003796	22.9338705	-16.143102
S13C07	9.98289418	0.25603392	10.0140178	0.2249103
S13C08	9.98289418	0.25603392	10.0140178	0.2249103
S13C09	9.98289418	0.25603392	10.0140178	0.2249103
S13C10	9.98289418	0.25603392	10.0140178	0.2249103
S13C11	9.98289418	0.25603392	10.0140178	0.2249103
S13C12	9.98289418	0.25603392	10.0140178	0.2249103
S13C13	18.7826664	-22.796688	18.9214755	-22.935497
S13C14	18.7826664	-22.796688	18.9214755	-22.935497
S13C15	18.7826664	-22.796688	18.9214755	-22.935497
S13C16	18.7826664	-22.796688	18.9214755	-22.935497
S13C17	18.7826664	-22.796688	18.9214755	-22.935497
S13C18	18.7826664	-22.796688	18.9214755	-22.935497
S13C19	5.03010564	0.12402737	5.04516911	0.1089639
S13C20	5.03010564	0.12402737	5.04516911	0.1089639
S13C21	5.03010564	0.12402737	5.04516911	0.1089639
S13C22	5.03010564	0.12402737	5.04516911	0.1089639
S13C23	5.03010564	0.12402737	5.04516911	0.1089639
S13C24	5.03010564	0.12402737	5.04516911	0.1089639
S13R01	21.62413	-20.613636	21.7727269	-20.762233
S13R02	18.2748077	-22.768663	18.4106117	-22.904467
S13R03	13.8362067	-18.794207	13.9376201	-18.89562
S13R04	8.78048234	-8.6481557	8.83330549	-8.7009789
S13R05	4.31292457	3.13977576	4.3165775	3.13612283
S13R06	15.3486775	-3.2000014	15.4102132	-3.261537

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S13R07	21.4825659	-10.144686	21.5940233	-10.256143
S13R08	22.7338864	-16.909554	22.876102	-17.051769
S13R09	20.8227309	-21.738916	20.9702535	-21.886438
S13R10	17.384427	-22.484196	17.5143851	-22.614154
S13R11	13.287422	-17.913637	13.3838809	-18.010096
S13R12	8.79246822	-8.6758901	8.84541164	-8.7288335
S13R13	3.84130635	2.79393797	3.8445492	2.79069512
S13R14	13.2951356	-1.7494362	13.3442926	-1.7985931
S13R15	20.2549074	-8.0927895	20.3533621	-8.1912443
S13R16	22.7710165	-14.846972	22.9060124	-14.981968

Source S14

Line	X1i	X2i	X1o	X2o
S14C01	22.7986988	-21.807696	22.9370388	-21.946036
S14C02	22.7986988	-21.807696	22.9370388	-21.946036
S14C03	22.7986988	-21.807696	22.9370388	-21.946036
S14C04	22.7986988	-21.807696	22.9370388	-21.946036
S14C05	22.7986988	-21.807696	22.9370388	-21.946036
S14C06	22.7986988	-21.807696	22.9370388	-21.946036
S14C07	-1.1983961	-22.732084	-1.0491108	-22.881369
S14C08	-1.1983961	-22.732084	-1.0491108	-22.881369
S14C09	-1.1983961	-22.732084	-1.0491108	-22.881369
S14C10	-1.1983961	-22.732084	-1.0491108	-22.881369
S14C11	-1.1983961	-22.732084	-1.0491108	-22.881369
S14C12	-1.1983961	-22.732084	-1.0491108	-22.881369
S14C13	-2.9377498	-22.764283	-2.7911804	-22.910852
S14C14	-2.9377498	-22.764283	-2.7911804	-22.910852
S14C15	-2.9377498	-22.764283	-2.7911804	-22.910852
S14C16	-2.9377498	-22.764283	-2.7911804	-22.910852
S14C17	-2.9377498	-22.764283	-2.7911804	-22.910852
S14C18	-2.9377498	-22.764283	-2.7911804	-22.910852
S14C19	-0.6969486	-20.533148	-0.6115935	-20.618503
S14C20	-0.6969486	-20.533148	-0.6115935	-20.618503
S14C21	-0.6969486	-20.533148	-0.6115935	-20.618503
S14C22	-0.6969486	-20.533148	-0.6115935	-20.618503
S14C23	-0.6969486	-20.533148	-0.6115935	-20.618503
S14C24	-0.6969486	-20.533148	-0.6115935	-20.618503
S14R01	22.3327774	-21.919561	22.4749501	-22.061734
S14R02	15.2446872	-22.282559	15.3965806	-22.434453
S14R03	2.52758086	-22.647498	2.68038867	-22.800306
S14R04	-9.8964447	-22.740635	-9.7739772	-22.863103
S14R05	-17.03958	-20.413361	-17.007162	-20.445779
S14R06	-10.626162	-19.759404	-10.572947	-19.812619
S14R07	6.24014542	-20.879942	6.34050515	-20.980302

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S14R08	20.3269681	-21.519565	20.4543604	-21.646958
S14R09	21.3203122	-22.01003	21.4653501	-22.155068
S14R10	9.26271153	-22.46784	9.41690336	-22.622032
S14R11	-5.9811275	-22.798087	-5.8417801	-22.937434
S14R12	-15.43181	-21.702665	-15.366888	-21.767587
S14R13	-15.438319	-19.028207	-15.412528	-19.053999
S14R14	-3.080926	-20.389626	-3.0017145	-20.468838
S14R15	10.8813945	-21.080965	10.9904435	-21.190014
S14R16	20.6715223	-21.541561	20.7997922	-21.669831

Source S15

Line	X1i	X2i	X1o	X2o
S15C01	22.6815595	14.2999302	22.8497782	14.1317114
S15C02	22.6815595	14.2999302	22.8497782	14.1317114
S15C03	22.6815595	14.2999302	22.8497782	14.1317114
S15C04	22.6815595	14.2999302	22.8497782	14.1317114
S15C05	22.6815595	14.2999302	22.8497782	14.1317114
S15C06	22.6815595	14.2999302	22.8497782	14.1317114
S15C07	22.4165445	1.33438341	22.5838069	1.16712098
S15C08	22.4165445	1.33438341	22.5838069	1.16712098
S15C09	22.4165445	1.33438341	22.5838069	1.16712098
S15C10	22.4165445	1.33438341	22.5838069	1.16712098
S15C11	22.4165445	1.33438341	22.5838069	1.16712098
S15C12	22.4165445	1.33438341	22.5838069	1.16712098
S15C13	22.1155868	-22.798888	22.2538826	-22.937184
S15C14	22.1155868	-22.798888	22.2538826	-22.937184
S15C15	22.1155868	-22.798888	22.2538826	-22.937184
S15C16	22.1155868	-22.798888	22.2538826	-22.937184
S15C17	22.1155868	-22.798888	22.2538826	-22.937184
S15C18	22.1155868	-22.798888	22.2538826	-22.937184
S15C19	21.8328462	0.82531416	21.9342745	0.72388588
S15C20	21.8328462	0.82531416	21.9342745	0.72388588
S15C21	21.8328462	0.82531416	21.9342745	0.72388588
S15C22	21.8328462	0.82531416	21.9342745	0.72388588
S15C23	21.8328462	0.82531416	21.9342745	0.72388588
S15C24	21.8328462	0.82531416	21.9342745	0.72388588
S15R01	22.1611979	-21.600046	22.3048815	-21.743729
S15R02	22.0321233	-19.12911	22.1600146	-19.257001
S15R03	21.8697604	-2.4918433	21.9761799	-2.5982628
S15R04	21.5467446	14.9940117	21.6099076	14.9308487
S15R05	22.4421966	20.2196333	22.5052219	20.1566081
S15R06	22.6432756	13.0675816	22.8139905	12.8968667
S15R07	22.3855391	-1.1532025	22.5507424	-1.3184057
S15R08	22.2424044	-15.139561	22.3949805	-15.292137

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S15R09	22.1395255	-22.45023	22.2806797	-22.591384
S15R10	22.0447644	-20.112087	22.1742691	-20.241592
S15R11	21.9343354	-9.1421341	22.0494211	-9.2572198
S15R12	21.7644153	5.89598493	21.8565718	5.80382848
S15R13	21.364113	18.3144561	21.4043119	18.2742572
S15R14	22.7379345	19.3870616	22.8416494	19.2833466
S15R15	22.5523348	9.47526346	22.7246553	9.30294292
S15R16	22.3095465	-8.2649844	22.4686137	-8.4240516

Source S16

Line	X1i	X2i	X1o	X2o
S16C01	22.7738213	-0.6731098	22.9180668	-0.8173552
S16C02	22.7738213	-0.6731098	22.9180668	-0.8173552
S16C03	22.7738213	-0.6731098	22.9180668	-0.8173552
S16C04	22.7738213	-0.6731098	22.9180668	-0.8173552
S16C05	22.7738213	-0.6731098	22.9180668	-0.8173552
S16C06	22.7738213	-0.6731098	22.9180668	-0.8173552
S16C07	22.796879	1.09378443	22.9325464	0.95811707
S16C08	22.796879	1.09378443	22.9325464	0.95811707
S16C09	22.796879	1.09378443	22.9325464	0.95811707
S16C10	22.796879	1.09378443	22.9325464	0.95811707
S16C11	22.796879	1.09378443	22.9325464	0.95811707
S16C12	22.796879	1.09378443	22.9325464	0.95811707
S16C13	19.2844325	-22.797041	19.423159	-22.935768
S16C14	19.2844325	-22.797041	19.423159	-22.935768
S16C15	19.2844325	-22.797041	19.423159	-22.935768
S16C16	19.2844325	-22.797041	19.423159	-22.935768
S16C17	19.2844325	-22.797041	19.423159	-22.935768
S16C18	19.2844325	-22.797041	19.423159	-22.935768
S16C19	15.2480236	0.42594763	15.2999083	0.37406292
S16C20	15.2480236	0.42594763	15.2999083	0.37406292
S16C21	15.2480236	0.42594763	15.2999083	0.37406292
S16C22	15.2480236	0.42594763	15.2999083	0.37406292
S16C23	15.2480236	0.42594763	15.2999083	0.37406292
S16C24	15.2480236	0.42594763	15.2999083	0.37406292
S16R01	20.6287757	-18.838712	20.787289	-18.997225
S16R02	18.9767235	-22.622135	19.1097763	-22.755188
S16R03	17.2417594	-14.440426	17.3384902	-14.537157
S16R04	15.1035049	1.38465015	15.1521818	1.33597323
S16R05	15.3962709	11.9015098	15.412837	11.8849437
S16R06	21.9416091	6.37214903	22.0364657	6.27729238
S16R07	22.6670846	-2.666637	22.8187577	-2.8183101
S16R08	21.4705363	-13.490905	21.6350465	-13.655415
S16R09	20.0706327	-21.323639	20.2221072	-21.475114

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S16R10	18.7280671	-22.161109	18.8563136	-22.289356
S16R11	17.3442842	-15.171553	17.4432912	-15.27056
S16R12	15.7126775	-2.837329	15.7749615	-2.8996131
S16R13	13.4532455	10.2190306	13.4666837	10.2055924
S16R14	19.3645814	9.7548736	19.4167609	9.70269404
S16R15	22.6949747	3.06277858	22.81841	2.9393433
S16R16	22.199239	-7.6577263	22.3615495	-7.8200368

Source S17

Line	X1i	X2i	X1o	X2o
S17C01	22.7991153	-22.489909	22.9373583	-22.628152
S17C02	22.7991153	-22.489909	22.9373583	-22.628152
S17C03	22.7991153	-22.489909	22.9373583	-22.628152
S17C04	22.7991153	-22.489909	22.9373583	-22.628152
S17C05	22.7991153	-22.489909	22.9373583	-22.628152
S17C06	22.7991153	-22.489909	22.9373583	-22.628152
S17C07	-0.8012248	-21.638548	-0.7028258	-21.736947
S17C08	-0.8012248	-21.638548	-0.7028258	-21.736947
S17C09	-0.8012248	-21.638548	-0.7028258	-21.736947
S17C10	-0.8012248	-21.638548	-0.7028258	-21.736947
S17C11	-0.8012248	-21.638548	-0.7028258	-21.736947
S17C12	-0.8012248	-21.638548	-0.7028258	-21.736947
S17C13	18.1470252	-22.796228	18.285942	-22.935144
S17C14	18.1470252	-22.796228	18.285942	-22.935144
S17C15	18.1470252	-22.796228	18.285942	-22.935144
S17C16	18.1470252	-22.796228	18.285942	-22.935144
S17C17	18.1470252	-22.796228	18.285942	-22.935144
S17C18	18.1470252	-22.796228	18.285942	-22.935144
S17C19	-0.6144757	-19.318862	-0.5393656	-19.393972
S17C20	-0.6144757	-19.318862	-0.5393656	-19.393972
S17C21	-0.6144757	-19.318862	-0.5393656	-19.393972
S17C22	-0.6144757	-19.318862	-0.5393656	-19.393972
S17C23	-0.6144757	-19.318862	-0.5393656	-19.393972
S17C24	-0.6144757	-19.318862	-0.5393656	-19.393972
S17R01	22.6761152	-22.56543	22.8153454	-22.70466
S17R02	17.6606196	-22.798645	17.7991391	-22.937165
S17R03	7.32270886	-22.498528	7.44552253	-22.621342
S17R04	-4.1216592	-20.962672	-4.0381807	-21.046151
S17R05	-12.860563	-16.447388	-12.841939	-16.466011
S17R06	-6.7323585	-17.919429	-6.6825172	-17.969271
S17R07	7.32720534	-20.524786	7.42636872	-20.623949
S17R08	19.4966514	-21.897348	19.6242918	-22.024988
S17R09	22.4475786	-22.613812	22.587335	-22.753568
S17R10	14.6840471	-22.778387	14.8194406	-22.91378

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S17R11	1.8236222	-22.009607	1.93149136	-22.117476
S17R12	-9.2067353	-19.110935	-9.1551107	-19.16256
S17R13	-12.276571	-15.812573	-12.259229	-15.829915
S17R14	-1.250071	-19.199092	-1.1772408	-19.271923
S17R15	11.0625699	-20.972702	11.1710586	-21.081191
S17R16	20.1950199	-21.981194	20.3243168	-22.110491

Source S18

Line	X1i	X2i	X1o	X2o
S18C01	22.580964	17.7951787	22.7795945	17.5965483
S18C02	22.580964	17.7951787	22.7795945	17.5965483
S18C03	22.580964	17.7951787	22.7795945	17.5965483
S18C04	22.580964	17.7951787	22.7795945	17.5965483
S18C05	22.580964	17.7951787	22.7795945	17.5965483
S18C06	22.580964	17.7951787	22.7795945	17.5965483
S18C07	19.0430897	0.59835146	19.1162035	0.52523765
S18C08	19.0430897	0.59835146	19.1162035	0.52523765
S18C09	19.0430897	0.59835146	19.1162035	0.52523765
S18C10	19.0430897	0.59835146	19.1162035	0.52523765
S18C11	19.0430897	0.59835146	19.1162035	0.52523765
S18C12	19.0430897	0.59835146	19.1162035	0.52523765
S18C13	19.2912783	-22.797046	19.4300038	-22.935772
S18C14	19.2912783	-22.797046	19.4300038	-22.935772
S18C15	19.2912783	-22.797046	19.4300038	-22.935772
S18C16	19.2912783	-22.797046	19.4300038	-22.935772
S18C17	19.2912783	-22.797046	19.4300038	-22.935772
S18C18	19.2912783	-22.797046	19.4300038	-22.935772
S18C19	19.7627569	1.91650811	20.0114689	1.66779608
S18C20	19.7627569	1.91650811	20.0114689	1.66779608
S18C21	19.7627569	1.91650811	20.0114689	1.66779608
S18C22	19.7627569	1.91650811	20.0114689	1.66779608
S18C23	19.7627569	1.91650811	20.0114689	1.66779608
S18C24	19.7627569	1.91650811	20.0114689	1.66779608
S18R01	19.423011	-16.776446	19.5951867	-16.948621
S18R02	19.7214904	0.43503943	19.9618645	0.19466529
S18R03	20.9435243	15.0103139	21.2920172	14.661821
S18R04	22.5675614	18.4007709	22.6546036	18.3137288
S18R05	18.8619943	15.2593339	18.8871796	15.2341486
S18R06	19.0394396	1.02865081	19.1115803	0.95651004
S18R07	19.1523424	-13.459349	19.2545542	-13.56156
S18R08	19.2493341	-21.989899	19.3771351	-22.1177
S18R09	19.3564666	-20.923066	19.5119307	-21.07853
S18R10	19.5134224	-10.437082	19.7075482	-10.631208
S18R11	19.8683245	4.97986013	20.1369504	4.71123423

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S18R12	21.5436884	16.4491151	21.8618365	16.130967
S18R13	21.5511075	18.5940005	21.5935171	18.5515908
S18R14	18.9612199	8.88707606	19.0125512	8.8357448
S18R15	19.1318952	-10.854932	19.2286729	-10.95171
S18R16	19.2655511	-22.520314	19.3975883	-22.652352

Source S19				
Line	X1i	X2i	X1o	X2o
S19C01	22.7992988	-22.797214	22.9374991	-22.935414
S19C02	22.7992988	-22.797214	22.9374991	-22.935414
S19C03	22.7992988	-22.797214	22.9374991	-22.935414
S19C04	22.7992988	-22.797214	22.9374991	-22.935414
S19C05	22.7992988	-22.797214	22.9374991	-22.935414
S19C06	22.7992988	-22.797214	22.9374991	-22.935414
S19C07	-0.8918512	-22.263919	-0.7820221	-22.373748
S19C08	-0.8918512	-22.263919	-0.7820221	-22.373748
S19C09	-0.8918512	-22.263919	-0.7820221	-22.373748
S19C10	-0.8918512	-22.263919	-0.7820221	-22.373748
S19C11	-0.8918512	-22.263919	-0.7820221	-22.373748
S19C12	-0.8918512	-22.263919	-0.7820221	-22.373748
S19C13	22.684386	-22.799232	22.8226019	-22.937448
S19C14	22.684386	-22.799232	22.8226019	-22.937448
S19C15	22.684386	-22.799232	22.8226019	-22.937448
S19C16	22.684386	-22.799232	22.8226019	-22.937448
S19C17	22.684386	-22.799232	22.8226019	-22.937448
S19C18	22.684386	-22.799232	22.8226019	-22.937448
S19C19	-0.8707222	-22.14307	-0.7635663	-22.250226
S19C20	-0.8707222	-22.14307	-0.7635663	-22.250226
S19C21	-0.8707222	-22.14307	-0.7635663	-22.250226
S19C22	-0.8707222	-22.14307	-0.7635663	-22.250226
S19C23	-0.8707222	-22.14307	-0.7635663	-22.250226
S19C24	-0.8707222	-22.14307	-0.7635663	-22.250226
S19R01	22.7983552	-22.797502	22.9365631	-22.93571
S19R02	18.3490959	-22.759235	18.4845906	-22.89473
S19R03	7.07260644	-22.552105	7.19661006	-22.676108
S19R04	-6.2778707	-21.907811	-6.183563	-22.002118
S19R05	-16.246871	-19.751539	-16.218041	-19.780368
S19R06	-13.002373	-20.777217	-12.945042	-20.834548
S19R07	0.69401293	-22.221189	0.80464171	-22.331818
S19R08	16.0935594	-22.673686	16.225806	-22.805933
S19R09	22.7962945	-22.797721	22.9345076	-22.935934
S19R10	15.5933851	-22.721832	15.7266724	-22.855119
S19R11	0.14302285	-22.31302	0.25515319	-22.425151
S19R12	-13.219994	-20.865495	-13.162159	-20.92333

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S19R13	-16.174335	-19.688561	-16.145801	-19.717096
S19R14	-5.9745828	-21.794778	-5.8819928	-21.887368
S19R15	7.44280854	-22.47082	7.56506245	-22.593073
S19R16	18.5901811	-22.719153	18.724701	-22.853673

Source S20				
Line	X1i	X2i	X1o	X2o
S20C01	22.7938008	-15.093182	22.933286	-15.232667
S20C02	22.7938008	-15.093182	22.933286	-15.232667
S20C03	22.7938008	-15.093182	22.933286	-15.232667
S20C04	22.7938008	-15.093182	22.933286	-15.232667
S20C05	22.7938008	-15.093182	22.933286	-15.232667
S20C06	22.7938008	-15.093182	22.933286	-15.232667
S20C07	8.75913011	0.22182122	8.78608703	0.19486431
S20C08	8.75913011	0.22182122	8.78608703	0.19486431
S20C09	8.75913011	0.22182122	8.78608703	0.19486431
S20C10	8.75913011	0.22182122	8.78608703	0.19486431
S20C11	8.75913011	0.22182122	8.78608703	0.19486431
S20C12	8.75913011	0.22182122	8.78608703	0.19486431
S20C13	17.7239119	-22.795913	17.8629022	-22.934903
S20C14	17.7239119	-22.795913	17.8629022	-22.934903
S20C15	17.7239119	-22.795913	17.8629022	-22.934903
S20C16	17.7239119	-22.795913	17.8629022	-22.934903
S20C17	17.7239119	-22.795913	17.8629022	-22.934903
S20C18	17.7239119	-22.795913	17.8629022	-22.934903
S20C19	4.00604875	0.09832532	4.01798943	0.08638464
S20C20	4.00604875	0.09832532	4.01798943	0.08638464
S20C21	4.00604875	0.09832532	4.01798943	0.08638464
S20C22	4.00604875	0.09832532	4.01798943	0.08638464
S20C23	4.00604875	0.09832532	4.01798943	0.08638464
S20C24	4.00604875	0.09832532	4.01798943	0.08638464
S20R01	21.3463834	-20.111513	21.4976367	-20.262766
S20R02	17.6510861	-22.798482	17.78965	-22.937045
S20R03	13.0151626	-19.547782	13.1183811	-19.651001
S20R04	7.98323444	-9.7303162	8.0370133	-9.7840951
S20R05	3.54446645	2.57672318	3.54745316	2.57373647
S20R06	15.1660867	-3.3786914	15.227263	-3.4398677
S20R07	21.5914025	-9.9234901	21.7036248	-10.035712
S20R08	22.6556094	-16.486536	22.8000874	-16.631014
S20R09	20.3243714	-21.464489	20.4744852	-21.614602
S20R10	16.5310326	-22.620628	16.6624383	-22.752034
S20R11	12.2750517	-18.450557	12.3715047	-18.54701
S20R12	7.82966091	-9.3643069	7.881841	-9.416487
S20R13	3.11583682	2.26362672	3.11845605	2.26100749

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S20R14	13.0964428	-2.0806223	13.1456928	-2.1298723
S20R15	20.307355	-7.9476733	20.4059358	-8.0462541
S20R16	22.790495	-14.329202	22.9267853	-14.465493

Source S21

Line	X1i	X2i	X1o	X2o
S21C01	22.7951871	-16.779497	22.9343473	-16.918658
S21C02	22.7951871	-16.779497	22.9343473	-16.918658
S21C03	22.7951871	-16.779497	22.9343473	-16.918658
S21C04	22.7951871	-16.779497	22.9343473	-16.918658
S21C05	22.7951871	-16.779497	22.9343473	-16.918658
S21C06	22.7951871	-16.779497	22.9343473	-16.918658
S21C07	4.450982	0.1094489	4.46427407	0.09615682
S21C08	4.450982	0.1094489	4.46427407	0.09615682
S21C09	4.450982	0.1094489	4.46427407	0.09615682
S21C10	4.450982	0.1094489	4.46427407	0.09615682
S21C11	4.450982	0.1094489	4.46427407	0.09615682
S21C12	4.450982	0.1094489	4.46427407	0.09615682
S21C13	19.0092569	-22.796849	19.1480286	-22.93562
S21C14	19.0092569	-22.796849	19.1480286	-22.93562
S21C15	19.0092569	-22.796849	19.1480286	-22.93562
S21C16	19.0092569	-22.796849	19.1480286	-22.93562
S21C17	19.0092569	-22.796849	19.1480286	-22.93562
S21C18	19.0092569	-22.796849	19.1480286	-22.93562
S21C19	8.60874756	0.21770547	8.63520346	0.19124957
S21C20	8.60874756	0.21770547	8.63520346	0.19124957
S21C21	8.60874756	0.21770547	8.63520346	0.19124957
S21C22	8.60874756	0.21770547	8.63520346	0.19124957
S21C23	8.60874756	0.21770547	8.63520346	0.19124957
S21C24	8.60874756	0.21770547	8.63520346	0.19124957
S21R01	21.7437954	-20.83164	21.8912726	-20.979118
S21R02	22.7403824	-15.354957	22.8741953	-15.48877
S21R03	20.0083981	-8.7531199	20.1063277	-8.8510495
S21R04	12.9134514	-2.3833696	12.9627934	-2.4327116
S21R05	3.35920445	2.44132009	3.36203201	2.43849253
S21R06	8.52282884	-8.8709022	8.57554925	-8.9236226
S21R07	13.2372513	-17.941349	13.333705	-18.037802
S21R08	17.5056795	-22.460912	17.6354534	-22.590686
S21R09	20.9964244	-21.83388	21.1430683	-21.980524
S21R10	22.7732976	-17.223984	22.913916	-17.364603
S21R11	21.2221907	-10.634844	21.3320222	-10.744675
S21R12	14.8096623	-3.7216366	14.8701658	-3.7821401
S21R13	3.75156524	2.72823386	3.7547305	2.72506859
S21R14	8.56000132	-8.9515422	8.61307979	-9.0046206

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S21R15	13.8165944	-18.813371	13.9180482	-18.914825
S21R16	18.3919547	-22.753183	18.5272728	-22.888501

Source S22				
Line	X1i	X2i	X1o	X2o
S22C01	22.7966141	-18.679605	22.9354405	-18.818431
S22C02	22.7966141	-18.679605	22.9354405	-18.818431
S22C03	22.7966141	-18.679605	22.9354405	-18.818431
S22C04	22.7966141	-18.679605	22.9354405	-18.818431
S22C05	22.7966141	-18.679605	22.9354405	-18.818431
S22C06	22.7966141	-18.679605	22.9354405	-18.818431
S22C07	-1.9875677	-19.396318	-1.7282993	-19.655586
S22C08	-1.9875677	-19.396318	-1.7282993	-19.655586
S22C09	-1.9875677	-19.396318	-1.7282993	-19.655586
S22C10	-1.9875677	-19.396318	-1.7282993	-19.655586
S22C11	-1.9875677	-19.396318	-1.7282993	-19.655586
S22C12	-1.9875677	-19.396318	-1.7282993	-19.655586
S22C13	-16.786563	-22.621944	-16.600912	-22.807595
S22C14	-16.786563	-22.621944	-16.600912	-22.807595
S22C15	-16.786563	-22.621944	-16.600912	-22.807595
S22C16	-16.786563	-22.621944	-16.600912	-22.807595
S22C17	-16.786563	-22.621944	-16.600912	-22.807595
S22C18	-16.786563	-22.621944	-16.600912	-22.807595
S22C19	-0.5594921	-18.32441	-0.4911811	-18.392721
S22C20	-0.5594921	-18.32441	-0.4911811	-18.392721
S22C21	-0.5594921	-18.32441	-0.4911811	-18.392721
S22C22	-0.5594921	-18.32441	-0.4911811	-18.392721
S22C23	-0.5594921	-18.32441	-0.4911811	-18.392721
S22C24	-0.5594921	-18.32441	-0.4911811	-18.392721
S22R01	20.597598	-18.784198	20.7564404	-18.943041
S22R02	9.7757115	-19.024268	9.97792666	-19.226484
S22R03	-5.4538824	-19.591036	-5.170916	-19.874003
S22R04	-15.789211	-21.852117	-15.518742	-22.122585
S22R05	-17.783233	-20.986475	-17.746665	-21.023043
S22R06	-7.3708485	-18.23389	-7.320645	-18.284093
S22R07	12.2467849	-18.464904	12.3432406	-18.561359
S22R08	22.7055577	-18.656112	22.8398189	-18.790374
S22R09	15.8975776	-18.892209	16.0764411	-19.071072
S22R10	-1.2468459	-19.362806	-0.9921093	-19.617543
S22R11	-14.558118	-21.155106	-14.240691	-21.472533
S22R12	-17.547523	-22.362135	-17.469571	-22.440088
S22R13	-14.460465	-18.095089	-14.437753	-18.117801
S22R14	-0.0957776	-18.329864	-0.0263735	-18.399268
S22R15	14.1430252	-18.48667	14.2438268	-18.587471

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S22R16 22.1912737 -18.625853 22.3196232 -18.754202

Source S23

Line	X1i	X2i	X1o	X2o
S23C01	22.7816541	-4.7903478	22.9240162	-4.9327099
S23C02	22.7816541	-4.7903478	22.9240162	-4.9327099
S23C03	22.7816541	-4.7903478	22.9240162	-4.9327099
S23C04	22.7816541	-4.7903478	22.9240162	-4.9327099
S23C05	22.7816541	-4.7903478	22.9240162	-4.9327099
S23C06	22.7816541	-4.7903478	22.9240162	-4.9327099
S23C07	19.5309432	0.62742089	19.6076576	0.5507065
S23C08	19.5309432	0.62742089	19.6076576	0.5507065
S23C09	19.5309432	0.62742089	19.6076576	0.5507065
S23C10	19.5309432	0.62742089	19.6076576	0.5507065
S23C11	19.5309432	0.62742089	19.6076576	0.5507065
S23C12	19.5309432	0.62742089	19.6076576	0.5507065
S23C13	13.1128941	-22.792007	13.2528009	-22.931914
S23C14	13.1128941	-22.792007	13.2528009	-22.931914
S23C15	13.1128941	-22.792007	13.2528009	-22.931914
S23C16	13.1128941	-22.792007	13.2528009	-22.931914
S23C17	13.1128941	-22.792007	13.2528009	-22.931914
S23C18	13.1128941	-22.792007	13.2528009	-22.931914
S23C19	6.07244873	0.1506032	6.09074226	0.13230966
S23C20	6.07244873	0.1506032	6.09074226	0.13230966
S23C21	6.07244873	0.1506032	6.09074226	0.13230966
S23C22	6.07244873	0.1506032	6.09074226	0.13230966
S23C23	6.07244873	0.1506032	6.09074226	0.13230966
S23C24	6.07244873	0.1506032	6.09074226	0.13230966
S23R01	18.5999159	-15.420901	18.782661	-15.603647
S23R02	14.5081707	-21.976821	14.6650375	-22.133688
S23R03	11.025895	-20.994927	11.1344962	-21.103529
S23R04	7.95053467	-9.7738231	8.00435466	-9.8276431
S23R05	6.54785053	4.79428687	6.5535152	4.7886222
S23R06	18.9765974	0.94275366	19.048475	0.87087606
S23R07	22.7983829	-4.4183777	22.9373181	-4.5573129
S23R08	20.4206112	-11.747008	20.6006388	-11.927036
S23R09	16.4924484	-19.252624	16.6667221	-19.426898
S23R10	13.0996932	-22.793359	13.2394229	-22.933089
S23R11	10.3351083	-19.362461	10.4320974	-19.45945
S23R12	7.86459734	-9.339703	7.91680356	-9.3919093
S23R13	5.34344527	3.89908957	5.34800999	3.89452485
S23R14	15.6491773	2.37406843	15.6978617	2.32538408
S23R15	22.0461773	-1.6397377	22.1544683	-1.7480287
S23R16	22.1763667	-7.5385676	22.33934	-7.7015409

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OF HN-200 GROUT CONTAINERS.**

Line	Source S24			
	X1i	X2i	X1o	X2o
S24C01	22.7549004	5.54902598	22.9037888	5.40013753
S24C02	22.7549004	5.54902598	22.9037888	5.40013753
S24C03	22.7549004	5.54902598	22.9037888	5.40013753
S24C04	22.7549004	5.54902598	22.9037888	5.40013753
S24C05	22.7549004	5.54902598	22.9037888	5.40013753
S24C06	22.7549004	5.54902598	22.9037888	5.40013753
S24C07	18.9347429	2.07760984	19.2076169	1.80473586
S24C08	18.9347429	2.07760984	19.2076169	1.80473586
S24C09	18.9347429	2.07760984	19.2076169	1.80473586
S24C10	18.9347429	2.07760984	19.2076169	1.80473586
S24C11	18.9347429	2.07760984	19.2076169	1.80473586
S24C12	18.9347429	2.07760984	19.2076169	1.80473586
S24C13	10.0452639	-22.788801	10.185927	-22.929464
S24C14	10.0452639	-22.788801	10.185927	-22.929464
S24C15	10.0452639	-22.788801	10.185927	-22.929464
S24C16	10.0452639	-22.788801	10.185927	-22.929464
S24C17	10.0452639	-22.788801	10.185927	-22.929464
S24C18	10.0452639	-22.788801	10.185927	-22.929464
S24C19	8.33259529	0.21019322	8.35813684	0.18465167
S24C20	8.33259529	0.21019322	8.35813684	0.18465167
S24C21	8.33259529	0.21019322	8.35813684	0.18465167
S24C22	8.33259529	0.21019322	8.35813684	0.18465167
S24C23	8.33259529	0.21019322	8.35813684	0.18465167
S24C24	8.33259529	0.21019322	8.35813684	0.18465167
S24R01	13.4131291	-7.7362666	13.7021113	-8.0252488
S24R02	10.8668039	-19.820612	11.0560404	-20.009848
S24R03	9.62019446	-21.732102	9.733498	-21.845406
S24R04	8.72809655	-8.720524	8.78097974	-8.7734071
S24R05	10.5003368	7.81991598	10.5100264	7.81022631
S24R06	21.9844731	6.49435616	22.0800524	6.39877683
S24R07	20.6336648	3.55542155	20.8671663	3.32191999
S24R08	14.5682381	-4.4563002	14.8754685	-4.7635306
S24R09	11.5334003	-16.093488	11.7567378	-16.316826
S24R10	10.1967618	-22.58962	10.3468496	-22.739707
S24R11	9.38229404	-19.761154	9.47979616	-19.858656
S24R12	8.72818916	-8.7225403	8.78107874	-8.7754299
S24R13	8.06548924	5.93756113	8.07260964	5.93044073
S24R14	18.1578268	7.21552119	18.2079366	7.16541139
S24R15	22.7992567	5.7569234	22.9371105	5.61906958
S24R16	18.9604835	2.10224235	19.2328432	1.82988269

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

Line	Source S25			
	X1i	X2i	X1o	X2o
S25C01	22.7883466	-9.6524862	22.9291171	-9.7932567
S25C02	22.7883466	-9.6524862	22.9291171	-9.7932567
S25C03	22.7883466	-9.6524862	22.9291171	-9.7932567
S25C04	22.7883466	-9.6524862	22.9291171	-9.7932567
S25C05	22.7883466	-9.6524862	22.9291171	-9.7932567
S25C06	22.7883466	-9.6524862	22.9291171	-9.7932567
S25C07	20.1764398	0.67035401	20.2584847	0.58830903
S25C08	20.1764398	0.67035401	20.2584847	0.58830903
S25C09	20.1764398	0.67035401	20.2584847	0.58830903
S25C10	20.1764398	0.67035401	20.2584847	0.58830903
S25C11	20.1764398	0.67035401	20.2584847	0.58830903
S25C12	20.1764398	0.67035401	20.2584847	0.58830903
S25C13	18.9513847	-22.796808	19.0901659	-22.935589
S25C14	18.9513847	-22.796808	19.0901659	-22.935589
S25C15	18.9513847	-22.796808	19.0901659	-22.935589
S25C16	18.9513847	-22.796808	19.0901659	-22.935589
S25C17	18.9513847	-22.796808	19.0901659	-22.935589
S25C18	18.9513847	-22.796808	19.0901659	-22.935589
S25C19	11.0074815	0.28581822	11.0422356	0.25106409
S25C20	11.0074815	0.28581822	11.0422356	0.25106409
S25C21	11.0074815	0.28581822	11.0422356	0.25106409
S25C22	11.0074815	0.28581822	11.0422356	0.25106409
S25C23	11.0074815	0.28581822	11.0422356	0.25106409
S25C24	11.0074815	0.28581822	11.0422356	0.25106409
S25R01	21.0929618	-19.658029	21.2467117	-19.811778
S25R02	18.5461109	-22.727596	18.6808057	-22.86229
S25R03	15.5783351	-16.841662	15.676746	-16.940072
S25R04	12.0913976	-3.7167276	12.1412238	-3.7665538
S25R05	10.2802758	7.64681772	10.2897181	7.63737541
S25R06	19.4481526	1.6052579	19.5221231	1.53128741
S25R07	22.6747509	-6.3610331	22.8023274	-6.4886096
S25R08	22.2184263	-15.078244	22.3714046	-15.231223
S25R09	20.3351438	-21.470452	20.4852004	-21.620508
S25R10	18.025323	-22.348778	18.1543718	-22.477827
S25R11	15.4929652	-16.562496	15.5902243	-16.659756
S25R12	12.604585	-5.6965795	12.6616161	-5.7536106
S25R13	9.02420187	6.67066871	9.03229359	6.66257698
S25R14	16.6236181	4.19458736	16.6725419	4.14566356
S25R15	21.8516906	-2.574558	21.9579394	-2.6808068
S25R16	22.7001502	-11.310006	22.845865	-11.455721

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Line	Source S26			
	X1i	X2i	X1o	X2o
S26C01	22.7796263	-3.5920478	22.9224738	-3.7348954
S26C02	22.7796263	-3.5920478	22.9224738	-3.7348954
S26C03	22.7796263	-3.5920478	22.9224738	-3.7348954
S26C04	22.7796263	-3.5920478	22.9224738	-3.7348954
S26C05	22.7796263	-3.5920478	22.9224738	-3.7348954
S26C06	22.7796263	-3.5920478	22.9224738	-3.7348954
S26C07	19.2447697	0.61006835	19.319334	0.53550408
S26C08	19.2447697	0.61006835	19.319334	0.53550408
S26C09	19.2447697	0.61006835	19.319334	0.53550408
S26C10	19.2447697	0.61006835	19.319334	0.53550408
S26C11	19.2447697	0.61006835	19.319334	0.53550408
S26C12	19.2447697	0.61006835	19.319334	0.53550408
S26C13	10.794563	-22.789638	10.9350282	-22.930103
S26C14	10.794563	-22.789638	10.9350282	-22.930103
S26C15	10.794563	-22.789638	10.9350282	-22.930103
S26C16	10.794563	-22.789638	10.9350282	-22.930103
S26C17	10.794563	-22.789638	10.9350282	-22.930103
S26C18	10.794563	-22.789638	10.9350282	-22.930103
S26C19	4.7318303	0.11650379	4.74597955	0.10235453
S26C20	4.7318303	0.11650379	4.74597955	0.10235453
S26C21	4.7318303	0.11650379	4.74597955	0.10235453
S26C22	4.7318303	0.11650379	4.74597955	0.10235453
S26C23	4.7318303	0.11650379	4.74597955	0.10235453
S26C24	4.7318303	0.11650379	4.74597955	0.10235453
S26R01	17.464202	-13.616141	17.6635564	-13.815496
S26R02	12.8374191	-21.10132	13.0073597	-21.27126
S26R03	9.34313503	-21.852178	9.45745962	-21.966502
S26R04	6.56253519	-11.556366	6.61824307	-11.612074
S26R05	5.35342909	3.90647332	5.35800276	3.90189965
S26R06	18.8514523	0.77371821	18.9228189	0.70235167
S26R07	22.7696829	-3.6801225	22.9136568	-3.8240964
S26R08	19.4610117	-10.364952	19.6559855	-10.559925
S26R09	14.7451161	-18.180106	14.9337044	-18.368694
S26R10	11.1531621	-22.686922	11.2994611	-22.833221
S26R11	8.52814816	-20.093847	8.62624784	-20.191947
S26R12	6.36087088	-10.375035	6.41205163	-10.426216
S26R13	4.26854197	3.10718937	4.27215613	3.10357521
S26R14	15.3834738	1.88967646	15.4321444	1.84100591
S26R15	22.1111247	-1.3023568	22.2202166	-1.4114487
S26R16	21.8946818	-6.2117849	22.0656796	-6.3827828

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OF HN-200 GROUT CONTAINERS.**

Source S27				
Line	X1i	X2i	X1o	X2o
S27C01	22.7709791	0.5329303	22.9159135	0.3879959
S27C02	22.7709791	0.5329303	22.9159135	0.3879959
S27C03	22.7709791	0.5329303	22.9159135	0.3879959
S27C04	22.7709791	0.5329303	22.9159135	0.3879959
S27C05	22.7709791	0.5329303	22.9159135	0.3879959
S27C06	22.7709791	0.5329303	22.9159135	0.3879959
S27C07	2.34924115	0.05736459	2.35620675	0.05039899
S27C08	2.34924115	0.05736459	2.35620675	0.05039899
S27C09	2.34924115	0.05736459	2.35620675	0.05039899
S27C10	2.34924115	0.05736459	2.35620675	0.05039899
S27C11	2.34924115	0.05736459	2.35620675	0.05039899
S27C12	2.34924115	0.05736459	2.35620675	0.05039899
S27C13	3.95007789	-22.780251	4.09277568	-22.922949
S27C14	3.95007789	-22.780251	4.09277568	-22.922949
S27C15	3.95007789	-22.780251	4.09277568	-22.922949
S27C16	3.95007789	-22.780251	4.09277568	-22.922949
S27C17	3.95007789	-22.780251	4.09277568	-22.922949
S27C18	3.95007789	-22.780251	4.09277568	-22.922949
S27C19	22.4300145	0.92604577	22.5441814	0.81187892
S27C20	22.4300145	0.92604577	22.5441814	0.81187892
S27C21	22.4300145	0.92604577	22.5441814	0.81187892
S27C22	22.4300145	0.92604577	22.5441814	0.81187892
S27C23	22.4300145	0.92604577	22.5441814	0.81187892
S27C24	22.4300145	0.92604577	22.5441814	0.81187892
S27R01	11.4294418	-5.1379617	11.7945222	-5.5030422
S27R02	20.1563287	-0.6224832	20.3807296	-0.8468841
S27R03	22.4677387	0.91159176	22.583065	0.79626549
S27R04	15.2845615	1.7106267	15.3332319	1.66195628
S27R05	2.29169199	1.66318527	2.29361127	1.661266
S27R06	2.83545071	-12.637724	2.8849424	-12.687215
S27R07	3.47987398	-21.64295	3.58437355	-21.747449
S27R08	4.4878467	-21.454775	4.67134759	-21.638276
S27R09	6.8037272	-12.715985	7.1158567	-13.028115
S27R10	13.6629649	-3.4612168	14.0035741	-3.801826
S27R11	22.0507398	0.07608669	22.2291976	-0.1023711
S27R12	19.3199401	1.42086707	19.3933132	1.34749392
S27R13	3.08376704	2.24022548	3.08635888	2.23763364
S27R14	2.97962529	-15.570914	3.04161263	-15.632901
S27R15	3.94288065	-22.784452	4.0850099	-22.926582
S27R16	5.86450724	-15.818431	6.13435195	-16.088276

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

Line	Source S28			
	X1i	X2i	X1o	X2o
S28C01	22.7675474	1.83371114	22.9133176	1.68794094
S28C02	22.7675474	1.83371114	22.9133176	1.68794094
S28C03	22.7675474	1.83371114	22.9133176	1.68794094
S28C04	22.7675474	1.83371114	22.9133176	1.68794094
S28C05	22.7675474	1.83371114	22.9133176	1.68794094
S28C06	22.7675474	1.83371114	22.9133176	1.68794094
S28C07	20.7539306	0.71472893	20.8415023	0.62715722
S28C08	20.7539306	0.71472893	20.8415023	0.62715722
S28C09	20.7539306	0.71472893	20.8415023	0.62715722
S28C10	20.7539306	0.71472893	20.8415023	0.62715722
S28C11	20.7539306	0.71472893	20.8415023	0.62715722
S28C12	20.7539306	0.71472893	20.8415023	0.62715722
S28C13	21.9536658	-22.798789	22.0919847	-22.937108
S28C14	21.9536658	-22.798789	22.0919847	-22.937108
S28C15	21.9536658	-22.798789	22.0919847	-22.937108
S28C16	21.9536658	-22.798789	22.0919847	-22.937108
S28C17	21.9536658	-22.798789	22.0919847	-22.937108
S28C18	21.9536658	-22.798789	22.0919847	-22.937108
S28C19	22.7580162	1.17862528	22.9047145	1.03192706
S28C20	22.7580162	1.17862528	22.9047145	1.03192706
S28C21	22.7580162	1.17862528	22.9047145	1.03192706
S28C22	22.7580162	1.17862528	22.9047145	1.03192706
S28C23	22.7580162	1.17862528	22.9047145	1.03192706
S28C24	22.7580162	1.17862528	22.9047145	1.03192706
S28R01	22.123872	-21.530821	22.2678879	-21.674837
S28R02	22.5304231	-9.7178837	22.6825625	-9.8700231
S28R03	22.7992946	5.72303597	22.9369274	5.58540321
S28R04	21.7293497	15.5083534	21.7946024	15.4431007
S28R05	19.2295891	15.6583549	19.2561568	15.6317873
S28R06	20.5941823	3.43699386	20.674795	3.35638117
S28R07	21.2647228	-10.55812	21.3748026	-10.6682
S28R08	21.6996253	-20.516469	21.8281959	-20.64504
S28R09	22.0478261	-22.401332	22.1894028	-22.542909
S28R10	22.3730344	-15.494611	22.5233401	-15.644917
S28R11	22.6862399	-2.8126308	22.836743	-2.9631339
S28R12	22.729714	9.78678783	22.8510431	9.66545866
S28R13	20.5123114	17.1636047	20.5453601	17.1305559
S28R14	19.9526052	11.061454	20.0064177	11.0076415
S28R15	21.061231	-5.6441038	21.1623456	-5.7452184
S28R16	21.6714561	-20.022847	21.7988814	-20.150272

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

Source S29				
Line	X1i	X2i	X1o	X2o
S29C01	22.7986463	-21.723052	22.9369985	-21.861404
S29C02	22.7986463	-21.723052	22.9369985	-21.861404
S29C03	22.7986463	-21.723052	22.9369985	-21.861404
S29C04	22.7986463	-21.723052	22.9369985	-21.861404
S29C05	22.7986463	-21.723052	22.9369985	-21.861404
S29C06	22.7986463	-21.723052	22.9369985	-21.861404
S29C07	-0.0050675	-0.2080776	-0.0044522	-0.2086929
S29C08	-0.0050675	-0.2080776	-0.0044522	-0.2086929
S29C09	-0.0050675	-0.2080776	-0.0044522	-0.2086929
S29C10	-0.0050675	-0.2080776	-0.0044522	-0.2086929
S29C11	-0.0050675	-0.2080776	-0.0044522	-0.2086929
S29C12	-0.0050675	-0.2080776	-0.0044522	-0.2086929
S29C13	21.7070512	-22.798636	21.8454058	-22.936991
S29C14	21.7070512	-22.798636	21.8454058	-22.936991
S29C15	21.7070512	-22.798636	21.8454058	-22.936991
S29C16	21.7070512	-22.798636	21.8454058	-22.936991
S29C17	21.7070512	-22.798636	21.8454058	-22.936991
S29C18	21.7070512	-22.798636	21.8454058	-22.936991
S29C19	-0.0037289	-0.1531151	-0.0032762	-0.1535679
S29C20	-0.0037289	-0.1531151	-0.0032762	-0.1535679
S29C21	-0.0037289	-0.1531151	-0.0032762	-0.1535679
S29C22	-0.0037289	-0.1531151	-0.0032762	-0.1535679
S29C23	-0.0037289	-0.1531151	-0.0032762	-0.1535679
S29C24	-0.0037289	-0.1531151	-0.0032762	-0.1535679
S29R01	22.5923438	-22.407037	22.7322823	-22.546975
S29R02	19.7886933	-22.261353	19.9190813	-22.391741
S29R03	14.4437639	-18.170816	14.5439995	-18.271052
S29R04	7.53633392	-10.318905	7.59068802	-10.373259
S29R05	-0.0779305	-0.1075088	-0.0778408	-0.1075985
S29R06	10.1421886	-7.6715498	10.1963657	-7.7257269
S29R07	18.0804962	-14.527288	18.1805805	-14.627373
S29R08	22.2445965	-19.816456	22.3749044	-19.946764
S29R09	22.4060398	-22.591816	22.5459828	-22.731759
S29R10	19.2616726	-21.985466	19.3894648	-22.113258
S29R11	13.8566667	-17.590568	13.9532226	-17.687124
S29R12	7.15526856	-9.8339917	7.20696621	-9.8856894
S29R13	-0.0740572	-0.1021654	-0.073972	-0.1022506
S29R14	9.70938781	-7.3355608	9.76121041	-7.3873834
S29R15	17.5215944	-13.974572	17.6181793	-14.071157
S29R16	21.9690915	-19.306804	22.0968521	-19.434565

Source S30

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

Line	X1i	X2i	X1o	X2o
S30C01	22.7555477	5.39108155	22.9042751	5.24235418
S30C02	22.7555477	5.39108155	22.9042751	5.24235418
S30C03	22.7555477	5.39108155	22.9042751	5.24235418
S30C04	22.7555477	5.39108155	22.9042751	5.24235418
S30C05	22.7555477	5.39108155	22.9042751	5.24235418
S30C06	22.7555477	5.39108155	22.9042751	5.24235418
S30C07	7.65795027	0.19207327	7.68128698	0.16873657
S30C08	7.65795027	0.19207327	7.68128698	0.16873657
S30C09	7.65795027	0.19207327	7.68128698	0.16873657
S30C10	7.65795027	0.19207327	7.68128698	0.16873657
S30C11	7.65795027	0.19207327	7.68128698	0.16873657
S30C12	7.65795027	0.19207327	7.68128698	0.16873657
S30C13	9.12610067	-22.78772	9.26701941	-22.928639
S30C14	9.12610067	-22.78772	9.26701941	-22.928639
S30C15	9.12610067	-22.78772	9.26701941	-22.928639
S30C16	9.12610067	-22.78772	9.26701941	-22.928639
S30C17	9.12610067	-22.78772	9.26701941	-22.928639
S30C18	9.12610067	-22.78772	9.26701941	-22.928639
S30C19	18.2570517	2.21215809	18.550768	1.91844184
S30C20	18.2570517	2.21215809	18.550768	1.91844184
S30C21	18.2570517	2.21215809	18.550768	1.91844184
S30C22	18.2570517	2.21215809	18.550768	1.91844184
S30C23	18.2570517	2.21215809	18.550768	1.91844184
S30C24	18.2570517	2.21215809	18.550768	1.91844184
S30R01	12.5588057	-6.5964327	12.8766291	-6.9142561
S30R02	18.7287982	2.57143089	19.0121414	2.28808772
S30R03	22.799026	5.57251464	22.9356913	5.43584935
S30R04	17.9294193	6.75249592	17.9792711	6.70264408
S30R05	7.45287974	5.47374805	7.45940172	5.46722608
S30R06	8.01088324	-9.2363822	8.06320013	-9.2886991
S30R07	8.57527323	-20.076074	8.67333653	-20.174138
S30R08	9.30156948	-22.47342	9.45558207	-22.627433
S30R09	10.5621965	-15.43103	10.7990684	-15.667902
S30R10	13.7458098	-3.5515514	14.083093	-3.8888346
S30R11	20.5244052	3.77113101	20.7625847	3.53295145
S30R12	21.8714572	6.17838643	21.9651934	6.08465027
S30R13	9.79034086	7.2637554	9.79924457	7.25485169
S30R14	8.02804197	-9.6705873	8.08176473	-9.7243101
S30R15	8.80721376	-22.062159	8.9236067	-22.178552
S30R16	9.95859721	-19.161419	10.1585032	-19.361325

Source S31

Line	X1i	X2i	X1o	X2o
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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

S31C01	22.7713305	0.39054605	22.9161796	0.245697
S31C02	22.7713305	0.39054605	22.9161796	0.245697
S31C03	22.7713305	0.39054605	22.9161796	0.245697
S31C04	22.7713305	0.39054605	22.9161796	0.245697
S31C05	22.7713305	0.39054605	22.9161796	0.245697
S31C06	22.7713305	0.39054605	22.9161796	0.245697
S31C07	6.11275342	0.15164063	6.13117307	0.13322097
S31C08	6.11275342	0.15164063	6.13117307	0.13322097
S31C09	6.11275342	0.15164063	6.13117307	0.13322097
S31C10	6.11275342	0.15164063	6.13117307	0.13322097
S31C11	6.11275342	0.15164063	6.13117307	0.13322097
S31C12	6.11275342	0.15164063	6.13117307	0.13322097
S31C13	10.0138115	-22.788765	10.154483	-22.929436
S31C14	10.0138115	-22.788765	10.154483	-22.929436
S31C15	10.0138115	-22.788765	10.154483	-22.929436
S31C16	10.0138115	-22.788765	10.154483	-22.929436
S31C17	10.0138115	-22.788765	10.154483	-22.929436
S31C18	10.0138115	-22.788765	10.154483	-22.929436
S31C19	22.7660945	1.05154172	22.8963104	0.92132587
S31C20	22.7660945	1.05154172	22.8963104	0.92132587
S31C21	22.7660945	1.05154172	22.8963104	0.92132587
S31C22	22.7660945	1.05154172	22.8963104	0.92132587
S31C23	22.7660945	1.05154172	22.8963104	0.92132587
S31C24	22.7660945	1.05154172	22.8963104	0.92132587
S31R01	15.7632537	-11.04646	15.9931584	-11.276365
S31R02	20.9624688	-2.8621415	21.1605388	-3.0602115
S31R03	22.5511725	1.57930143	22.6687664	1.46170747
S31R04	16.5390932	4.03383928	16.5879831	3.98494933
S31R05	5.70533407	4.16710418	5.71022497	4.16221328
S31R06	7.11254608	-9.8634177	7.16421454	-9.9150861
S31R07	8.55355142	-20.084275	8.65163144	-20.182355
S31R08	10.3461522	-22.606673	10.4956216	-22.756142
S31R09	13.0540313	-17.100776	13.2592796	-17.306024
S31R10	17.5241668	-7.8747114	17.7542472	-8.1047918
S31R11	22.3069829	-0.8320726	22.4754288	-1.0005186
S31R12	20.3560922	3.02397724	20.4350849	2.94498452
S31R13	7.30660894	5.36348977	7.31299031	5.3571084
S31R14	7.20724109	-10.744028	7.26203716	-10.798824
S31R15	9.11664815	-21.944459	9.23183161	-22.059642
S31R16	11.6800423	-20.376444	11.860735	-20.557136

Source S32

Line	X1i	X2i	X1o	X2o
S32C01	22.784051	-6.3549014	22.9258412	-6.4966916

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
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S32C02	22.784051	-6.3549014	22.9258412	-6.4966916
S32C03	22.784051	-6.3549014	22.9258412	-6.4966916
S32C04	22.784051	-6.3549014	22.9258412	-6.4966916
S32C05	22.784051	-6.3549014	22.9258412	-6.4966916
S32C06	22.784051	-6.3549014	22.9258412	-6.4966916
S32C07	-0.1748783	-7.0071792	-0.1536331	-7.0284244
S32C08	-0.1748783	-7.0071792	-0.1536331	-7.0284244
S32C09	-0.1748783	-7.0071792	-0.1536331	-7.0284244
S32C10	-0.1748783	-7.0071792	-0.1536331	-7.0284244
S32C11	-0.1748783	-7.0071792	-0.1536331	-7.0284244
S32C12	-0.1748783	-7.0071792	-0.1536331	-7.0284244
S32C13	4.66042651	-22.781443	4.80283913	-22.923855
S32C14	4.66042651	-22.781443	4.80283913	-22.923855
S32C15	4.66042651	-22.781443	4.80283913	-22.923855
S32C16	4.66042651	-22.781443	4.80283913	-22.923855
S32C17	4.66042651	-22.781443	4.80283913	-22.923855
S32C18	4.66042651	-22.781443	4.80283913	-22.923855
S32C19	-0.0249106	-1.0223664	-0.0218859	-1.025391
S32C20	-0.0249106	-1.0223664	-0.0218859	-1.025391
S32C21	-0.0249106	-1.0223664	-0.0218859	-1.025391
S32C22	-0.0249106	-1.0223664	-0.0218859	-1.025391
S32C23	-0.0249106	-1.0223664	-0.0218859	-1.025391
S32C24	-0.0249106	-1.0223664	-0.0218859	-1.025391
S32R01	16.4390019	-12.048926	16.6558217	-12.265745
S32R02	9.33947414	-18.69164	9.5474359	-18.899602
S32R03	4.47187561	-22.798903	4.61046256	-22.93749
S32R04	1.4179155	-17.052056	1.48339172	-17.117533
S32R05	-0.8817222	-1.2159702	-0.8807071	-1.2169854
S32R06	15.4536743	-3.0962861	15.5154214	-3.1580332
S32R07	22.7385113	-5.8294882	22.8689494	-5.9599263
S32R08	19.1725942	-9.9735822	19.3723135	-10.173301
S32R09	11.7097469	-16.21215	11.9308066	-16.43321
S32R10	6.23738024	-21.900583	6.40821133	-22.071415
S32R11	2.98508838	-21.759527	3.09051747	-21.864956
S32R12	0.81077585	-13.850086	0.85971225	-13.899022
S32R13	-0.6847905	-0.9445112	-0.6840024	-0.9452993
S32R14	12.7500829	-2.6518203	12.799512	-2.7012494
S32R15	21.3435167	-4.6485139	21.4460576	-4.7510548
S32R16	22.1618643	-7.4640759	22.3252565	-7.6274682

Source S33

Line	X1i	X2i	X1o	X2o
S33C01	22.7790246	-3.2562767	22.9220165	-3.3992686
S33C02	22.7790246	-3.2562767	22.9220165	-3.3992686

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S33C03	22.7790246	-3.2562767	22.9220165	-3.3992686
S33C04	22.7790246	-3.2562767	22.9220165	-3.3992686
S33C05	22.7790246	-3.2562767	22.9220165	-3.3992686
S33C06	22.7790246	-3.2562767	22.9220165	-3.3992686
S33C07	-0.0689584	-2.8207026	-0.0605848	-2.8290762
S33C08	-0.0689584	-2.8207026	-0.0605848	-2.8290762
S33C09	-0.0689584	-2.8207026	-0.0605848	-2.8290762
S33C10	-0.0689584	-2.8207026	-0.0605848	-2.8290762
S33C11	-0.0689584	-2.8207026	-0.0605848	-2.8290762
S33C12	-0.0689584	-2.8207026	-0.0605848	-2.8290762
S33C13	-2.3180156	-22.766159	-2.1719059	-22.912268
S33C14	-2.3180156	-22.766159	-2.1719059	-22.912268
S33C15	-2.3180156	-22.766159	-2.1719059	-22.912268
S33C16	-2.3180156	-22.766159	-2.1719059	-22.912268
S33C17	-2.3180156	-22.766159	-2.1719059	-22.912268
S33C18	-2.3180156	-22.766159	-2.1719059	-22.912268
S33C19	-1.9434092	-19.623947	-1.690719	-19.876637
S33C20	-1.9434092	-19.623947	-1.690719	-19.876637
S33C21	-1.9434092	-19.623947	-1.690719	-19.876637
S33C22	-1.9434092	-19.623947	-1.690719	-19.876637
S33C23	-1.9434092	-19.623947	-1.690719	-19.876637
S33C24	-1.9434092	-19.623947	-1.690719	-19.876637
S33R01	10.7119588	-4.2387444	11.1143342	-4.6411197
S33R02	21.1410719	-3.4234534	21.3337546	-3.6161361
S33R03	21.7255311	-3.1320457	21.8306776	-3.2371922
S33R04	12.565847	-2.9524924	12.6153798	-3.0020253
S33R05	-2.0343434	-2.8014348	-2.0319921	-2.803786
S33R06	-2.6376542	-15.792613	-2.5889539	-15.841314
S33R07	-2.402857	-22.638205	-2.2821685	-22.758893
S33R08	-1.8874259	-19.063928	-1.6197649	-19.331589
S33R09	0.97504422	-7.9618837	1.61867511	-8.6055146
S33R10	14.0708364	-3.9073286	14.3956268	-4.232119
S33R11	22.7367385	-3.2694951	22.8837159	-3.4164725
S33R12	15.5581132	-2.992407	15.6200741	-3.0543678
S33R13	-2.7835725	-3.8271517	-2.7803419	-3.8303823
S33R14	-2.5454283	-20.065405	-2.4682191	-20.142614
S33R15	-2.1098425	-21.302951	-1.9032215	-21.509572
S33R16	-0.2387175	-10.17834	0.32974735	-10.746805

Source S34

Line	X1i	X2i	X1o	X2o
S34C01	22.7936002	-14.861025	22.9331325	-15.000557
S34C02	22.7936002	-14.861025	22.9331325	-15.000557
S34C03	22.7936002	-14.861025	22.9331325	-15.000557

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S34C04	22.7936002	-14.861025	22.9331325	-15.000557
S34C05	22.7936002	-14.861025	22.9331325	-15.000557
S34C06	22.7936002	-14.861025	22.9331325	-15.000557
S34C07	-2.615162	-16.366995	-2.2547755	-16.727381
S34C08	-2.615162	-16.366995	-2.2547755	-16.727381
S34C09	-2.615162	-16.366995	-2.2547755	-16.727381
S34C10	-2.615162	-16.366995	-2.2547755	-16.727381
S34C11	-2.615162	-16.366995	-2.2547755	-16.727381
S34C12	-2.615162	-16.366995	-2.2547755	-16.727381
S34C13	-13.209038	-22.697984	-13.045342	-22.861681
S34C14	-13.209038	-22.697984	-13.045342	-22.861681
S34C15	-13.209038	-22.697984	-13.045342	-22.861681
S34C16	-13.209038	-22.697984	-13.045342	-22.861681
S34C17	-13.209038	-22.697984	-13.045342	-22.861681
S34C18	-13.209038	-22.697984	-13.045342	-22.861681
S34C19	-0.3946327	-14.388284	-0.3465843	-14.436333
S34C20	-0.3946327	-14.388284	-0.3465843	-14.436333
S34C21	-0.3946327	-14.388284	-0.3465843	-14.436333
S34C22	-0.3946327	-14.388284	-0.3465843	-14.436333
S34C23	-0.3946327	-14.388284	-0.3465843	-14.436333
S34C24	-0.3946327	-14.388284	-0.3465843	-14.436333
S34R01	18.4070519	-15.109156	18.592441	-15.294545
S34R02	5.67182216	-15.649756	5.94623057	-15.924165
S34R03	-8.294351	-17.699225	-7.8746357	-18.11894
S34R04	-13.150703	-22.629451	-12.978125	-22.802028
S34R05	-14.028005	-17.663757	-14.006497	-17.685265
S34R06	-0.1255089	-14.392037	-0.0767279	-14.440818
S34R07	17.9411589	-14.654105	18.0410185	-14.753965
S34R08	22.1618802	-14.937528	22.3157933	-15.091441
S34R09	10.5332867	-15.411076	10.7705892	-15.648378
S34R10	-5.7698151	-16.922651	-5.3702692	-17.322197
S34R11	-12.686928	-21.85466	-12.450577	-22.091011
S34R12	-13.824898	-21.105829	-13.765513	-21.165214
S34R13	-10.867671	-14.216254	-10.853088	-14.230837
S34R14	4.06142705	-14.448759	4.12128529	-14.508618
S34R15	17.1191758	-14.638369	17.2159843	-14.735177
S34R16	22.7714908	-14.837213	22.9065103	-14.972232

Source S35				
Line	X1i	X2i	X1o	X2o
S35C01	22.6475534	15.9215159	22.8255141	15.7435551
S35C02	22.6475534	15.9215159	22.8255141	15.7435551
S35C03	22.6475534	15.9215159	22.8255141	15.7435551
S35C04	22.6475534	15.9215159	22.8255141	15.7435551

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S35C05	22.6475534	15.9215159	22.8255141	15.7435551
S35C06	22.6475534	15.9215159	22.8255141	15.7435551
S35C07	19.6477607	1.93879367	19.8997668	1.68678757
S35C08	19.6477607	1.93879367	19.8997668	1.68678757
S35C09	19.6477607	1.93879367	19.8997668	1.68678757
S35C10	19.6477607	1.93879367	19.8997668	1.68678757
S35C11	19.6477607	1.93879367	19.8997668	1.68678757
S35C12	19.6477607	1.93879367	19.8997668	1.68678757
S35C13	18.6302008	-22.796579	18.7690355	-22.935413
S35C14	18.6302008	-22.796579	18.7690355	-22.935413
S35C15	18.6302008	-22.796579	18.7690355	-22.935413
S35C16	18.6302008	-22.796579	18.7690355	-22.935413
S35C17	18.6302008	-22.796579	18.7690355	-22.935413
S35C18	18.6302008	-22.796579	18.7690355	-22.935413
S35C19	18.1163055	0.54896429	18.1833172	0.48195262
S35C20	18.1163055	0.54896429	18.1833172	0.48195262
S35C21	18.1163055	0.54896429	18.1833172	0.48195262
S35C22	18.1163055	0.54896429	18.1833172	0.48195262
S35C23	18.1163055	0.54896429	18.1833172	0.48195262
S35C24	18.1163055	0.54896429	18.1833172	0.48195262
S35R01	18.9336427	-15.965563	19.1119677	-16.143888
S35R02	18.5981916	-22.717563	18.7326799	-22.852051
S35R03	18.3243692	-12.520856	18.4208048	-12.617291
S35R04	17.9952233	6.88537815	18.045146	6.83545546
S35R05	20.675064	17.3712982	20.7092208	17.3371415
S35R06	22.1551628	15.0059983	22.3856151	14.7755461
S35R07	19.87782	4.9632822	20.1459721	4.6951301
S35R08	19.1202684	-9.9035279	19.3208637	-10.104123
S35R09	18.7807886	-20.595647	18.9396517	-20.75451
S35R10	18.5538567	-22.211902	18.6822816	-22.340327
S35R11	18.3536316	-14.271386	18.4541875	-14.371942
S35R12	18.1283053	-0.1558042	18.1970149	-0.2245137
S35R13	17.7938347	14.1572777	17.8156937	14.1354187
S35R14	22.2213984	17.0420003	22.2953063	16.9680924
S35R15	21.5209144	13.6671177	21.7925641	13.395468
S35R16	19.5752774	0.77202174	19.8213657	0.52593347

TABLE 8

Determine the coordinates (X,Z,Y) where the line from each source to each measurement point intercepts the inner and outer radius of the cylinder.

Source S01

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S01C01	22.7988391	0.14497214	43.6204096	22.9371464	0.12736312	44.3345734
S01C02	22.7988391	0.14497214	36.8629491	22.9371464	0.12736312	37.3047231
S01C03	22.7988391	0.14497214	30.1054886	22.9371464	0.12736312	30.2748728
S01C04	22.7988391	0.14497214	23.3480281	22.9371464	0.12736312	23.2450225
S01C05	22.7988391	0.14497214	16.5905676	22.9371464	0.12736312	16.2151722

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S01C06	22.7988391	0.14497214	9.83310714	22.9371464	0.12736312	9.18532191
S01C07	0.96064256	22.7790528	48.3296031	0.84207215	22.9220379	48.4740631
S01C08	0.96064256	22.7790528	39.7760052	0.84207215	22.9220379	39.8653666
S01C09	0.96064256	22.7790528	31.2224072	0.84207215	22.9220379	31.25667
S01C10	0.96064256	22.7790528	22.6688093	0.84207215	22.9220379	22.6479735
S01C11	0.96064256	22.7790528	14.1152114	0.84207215	22.9220379	14.0392769
S01C12	0.96064256	22.7790528	5.56161342	0.84207215	22.9220379	5.43058036
S01C13	-22.799295	0.01529211	48.8798026	-22.937496	0.01343534	48.9551072
S01C14	-22.799295	0.01529211	40.1163526	-22.937496	0.01343534	40.1629352
S01C15	-22.799295	0.01529211	31.3529026	-22.937496	0.01343534	31.3707632
S01C16	-22.799295	0.01529211	22.5894526	-22.937496	0.01343534	22.5785913
S01C17	-22.799295	0.01529211	13.8260026	-22.937496	0.01343534	13.7864193
S01C18	-22.799295	0.01529211	5.06255264	-22.937496	0.01343534	4.99424733
S01C19	0.91352136	-22.780991	48.3870131	0.80094493	-22.923512	48.5241704
S01C20	0.91352136	-22.780991	39.8115184	0.80094493	-22.923512	39.8963624
S01C21	0.91352136	-22.780991	31.2360236	0.80094493	-22.923512	31.2685544
S01C22	0.91352136	-22.780991	22.6605289	0.80094493	-22.923512	22.6407464
S01C23	0.91352136	-22.780991	14.0850342	0.80094493	-22.923512	14.0129384
S01C24	0.91352136	-22.780991	5.50953942	0.80094493	-22.923512	5.38513035
S01R01	22.792281	0.56569342	25.9268599	22.9305393	0.56504244	25.9278071
S01R02	22.694871	2.17965866	25.9283934	22.8275318	2.24336777	25.9293901
S01R03	22.390261	4.29933635	25.9347164	22.5038597	4.4390543	25.9358935
S01R04	21.3563984	7.98200035	25.9510491	21.4177491	8.21029416	25.9525191
S01R05	17.4506411	14.6725324	25.9871962	17.4160431	14.9268332	25.9887085
S01R06	7.58244723	21.5015017	26.0381046	7.47982728	21.6836595	26.0392776
S01R07	-6.2228972	21.9336187	26.0832804	-6.3512009	22.0406704	26.0841822
S01R08	-18.034248	13.9489774	26.1125085	-18.171082	13.9978808	26.1132735
S01R09	-22.795232	0.43067568	26.1233241	-22.933466	0.43018015	26.1240452
S01R10	-18.546797	-13.25988	26.1153741	-18.681489	-13.309053	26.1161272
S01R11	-7.0214122	-21.691193	26.0888933	-7.1456635	-21.796064	26.0897667
S01R12	6.91019269	-21.72688	26.0457886	6.8120565	-21.902621	26.0469103
S01R13	17.2824724	-14.870246	25.9945472	17.2487976	-15.119785	25.9960192
S01R14	21.5248004	-7.5160526	25.9550842	21.5877375	-7.752322	25.9565923
S01R15	22.5480961	-3.3751214	25.9363519	22.6655966	-3.5213117	25.9375694
S01R16	22.7732846	-1.0888468	25.9289825	22.9083955	-1.1551277	25.9299976

Source S02

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S02C01	22.7900376	-0.6498203	48.4827436	22.9304085	-0.5703267	48.6071862
S02C02	22.7900376	-0.6498203	39.7816042	22.9304085	-0.5703267	39.8694867
S02C03	22.7900376	-0.6498203	31.0804647	22.9304085	-0.5703267	31.1317871
S02C04	22.7900376	-0.6498203	22.3793253	22.9304085	-0.5703267	22.3940876
S02C05	22.7900376	-0.6498203	13.6781858	22.9304085	-0.5703267	13.6563881
S02C06	22.7900376	-0.6498203	4.97704638	22.9304085	-0.5703267	4.91868854

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S02C07	-0.2781886	22.7976028	48.6973678	-0.2443647	22.9361983	48.7949567
S02C08	-0.2781886	22.7976028	39.9331738	-0.2443647	22.9361983	40.0020919
S02C09	-0.2781886	22.7976028	31.1689797	-0.2443647	22.9361983	31.2092271
S02C10	-0.2781886	22.7976028	22.4047856	-0.2443647	22.9361983	22.4163624
S02C11	-0.2781886	22.7976028	13.6405916	-0.2443647	22.9361983	13.6234976
S02C12	-0.2781886	22.7976028	4.8763975	-0.2443647	22.9361983	4.83063284
S02C13	-22.730201	-1.7737055	46.7233656	-22.885356	-1.5457591	47.0802027
S02C14	-22.730201	-1.7737055	38.5391152	-22.885356	-1.5457591	38.7911168
S02C15	-22.730201	-1.7737055	30.3548648	-22.885356	-1.5457591	30.502031
S02C16	-22.730201	-1.7737055	22.1706144	-22.885356	-1.5457591	22.2129451
S02C17	-22.730201	-1.7737055	13.986364	-22.885356	-1.5457591	13.9238593
S02C18	-22.730201	-1.7737055	5.8021136	-22.885356	-1.5457591	5.63477345
S02C19	-3.3778989	-22.54768	39.7540562	-2.8679392	-22.757501	41.2253964
S02C20	-3.3778989	-22.54768	33.6173247	-2.8679392	-22.757501	34.6563987
S02C21	-3.3778989	-22.54768	27.4805932	-2.8679392	-22.757501	28.087401
S02C22	-3.3778989	-22.54768	21.3438617	-2.8679392	-22.757501	21.5184033
S02C23	-3.3778989	-22.54768	15.2071301	-2.8679392	-22.757501	14.9494056
S02C24	-3.3778989	-22.54768	9.07039862	-2.8679392	-22.757501	8.38040783
S02R01	16.0758032	-16.167147	20.2364869	16.2994838	-16.138641	20.2479715
S02R02	22.6898979	-2.230832	20.7064926	22.8360676	-2.154744	20.7145698
S02R03	19.0691341	12.4970479	20.961508	19.165864	12.6015302	20.9683361
S02R04	7.13976211	21.6525259	21.0093343	7.19465075	21.7799428	21.0159596
S02R05	-7.9427396	21.3710311	20.8521692	-7.9328728	21.5220453	20.8594957
S02R06	-19.662297	11.5413232	20.4835854	-19.715236	11.7234116	20.4930534
S02R07	-22.491758	-3.7321443	19.9009097	-22.669696	-3.4948251	19.9164188
S02R08	-15.904675	-16.335526	19.2091999	-16.409442	-16.026825	19.2419702
S02R09	-12.045012	-19.357835	18.9510043	-12.382852	-19.307871	18.9711338
S02R10	-11.341371	-19.778306	18.9129427	-11.525514	-19.831576	18.9248976
S02R11	-11.039022	-19.948636	18.9026852	-11.147583	-20.046454	18.9121474
S02R12	-10.814469	-20.071256	18.9011622	-10.865261	-20.200866	18.9102463
S02R13	-10.562894	-20.204786	18.9065905	-10.548857	-20.36788	18.9170133
S02R14	-10.116498	-20.431949	18.9264424	-9.9916717	-20.646922	18.9415094
S02R15	-8.3752138	-21.205279	19.0242441	-7.9495708	-21.515883	19.0542897
S02R16	2.10584163	-22.701839	19.56904	2.50550544	-22.800249	19.591125

Source S03

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S03C01	22.7962367	-0.373728	49.1080659	22.9351513	-0.3282378	49.1557722
S03C02	22.7962367	-0.373728	40.571428	22.9351513	-0.3282378	40.5627338
S03C03	22.7962367	-0.373728	32.03479	22.9351513	-0.3282378	31.9696953
S03C04	22.7962367	-0.373728	23.498152	22.9351513	-0.3282378	23.3766569
S03C05	22.7962367	-0.373728	14.961514	22.9351513	-0.3282378	14.7836185
S03C06	22.7962367	-0.373728	6.42487605	22.9351513	-0.3282378	6.19058006
S03C07	0.06459974	22.7992085	49.2222318	0.05675548	22.9374298	49.2559609

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S03C08	0.06459974	22.7992085	40.5506218	0.05675548	22.9374298	40.5444749
S03C09	0.06459974	22.7992085	31.8790118	0.05675548	22.9374298	31.8329889
S03C10	0.06459974	22.7992085	23.2074018	0.05675548	22.9374298	23.1215029
S03C11	0.06459974	22.7992085	14.5357918	0.05675548	22.9374298	14.4100169
S03C12	0.06459974	22.7992085	5.86418185	0.05675548	22.9374298	5.69853097
S03C13	-22.797026	-0.3220296	49.1622828	-22.935756	-0.2828571	49.2033636
S03C14	-22.797026	-0.3220296	40.5615472	-22.935756	-0.2828571	40.5540605
S03C15	-22.797026	-0.3220296	31.9608117	-22.935756	-0.2828571	31.9047573
S03C16	-22.797026	-0.3220296	23.3600761	-22.935756	-0.2828571	23.2554542
S03C17	-22.797026	-0.3220296	14.7593405	-22.935756	-0.2828571	14.6061511
S03C18	-22.797026	-0.3220296	6.15860492	-22.935756	-0.2828571	5.95684792
S03C19	0.12085581	-22.79898	48.98034	0.10617774	-22.937254	49.0434533
S03C20	0.12085581	-22.79898	40.5947054	0.10617774	-22.937254	40.5832033
S03C21	0.12085581	-22.79898	32.2090707	0.10617774	-22.937254	32.1229532
S03C22	0.12085581	-22.79898	23.823436	0.10617774	-22.937254	23.6627032
S03C23	0.12085581	-22.79898	15.4378013	0.10617774	-22.937254	15.2024532
S03C24	0.12085581	-22.79898	7.05216664	0.10617774	-22.937254	6.74220313
S03R01	21.9338208	-6.2221849	39.7252425	22.0795498	-6.2146913	39.709616
S03R02	22.642775	2.66698743	39.4623093	22.7745036	2.72963205	39.4470044
S03R03	19.4012527	11.9749519	39.1997561	19.4982832	12.0808053	39.1849649
S03R04	11.9136262	19.4389709	38.9864976	11.9635718	19.5704332	38.9722136
S03R05	1.41665422	22.7552449	38.8624151	1.41502085	22.8938119	38.8484498
S03R06	-9.5614301	20.6975152	38.8497507	-9.6134039	20.8257382	38.8358186
S03R07	-18.180975	13.7571888	38.9507199	-18.277405	13.8587654	38.9365263
S03R08	-22.453456	3.95605698	39.1473724	-22.583174	4.01611309	39.1326999
S03R09	-21.977041	-6.0677645	39.4032268	-22.122377	-6.060474	39.3880237
S03R10	-17.831182	-14.20764	39.6702028	-17.968919	-14.256467	39.6546231
S03R11	-11.714246	-19.559768	39.9025557	-11.820821	-19.656986	39.886869
S03R12	-5.0093336	-22.242182	40.0699816	-5.0674987	-22.370726	40.0543899
S03R13	1.5683706	-22.745292	40.1595925	1.56656138	-22.883942	40.1441236
S03R14	7.78086186	-21.430499	40.1684346	7.83489767	-21.557905	40.1529808
S03R15	13.5193412	-18.358526	40.096384	13.6214225	-18.454966	40.0808229
S03R16	18.4853814	-13.345365	39.9453368	18.6203195	-13.394499	39.9296589

Source S04

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S04C01	22.7665125	-1.2222876	48.1755365	22.9125357	-1.0698673	48.3406982
S04C02	22.7665125	-1.2222876	39.7479495	22.9125357	-1.0698673	39.8417308
S04C03	22.7665125	-1.2222876	31.3203625	22.9125357	-1.0698673	31.3427634
S04C04	22.7665125	-1.2222876	22.8927754	22.9125357	-1.0698673	22.843796
S04C05	22.7665125	-1.2222876	14.4651884	22.9125357	-1.0698673	14.3448286
S04C06	22.7665125	-1.2222876	6.0376014	22.9125357	-1.0698673	5.84586123
S04C07	0.1458092	22.7988337	48.9505425	0.12809843	22.9371423	49.0172826
S04C08	0.1458092	22.7988337	40.1880097	0.12809843	22.9371423	40.2259057

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S04C09	0.1458092	22.7988337	31.4254768	0.12809843	22.9371423	31.4345288
S04C10	0.1458092	22.7988337	22.662944	0.12809843	22.9371423	22.643152
S04C11	0.1458092	22.7988337	13.9004112	0.12809843	22.9371423	13.8517751
S04C12	0.1458092	22.7988337	5.13787837	0.12809843	22.9371423	5.06039822
S04C13	-22.786946	-0.7504587	48.6868074	-22.928048	-0.6584235	48.7865362
S04C14	-22.786946	-0.7504587	40.0382569	-22.928048	-0.6584235	40.0948844
S04C15	-22.786946	-0.7504587	31.3897063	-22.928048	-0.6584235	31.4032326
S04C16	-22.786946	-0.7504587	22.7411558	-22.928048	-0.6584235	22.7115808
S04C17	-22.786946	-0.7504587	14.0926053	-22.928048	-0.6584235	14.019929
S04C18	-22.786946	-0.7504587	5.44405472	-22.928048	-0.6584235	5.3282772
S04C19	1.38179576	-22.757388	44.2929346	1.20818573	-22.905659	44.9471549
S04C20	1.38179576	-22.757388	37.5433491	1.20818573	-22.905659	37.9148253
S04C21	1.38179576	-22.757388	30.7937635	1.20818573	-22.905659	30.8824957
S04C22	1.38179576	-22.757388	24.044178	1.20818573	-22.905659	23.8501661
S04C23	1.38179576	-22.757388	17.2945924	1.20818573	-22.905659	16.8178365
S04C24	1.38179576	-22.757388	10.5450069	1.20818573	-22.905659	9.78550689
S04R01	13.9399981	-18.04119	28.5576695	14.2134795	-18.002942	28.5538372
S04R02	20.1439935	-10.678371	28.453117	20.3688282	-10.547025	28.4496954
S04R03	22.6755037	2.3726803	28.3299571	22.7979014	2.52677605	28.3274903
S04R04	16.7877548	15.4265799	28.2345854	16.8367523	15.5773129	28.2326667
S04R05	4.10695199	22.4263467	28.1810541	4.10213451	22.567707	28.1793755
S04R06	-10.235679	20.372505	28.1716289	-10.286989	20.5013846	28.1699884
S04R07	-20.445333	10.0894222	28.2064293	-20.544272	10.2010689	28.2046421
S04R08	-22.407133	-4.2105213	28.284628	-22.563236	-4.1266532	28.2824432
S04R09	-15.775239	-16.460556	28.399295	-16.0049	-16.430827	28.3963163
S04R10	-5.6265033	-22.094129	28.5194848	-5.9020079	-22.16518	28.5156289
S04R11	0.88450841	-22.782136	28.5917282	0.69593081	-22.92694	28.5883217
S04R12	3.78337997	-22.483196	28.6198532	3.70134678	-22.636893	28.6172303
S04R13	5.39511953	-22.151767	28.6299119	5.38869789	-22.295534	28.6276743
S04R14	6.65428146	-21.806619	28.6313988	6.70985582	-21.934146	28.6292226
S04R15	8.01007256	-21.345885	28.6255152	8.12978123	-21.44844	28.6231027
S04R16	10.0217644	-20.478582	28.6071593	10.220886	-20.53442	28.604129

Source S05

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S05C01	22.7991737	0.07589067	49.0896331	22.9374031	0.0666751	49.1394648
S05C02	22.7991737	0.07589067	40.3706661	22.9374031	0.0666751	40.3863714
S05C03	22.7991737	0.07589067	31.6516992	22.9374031	0.0666751	31.633278
S05C04	22.7991737	0.07589067	22.9327322	22.9374031	0.0666751	22.8801846
S05C05	22.7991737	0.07589067	14.2137652	22.9374031	0.0666751	14.1270912
S05C06	22.7991737	0.07589067	5.4947983	22.9374031	0.0666751	5.37399781
S05C07	-0.6681267	22.7895083	48.7985223	-0.5863587	22.9300041	48.8843719
S05C08	-0.6681267	22.7895083	40.2789178	-0.5863587	22.9300041	40.3059747
S05C09	-0.6681267	22.7895083	31.7593133	-0.5863587	22.9300041	31.7275774

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S05C10	-0.6681267	22.7895083	23.2397088	-0.5863587	22.9300041	23.1491802
S05C11	-0.6681267	22.7895083	14.7201043	-0.5863587	22.9300041	14.570783
S05C12	-0.6681267	22.7895083	6.20049976	-0.5863587	22.9300041	5.99238572
S05C13	-22.79801	0.24249407	48.1887512	-22.936511	0.21301988	48.3481283
S05C14	-22.79801	0.24249407	40.0867384	-22.936511	0.21301988	40.1369687
S05C15	-22.79801	0.24249407	31.9847256	-22.936511	0.21301988	31.9258091
S05C16	-22.79801	0.24249407	23.8827128	-22.936511	0.21301988	23.7146495
S05C17	-22.79801	0.24249407	15.7807	-22.936511	0.21301988	15.5034899
S05C18	-22.79801	0.24249407	7.67868718	-22.936511	0.21301988	7.29233035
S05C19	-0.5433879	-22.792824	48.9294877	-0.4770641	-22.932538	48.9991222
S05C20	-0.5433879	-22.792824	40.3201937	-0.4770641	-22.932538	40.3421401
S05C21	-0.5433879	-22.792824	31.7108996	-0.4770641	-22.932538	31.6851581
S05C22	-0.5433879	-22.792824	23.1016056	-0.4770641	-22.932538	23.028176
S05C23	-0.5433879	-22.792824	14.4923116	-0.4770641	-22.932538	14.371194
S05C24	-0.5433879	-22.792824	5.88301762	-0.4770641	-22.932538	5.7142119
S05R01	22.7217019	1.87945336	34.1801318	22.8605493	1.87728262	34.1715501
S05R02	18.3154819	13.5775993	34.3090476	18.451116	13.6266365	34.3000336
S05R03	8.87004131	21.0031057	34.5490583	8.98618526	21.103966	34.5392341
S05R04	-2.0005169	22.7113631	34.8548633	-1.9252253	22.8565617	34.844101
S05R05	-10.952192	19.9964391	35.1569228	-10.937454	20.1618699	35.1456103
S05R06	-16.757089	15.4598848	35.3923538	-16.806072	15.6104082	35.3811968
S05R07	-20.060964	10.8335504	35.5396159	-20.158997	10.9427494	35.5289795
S05R08	-21.849782	6.5111533	35.6079956	-21.977358	6.5669365	35.5977416
S05R09	-22.688913	2.24082433	35.6087567	-22.828036	2.23823178	35.5985075
S05R10	-22.670286	-2.4220228	35.5420469	-22.802471	-2.4851963	35.5314224
S05R11	-21.377416	-7.9255395	35.3967824	-21.480152	-8.0456173	35.3856356
S05R12	-17.762554	-14.293346	35.1633353	-17.812238	-14.45175	35.1520185
S05R13	-10.568279	-20.201969	34.862231	-10.554233	-20.365094	34.8514492
S05R14	0.09264891	-22.799112	34.5556617	0.16153116	-22.936931	34.5458156
S05R15	11.6549431	-19.595162	34.3134929	11.7616859	-19.692426	34.3044639
S05R16	20.2319415	-10.510786	34.1816833	20.3611484	-10.561844	34.1730965

Source S06

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S06C01	22.7922696	-0.5661525	47.8508277	22.9321146	-0.4970191	48.0522094
S06C02	22.7922696	-0.5661525	39.5982915	22.9321146	-0.4970191	39.7083999
S06C03	22.7922696	-0.5661525	31.3457554	22.9321146	-0.4970191	31.3645903
S06C04	22.7922696	-0.5661525	23.0932192	22.9321146	-0.4970191	23.0207808
S06C05	22.7922696	-0.5661525	14.8406831	22.9321146	-0.4970191	14.6769712
S06C06	22.7922696	-0.5661525	6.58814691	22.9321146	-0.4970191	6.33316163
S06C07	0.3766013	22.7961894	48.7630887	0.33075963	22.9351151	48.852789
S06C08	0.3766013	22.7961894	40.0970833	0.33075963	22.9351151	40.1461282
S06C09	0.3766013	22.7961894	31.4310778	0.33075963	22.9351151	31.4394673
S06C10	0.3766013	22.7961894	22.7650723	0.33075963	22.9351151	22.7328065

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S06C11	0.3766013	22.7961894	14.0990669	0.33075963	22.9351151	14.0261456
S06C12	0.3766013	22.7961894	5.4330614	0.33075963	22.9351151	5.31948479
S06C13	-22.798161	-0.2278597	48.8362567	-22.936627	-0.2001676	48.9169222
S06C14	-22.798161	-0.2278597	40.1370889	-22.936627	-0.2001676	40.1811939
S06C15	-22.798161	-0.2278597	31.4379211	-22.936627	-0.2001676	31.4454656
S06C16	-22.798161	-0.2278597	22.7387533	-22.936627	-0.2001676	22.7097373
S06C17	-22.798161	-0.2278597	14.0395855	-22.936627	-0.2001676	13.974009
S06C18	-22.798161	-0.2278597	5.3404177	-22.936627	-0.2001676	5.23828069
S06C19	0.68068286	-22.789137	48.1680798	0.59735305	-22.92972	48.3311347
S06C20	0.68068286	-22.789137	39.7717537	0.59735305	-22.92972	39.8609062
S06C21	0.68068286	-22.789137	31.3754275	0.59735305	-22.92972	31.3906778
S06C22	0.68068286	-22.789137	22.9791013	0.59735305	-22.92972	22.9204493
S06C23	0.68068286	-22.789137	14.5827752	0.59735305	-22.92972	14.4502209
S06C24	0.68068286	-22.789137	6.18644901	0.59735305	-22.92972	5.97999242
S06R01	21.9367934	-6.2116965	29.3859706	22.0824953	-6.2042168	29.3827965
S06R02	22.7951492	-0.435032	29.3426817	22.9346011	-0.3646629	29.3393727
S06R03	21.7240805	6.91898887	29.2744899	21.8292151	7.04373997	29.271145
S06R04	17.1532469	15.0191278	29.1879337	17.2024488	15.1724969	29.184739
S06R05	8.24574956	21.2559567	29.1005052	8.23544006	21.4080927	29.0975664
S06R06	-3.5513795	22.5210076	29.0316673	-3.6122143	22.6512873	29.0289536
S06R07	-14.777324	17.3619919	28.9944858	-14.876972	17.4586546	28.991894
S06R08	-21.709546	6.96445942	28.9947252	-21.836992	7.01959166	28.9921326
S06R09	-22.155834	-5.378391	29.0323524	-22.299566	-5.3719907	29.0296364
S06R10	-16.459659	-15.776176	29.1015201	-16.604285	-15.824874	29.0985781
S06R11	-7.2961968	-21.600315	29.1890663	-7.419135	-21.7045	29.1858688
S06R12	1.91427586	-22.718795	29.2754834	1.83927735	-22.863638	29.2721378
S06R13	9.09776861	-20.90547	29.3433789	9.08616503	-21.061114	29.3400712
S06R14	14.0973018	-17.918542	29.3863592	14.1461596	-18.055888	29.3831868
S06R15	17.5783215	-14.519321	29.4063889	17.6748823	-14.61942	29.4033168
S06R16	20.1155496	-10.731856	29.4062661	20.2450455	-10.782719	29.4031933

Source S07

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S07C01	22.7856013	-0.790224	47.4485048	22.9270227	-0.6932063	47.7003719
S07C02	22.7856013	-0.790224	38.8333049	22.9270227	-0.6932063	39.0379292
S07C03	22.7856013	-0.790224	30.218105	22.9270227	-0.6932063	30.3754864
S07C04	22.7856013	-0.790224	21.6029051	22.9270227	-0.6932063	21.7130436
S07C05	22.7856013	-0.790224	12.9877052	22.9270227	-0.6932063	13.0506009
S07C06	22.7856013	-0.790224	4.37250524	22.9270227	-0.6932063	4.38815809
S07C07	-0.0806125	22.7991575	48.2123984	-0.0708234	22.9373907	48.3687567
S07C08	-0.0806125	22.7991575	39.4539146	-0.0708234	22.9373907	39.5809446
S07C09	-0.0806125	22.7991575	30.6954307	-0.0708234	22.9373907	30.7931325
S07C10	-0.0806125	22.7991575	21.9369468	-0.0708234	22.9373907	22.0053205
S07C11	-0.0806125	22.7991575	13.178463	-0.0708234	22.9373907	13.2175084

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S07C12	-0.0806125	22.7991575	4.41997912	-0.0708234	22.9373907	4.42969635
S07C13	-22.776235	-1.0252909	46.8382494	-22.919897	-0.8984498	47.1675407
S07C14	-22.776235	-1.0252909	38.3375155	-22.919897	-0.8984498	38.6050414
S07C15	-22.776235	-1.0252909	29.8367815	-22.919897	-0.8984498	30.0425421
S07C16	-22.776235	-1.0252909	21.3360475	-22.919897	-0.8984498	21.4800427
S07C17	-22.776235	-1.0252909	12.8353135	-22.919897	-0.8984498	12.9175434
S07C18	-22.776235	-1.0252909	4.33457956	-22.919897	-0.8984498	4.3550441
S07C19	-0.6315939	-22.79055	39.4117231	-0.5543621	-22.9308	40.645326
S07C20	-0.6315939	-22.79055	32.3039868	-0.5543621	-22.9308	33.3062021
S07C21	-0.6315939	-22.79055	25.1962504	-0.5543621	-22.9308	25.9670782
S07C22	-0.6315939	-22.79055	18.0885141	-0.5543621	-22.9308	18.6279543
S07C23	-0.6315939	-22.79055	10.9807778	-0.5543621	-22.9308	11.2888304
S07C24	-0.6315939	-22.79055	3.87304146	-0.5543621	-22.9308	3.94970647
S07R01	16.1913511	-16.051425	4.83675342	16.4128071	-16.023379	4.87504113
S07R02	22.293676	-4.7749439	6.24413707	22.4532156	-4.6884981	6.27394207
S07R03	20.9386722	9.02109125	7.32265381	21.0392644	9.13664374	7.34704113
S07R04	11.6033677	19.6257468	7.90536628	11.6535334	19.7566208	7.92730209
S07R05	-2.237797	22.6892121	7.95368773	-2.235208	22.8283322	7.97543395
S07R06	-15.189619	17.0024569	7.46567592	-15.238292	17.1441931	7.48943236
S07R07	-22.248967	4.97911076	6.46959467	-22.360026	5.11450249	6.49816906
S07R08	-21.311692	-8.1006085	5.09750544	-21.499342	-7.9941977	5.13419402
S07R09	-15.357824	-16.850677	3.74562126	-15.596282	-16.819182	3.78861866
S07R10	-10.056453	-20.46157	2.89692462	-10.255147	-20.517331	2.93577243
S07R11	-6.8712352	-21.739232	2.51305774	-6.9962213	-21.844491	2.54521541
S07R12	-4.7419882	-22.300709	2.36634444	-4.8006153	-22.429512	2.39495946
S07R13	-2.9042767	-22.613564	2.35561052	-2.9009033	-22.753322	2.38394506
S07R14	-0.8181513	-22.784616	2.47384997	-0.7466513	-22.925344	2.50511454
S07R15	2.29064918	-22.683937	2.80167413	2.44543745	-22.80677	2.8392006
S07R16	7.8694182	-21.398139	3.54941315	8.09958747	-21.45986	3.59241312

Source S08

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S08C01	22.795377	-0.4229253	48.2114852	22.9344928	-0.3714111	48.3684321
S08C02	22.795377	-0.4229253	39.6164254	22.9344928	-0.3714111	39.7240488
S08C03	22.795377	-0.4229253	31.0213657	22.9344928	-0.3714111	31.0796655
S08C04	22.795377	-0.4229253	22.4263059	22.9344928	-0.3714111	22.4352822
S08C05	22.795377	-0.4229253	13.8312462	22.9344928	-0.3714111	13.7908989
S08C06	22.795377	-0.4229253	5.23618644	22.9344928	-0.3714111	5.14651559
S08C07	-0.0493975	22.7992465	48.5221989	-0.0433994	22.9374589	48.6409284
S08C08	-0.0493975	22.7992465	39.8294915	-0.0433994	22.9374589	39.910908
S08C09	-0.0493975	22.7992465	31.136784	-0.0433994	22.9374589	31.1808875
S08C10	-0.0493975	22.7992465	22.4440766	-0.0433994	22.9374589	22.4508671
S08C11	-0.0493975	22.7992465	13.7513692	-0.0433994	22.9374589	13.7208467
S08C12	-0.0493975	22.7992465	5.05866172	-0.0433994	22.9374589	4.99082621

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S08C13	-22.794293	-0.477789	48.0443332	-22.933663	-0.4195412	48.2217953
S08C14	-22.794293	-0.477789	39.5018041	-22.933663	-0.4195412	39.6234954
S08C15	-22.794293	-0.477789	30.9592751	-22.933663	-0.4195412	31.0251955
S08C16	-22.794293	-0.477789	22.416746	-22.933663	-0.4195412	22.4268956
S08C17	-22.794293	-0.477789	13.8742169	-22.933663	-0.4195412	13.8285957
S08C18	-22.794293	-0.477789	5.33168788	-22.933663	-0.4195412	5.2302958
S08C19	-0.1132982	-22.799018	47.257311	-0.0995385	-22.937284	47.5296796
S08C20	-0.1132982	-22.799018	38.9621186	-0.0995385	-22.937284	39.1488902
S08C21	-0.1132982	-22.799018	30.6669262	-0.0995385	-22.937284	30.7681008
S08C22	-0.1132982	-22.799018	22.3717338	-0.0995385	-22.937284	22.3873114
S08C23	-0.1132982	-22.799018	14.0765414	-0.0995385	-22.937284	14.006522
S08C24	-0.1132982	-22.799018	5.78134904	-0.0995385	-22.937284	5.62573263
S08R01	21.3818629	-7.9135338	21.7930474	21.5327724	-7.9037093	21.7992014
S08R02	22.6937849	2.19093794	21.9267776	22.826423	2.25462185	21.9326274
S08R03	18.9878886	12.6201492	22.0357199	19.0845624	12.7243225	22.0412721
S08R04	10.347826	20.3157716	22.0989679	10.3990318	20.4447804	22.1043377
S08R05	-1.1412306	22.7707196	22.1055117	-1.1399158	22.9091575	22.1108623
S08R06	-12.229257	19.2419685	22.0542728	-12.278994	19.3740859	22.0597719
S08R07	-19.922017	11.0869881	21.9540061	-20.019787	11.1954023	21.9597843
S08R08	-22.77431	1.0671876	21.8235551	-22.909475	1.13352239	21.8296483
S08R09	-21.319705	-8.0794964	21.6890903	-21.471218	-8.0694308	21.6953952
S08R10	-17.267986	-14.887067	21.575331	-17.408386	-14.935762	21.5816602
S08R11	-12.178091	-19.274392	21.4963377	-12.283399	-19.371294	21.5025615
S08R12	-6.8121598	-21.757816	21.455335	-6.8675074	-21.885298	21.4614545
S08R13	-1.3019865	-22.762094	21.4512801	-1.3004859	-22.900604	21.4573872
S08R14	4.48316551	-22.354179	21.4839621	4.54225141	-22.483257	21.4901582
S08R15	10.6094441	-20.180381	21.5545271	10.7193576	-20.278666	21.5608397
S08R16	16.6747505	-15.548658	21.6613215	16.8182058	-15.597335	21.6676482

Source S09

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S09C01	22.7992621	-0.0415679	49.3702662	22.9374709	-0.0365206	49.3860189
S09C02	22.7992621	-0.0415679	40.6607853	22.9374709	-0.0365206	40.6412622
S09C03	22.7992621	-0.0415679	31.9513044	22.9374709	-0.0365206	31.8965055
S09C04	22.7992621	-0.0415679	23.2418235	22.9374709	-0.0365206	23.1517487
S09C05	22.7992621	-0.0415679	14.5323427	22.9374709	-0.0365206	14.406992
S09C06	22.7992621	-0.0415679	5.82286177	22.9374709	-0.0365206	5.66223527
S09C07	-0.5135527	22.7935154	49.3177339	-0.4509055	22.9330676	49.3399681
S09C08	-0.5135527	22.7935154	40.7258911	-0.4509055	22.9330676	40.6983351
S09C09	-0.5135527	22.7935154	32.1340483	-0.4509055	22.9330676	32.0567021
S09C10	-0.5135527	22.7935154	23.5422056	-0.4509055	22.9330676	23.4150691
S09C11	-0.5135527	22.7935154	14.9503628	-0.4509055	22.9330676	14.7734361
S09C12	-0.5135527	22.7935154	6.35852001	-0.4509055	22.9330676	6.13180315
S09C13	-22.799004	-0.1162311	49.1372419	-22.937273	-0.102115	49.1812984

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S09C14	-22.799004	-0.1162311	40.9495835	-22.937273	-0.102115	40.8949821
S09C15	-22.799004	-0.1162311	32.761925	-22.937273	-0.102115	32.6086658
S09C16	-22.799004	-0.1162311	24.5742665	-22.937273	-0.102115	24.3223494
S09C17	-22.799004	-0.1162311	16.3866081	-22.937273	-0.102115	16.0360331
S09C18	-22.799004	-0.1162311	8.19894964	-22.937273	-0.102115	7.74971675
S09C19	-0.572652	-22.792107	49.2967588	-0.5027158	-22.93199	49.32158
S09C20	-0.572652	-22.792107	40.7518865	-0.5027158	-22.93199	40.7211244
S09C21	-0.572652	-22.792107	32.2070142	-0.5027158	-22.93199	32.1206688
S09C22	-0.572652	-22.792107	23.6621418	-0.5027158	-22.93199	23.5202131
S09C23	-0.572652	-22.792107	15.1172695	-0.5027158	-22.93199	14.9197575
S09C24	-0.572652	-22.792107	6.57239719	-0.5027158	-22.93199	6.31930188
S09R01	22.7772241	-1.0030659	41.340282	22.9156078	-1.0019107	41.323479
S09R02	20.000901	10.9440412	41.3887574	20.1306967	10.994724	41.3718012
S09R03	11.6255809	19.6125967	41.6563913	11.7324071	19.709884	41.6385886
S09R04	0.59846811	22.7914439	42.0985638	0.66599741	22.9278292	42.0794057
S09R05	-9.5991807	20.6800341	42.6279515	-9.5867772	20.8380088	42.6074348
S09R06	-16.767999	15.4480514	43.1300923	-16.816987	15.5986491	43.1089377
S09R07	-20.745248	9.45741825	43.514702	-20.845114	9.57131776	43.4938593
S09R08	-22.466807	3.87951985	43.7522364	-22.596626	3.93972093	43.7320957
S09R09	-22.768963	-1.175754	43.8521489	-22.907416	-1.1743994	43.8324446
S09R10	-21.993483	-6.0078927	43.8256696	-22.121291	-6.0644348	43.8058409
S09R11	-20.003996	-10.938384	43.6694059	-20.101917	-11.047255	43.6489691
S09R12	-16.213618	-16.028932	43.3694905	-16.262402	-16.176006	43.3484241
S09R13	-9.7805191	-20.594891	42.9279023	-9.7678184	-20.753762	42.9068941
S09R14	-0.4654769	-22.794548	42.4004053	-0.3950196	-22.934098	42.3804166
S09R15	10.195546	-20.392619	41.8947087	10.3068303	-20.491417	41.876163
S09R16	19.0095264	-12.587533	41.5182684	19.1424603	-12.637053	41.5009022

Source S10

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S10C01	22.7962151	0.37504127	49.3911218	22.9351348	0.32939043	49.4043747
S10C02	22.7962151	0.37504127	40.7111387	22.9351348	0.32939043	40.6854385
S10C03	22.7962151	0.37504127	32.0311557	22.9351348	0.32939043	31.9665023
S10C04	22.7962151	0.37504127	23.3511727	22.9351348	0.32939043	23.2475661
S10C05	22.7962151	0.37504127	14.6711896	22.9351348	0.32939043	14.5286299
S10C06	22.7962151	0.37504127	5.9912066	22.9351348	0.32939043	5.80969371
S10C07	-0.7001335	22.7885474	49.2372569	-0.6143816	22.9292704	49.2694375
S10C08	-0.7001335	22.7885474	41.0095164	-0.6143816	22.9292704	40.9471112
S10C09	-0.7001335	22.7885474	32.781776	-0.6143816	22.9292704	32.6247849
S10C10	-0.7001335	22.7885474	24.5540355	-0.6143816	22.9292704	24.3024585
S10C11	-0.7001335	22.7885474	16.326295	-0.6143816	22.9292704	15.9801322
S10C12	-0.7001335	22.7885474	8.09855453	-0.6143816	22.9292704	7.65780584
S10C13	-22.786309	0.76955981	49.2765891	-22.927562	0.67513329	49.3040021
S10C14	-22.786309	0.76955981	40.9332427	-22.927562	0.67513329	40.880083

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S10C15	-22.786309	0.76955981	32.5898963	-22.927562	0.67513329	32.4561638
S10C16	-22.786309	0.76955981	24.2465499	-22.927562	0.67513329	24.0322447
S10C17	-22.786309	0.76955981	15.9032035	-22.927562	0.67513329	15.6083256
S10C18	-22.786309	0.76955981	7.55985706	-22.927562	0.67513329	7.18440652
S10C19	-0.2696851	-22.797705	49.3987937	-0.2368979	-22.936277	49.411098
S10C20	-0.2696851	-22.797705	40.6962611	-0.2368979	-22.936277	40.6724005
S10C21	-0.2696851	-22.797705	31.9937285	-0.2368979	-22.936277	31.933703
S10C22	-0.2696851	-22.797705	23.2911959	-0.2368979	-22.936277	23.1950055
S10C23	-0.2696851	-22.797705	14.5886633	-0.2368979	-22.936277	14.456308
S10C24	-0.2696851	-22.797705	5.88613064	-0.2368979	-22.936277	5.71761046
S10R01	21.1551086	8.50114465	42.6182712	21.3082397	8.49045518	42.5983181
S10R02	14.4221594	17.6581256	43.2672529	14.5796366	17.7077131	43.2451413
S10R03	5.73854018	22.0652949	43.9329823	5.86948536	22.1738145	43.9093807
S10R04	-1.8606725	22.7232475	44.4651448	-1.7858547	22.8678733	44.4417113
S10R05	-7.4821553	21.5366068	44.8037487	-7.472946	21.686032	44.7815274
S10R06	-11.630439	19.6097165	44.9696244	-11.680584	19.7406396	44.9484112
S10R07	-14.977122	17.1899355	44.9933114	-15.076438	17.2866981	44.9722668
S10R08	-17.962706	14.040985	44.880172	-18.099855	14.0898596	44.8583783
S10R09	-20.695195	9.56645159	44.6067774	-20.853011	9.55410121	44.5837242
S10R10	-22.609221	2.9378904	44.1418168	-22.758597	2.8592257	44.1180802
S10R11	-21.980276	-6.056034	43.5093606	-22.087821	-6.1852314	43.4865722
S10R12	-16.675797	-15.547536	42.8352871	-16.724743	-15.697511	42.8145815
S10R13	-6.4359768	-21.872043	42.2794167	-6.4281997	-22.018337	42.2606512
S10R14	6.165222	-21.9499	41.9513772	6.22152272	-22.077626	41.9337434
S10R15	17.014179	-15.176488	41.9006539	17.1110603	-15.275488	41.883192
S10R16	22.4943134	-3.7167117	42.1338318	22.6243559	-3.7772247	42.1155723

Source S11

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S11C01	22.789198	0.6786289	47.3573007	22.9297671	0.59555467	47.6195989
S11C02	22.789198	0.6786289	39.3068794	22.9297671	0.59555467	39.4529351
S11C03	22.789198	0.6786289	31.2564581	22.9297671	0.59555467	31.2862713
S11C04	22.789198	0.6786289	23.2060368	22.9297671	0.59555467	23.1196075
S11C05	22.789198	0.6786289	15.1556155	22.9297671	0.59555467	14.9529437
S11C06	22.789198	0.6786289	7.10519423	22.9297671	0.59555467	6.78627986
S11C07	0.86088994	22.7830408	48.1607056	0.75497624	22.9250718	48.3254765
S11C08	0.86088994	22.7830408	39.7542399	0.75497624	22.9250718	39.8459894
S11C09	0.86088994	22.7830408	31.3477741	0.75497624	22.9250718	31.3665022
S11C10	0.86088994	22.7830408	22.9413084	0.75497624	22.9250718	22.887015
S11C11	0.86088994	22.7830408	14.5348426	0.75497624	22.9250718	14.4075279
S11C12	0.86088994	22.7830408	6.12837688	0.75497624	22.9250718	5.92804068
S11C13	-22.79844	0.19805618	48.8746585	-22.93684	0.17399156	48.95064
S11C14	-22.79844	0.19805618	40.1517907	-22.93684	0.17399156	40.1940995
S11C15	-22.79844	0.19805618	31.4289229	-22.93684	0.17399156	31.4375591

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S11C16	-22.79844	0.19805618	22.7060551	-22.93684	0.17399156	22.6810186
S11C17	-22.79844	0.19805618	13.9831873	-22.93684	0.17399156	13.9244781
S11C18	-22.79844	0.19805618	5.26031953	-22.93684	0.17399156	5.16793769
S11C19	0.49152195	-22.794001	48.7353348	0.43158577	-22.933439	48.8285781
S11C20	0.49152195	-22.794001	40.074211	0.43158577	-22.933439	40.1261317
S11C21	0.49152195	-22.794001	31.4130872	0.43158577	-22.933439	31.4236853
S11C22	0.49152195	-22.794001	22.7519634	0.43158577	-22.933439	22.721239
S11C23	0.49152195	-22.794001	14.0908396	0.43158577	-22.933439	14.0187926
S11C24	0.49152195	-22.794001	5.4297158	0.43158577	-22.933439	5.31634627
S11R01	21.9986295	5.98902181	29.0235839	22.1437703	5.98183428	29.0208553
S11R02	20.708879	9.5367925	29.034673	20.8370818	9.5887918	29.0320425
S11R03	18.9131401	12.7318975	29.0291979	19.0097678	12.835795	29.0265173
S11R04	16.2299997	16.0123449	29.0055265	16.2787882	16.1595161	29.002666
S11R05	11.8037648	19.5058765	28.9578785	11.7873957	19.6770478	28.9548167
S11R06	4.4646368	22.3578867	28.8821901	4.37963061	22.5155	28.8791266
S11R07	-5.7838637	22.0534578	28.7886995	-5.9145555	22.1618352	28.7859033
S11R08	-16.110273	16.132798	28.7009991	-16.256875	16.1815616	28.6985323
S11R09	-22.249596	4.97630102	28.6391295	-22.392497	4.97040878	28.6368927
S11R10	-21.329703	-8.0530646	28.6131734	-21.457153	-8.1067562	28.6110289
S11R11	-13.375248	-18.46377	28.6262812	-13.477645	-18.560226	28.6240904
S11R12	-1.2307106	-22.766059	28.676939	-1.2966414	-22.900822	28.674563
S11R13	10.734025	-20.114393	28.7577851	10.7196836	-20.278493	28.7551026
S11R14	18.846497	-12.83034	28.8521184	18.8976192	-13.000342	28.8491211
S11R15	22.280316	-4.8368996	28.935788	22.3918848	-4.9731682	28.9326929
S11R16	22.7531751	1.4495186	28.9927275	22.8961871	1.3760534	28.9897932

Source S12

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S12C01	22.7486395	1.51903989	44.6026552	22.899094	1.32679994	45.2224318
S12C02	22.7486395	1.51903989	37.1649737	22.899094	1.32679994	37.5870332
S12C03	22.7486395	1.51903989	29.7272921	22.899094	1.32679994	29.9516347
S12C04	22.7486395	1.51903989	22.2896106	22.899094	1.32679994	22.3162361
S12C05	22.7486395	1.51903989	14.851929	22.899094	1.32679994	14.6808375
S12C06	22.7486395	1.51903989	7.41424743	22.899094	1.32679994	7.04543896
S12C07	1.32405081	22.7608209	47.3141266	1.15816603	22.9082421	47.5879856
S12C08	1.32405081	22.7608209	39.0114495	1.15816603	22.9082421	39.1979437
S12C09	1.32405081	22.7608209	30.7087723	1.15816603	22.9082421	30.8079019
S12C10	1.32405081	22.7608209	22.4060951	1.15816603	22.9082421	22.41786
S12C11	1.32405081	22.7608209	14.1034179	1.15816603	22.9082421	14.0278182
S12C12	1.32405081	22.7608209	5.80074073	1.15816603	22.9082421	5.63777637
S12C13	-22.798004	0.24304779	48.7164203	-22.936506	0.21350616	48.8116617
S12C14	-22.798004	0.24304779	39.9663927	-22.936506	0.21350616	40.0312509
S12C15	-22.798004	0.24304779	31.2163651	-22.936506	0.21350616	31.25084
S12C16	-22.798004	0.24304779	22.4663375	-22.936506	0.21350616	22.4704291

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S12C17	-22.798004	0.24304779	13.7163099	-22.936506	0.21350616	13.6900182
S12C18	-22.798004	0.24304779	4.9662823	-22.936506	0.21350616	4.90960726
S12C19	0.59914937	-22.791426	48.5108653	0.52593682	-22.93147	48.6317318
S12C20	0.59914937	-22.791426	39.8264125	0.52593682	-22.93147	39.9087209
S12C21	0.59914937	-22.791426	31.1419597	0.52593682	-22.93147	31.1857101
S12C22	0.59914937	-22.791426	22.4575069	0.52593682	-22.93147	22.4626993
S12C23	0.59914937	-22.791426	13.7730541	0.52593682	-22.93147	13.7396885
S12C24	0.59914937	-22.791426	5.08860127	0.52593682	-22.93147	5.01667763
S12R01	21.1687996	8.46699492	21.46509	21.3217949	8.45635663	21.4717302
S12R02	20.4442047	10.0917083	21.4474236	20.5729269	10.1431545	21.453539
S12R03	19.6486243	11.5645858	21.4544938	19.745961	11.6715865	21.4608243
S12R04	18.4888654	13.3405373	21.4913283	18.5394139	13.5062592	21.4986691
S12R05	16.1543692	16.0886431	21.5867025	16.1259149	16.3120745	21.5957972
S12R06	10.3590228	20.3100647	21.8000509	10.231474	20.5291463	21.8097553
S12R07	-0.8704918	22.782676	22.1181863	-1.0385421	22.9139769	22.1259544
S12R08	-13.68861	18.2326643	22.4151413	-13.85156	18.2828662	22.4211088
S12R09	-21.816062	6.6232569	22.6159103	-21.96287	6.61522902	22.6209211
S12R10	-21.47556	-7.6556124	22.7003131	-21.602957	-7.7098102	22.7049786
S12R11	-12.699052	-18.93521	22.6649608	-12.80303	-19.031851	22.6697672
S12R12	1.01511166	-22.77669	22.510975	0.94301253	-22.918107	22.5164606
S12R13	14.0831125	-17.929697	22.2487225	14.0614559	-18.12193	22.2556444
S12R14	21.4730269	-7.6627147	21.9246981	21.5354495	-7.896412	21.9337633
S12R15	22.7602163	1.33440485	21.6568612	22.9091723	1.13961874	21.6665488
S12R16	21.9818664	6.05025866	21.5204759	22.1503976	5.95724689	21.5284826

Source S13

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S13C01	22.7945643	0.46466894	49.0493973	22.9338705	0.408033	49.1043188
S13C02	22.7945643	0.46466894	40.5530104	22.9338705	0.408033	40.5465493
S13C03	22.7945643	0.46466894	32.0566235	22.9338705	0.408033	31.9887797
S13C04	22.7945643	0.46466894	23.5602366	22.9338705	0.408033	23.4310102
S13C05	22.7945643	0.46466894	15.0638497	22.9338705	0.408033	14.8732406
S13C06	22.7945643	0.46466894	6.56746275	22.9338705	0.408033	6.31547107
S13C07	0.25603392	22.7978623	48.9129828	0.2249103	22.9363973	48.9843409
S13C08	0.25603392	22.7978623	40.5690587	0.2249103	22.9363973	40.5606638
S13C09	0.25603392	22.7978623	32.2251345	0.2249103	22.9363973	32.1369868
S13C10	0.25603392	22.7978623	23.8812103	0.2249103	22.9363973	23.7133097
S13C11	0.25603392	22.7978623	15.5372862	0.2249103	22.9363973	15.2896326
S13C12	0.25603392	22.7978623	7.19336202	0.2249103	22.9363973	6.86595547
S13C13	-22.796688	0.3451158	49.1653314	-22.935497	0.30312357	49.2060525
S13C14	-22.796688	0.3451158	40.5393715	-22.935497	0.30312357	40.534581
S13C15	-22.796688	0.3451158	31.9134117	-22.935497	0.30312357	31.8631095
S13C16	-22.796688	0.3451158	23.2874518	-22.935497	0.30312357	23.191638
S13C17	-22.796688	0.3451158	14.6614919	-22.935497	0.30312357	14.5201665

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S13C18	-22.796688	0.3451158	6.03553203	-22.935497	0.30312357	5.84869503
S13C19	0.12402737	-22.798963	49.2156385	0.1089639	-22.937241	49.250175
S13C20	0.12402737	-22.798963	40.5334532	0.1089639	-22.937241	40.5293902
S13C21	0.12402737	-22.798963	31.851268	0.1089639	-22.937241	31.8086055
S13C22	0.12402737	-22.798963	23.1690828	0.1089639	-22.937241	23.0878208
S13C23	0.12402737	-22.798963	14.4868976	0.1089639	-22.937241	14.3670361
S13C24	0.12402737	-22.798963	5.80471235	0.1089639	-22.937241	5.6462514
S13R01	21.62413	7.22530858	39.5381003	21.7727269	7.21645829	39.5224362
S13R02	18.2748077	13.6322956	39.7594445	18.4106117	13.6813115	39.7439172
S13R03	13.8362067	18.1209124	39.8920433	13.9376201	18.2173448	39.8767654
S13R04	8.78048234	21.0407037	39.9346895	8.83330549	21.1684109	39.9195225
S13R05	3.13977576	22.5820701	39.8886714	3.13612283	22.7220959	39.8733854
S13R06	-3.2000014	22.5736145	39.7526355	-3.261537	22.7044331	39.7370991
S13R07	-10.144686	20.4179683	39.5281183	-10.256143	20.5168329	39.5124551
S13R08	-16.909554	15.2929748	39.2333713	-17.051769	15.3416451	39.2179534
S13R09	-21.738916	6.87223575	38.9131954	-21.886438	6.86387089	38.8983904
S13R10	-22.484196	-3.7774366	38.6290129	-22.614154	-3.8378327	38.6149239
S13R11	-17.913637	-14.103535	38.4363401	-18.010096	-14.204413	38.4227846
S13R12	-8.6758901	-21.084046	38.3700867	-8.7288335	-21.211704	38.3567196
S13R13	2.79393797	-22.627461	38.4414823	2.79069512	-22.767102	38.4279123
S13R14	13.2951356	-18.52154	38.6384093	13.3442926	-18.656333	38.624295
S13R15	20.2549074	-10.466461	38.9250693	20.3533621	-10.576841	38.9102371
S13R16	22.7710165	-1.1352922	39.2453643	22.9060124	-1.2014579	39.2299293

Source S14

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S14C01	22.7986988	0.1655667	49.2413831	22.9370388	0.14545389	49.2727995
S14C02	22.7986988	0.1655667	40.4843749	22.9370388	0.14545389	40.486273
S14C03	22.7986988	0.1655667	31.7273668	22.9370388	0.14545389	31.6997466
S14C04	22.7986988	0.1655667	22.9703586	22.9370388	0.14545389	22.9132201
S14C05	22.7986988	0.1655667	14.2133505	22.9370388	0.14545389	14.1266936
S14C06	22.7986988	0.1655667	5.4563423	22.9370388	0.14545389	5.34016717
S14C07	-1.1983961	22.7677827	48.8707228	-1.0491108	22.9134954	48.9491124
S14C08	-1.1983961	22.7677827	40.4619804	-1.0491108	22.9134954	40.4667165
S14C09	-1.1983961	22.7677827	32.053238	-1.0491108	22.9134954	31.9843206
S14C10	-1.1983961	22.7677827	23.6444955	-1.0491108	22.9134954	23.5019247
S14C11	-1.1983961	22.7677827	15.2357531	-1.0491108	22.9134954	15.0195288
S14C12	-1.1983961	22.7677827	6.82701071	-1.0491108	22.9134954	6.53713284
S14C13	-22.764283	1.2631365	47.5269674	-22.910852	1.10533354	47.7734573
S14C14	-22.764283	1.2631365	40.3807935	-22.910852	1.10533354	40.3956859
S14C15	-22.764283	1.2631365	33.2346196	-22.910852	1.10533354	33.0179145
S14C16	-22.764283	1.2631365	26.0884457	-22.910852	1.10533354	25.6401431
S14C17	-22.764283	1.2631365	18.9422718	-22.910852	1.10533354	18.2623717
S14C18	-22.764283	1.2631365	11.7960979	-22.910852	1.10533354	10.8846003

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S14C19	-0.6969486	-22.788645	49.1340326	-0.6115935	-22.929345	49.1788525
S14C20	-0.6969486	-22.788645	40.477889	-0.6115935	-22.929345	40.4805969
S14C21	-0.6969486	-22.788645	31.8217454	-0.6115935	-22.929345	31.7823413
S14C22	-0.6969486	-22.788645	23.1656018	-0.6115935	-22.929345	23.0840857
S14C23	-0.6969486	-22.788645	14.5094582	-0.6115935	-22.929345	14.3858301
S14C24	-0.6969486	-22.788645	5.85331454	-0.6115935	-22.929345	5.68757454
S14R01	22.3327774	4.58858755	36.6055981	22.4749501	4.58317838	36.59398
S14R02	15.2446872	16.9530998	36.9867255	15.3965806	17.0021826	36.9734145
S14R03	2.52758086	22.6587602	37.6285104	2.68038867	22.7803517	37.6116416
S14R04	-9.8964447	20.5394367	38.4143389	-9.7739772	20.750862	38.3922246
S14R05	-17.03958	15.1479638	39.0532676	-17.007162	15.3910798	39.029861
S14R06	-19.759404	11.3742704	39.3729826	-19.812619	11.5580723	39.3537576
S14R07	-20.879942	9.15620563	39.501759	-20.980302	9.2712375	39.4858003
S14R08	-21.519565	7.53102814	39.5419465	-21.646958	7.58538924	39.5272041
S14R09	-22.01003	5.94698809	39.5232388	-22.155068	5.9398554	39.5079188
S14R10	-22.46784	3.87353335	39.4322075	-22.622032	3.79112073	39.4143636
S14R11	-22.798087	0.23518226	39.1967451	-22.937434	0.05482973	39.1745867
S14R12	-21.702665	-6.9858721	38.6709371	-21.767587	-7.2319485	38.6474827
S14R13	-15.438319	-16.77696	37.8970929	-15.412528	-16.987728	37.8784701
S14R14	-3.080926	-22.590174	37.1836401	-3.0017145	-22.740242	37.1693367
S14R15	10.8813945	-20.035053	36.7063175	10.9904435	-20.133034	36.6942794
S14R16	20.6715223	-9.617497	36.5111505	20.7997922	-9.6694131	36.4999097

Source S15

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S15C01	22.6815595	2.3140746	32.898817	22.8497782	2.00413094	35.1223544
S15C02	22.6815595	2.3140746	27.7501653	22.8497782	2.00413094	29.4578589
S15C03	22.6815595	2.3140746	22.6015136	22.8497782	2.00413094	23.7933634
S15C04	22.6815595	2.3140746	17.4528619	22.8497782	2.00413094	18.1288679
S15C05	22.6815595	2.3140746	12.3042102	22.8497782	2.00413094	12.4643724
S15C06	22.6815595	2.3140746	7.15555843	22.8497782	2.00413094	6.79987694
S15C07	1.33438341	22.7602175	47.0352261	1.16712098	22.9077876	47.3441808
S15C08	1.33438341	22.7602175	38.6070349	1.16712098	22.9077876	38.8443145
S15C09	1.33438341	22.7602175	30.1788437	1.16712098	22.9077876	30.3444481
S15C10	1.33438341	22.7602175	21.7506525	1.16712098	22.9077876	21.8445818
S15C11	1.33438341	22.7602175	13.3224613	1.16712098	22.9077876	13.3447155
S15C12	1.33438341	22.7602175	4.89427017	1.16712098	22.9077876	4.84484915
S15C13	-22.798888	0.13700898	48.5170969	-22.937184	0.12036786	48.6364804
S15C14	-22.798888	0.13700898	39.7451229	-22.937184	0.12036786	39.8368104
S15C15	-22.798888	0.13700898	30.973149	-22.937184	0.12036786	31.0371404
S15C16	-22.798888	0.13700898	22.201175	-22.937184	0.12036786	22.2374703
S15C17	-22.798888	0.13700898	13.4292011	-22.937184	0.12036786	13.4378003
S15C18	-22.798888	0.13700898	4.65722715	-22.937184	0.12036786	4.63813033
S15C19	0.82531416	-22.784357	47.975541	0.72388588	-22.926075	48.1628918

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S15C20	0.82531416	-22.784357	39.3292039	0.72388588	-22.926075	39.4730907
S15C21	0.82531416	-22.784357	30.6828668	0.72388588	-22.926075	30.7832897
S15C22	0.82531416	-22.784357	22.0365297	0.72388588	-22.926075	22.0934886
S15C23	0.82531416	-22.784357	13.3901926	0.72388588	-22.926075	13.4036876
S15C24	0.82531416	-22.784357	4.74385551	0.72388588	-22.926075	4.71388651
S15R01	22.1611979	5.35624756	10.8580806	22.3048815	5.3498754	10.8769867
S15R02	22.0321233	5.86460774	10.8543694	22.1600146	5.92137306	10.8728463
S15R03	21.8697604	6.44373048	10.8793952	21.9761799	6.57087703	10.9007196
S15R04	21.5467446	7.45291072	10.9647287	21.6099076	7.69030564	10.9948027
S15R05	20.2196333	10.534444	11.3037249	20.1566081	10.9471483	11.3518714
S15R06	13.0675816	18.6827833	12.3873673	12.8968667	18.9683878	12.4235486
S15R07	-1.1532025	22.7701165	13.6175763	-1.3184057	22.8995789	13.6392891
S15R08	-15.139561	17.0470457	14.4942016	-15.292137	17.0961821	14.5101953
S15R09	-22.45023	3.97432279	14.958234	-22.591384	3.96966676	14.9720484
S15R10	-20.112087	-10.738344	15.0154435	-20.241592	-10.789202	15.0290188
S15R11	-9.1421341	-20.886107	14.6675683	-9.2572198	-20.986491	14.6826941
S15R12	5.89598493	-22.023747	13.9073169	5.80382848	-22.19109	13.9268486
S15R13	18.3144561	-13.578983	12.7591366	18.2742572	-13.862916	12.7898456
S15R14	22.7379345	-1.67165	11.5318938	22.8416494	-2.094745	11.5812759
S15R15	22.5523348	3.34668155	11.0161698	22.7246553	3.11752268	11.0506994
S15R16	22.3095465	4.70023561	10.8944496	22.4686137	4.6141416	10.9174306

Source S16

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S16C01	22.7738213	1.07756348	48.4370401	22.9180668	0.94399257	48.5688008
S16C02	22.7738213	1.07756348	40.3756945	22.9180668	0.94399257	40.3911103
S16C03	22.7738213	1.07756348	32.314349	22.9180668	0.94399257	32.2134052
S16C04	22.7738213	1.07756348	24.2530034	22.9180668	0.94399257	24.0357074
S16C05	22.7738213	1.07756348	16.1916579	22.9180668	0.94399257	15.8580096
S16C06	22.7738213	1.07756348	8.13031231	22.9180668	0.94399257	7.68031178
S16C07	1.09378443	22.773048	48.6277176	0.95811707	22.9174806	48.735911
S16C08	1.09378443	22.773048	40.3979929	0.95811707	22.9174806	40.4106453
S16C09	1.09378443	22.773048	32.1682682	0.95811707	22.9174806	32.0853796
S16C10	1.09378443	22.773048	23.9385435	0.95811707	22.9174806	23.760114
S16C11	1.09378443	22.773048	15.7088188	0.95811707	22.9174806	15.4348483
S16C12	1.09378443	22.773048	7.47909406	0.95811707	22.9174806	7.10958264
S16C13	-22.797041	0.32091274	49.1834364	-22.935768	0.28187658	49.2219435
S16C14	-22.797041	0.32091274	40.4629802	-22.935768	0.28187658	40.4674833
S16C15	-22.797041	0.32091274	31.742524	-22.935768	0.28187658	31.7130231
S16C16	-22.797041	0.32091274	23.0220677	-22.935768	0.28187658	22.9585629
S16C17	-22.797041	0.32091274	14.3016115	-22.935768	0.28187658	14.2041027
S16C18	-22.797041	0.32091274	5.5811553	-22.935768	0.28187658	5.44964244
S16C19	0.42594763	-22.795321	49.1603109	0.37406292	-22.93445	49.2016885
S16C20	0.42594763	-22.795321	40.4602758	0.37406292	-22.93445	40.4651146

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S16C21	0.42594763	-22.795321	31.7602407	0.37406292	-22.93445	31.7285408
S16C22	0.42594763	-22.795321	23.0602056	0.37406292	-22.93445	22.9919669
S16C23	0.42594763	-22.795321	14.3601705	0.37406292	-22.93445	14.2553931
S16C24	0.42594763	-22.795321	5.66013541	0.37406292	-22.93445	5.51881923
S16R01	20.6287757	9.70884612	38.5508458	20.787289	9.69626337	38.5355518
S16R02	18.9767235	12.6369319	38.6557026	19.1097763	12.686424	38.6416941
S16R03	17.2417594	14.9174332	38.6735112	17.3384902	15.016846	38.6597528
S16R04	15.1035049	17.0789994	38.6120491	15.1521818	17.2203453	38.5974667
S16R05	11.9015098	19.4463916	38.4449652	11.8849437	19.6182828	38.4286866
S16R06	6.37214903	21.890724	38.1156331	6.27729238	22.0618337	38.0979801
S16R07	-2.666637	22.6428162	37.6043446	-2.8183101	22.7636999	37.5876147
S16R08	-13.490905	18.3794331	37.0303139	-13.655415	18.4298275	37.01605
S16R09	-21.323639	8.06910744	36.5577868	-21.475114	8.05905707	36.5455709
S16R10	-22.161109	-5.356615	36.2785609	-22.289356	-5.4141976	36.2674412
S16R11	-15.171553	-17.01858	36.2250242	-15.27056	-17.115458	36.2141035
S16R12	-2.837329	-22.622061	36.4017276	-2.8996131	-22.753487	36.3901364
S16R13	10.2190306	-20.380861	36.7916846	10.2055924	-20.542025	36.7784796
S16R14	19.3645814	-12.034163	37.3355383	19.4167609	-12.2114	37.3199066
S16R15	22.6949747	-2.1785782	37.8978794	22.81841	-2.3343245	37.8803228
S16R16	22.199239	5.19633208	38.3164188	22.3615495	5.1078379	38.2993298

Source S17

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S17C01	22.7991153	0.09178379	48.2911655	22.9373583	0.08063776	48.4379638
S17C02	22.7991153	0.09178379	39.5577816	22.9373583	0.08063776	39.6722026
S17C03	22.7991153	0.09178379	30.8243977	22.9373583	0.08063776	30.9064414
S17C04	22.7991153	0.09178379	22.0910138	22.9373583	0.08063776	22.1406802
S17C05	22.7991153	0.09178379	13.3576299	22.9373583	0.08063776	13.374919
S17C06	22.7991153	0.09178379	4.62424599	22.9373583	0.08063776	4.60915782
S17C07	-0.8012248	22.7852171	47.2436792	-0.7028258	22.9267299	47.5207796
S17C08	-0.8012248	22.7852171	38.741325	-0.7028258	22.9267299	38.9573092
S17C09	-0.8012248	22.7852171	30.2389708	-0.7028258	22.9267299	30.3938388
S17C10	-0.8012248	22.7852171	21.7366167	-0.7028258	22.9267299	21.8303684
S17C11	-0.8012248	22.7852171	13.2342625	-0.7028258	22.9267299	13.2668979
S17C12	-0.8012248	22.7852171	4.73190834	-0.7028258	22.9267299	4.7034275
S17C13	-22.796228	0.374289	44.5704425	-22.935144	0.32873019	45.1704729
S17C14	-22.796228	0.374289	36.6576876	-22.935144	0.32873019	37.1253775
S17C15	-22.796228	0.374289	28.7449327	-22.935144	0.32873019	29.0802821
S17C16	-22.796228	0.374289	20.8321778	-22.935144	0.32873019	21.0351867
S17C17	-22.796228	0.374289	12.9194229	-22.935144	0.32873019	12.9900913
S17C18	-22.796228	0.374289	5.00666797	-22.935144	0.32873019	4.94499586
S17C19	-0.6144757	-22.791018	47.7695814	-0.5393656	-22.931158	47.9810983
S17C20	-0.6144757	-22.791018	39.1512362	-0.5393656	-22.931158	39.3161017
S17C21	-0.6144757	-22.791018	30.5328909	-0.5393656	-22.931158	30.6511051

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S17C22	-0.6144757	-22.791018	21.9145457	-0.5393656	-22.931158	21.9861084
S17C23	-0.6144757	-22.791018	13.2962005	-0.5393656	-22.931158	13.3211118
S17C24	-0.6144757	-22.791018	4.67785525	-0.5393656	-22.931158	4.6561152
S17R01	22.6761152	2.36682946	12.956831	22.8153454	2.36408931	12.9727998
S17R02	17.6606196	14.4191052	12.6553677	17.7991391	14.46788	12.6724345
S17R03	7.32270886	21.5913412	12.10224	7.44552253	21.6954627	12.1214289
S17R04	-4.1216592	22.4236484	11.3998997	-4.0381807	22.5792383	11.4216843
S17R05	-12.860563	18.8258861	10.7248292	-12.841939	19.0056175	10.7480359
S17R06	-17.919429	14.0961744	10.2339446	-17.969271	14.2560239	10.2563256
S17R07	-20.524786	9.92679411	9.95254381	-20.623949	10.0390049	9.97322349
S17R08	-21.897348	6.34934886	9.83167634	-22.024988	6.40537187	9.85127937
S17R09	-22.613812	2.90234151	9.83602814	-22.753568	2.89897043	9.85567378
S17R10	-22.778387	-0.9763081	9.96698631	-22.91378	-1.0428702	9.98778005
S17R11	-22.009607	-5.9485516	10.2621907	-22.117476	-6.0783337	10.2846858
S17R12	-19.110935	-12.43303	10.7689847	-19.16256	-12.606555	10.7921665
S17R13	-12.276571	-19.211816	11.4525246	-12.259229	-19.386599	11.4741348
S17R14	-1.250071	-22.765004	12.1492719	-1.1772408	-22.90727	12.1682777
S17R15	11.0625699	-19.935587	12.6865701	11.1710586	-20.033381	12.7035208
S17R16	20.1950199	-10.581552	12.9676279	20.3243168	-10.632547	12.9835584

Source S18

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S18C01	22.580964	-3.1477208	39.2781683	22.7795945	-2.6868165	40.7748976
S18C02	22.580964	-3.1477208	32.6383147	22.7795945	-2.6868165	33.7894602
S18C03	22.580964	-3.1477208	25.9984612	22.7795945	-2.6868165	26.8040227
S18C04	22.580964	-3.1477208	19.3586076	22.7795945	-2.6868165	19.8185853
S18C05	22.580964	-3.1477208	12.7187541	22.7795945	-2.6868165	12.8331478
S18C06	22.580964	-3.1477208	6.07890051	22.7795945	-2.6868165	5.84771037
S18C07	0.59835146	22.791447	48.2570618	0.52523765	22.9314856	48.408939
S18C08	0.59835146	22.791447	39.5440471	0.52523765	22.9314856	39.660857
S18C09	0.59835146	22.791447	30.8310325	0.52523765	22.9314856	30.912775
S18C10	0.59835146	22.791447	22.1180179	0.52523765	22.9314856	22.1646931
S18C11	0.59835146	22.791447	13.4050033	0.52523765	22.9314856	13.4166111
S18C12	0.59835146	22.791447	4.69198867	0.52523765	22.9314856	4.66852917
S18C13	-22.797046	-0.320574	48.4589757	-22.935772	-0.2815792	48.5856065
S18C14	-22.797046	-0.320574	39.6993406	-22.935772	-0.2815792	39.7967333
S18C15	-22.797046	-0.320574	30.9397055	-22.935772	-0.2815792	31.0078601
S18C16	-22.797046	-0.320574	22.1800705	-22.935772	-0.2815792	22.2189869
S18C17	-22.797046	-0.320574	13.4204354	-22.935772	-0.2815792	13.4301137
S18C18	-22.797046	-0.320574	4.66080032	-22.935772	-0.2815792	4.64124048
S18C19	1.91650811	-22.718606	45.5188929	1.66779608	-22.876787	46.0355353
S18C20	1.91650811	-22.718606	37.4381015	1.66779608	-22.876787	37.8354549
S18C21	1.91650811	-22.718606	29.3573101	1.66779608	-22.876787	29.6353746
S18C22	1.91650811	-22.718606	21.2765188	1.66779608	-22.876787	21.4352942

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S18C23	1.91650811	-22.718606	13.1957274	1.66779608	-22.876787	13.2352139
S18C24	1.91650811	-22.718606	5.11493597	1.66779608	-22.876787	5.03513355
S18R01	19.423011	-11.939628	10.6069114	19.5951867	-11.922985	10.6294144
S18R02	19.7214904	-11.439882	10.6579331	19.9618645	-11.298357	10.6923667
S18R03	20.9435243	-9.0098207	10.9504927	21.2920172	-8.5310557	11.0192074
S18R04	22.5675614	3.24241451	12.2383638	22.6546036	3.5913568	12.2776739
S18R05	15.2593339	16.9399176	13.5524878	15.2341486	17.1478752	13.5742702
S18R06	1.02865081	22.776083	14.4389336	0.95651004	22.9175477	14.4548703
S18R07	-13.459349	18.4025546	14.8848538	-13.56156	18.4989995	14.898696
S18R08	-21.989899	6.02099948	14.9062401	-22.1177	6.07752136	14.9199921
S18R09	-20.923066	-9.0572287	14.5040873	-21.07853	-9.0456884	14.5196904
S18R10	-10.437082	-20.270062	13.6631003	-10.631208	-20.325017	13.6839892
S18R11	4.97986013	-22.248799	12.3876841	4.71123423	-22.448456	12.4240633
S18R12	16.4491151	-15.787169	11.0323727	16.130967	-16.307078	11.1026554
S18R13	18.5940005	-13.193606	10.6683972	18.5515908	-13.489529	10.7050765
S18R14	18.9612199	-12.660182	10.6096594	19.0125512	-12.831672	10.6328418
S18R15	19.1318952	-12.400753	10.5932812	19.2286729	-12.505481	10.6123635
S18R16	19.2655511	-12.192072	10.5926198	19.3975883	-12.241833	10.6115341

Source S19

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S19C01	22.7992988	0.00751195	48.7339354	22.9374991	0.00659985	48.8269509
S19C02	22.7992988	0.00751195	39.9767033	22.9374991	0.00659985	40.0402419
S19C03	22.7992988	0.00751195	31.2194713	22.9374991	0.00659985	31.253533
S19C04	22.7992988	0.00751195	22.4622392	22.9374991	0.00659985	22.4668241
S19C05	22.7992988	0.00751195	13.7050071	22.9374991	0.00659985	13.6801152
S19C06	22.7992988	0.00751195	4.94777506	22.9374991	0.00659985	4.89340626
S19C07	-0.8918512	22.7818498	48.1127768	-0.7820221	22.9241651	48.2836097
S19C08	-0.8918512	22.7818498	39.5523916	-0.7820221	22.9241651	39.6690871
S19C09	-0.8918512	22.7818498	30.9920063	-0.7820221	22.9241651	31.0545644
S19C10	-0.8918512	22.7818498	22.4316211	-0.7820221	22.9241651	22.4400418
S19C11	-0.8918512	22.7818498	13.8712358	-0.7820221	22.9241651	13.8255191
S19C12	-0.8918512	22.7818498	5.31085059	-0.7820221	22.9241651	5.21099645
S19C13	-22.799232	0.05581734	43.8077814	-22.937448	0.04903963	44.4989674
S19C14	-22.799232	0.05581734	36.6116608	-22.937448	0.04903963	37.0838081
S19C15	-22.799232	0.05581734	29.4155401	-22.937448	0.04903963	29.6686487
S19C16	-22.799232	0.05581734	22.2194195	-22.937448	0.04903963	22.2534894
S19C17	-22.799232	0.05581734	15.0232989	-22.937448	0.04903963	14.8383301
S19C18	-22.799232	0.05581734	7.82717821	-22.937448	0.04903963	7.42317071
S19C19	-0.8707222	-22.782667	48.1456418	-0.7635663	-22.924787	48.3123166
S19C20	-0.8707222	-22.782667	39.5748415	-0.7635663	-22.924787	39.6886967
S19C21	-0.8707222	-22.782667	31.0040413	-0.7635663	-22.924787	31.0650767
S19C22	-0.8707222	-22.782667	22.4332411	-0.7635663	-22.924787	22.4414568
S19C23	-0.8707222	-22.782667	13.8624408	-0.7635663	-22.924787	13.8178368

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S19C24	-0.8707222	-22.782667	5.29164057	-0.7635663	-22.924787	5.19421689
S19R01	22.7983552	0.2075557	22.5391459	22.9365631	0.20731693	22.5439901
S19R02	18.3490959	13.532138	22.4760757	18.4845906	13.5811935	22.4811685
S19R03	7.07260644	21.6745546	22.2994498	7.19661006	21.7792954	22.3053209
S19R04	-6.2778707	21.9179474	22.027887	-6.183563	22.0882877	22.0351902
S19R05	-16.246871	15.9952266	21.7225623	-16.218041	16.2204825	21.7314833
S19R06	-20.777217	9.38697758	21.4906329	-20.834548	9.59429667	21.4995215
S19R07	-22.221189	5.10165019	21.3704722	-22.331818	5.23629789	21.3780197
S19R08	-22.673686	2.38998679	21.3193252	-22.805933	2.45323038	21.325891
S19R09	-22.797721	0.26834734	21.3058158	-22.935934	0.26803862	21.312079
S19R10	-22.721832	-1.8778839	21.3217156	-22.855119	-1.9422776	21.328333
S19R11	-22.31302	-4.6837162	21.3767373	-22.425151	-4.8209456	21.3843873
S19R12	-20.865495	-9.1890809	21.5043196	-20.92333	-9.3991056	21.5132863
S19R13	-16.174335	-16.06857	21.7450076	-16.145801	-16.292392	21.7538374
S19R14	-5.9745828	-22.002555	22.0513736	-5.8819928	-22.1705	22.0585438
S19R15	7.44280854	-21.550236	22.3169776	7.56506245	-21.65407	22.3227659
S19R16	18.5901811	-13.198987	22.4851373	18.724701	-13.248188	22.4901935

Source S20

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S20C01	22.7938008	0.50072587	49.2259071	22.933286	0.43965748	49.2593354
S20C02	22.7938008	0.50072587	40.7143627	22.933286	0.43965748	40.6882191
S20C03	22.7938008	0.50072587	32.2028182	22.933286	0.43965748	32.1171027
S20C04	22.7938008	0.50072587	23.6912738	22.933286	0.43965748	23.5459864
S20C05	22.7938008	0.50072587	15.1797293	22.933286	0.43965748	14.97487
S20C06	22.7938008	0.50072587	6.66818489	22.933286	0.43965748	6.40375367
S20C07	0.22182122	22.7982209	49.1088972	0.19486431	22.9366723	49.1564261
S20C08	0.22182122	22.7982209	40.8058738	0.19486431	22.9366723	40.7687024
S20C09	0.22182122	22.7982209	32.5028505	0.19486431	22.9366723	32.3809787
S20C10	0.22182122	22.7982209	24.1998271	0.19486431	22.9366723	23.9932549
S20C11	0.22182122	22.7982209	15.8968037	0.19486431	22.9366723	15.6055312
S20C12	0.22182122	22.7982209	7.59378037	0.19486431	22.9366723	7.21780743
S20C13	-22.795913	0.39297195	49.2848907	-22.934903	0.3451269	49.3110806
S20C14	-22.795913	0.39297195	40.6682328	-22.934903	0.3451269	40.6477502
S20C15	-22.795913	0.39297195	32.051575	-22.934903	0.3451269	31.9844197
S20C16	-22.795913	0.39297195	23.4349171	-22.934903	0.3451269	23.3210892
S20C17	-22.795913	0.39297195	14.8182593	-22.934903	0.3451269	14.6577588
S20C18	-22.795913	0.39297195	6.20160142	-22.934903	0.3451269	5.99442832
S20C19	0.09832532	-22.799088	49.3266383	0.08638464	-22.937337	49.3476914
S20C20	0.09832532	-22.799088	40.6355828	0.08638464	-22.937337	40.6191176
S20C21	0.09832532	-22.799088	31.9445273	0.08638464	-22.937337	31.8905437
S20C22	0.09832532	-22.799088	23.2534719	0.08638464	-22.937337	23.1619698
S20C23	0.09832532	-22.799088	14.5624164	0.08638464	-22.937337	14.433396
S20C24	0.09832532	-22.799088	5.8713609	0.08638464	-22.937337	5.70482211

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S20R01	21.3463834	8.00874499	42.1143235	21.4976367	7.9987825	42.0952111
S20R02	17.6510861	14.430774	42.4239033	17.78965	14.4795462	42.4049197
S20R03	13.0151626	18.7193382	42.6202701	13.1183811	18.8158705	42.6016673
S20R04	7.98323444	21.3559371	42.7018322	8.0370133	21.4833732	42.6834689
S20R05	2.57672318	22.6532245	42.672338	2.57373647	22.7926476	42.6538822
S20R06	-3.3786914	22.5475614	42.5301212	-3.4398677	22.6780999	42.5113108
S20R07	-9.9234901	20.5263836	42.2720329	-10.035712	20.6255517	42.2529221
S20R08	-16.486536	15.7480855	41.9111664	-16.631014	15.7967802	41.892213
S20R09	-21.464489	7.68659899	41.4963047	-21.614602	7.67710005	41.4780815
S20R10	-22.620628	-2.8487286	41.1064627	-22.752034	-2.9109888	41.0892241
S20R11	-18.450557	-13.39347	40.8199273	-18.54701	-13.495827	40.8035019
S20R12	-9.3643069	-20.787444	40.689675	-9.416487	-20.915513	40.6736307
S20R13	2.26362672	-22.68665	40.737622	2.26100749	-22.825791	40.721437
S20R14	13.0964428	-18.662563	40.9558767	13.1456928	-18.796799	40.9390598
S20R15	20.307355	-10.364334	41.3060175	20.4059358	-10.475051	41.2882505
S20R16	22.790495	-0.6335773	41.7197911	22.9267853	-0.7010152	41.701119

Source S21

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S21C01	22.7951871	-0.4330437	47.8794392	22.9343473	-0.380289	48.0768611
S21C02	22.7951871	-0.4330437	39.3719239	22.9343473	-0.380289	39.5093497
S21C03	22.7951871	-0.4330437	30.8644085	22.9343473	-0.380289	30.9418383
S21C04	22.7951871	-0.4330437	22.3568932	22.9343473	-0.380289	22.3743269
S21C05	22.7951871	-0.4330437	13.8493779	22.9343473	-0.380289	13.8068155
S21C06	22.7951871	-0.4330437	5.34186257	22.9343473	-0.380289	5.23930416
S21C07	0.1094489	22.7990373	48.4414591	0.09615682	22.9372984	48.5700141
S21C08	0.1094489	22.7990373	39.7631472	0.09615682	22.9372984	39.8526347
S21C09	0.1094489	22.7990373	31.0848354	0.09615682	22.9372984	31.1352552
S21C10	0.1094489	22.7990373	22.4065235	0.09615682	22.9372984	22.4178758
S21C11	0.1094489	22.7990373	13.7282116	0.09615682	22.9372984	13.7004963
S21C12	0.1094489	22.7990373	5.04989973	0.09615682	22.9372984	4.98311689
S21C13	-22.796849	-0.3343315	48.2488459	-22.93562	-0.2936567	48.4010613
S21C14	-22.796849	-0.3343315	39.6290687	-22.93562	-0.2936567	39.7350262
S21C15	-22.796849	-0.3343315	31.0092916	-22.93562	-0.2936567	31.0689911
S21C16	-22.796849	-0.3343315	22.3895144	-22.93562	-0.2936567	22.4029561
S21C17	-22.796849	-0.3343315	13.7697372	-22.93562	-0.2936567	13.736921
S21C18	-22.796849	-0.3343315	5.14996007	-22.93562	-0.2936567	5.07088594
S21C19	0.21770547	-22.798261	47.3944498	0.19124957	-22.936703	47.6503195
S21C20	0.21770547	-22.798261	39.0343217	0.19124957	-22.936703	39.2124331
S21C21	0.21770547	-22.798261	30.6741935	0.19124957	-22.936703	30.7745467
S21C22	0.21770547	-22.798261	22.3140653	0.19124957	-22.936703	22.3366603
S21C23	0.21770547	-22.798261	13.9539371	0.19124957	-22.936703	13.898774
S21C24	0.21770547	-22.798261	5.59380891	0.19124957	-22.936703	5.46088758
S21R01	21.7437954	-6.8567808	20.8016865	21.8912726	-6.848437	20.8089248

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S21R02	22.7403824	1.6380139	20.9320662	22.8741953	1.7029661	20.9391878
S21R03	20.0083981	10.9303287	21.0717936	20.1063277	11.0392251	21.0786532
S21R04	12.9134514	18.7896475	21.1945065	12.9627934	18.9233954	21.2010665
S21R05	2.44132009	22.6682164	21.276552	2.43849253	22.8075132	21.2828914
S21R06	-8.8709022	21.0027421	21.3030535	-8.9236226	21.1304961	21.3093195
S21R07	-17.941349	14.0682652	21.2694584	-18.037802	14.1692127	21.2758173
S21R08	-22.460912	3.91350279	21.181561	-22.590686	3.97363937	21.1881547
S21R09	-21.83388	-6.564279	21.0554342	-21.980524	-6.5563303	21.0623298
S21R10	-17.223984	-14.937953	20.9154793	-17.364603	-14.986643	20.922624
S21R11	-10.634844	-20.167007	20.7877642	-10.744675	-20.265262	20.795005
S21R12	-3.7216366	-22.493499	20.6910428	-3.7821401	-22.623535	20.6982339
S21R13	2.72823386	-22.635477	20.6332904	2.72506859	-22.77505	20.6403869
S21R14	8.56000132	-21.131362	20.6157154	8.61307979	-21.258969	20.6227722
S21R15	13.8165944	-18.13587	20.6380812	13.9180482	-18.232302	20.6451876
S21R16	18.3919547	-13.47383	20.7006387	18.5272728	-13.522909	20.7078405

Source S22

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S22C01	22.7966141	0.34994873	49.5147832	22.9354405	0.30736593	49.5129843
S22C02	22.7966141	0.34994873	40.7597505	22.9354405	0.30736593	40.7281433
S22C03	22.7966141	0.34994873	32.0047177	22.9354405	0.30736593	31.9433022
S22C04	22.7966141	0.34994873	23.249685	22.9354405	0.30736593	23.1584611
S22C05	22.7966141	0.34994873	14.4946522	22.9354405	0.30736593	14.37362
S22C06	22.7966141	0.34994873	5.7396195	22.9354405	0.30736593	5.58877891
S22C07	-1.9875677	22.7125	49.5600453	-1.7282993	22.8722952	49.5522127
S22C08	-1.9875677	22.7125	41.5550345	-1.7282993	22.8722952	41.4174104
S22C09	-1.9875677	22.7125	33.5500237	-1.7282993	22.8722952	33.2826082
S22C10	-1.9875677	22.7125	25.5450129	-1.7282993	22.8722952	25.147806
S22C11	-1.9875677	22.7125	17.5400022	-1.7282993	22.8722952	17.0130037
S22C12	-1.9875677	22.7125	9.53499137	-1.7282993	22.8722952	8.87820151
S22C13	-22.621944	2.83826274	49.6198993	-22.807595	2.43772737	49.6029792
S22C14	-22.621944	2.83826274	42.6067088	-22.807595	2.43772737	42.3094102
S22C15	-22.621944	2.83826274	35.5935182	-22.807595	2.43772737	35.0158413
S22C16	-22.621944	2.83826274	28.5803277	-22.807595	2.43772737	27.7222724
S22C17	-22.621944	2.83826274	21.5671371	-22.807595	2.43772737	20.4287035
S22C18	-22.621944	2.83826274	14.5539466	-22.807595	2.43772737	13.1351346
S22C19	-0.5594921	-22.792434	49.5169025	-0.4911811	-22.93224	49.5148388
S22C20	-0.5594921	-22.792434	40.7969878	-0.4911811	-22.93224	40.7607272
S22C21	-0.5594921	-22.792434	32.0770732	-0.4911811	-22.93224	32.0066157
S22C22	-0.5594921	-22.792434	23.3571585	-0.4911811	-22.93224	23.2525041
S22C23	-0.5594921	-22.792434	14.6372439	-0.4911811	-22.93224	14.4983926
S22C24	-0.5594921	-22.792434	5.91732919	-0.4911811	-22.93224	5.74428102
S22R01	20.597598	9.77481653	44.4591436	20.7564404	9.76212521	44.4361506
S22R02	9.7757115	20.5971732	45.7343047	9.97792666	20.6535684	45.7029106

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S22R03	-5.4538824	22.1373722	47.5926487	-5.170916	22.3470475	47.5372841
S22R04	-15.789211	16.447155	49.341565	-15.518742	16.8907531	49.2548805
S22R05	-17.783233	14.26761	49.7905314	-17.746665	14.5321983	49.7431524
S22R06	-18.23389	13.6869772	49.8809372	-18.284093	13.8499401	49.8490922
S22R07	-18.464904	13.3736837	49.9066933	-18.561359	13.4760842	49.8796546
S22R08	-18.656112	13.1056304	49.9047087	-18.790374	13.154876	49.8772946
S22R09	-18.892209	12.7629353	49.8727515	-19.071072	12.7445322	49.8394104
S22R10	-19.362806	12.037019	49.7604128	-19.617543	11.8861655	49.7083995
S22R11	-21.155106	8.50115137	49.1525679	-21.472533	8.06593127	49.0635859
S22R12	-22.362135	-4.4433091	47.2623221	-22.440088	-4.750933	47.2128753
S22R13	-14.460465	-17.62677	45.4854459	-14.437753	-17.823585	45.4560198
S22R14	-0.0957776	-22.799099	44.311856	-0.0263735	-22.937485	44.2896121
S22R15	14.1430252	-17.882475	43.7583592	14.2438268	-17.978941	43.7386366
S22R16	22.1912737	-5.230244	43.806775	22.3196232	-5.2880363	43.7868486

Source S23

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S23C01	22.7816541	0.89683833	49.6536215	22.9240162	0.78637743	49.6347004
S23C02	22.7816541	0.89683833	41.2058264	22.9240162	0.78637743	41.1188919
S23C03	22.7816541	0.89683833	32.7580313	22.9240162	0.78637743	32.6030834
S23C04	22.7816541	0.89683833	24.3102362	22.9240162	0.78637743	24.0872748
S23C05	22.7816541	0.89683833	15.8624411	22.9240162	0.78637743	15.5714663
S23C06	22.7816541	0.89683833	7.41464606	22.9240162	0.78637743	7.05565778
S23C07	0.62742089	22.7906653	49.8080726	0.5507065	22.9308881	49.7704047
S23C08	0.62742089	22.7906653	41.9154642	0.5507065	22.9308881	41.7423963
S23C09	0.62742089	22.7906653	34.0228559	0.5507065	22.9308881	33.7143878
S23C10	0.62742089	22.7906653	26.1302476	0.5507065	22.9308881	25.6863793
S23C11	0.62742089	22.7906653	18.2376393	0.5507065	22.9308881	17.6583709
S23C12	0.62742089	22.7906653	10.3450309	0.5507065	22.9308881	9.63036239
S23C13	-22.792007	0.57663634	49.5987734	-22.931914	0.50620785	49.5867095
S23C14	-22.792007	0.57663634	40.9538222	-22.931914	0.50620785	40.8983939
S23C15	-22.792007	0.57663634	32.3088711	-22.931914	0.50620785	32.2100782
S23C16	-22.792007	0.57663634	23.6639199	-22.931914	0.50620785	23.5217625
S23C17	-22.792007	0.57663634	15.0189688	-22.931914	0.50620785	14.8334469
S23C18	-22.792007	0.57663634	6.37401763	-22.931914	0.50620785	6.14513119
S23C19	0.1506032	-22.798803	49.5739483	0.13230966	-22.937118	49.5649659
S23C20	0.1506032	-22.798803	40.8397615	0.13230966	-22.937118	40.7984912
S23C21	0.1506032	-22.798803	32.1055746	0.13230966	-22.937118	32.0320164
S23C22	0.1506032	-22.798803	23.3713878	0.13230966	-22.937118	23.2655416
S23C23	0.1506032	-22.798803	14.6372009	0.13230966	-22.937118	14.4990669
S23C24	0.1506032	-22.798803	5.90301407	0.13230966	-22.937118	5.73259212
S23R01	18.5999159	13.1852649	49.5302589	18.782661	13.1658858	49.4967777
S23R02	14.5081707	17.5875258	50.1321829	14.6650375	17.6370514	50.1009798
S23R03	11.025895	19.9558943	50.4442467	11.1344962	20.0537254	50.41567

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S23R04	7.95053467	21.3681323	50.5520235	8.00435466	21.4955626	50.5246215
S23R05	4.79428687	22.2895243	50.4937873	4.7886222	22.4320753	50.465733
S23R06	0.94275366	22.7798002	50.248465	0.87087606	22.9209616	50.2181103
S23R07	-4.4183777	22.3670744	49.739935	-4.5573129	22.4802092	49.706888
S23R08	-11.747008	19.5401096	48.9019788	-11.927036	19.5927213	48.8688314
S23R09	-19.252624	12.2124746	47.8495635	-19.426898	12.1952671	47.8198339
S23R10	-22.793359	0.52045533	46.8680785	-22.933089	0.44983794	46.8423509
S23R11	-19.362461	-12.037574	46.1853537	-19.45945	-12.143257	46.162284
S23R12	-9.339703	-20.79851	45.90607	-9.3919093	-20.926561	45.8840227
S23R13	3.89908957	-22.463419	46.0603075	3.89452485	-22.604459	46.0377006
S23R14	15.6491773	-16.58045	46.6323197	15.6978617	-16.724415	46.6075325
S23R15	22.0461773	-5.8115529	47.5444323	22.1544683	-5.9420906	47.5159372
S23R16	22.1763667	5.29309379	48.6068665	22.33934	5.20411321	48.5744487

Source S24

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S24C01	22.7549004	1.42217731	48.2810524	22.9037888	1.2431262	48.434517
S24C02	22.7549004	1.42217731	39.9472743	22.9037888	1.2431262	40.0168621
S24C03	22.7549004	1.42217731	31.6134963	22.9037888	1.2431262	31.5992072
S24C04	22.7549004	1.42217731	23.2797182	22.9037888	1.2431262	23.1815522
S24C05	22.7549004	1.42217731	14.9459402	22.9037888	1.2431262	14.7638973
S24C06	22.7549004	1.42217731	6.6121621	22.9037888	1.2431262	6.3462424
S24C07	2.07760984	22.7044405	45.2030117	1.80473586	22.8663909	45.7673796
S24C08	2.07760984	22.7044405	38.5515522	1.80473586	22.8663909	38.807462
S24C09	2.07760984	22.7044405	31.9000928	1.80473586	22.8663909	31.8475444
S24C10	2.07760984	22.7044405	25.2486333	1.80473586	22.8663909	24.8876269
S24C11	2.07760984	22.7044405	18.5971738	1.80473586	22.8663909	17.9277093
S24C12	2.07760984	22.7044405	11.9457144	1.80473586	22.8663909	10.9677917
S24C13	-22.788801	0.69183603	48.9070276	-22.929464	0.60711779	48.9796396
S24C14	-22.788801	0.69183603	40.2311196	-22.929464	0.60711779	40.2640452
S24C15	-22.788801	0.69183603	31.5552117	-22.929464	0.60711779	31.5484508
S24C16	-22.788801	0.69183603	22.8793037	-22.929464	0.60711779	22.8328564
S24C17	-22.788801	0.69183603	14.2033958	-22.929464	0.60711779	14.117262
S24C18	-22.788801	0.69183603	5.52748781	-22.929464	0.60711779	5.40166759
S24C19	0.21019322	-22.798331	49.0652707	0.18465167	-22.936757	49.1180967
S24C20	0.21019322	-22.798331	40.3028742	0.18465167	-22.936757	40.3268279
S24C21	0.21019322	-22.798331	31.5404777	0.18465167	-22.936757	31.535559
S24C22	0.21019322	-22.798331	22.7780811	0.18465167	-22.936757	22.7442902
S24C23	0.21019322	-22.798331	14.0156846	0.18465167	-22.936757	13.9530214
S24C24	0.21019322	-22.798331	5.25328804	0.18465167	-22.936757	5.16175253
S24R01	13.4131291	18.4362699	32.7794565	13.7021113	18.3951367	32.7660041
S24R02	10.8668039	20.0429702	32.8861328	11.0560404	20.0970863	32.8765513
S24R03	9.62019446	20.670267	32.921308	9.733498	20.7698802	32.9136621
S24R04	8.72809655	21.0624882	32.9301984	8.78097974	21.1901699	32.9230891

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S24R05	7.81991598	21.4162787	32.9212917	7.81022631	21.5668559	32.9136448
S24R06	6.49435616	21.8547802	32.8860834	6.39877683	22.0269054	32.8764995
S24R07	3.55542155	22.5203698	32.7793018	3.32191999	22.695677	32.765846
S24R08	-4.4563002	22.3595498	32.475973	-4.7635306	22.437417	32.4621863
S24R09	-16.093488	16.1495421	32.0315977	-16.316826	16.1211072	32.0222983
S24R10	-22.58962	3.08499093	31.6622557	-22.739707	3.00576375	31.6555206
S24R11	-19.761154	-11.37123	31.4356528	-19.858656	-11.478793	31.4300341
S24R12	-8.7225403	-21.06479	31.3602491	-8.7754299	-21.192469	31.3549457
S24R13	5.93756113	-22.012575	31.435782	5.93044073	-22.15759	31.4301627
S24R14	18.1578268	-13.787727	31.6625142	18.2079366	-13.949909	31.6557777
S24R15	22.7992567	0.044422	32.0319656	22.9371105	-0.133664	32.022663
S24R16	18.9604835	12.6612853	32.4763316	19.2328432	12.4990659	32.4625414

Source S25

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S25C01	22.7883466	0.70663921	48.7867317	22.9291171	0.6200764	48.8741065
S25C02	22.7883466	0.70663921	40.4522625	22.9291171	0.6200764	40.4581103
S25C03	22.7883466	0.70663921	32.1177934	22.9291171	0.6200764	32.0421141
S25C04	22.7883466	0.70663921	23.7833243	22.9291171	0.6200764	23.6261179
S25C05	22.7883466	0.70663921	15.4488551	22.9291171	0.6200764	15.2101217
S25C06	22.7883466	0.70663921	7.11438598	22.9291171	0.6200764	6.79412551
S25C07	0.67035401	22.7894429	48.7300122	0.58830903	22.9299542	48.8242514
S25C08	0.67035401	22.7894429	40.4484664	0.58830903	22.9299542	40.4547736
S25C09	0.67035401	22.7894429	32.1669206	0.58830903	22.9299542	32.0852959
S25C10	0.67035401	22.7894429	23.8853749	0.58830903	22.9299542	23.7158181
S25C11	0.67035401	22.7894429	15.6038291	0.58830903	22.9299542	15.3463403
S25C12	0.67035401	22.7894429	7.32228331	0.58830903	22.9299542	6.97686257
S25C13	-22.796808	0.33710743	49.1597301	-22.935589	0.2960936	49.2011287
S25C14	-22.796808	0.33710743	40.4772265	-22.935589	0.2960936	40.4799972
S25C15	-22.796808	0.33710743	31.7947229	-22.935589	0.2960936	31.7588657
S25C16	-22.796808	0.33710743	23.1122193	-22.935589	0.2960936	23.0377342
S25C17	-22.796808	0.33710743	14.4297157	-22.935589	0.2960936	14.3166028
S25C18	-22.796808	0.33710743	5.74721205	-22.935589	0.2960936	5.59547127
S25C19	0.28581822	-22.797508	49.171701	0.25106409	-22.936126	49.2116206
S25C20	0.28581822	-22.797508	40.4780277	0.25106409	-22.936126	40.4806994
S25C21	0.28581822	-22.797508	31.7843543	0.25106409	-22.936126	31.7497782
S25C22	0.28581822	-22.797508	23.090681	0.25106409	-22.936126	23.018857
S25C23	0.28581822	-22.797508	14.3970077	0.25106409	-22.936126	14.2879358
S25C24	0.28581822	-22.797508	5.70333434	0.25106409	-22.936126	5.55701461
S25R01	21.0929618	8.65419217	38.6178788	21.2467117	8.64327186	38.6029032
S25R02	18.5461109	13.260839	38.7789712	18.6808057	13.3100115	38.7646973
S25R03	15.5783351	16.6470284	38.8390483	15.676746	16.7442092	38.8251327
S25R04	12.0913976	19.3288951	38.8089879	12.1412238	19.4607192	38.7948861
S25R05	7.64681772	21.4786931	38.6830573	7.63737541	21.6286709	38.6683223

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S25R06	1.6052579	22.7427181	38.4437972	1.53128741	22.8863292	38.4284346
S25R07	-6.3610331	21.8939567	38.0877268	-6.4886096	22.0006102	38.0724548
S25R08	-15.078244	17.1013048	37.6641543	-15.231223	17.1504741	37.6498814
S25R09	-21.470452	7.66992773	37.2681131	-21.620508	7.66045254	37.2551194
S25R10	-22.348778	-4.5100092	36.9858112	-22.477827	-4.569047	36.9737709
S25R11	-16.562496	-15.668178	36.8665242	-16.659756	-15.766466	36.8548814
S25R12	-5.6965795	-22.076165	36.9273046	-5.7536106	-22.204163	36.91546
S25R13	6.67066871	-21.801611	37.1597515	6.66257698	-21.948553	37.1471241
S25R14	16.6236181	-15.603314	37.5262833	16.6725419	-15.752944	37.512437
S25R15	21.8516906	-6.5047444	37.951979	21.9579394	-6.6315763	37.9369551
S25R16	22.7001502	2.12397314	38.3387595	22.845865	2.04825711	38.3233178

Source S26

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S26C01	22.7796263	0.94694669	48.6061867	22.9224738	0.83012135	48.7164569
S26C02	22.7796263	0.94694669	40.1317363	22.9224738	0.83012135	40.1771692
S26C03	22.7796263	0.94694669	31.6572859	22.9224738	0.83012135	31.6378815
S26C04	22.7796263	0.94694669	23.1828356	22.9224738	0.83012135	23.0985938
S26C05	22.7796263	0.94694669	14.7083852	22.9224738	0.83012135	14.559306
S26C06	22.7796263	0.94694669	6.23393483	22.9224738	0.83012135	6.02001832
S26C07	0.61006835	22.7911364	47.2274235	0.53550408	22.9312481	47.5051841
S26C08	0.61006835	22.7911364	39.5636664	0.53550408	22.9312481	39.6781077
S26C09	0.61006835	22.7911364	31.8999094	0.53550408	22.9312481	31.8510314
S26C10	0.61006835	22.7911364	24.2361524	0.53550408	22.9312481	24.023955
S26C11	0.61006835	22.7911364	16.5723953	0.53550408	22.9312481	16.1968786
S26C12	0.61006835	22.7911364	8.90863832	0.53550408	22.9312481	8.36980218
S26C13	-22.789638	0.66369025	48.8735496	-22.930103	0.58247368	48.950209
S26C14	-22.789638	0.66369025	40.2418936	-22.930103	0.58247368	40.2734784
S26C15	-22.789638	0.66369025	31.6102376	-22.930103	0.58247368	31.5967477
S26C16	-22.789638	0.66369025	22.9785816	-22.930103	0.58247368	22.920017
S26C17	-22.789638	0.66369025	14.3469257	-22.930103	0.58247368	14.2432864
S26C18	-22.789638	0.66369025	5.71526971	-22.930103	0.58247368	5.56655571
S26C19	0.11650379	-22.799002	49.0660097	0.10235453	-22.937272	49.1187173
S26C20	0.11650379	-22.799002	40.3211899	0.10235453	-22.937272	40.3429062
S26C21	0.11650379	-22.799002	31.5763701	0.10235453	-22.937272	31.567095
S26C22	0.11650379	-22.799002	22.8315503	0.10235453	-22.937272	22.7912839
S26C23	0.11650379	-22.799002	14.0867305	0.10235453	-22.937272	14.0154727
S26C24	0.11650379	-22.799002	5.34191067	0.10235453	-22.937272	5.23966154
S26R01	17.464202	14.6563886	33.47745	17.6635564	14.6331023	33.4667613
S26R02	12.8374191	18.8416759	33.6857253	13.0073597	18.8927896	33.6758388
S26R03	9.34313503	20.7969687	33.7917044	9.45745962	20.8970181	33.7829281
S26R04	6.56253519	21.8344043	33.832517	6.61824307	21.9619618	33.8243206
S26R05	3.90647332	22.4621358	33.8266401	3.90189965	22.6031875	33.8183548
S26R06	0.77371821	22.7861677	33.7713601	0.70235167	22.9267444	33.7623271

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S26R07	-3.6801225	22.5003284	33.6422863	-3.8240964	22.6164806	33.6320975
S26R08	-10.364952	20.3070397	33.4022927	-10.559925	20.3621434	33.3916345
S26R09	-18.180106	13.7583364	33.0652338	-18.368694	13.7375388	33.0556874
S26R10	-22.686922	2.26089543	32.7287125	-22.833221	2.18470189	32.7207151
S26R11	-20.093847	-10.772437	32.4807113	-20.191947	-10.881829	32.4737689
S26R12	-10.375035	-20.30189	32.3602469	-10.426216	-20.430931	32.3537689
S26R13	3.10718937	-22.586577	32.3787242	3.10357521	-22.726564	32.3721771
S26R14	15.3834738	-16.827264	32.5346775	15.4321444	-16.969909	32.5275165
S26R15	22.1111247	-5.5593387	32.8115515	22.2202166	-5.6912986	32.8031769
S26R16	21.8946818	6.35853681	33.1588094	22.0656796	6.26375989	33.1488615

Source S27

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S27C01	22.7709791	-1.1360429	47.5872449	22.9159135	-0.9948952	47.8248952
S27C02	22.7709791	-1.1360429	39.0717766	22.9159135	-0.9948952	39.2492262
S27C03	22.7709791	-1.1360429	30.5563083	22.9159135	-0.9948952	30.6735573
S27C04	22.7709791	-1.1360429	22.04084	22.9159135	-0.9948952	22.0978884
S27C05	22.7709791	-1.1360429	13.5253718	22.9159135	-0.9948952	13.5222194
S27C06	22.7709791	-1.1360429	5.00990346	22.9159135	-0.9948952	4.9465505
S27C07	0.05736459	22.7992278	48.6020829	0.05039899	22.9374446	48.7111141
S27C08	0.05736459	22.7992278	39.8295398	0.05039899	22.9374446	39.9109516
S27C09	0.05736459	22.7992278	31.0569966	0.05039899	22.9374446	31.1107891
S27C10	0.05736459	22.7992278	22.2844535	0.05039899	22.9374446	22.3106267
S27C11	0.05736459	22.7992278	13.5119104	0.05039899	22.9374446	13.5104642
S27C12	0.05736459	22.7992278	4.73936732	0.05039899	22.9374446	4.7103017
S27C13	-22.780251	-0.9317932	47.93114	-22.922949	-0.8168958	48.1245927
S27C14	-22.780251	-0.9317932	39.3285576	-22.922949	-0.8168958	39.4730055
S27C15	-22.780251	-0.9317932	30.7259751	-22.922949	-0.8168958	30.8214184
S27C16	-22.780251	-0.9317932	22.1233926	-22.922949	-0.8168958	22.1698312
S27C17	-22.780251	-0.9317932	13.5208102	-22.922949	-0.8168958	13.5182441
S27C18	-22.780251	-0.9317932	4.91822768	-22.922949	-0.8168958	4.86665695
S27C19	0.92604577	-22.780486	35.0047797	0.81187892	-22.923127	36.791812
S27C20	0.92604577	-22.780486	29.6766528	0.81187892	-22.923127	31.011001
S27C21	0.92604577	-22.780486	24.3485258	0.81187892	-22.923127	25.2301899
S27C22	0.92604577	-22.780486	19.0203989	0.81187892	-22.923127	19.4493789
S27C23	0.92604577	-22.780486	13.6922719	0.81187892	-22.923127	13.6685678
S27C24	0.92604577	-22.780486	8.36414499	0.81187892	-22.923127	7.88775679
S27R01	11.4294418	-19.727543	14.803364	11.7945222	-19.672777	14.8365291
S27R02	20.1563287	-10.655069	15.7323624	20.3807296	-10.524009	15.7544567
S27R03	22.4677387	3.87411878	16.5835989	22.583065	4.01672513	16.5985148
S27R04	15.2845615	16.9171588	17.1433504	15.3332319	17.0593349	17.1552129
S27R05	1.66318527	22.7385553	17.3864403	1.661266	22.8772617	17.3972456
S27R06	-12.637724	18.9761962	17.3151455	-12.687215	19.109251	17.3262468
S27R07	-21.64295	7.16873771	16.9281988	-21.747449	7.29228002	16.9411207

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S27R08	-21.454775	-7.7136691	16.2282287	-21.638276	-7.6101185	16.2456855
S27R09	-12.715985	-18.923842	15.2900702	-13.028115	-18.878483	15.3175387
S27R10	-3.4612168	-22.535041	14.5164719	-3.801826	-22.620235	14.5488746
S27R11	0.07608669	-22.799173	14.2425342	-0.1023711	-22.937272	14.2646014
S27R12	1.42086707	-22.754982	14.161693	1.34749392	-22.897886	14.1781512
S27R13	2.24022548	-22.688972	14.1377641	2.23763364	-22.828095	14.1523558
S27R14	2.97962529	-22.603759	14.1442766	3.04161263	-22.73494	14.1593848
S27R15	3.94288065	-22.455774	14.1876614	4.0850099	-22.570813	14.2060438
S27R16	5.86450724	-22.03215	14.3252028	6.13435195	-22.102005	14.3517714

Source S28

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S28C01	22.7675474	-1.2028565	40.3866391	22.9133176	-1.0529866	41.522118
S28C02	22.7675474	-1.2028565	33.2934201	22.9133176	-1.0529866	34.1913236
S28C03	22.7675474	-1.2028565	26.200201	22.9133176	-1.0529866	26.8605293
S28C04	22.7675474	-1.2028565	19.106982	22.9133176	-1.0529866	19.5297349
S28C05	22.7675474	-1.2028565	12.0137629	22.9133176	-1.0529866	12.1989406
S28C06	22.7675474	-1.2028565	4.92054391	22.9133176	-1.0529866	4.86814626
S28C07	0.71472893	22.7880943	47.8305163	0.62715722	22.9289245	48.0350687
S28C08	0.71472893	22.7880943	39.179821	0.62715722	22.9289245	39.3415751
S28C09	0.71472893	22.7880943	30.5291257	0.62715722	22.9289245	30.6480814
S28C10	0.71472893	22.7880943	21.8784304	0.62715722	22.9289245	21.9545878
S28C11	0.71472893	22.7880943	13.2277351	0.62715722	22.9289245	13.2610942
S28C12	0.71472893	22.7880943	4.57703977	0.62715722	22.9289245	4.56760052
S28C13	-22.798789	-0.1526464	48.3434847	-22.937108	-0.1341045	48.4839664
S28C14	-22.798789	-0.1526464	39.5854614	-22.937108	-0.1341045	39.6965502
S28C15	-22.798789	-0.1526464	30.8274382	-22.937108	-0.1341045	30.9091341
S28C16	-22.798789	-0.1526464	22.0694149	-22.937108	-0.1341045	22.121718
S28C17	-22.798789	-0.1526464	13.3113917	-22.937108	-0.1341045	13.3343019
S28C18	-22.798789	-0.1526464	4.5533684	-22.937108	-0.1341045	4.54688575
S28C19	1.17862528	-22.768815	46.7469343	1.03192706	-22.914276	47.0895961
S28C20	1.17862528	-22.768815	38.322956	1.03192706	-22.914276	38.5939229
S28C21	1.17862528	-22.768815	29.8989776	1.03192706	-22.914276	30.0982497
S28C22	1.17862528	-22.768815	21.4749993	1.03192706	-22.914276	21.6025765
S28C23	1.17862528	-22.768815	13.0510209	1.03192706	-22.914276	13.1069034
S28C24	1.17862528	-22.768815	4.62704259	1.03192706	-22.914276	4.61123017
S28R01	22.123872	-5.5083909	7.08850319	22.2678879	-5.5018246	7.11194069
S28R02	22.5304231	-3.4911481	7.21878604	22.6825625	-3.4103172	7.24591615
S28R03	22.7992946	-0.0156726	7.55978694	22.9369274	0.1620774	7.59353049
S28R04	21.7293497	6.9024229	8.33586145	21.7946024	7.15011971	8.37230537
S28R05	15.6583549	16.5717833	9.51885963	15.6317873	16.7861887	9.5480958
S28R06	3.43699386	22.5387478	10.6364521	3.35638117	22.6906062	10.6587952
S28R07	-10.55812	20.2072806	11.3988544	-10.6682	20.3056255	11.4175239
S28R08	-20.516469	9.94397142	11.7281505	-20.64504	9.9955606	11.7454659

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S28R09	-22.401332	-4.2412738	11.6113155	-22.542909	-4.2362922	11.6290967
S28R10	-15.494611	-16.724985	11.051826	-15.644917	-16.773953	11.0720686
S28R11	-2.8126308	-22.625145	10.0852217	-2.9631339	-22.745302	10.110747
S28R12	9.78678783	-20.591913	8.87650456	9.66545866	-20.80163	8.91013289
S28R13	17.1636047	-15.00729	7.86241684	17.1305559	-15.253621	7.8987851
S28R14	19.9526052	-11.031846	7.34354199	20.0064177	-11.219276	7.37359652
S28R15	21.061231	-8.7311298	7.13366436	21.1623456	-8.8478266	7.1584547
S28R16	21.6714561	-7.0820952	7.06561163	21.7988814	-7.1370635	7.08833462

Source S29

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S29C01	22.7986463	0.1726522	48.9713048	22.9369985	0.15167776	49.0355327
S29C02	22.7986463	0.1726522	40.3978798	22.9369985	0.15167776	40.4102858
S29C03	22.7986463	0.1726522	31.8244549	22.9369985	0.15167776	31.7850389
S29C04	22.7986463	0.1726522	23.2510299	22.9369985	0.15167776	23.159792
S29C05	22.7986463	0.1726522	14.6776049	22.9369985	0.15167776	14.534545
S29C06	22.7986463	0.1726522	6.10417993	22.9369985	0.15167776	5.90929813
S29C07	-0.0050675	22.7992994	48.8744159	-0.0044522	22.9374996	48.9503742
S29C08	-0.0050675	22.7992994	40.3791652	-0.0044522	22.9374996	40.393837
S29C09	-0.0050675	22.7992994	31.8839146	-0.0044522	22.9374996	31.8372998
S29C10	-0.0050675	22.7992994	23.388664	-0.0044522	22.9374996	23.2807625
S29C11	-0.0050675	22.7992994	14.8934133	-0.0044522	22.9374996	14.7242253
S29C12	-0.0050675	22.7992994	6.39816268	-0.0044522	22.9374996	6.16768807
S29C13	-22.798636	0.17396208	48.9672937	-22.936991	0.15282834	49.0320094
S29C14	-22.798636	0.17396208	40.3971051	-22.936991	0.15282834	40.4096052
S29C15	-22.798636	0.17396208	31.8269164	-22.936991	0.15282834	31.7872011
S29C16	-22.798636	0.17396208	23.2567278	-22.936991	0.15282834	23.1647969
S29C17	-22.798636	0.17396208	14.6865392	-22.936991	0.15282834	14.5423928
S29C18	-22.798636	0.17396208	6.11635053	-22.936991	0.15282834	5.91998862
S29C19	-0.0037289	-22.7993	49.0396647	-0.0032762	-22.9375	49.0955585
S29C20	-0.0037289	-22.7993	40.4110839	-0.0032762	-22.9375	40.4218801
S29C21	-0.0037289	-22.7993	31.7825031	-0.0032762	-22.9375	31.7482016
S29C22	-0.0037289	-22.7993	23.1539223	-0.0032762	-22.9375	23.0745232
S29C23	-0.0037289	-22.7993	14.5253415	-0.0032762	-22.9375	14.4008447
S29C24	-0.0037289	-22.7993	5.8967607	-0.0032762	-22.9375	5.72716627
S29R01	22.5923438	3.06497672	36.5065263	22.7322823	3.06141274	36.4951813
S29R02	19.7886933	11.3232371	36.6011272	19.9190813	11.3736145	36.5896861
S29R03	14.4437639	17.6404581	36.6795105	14.5439995	17.7369948	36.6680213
S29R04	7.53633392	21.5177079	36.7313757	7.59068802	21.6451002	36.7198726
S29R05	-0.0779305	22.7991668	36.7507788	-0.0778408	22.9373679	36.7392744
S29R06	-7.6715498	21.469872	36.7356952	-7.7257269	21.5972695	36.7241916
S29R07	-14.527288	17.5717379	36.6876891	-14.627373	17.6683014	36.6761967
S29R08	-19.816456	11.2745792	36.6121777	-19.946764	11.3249946	36.600728
S29R09	-22.591816	3.06886764	36.5189119	-22.731759	3.06529904	36.5075522

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S29R10	-21.985466	-6.0371651	36.4215946	-22.113258	-6.093662	36.4103659
S29R11	-17.590568	-14.504482	36.3359416	-17.687124	-14.604607	36.3248544
S29R12	-9.8339917	-20.569411	36.2765353	-9.8856894	-20.697876	36.2655581
S29R13	-0.0740572	-22.79918	36.2537189	-0.073972	-22.937381	36.2427863
S29R14	9.70938781	-20.628521	36.2714844	9.76121041	-20.756871	36.260517
S29R15	17.5215944	-14.587728	36.3267235	17.6181793	-14.687705	36.3156527
S29R16	21.9690915	-6.0964827	36.4098053	22.0968521	-6.1528884	36.3985948

Source S30

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S30C01	22.7555477	-1.4117816	46.8527578	22.9042751	-1.2341344	47.1858655
S30C02	22.7555477	-1.4117816	38.4949514	22.9042751	-1.2341344	38.7472506
S30C03	22.7555477	-1.4117816	30.1371449	22.9042751	-1.2341344	30.3086357
S30C04	22.7555477	-1.4117816	21.7793385	22.9042751	-1.2341344	21.8700207
S30C05	22.7555477	-1.4117816	13.4215321	22.9042751	-1.2341344	13.4314058
S30C06	22.7555477	-1.4117816	5.06372563	22.9042751	-1.2341344	4.99279093
S30C07	0.19207327	22.7984909	48.5335291	0.16873657	22.9368793	48.6509543
S30C08	0.19207327	22.7984909	39.7679849	0.16873657	22.9368793	39.856924
S30C09	0.19207327	22.7984909	31.0024408	0.16873657	22.9368793	31.0628937
S30C10	0.19207327	22.7984909	22.2368966	0.16873657	22.9368793	22.2688634
S30C11	0.19207327	22.7984909	13.4713525	0.16873657	22.9368793	13.4748331
S30C12	0.19207327	22.7984909	4.70580831	0.16873657	22.9368793	4.68080281
S30C13	-22.78772	-0.7265537	48.1376338	-22.928639	-0.6375062	48.3046075
S30C14	-22.78772	-0.7265537	39.4681297	-22.928639	-0.6375062	39.5945973
S30C15	-22.78772	-0.7265537	30.7986257	-22.928639	-0.6375062	30.8845872
S30C16	-22.78772	-0.7265537	22.1291216	-22.928639	-0.6375062	22.174577
S30C17	-22.78772	-0.7265537	13.4596176	-22.928639	-0.6375062	13.4645669
S30C18	-22.78772	-0.7265537	4.79011352	-22.928639	-0.6375062	4.75455676
S30C19	2.21215809	-22.691726	38.3689014	1.91844184	-22.857132	39.8468176
S30C20	2.21215809	-22.691726	32.0691907	1.91844184	-22.857132	33.1885798
S30C21	2.21215809	-22.691726	25.7694801	1.91844184	-22.857132	26.530342
S30C22	2.21215809	-22.691726	19.4697694	1.91844184	-22.857132	19.8721041
S30C23	2.21215809	-22.691726	13.1700588	1.91844184	-22.857132	13.2138663
S30C24	2.21215809	-22.691726	6.87034812	1.91844184	-22.857132	6.55562841
S30R01	12.5588057	-19.028518	12.9492312	12.8766291	-18.982132	12.9828732
S30R02	18.7287982	-13.001546	13.7072274	19.0121414	-12.832279	13.739837
S30R03	22.799026	0.11176611	14.7627462	22.9356913	0.28804351	14.783676
S30R04	17.9294193	14.0834657	15.6010483	17.9792711	14.2434096	15.6161636
S30R05	5.47374805	22.1324685	16.0968303	5.46722608	22.2764078	16.1095236
S30R06	-9.2363822	20.8445994	16.2400014	-9.2886991	20.9725767	16.2520957
S30R07	-20.076074	10.8055224	16.0324406	-20.174138	10.9148097	16.0454165
S30R08	-22.47342	-3.8410231	15.4720168	-22.627433	-3.7587478	15.4878673
S30R09	-15.43103	-16.783664	14.5773508	-15.667902	-16.752485	14.5999643
S30R10	-3.5515514	-22.520981	13.52464	-3.8888346	-22.605439	13.5593521

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S30R11	3.77113101	-22.485254	12.8769297	3.53295145	-22.663785	12.9084461
S30R12	6.17838643	-21.946198	12.6764946	6.08465027	-22.11574	12.698164
S30R13	7.2637554	-21.611246	12.6130653	7.25485169	-21.759964	12.6303939
S30R14	8.02804197	-21.339134	12.5989043	8.08176473	-21.466578	12.6151933
S30R15	8.80721376	-21.029528	12.6199479	8.9236067	-21.130503	12.6377731
S30R16	9.95859721	-20.509374	12.6978782	10.1585032	-20.565352	12.720885

Source S31

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S31C01	22.7713305	-1.128976	47.7092241	22.9161796	-0.9887468	47.9316551
S31C02	22.7713305	-1.128976	39.2802492	22.9161796	-0.9887468	39.4317535
S31C03	22.7713305	-1.128976	30.8512743	22.9161796	-0.9887468	30.931852
S31C04	22.7713305	-1.128976	22.4222994	22.9161796	-0.9887468	22.4319505
S31C05	22.7713305	-1.128976	13.9933245	22.9161796	-0.9887468	13.932049
S31C06	22.7713305	-1.128976	5.56434955	22.9161796	-0.9887468	5.43214748
S31C07	0.15164063	22.7987957	48.7298485	0.13322097	22.9371131	48.8233981
S31C08	0.15164063	22.7987957	39.9754269	0.13322097	22.9371131	40.0391463
S31C09	0.15164063	22.7987957	31.2210052	0.13322097	22.9371131	31.2548945
S31C10	0.15164063	22.7987957	22.4665836	0.13322097	22.9371131	22.4706427
S31C11	0.15164063	22.7987957	13.712162	0.13322097	22.9371131	13.6863909
S31C12	0.15164063	22.7987957	4.95774038	0.13322097	22.9371131	4.90213905
S31C13	-22.788765	-0.6930199	48.4007354	-22.929436	-0.6081542	48.5353489
S31C14	-22.788765	-0.6930199	39.7512581	-22.929436	-0.6081542	39.8429474
S31C15	-22.788765	-0.6930199	31.1017809	-22.929436	-0.6081542	31.1505459
S31C16	-22.788765	-0.6930199	22.4523036	-22.929436	-0.6081542	22.4581444
S31C17	-22.788765	-0.6930199	13.8028263	-22.929436	-0.6081542	13.7657429
S31C18	-22.788765	-0.6930199	5.15334907	-22.929436	-0.6081542	5.07334139
S31C19	1.05154172	-22.775038	44.159436	0.92132587	-22.918989	44.8207755
S31C20	1.05154172	-22.775038	36.8623828	0.92132587	-22.918989	37.3128408
S31C21	1.05154172	-22.775038	29.5653296	0.92132587	-22.918989	29.8049061
S31C22	1.05154172	-22.775038	22.2682763	0.92132587	-22.918989	22.2969714
S31C23	1.05154172	-22.775038	14.9712231	0.92132587	-22.918989	14.7890367
S31C24	1.05154172	-22.775038	7.67416987	0.92132587	-22.918989	7.28110202
S31R01	15.7632537	-16.472034	21.6820594	15.9931584	-16.442256	21.6912212
S31R02	20.9624688	-8.9656557	21.9420528	21.1605388	-8.8521468	21.9506249
S31R03	22.5511725	3.35450447	22.2493907	22.6687664	3.50084762	22.2561309
S31R04	16.5390932	15.6928798	22.4987568	16.5879831	15.8419608	22.5042033
S31R05	4.16710418	22.4152476	22.6449095	4.16221328	22.5567038	22.6497276
S31R06	-9.8634177	20.5553174	22.6764009	-9.9150861	20.6838094	22.6810953
S31R07	-20.084275	10.7902728	22.5918622	-20.182355	10.8996082	22.5968979
S31R08	-22.606673	-2.9574361	22.3957871	-22.756142	-2.8786973	22.4017334
S31R09	-17.100776	-15.078844	22.1107014	-17.306024	-15.054249	22.1182684
S31R10	-7.8747114	-21.396191	21.8097122	-8.1047918	-21.457895	21.8188654
S31R11	-0.8320726	-22.784111	21.6034011	-1.0005186	-22.915669	21.6120496

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S31R12	3.02397724	-22.597868	21.5055197	2.94498452	-22.747659	21.5126965
S31R13	5.36348977	-22.159446	21.4663282	5.3571084	-22.303145	21.4726146
S31R14	7.20724109	-21.630158	21.4591541	7.26203716	-21.757567	21.4652586
S31R15	9.11664815	-20.897244	21.4793597	9.23183161	-20.997671	21.4859617
S31R16	11.6800423	-19.580212	21.5403281	11.860735	-19.632928	21.5481481

Source S32						
Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S32C01	22.784051	0.83372779	48.4207048	22.9258412	0.73123999	48.5533795
S32C02	22.784051	0.83372779	39.8383762	22.9258412	0.73123999	39.9197077
S32C03	22.784051	0.83372779	31.2560475	22.9258412	0.73123999	31.2860359
S32C04	22.784051	0.83372779	22.6737188	22.9258412	0.73123999	22.652364
S32C05	22.784051	0.83372779	14.0913901	22.9258412	0.73123999	14.0186922
S32C06	22.784051	0.83372779	5.50906143	22.9258412	0.73123999	5.38502037
S32C07	-0.1748783	22.7986293	45.0651277	-0.1536331	22.9369855	45.6039
S32C08	-0.1748783	22.7986293	37.7813579	-0.1536331	22.9369855	38.1116332
S32C09	-0.1748783	22.7986293	30.4975881	-0.1536331	22.9369855	30.6193665
S32C10	-0.1748783	22.7986293	23.2138183	-0.1536331	22.9369855	23.1270998
S32C11	-0.1748783	22.7986293	15.9300485	-0.1536331	22.9369855	15.6348331
S32C12	-0.1748783	22.7986293	8.64627877	-0.1536331	22.9369855	8.14256637
S32C13	-22.781443	0.9021901	48.3320775	-22.923855	0.79105092	48.4759518
S32C14	-22.781443	0.9021901	39.7840463	-22.923855	0.79105092	39.8722434
S32C15	-22.781443	0.9021901	31.2360151	-22.923855	0.79105092	31.2685349
S32C16	-22.781443	0.9021901	22.6879839	-22.923855	0.79105092	22.6648265
S32C17	-22.781443	0.9021901	14.1399526	-22.923855	0.79105092	14.061118
S32C18	-22.781443	0.9021901	5.59192142	-22.923855	0.79105092	5.45740958
S32C19	-0.0249106	-22.799286	48.8682724	-0.0218859	-22.93749	48.9449775
S32C20	-0.0249106	-22.799286	40.1127417	-0.0218859	-22.93749	40.159763
S32C21	-0.0249106	-22.799286	31.3572109	-0.0218859	-22.93749	31.3745486
S32C22	-0.0249106	-22.799286	22.6016802	-0.0218859	-22.93749	22.5893341
S32C23	-0.0249106	-22.799286	13.8461495	-0.0218859	-22.93749	13.8041196
S32C24	-0.0249106	-22.799286	5.0906187	-0.0218859	-22.93749	5.01890512
S32R01	16.4390019	15.7976991	26.3044336	16.6558217	15.7706217	26.3051973
S32R02	9.33947414	20.798613	26.2823829	9.5474359	20.8560632	26.2831754
S32R03	4.47187561	22.35644	26.2700734	4.61046256	22.469369	26.2707619
S32R04	1.4179155	22.7551664	26.2645732	1.48339172	22.8894835	26.2651697
S32R05	-0.8817222	22.7822441	26.2628309	-0.8807071	22.920586	26.2633918
S32R06	-3.0962861	22.5880741	26.2638311	-3.1580332	22.719061	26.2644128
S32R07	-5.8294882	22.0414416	26.2681529	-5.9599263	22.1496769	26.2688128
S32R08	-9.9735822	20.5020911	26.2782928	-10.173301	20.558036	26.2790645
S32R09	-16.21215	16.0304166	26.2978699	-16.43321	16.0024532	26.2986586
S32R10	-21.900583	6.33817978	26.3243765	-22.071415	6.24352179	26.3250366
S32R11	-21.759527	-6.8066915	26.3487454	-21.864956	-6.9319972	26.3492788
S32R12	-13.850086	-18.110307	26.3651452	-13.899022	-18.246811	26.3656062

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S32R13	-0.6847905	-22.789014	26.3716396	-0.6840024	-22.927299	26.372075
S32R14	12.7500829	-18.900885	26.3678154	12.799512	-19.034217	26.3682657
S32R15	21.3435167	-8.0163816	26.3538946	21.4460576	-8.1360628	26.3544041
S32R16	22.1618643	5.35348973	26.3312428	22.3252565	5.26420241	26.3318654

Source S33

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S33C01	22.7790246	-0.9613101	48.6473191	22.9220165	-0.8426546	48.7525664
S33C02	22.7790246	-0.9613101	40.0373576	22.9220165	-0.8426546	40.094462
S33C03	22.7790246	-0.9613101	31.427396	22.9220165	-0.8426546	31.4363576
S33C04	22.7790246	-0.9613101	22.8174345	22.9220165	-0.8426546	22.7782532
S33C05	22.7790246	-0.9613101	14.2074729	22.9220165	-0.8426546	14.1201488
S33C06	22.7790246	-0.9613101	5.5975114	22.9220165	-0.8426546	5.46204441
S33C07	-0.0689584	22.7991957	49.0143802	-0.0605848	22.93742	49.073349
S33C08	-0.0689584	22.7991957	40.2365153	-0.0605848	22.93742	40.2685103
S33C09	-0.0689584	22.7991957	31.4586505	-0.0605848	22.93742	31.4636716
S33C10	-0.0689584	22.7991957	22.6807857	-0.0605848	22.93742	22.6588329
S33C11	-0.0689584	22.7991957	13.9029208	-0.0605848	22.93742	13.8539942
S33C12	-0.0689584	22.7991957	5.125056	-0.0605848	22.93742	5.04915546
S33C13	-22.766159	-1.2288627	48.4100003	-22.912268	-1.075578	48.5459636
S33C14	-22.766159	-1.2288627	39.9085946	-22.912268	-1.075578	39.9823647
S33C15	-22.766159	-1.2288627	31.4071888	-22.912268	-1.075578	31.4187658
S33C16	-22.766159	-1.2288627	22.9057831	-22.912268	-1.075578	22.8551669
S33C17	-22.766159	-1.2288627	14.4043774	-22.912268	-1.075578	14.291568
S33C18	-22.766159	-1.2288627	5.90297172	-22.912268	-1.075578	5.72796913
S33C19	-1.9434092	-22.716321	35.8141031	-1.690719	-22.875104	37.5936007
S33C20	-1.9434092	-22.716321	33.0743891	-1.690719	-22.875104	34.0398981
S33C21	-1.9434092	-22.716321	30.3346751	-1.690719	-22.875104	30.4861955
S33C22	-1.9434092	-22.716321	27.5949611	-1.690719	-22.875104	26.9324929
S33C23	-1.9434092	-22.716321	24.855247	-1.690719	-22.875104	23.3787902
S33C24	-1.9434092	-22.716321	22.115533	-1.690719	-22.875104	19.8250876
S33R01	10.7119588	-20.126153	29.539738	11.1143342	-20.064907	29.5312485
S33R02	21.1410719	-8.5359921	29.2789559	21.3337546	-8.4261391	29.2745626
S33R03	21.7255311	6.91443259	29.0988535	21.8306776	7.03920606	29.0957409
S33R04	12.565847	19.0238685	29.0032693	12.6153798	19.1567507	29.0006203
S33R05	-2.0343434	22.7083581	28.9887876	-2.0319921	22.8473174	28.9862001
S33R06	-15.792613	16.4438878	29.0547001	-15.841314	16.5886012	29.0518153
S33R07	-22.638205	2.7055064	29.2038492	-22.758893	2.85686592	29.2000734
S33R08	-19.063928	-12.504988	29.4376859	-19.331589	-12.345792	29.4313193
S33R09	-7.9618837	-21.363906	29.7113062	-8.6055146	-21.262032	29.6971852
S33R10	-3.9073286	-22.461987	29.7982052	-4.232119	-22.543693	29.7904796
S33R11	-3.2694951	-22.563654	29.8098103	-3.4164725	-22.681636	29.8052121
S33R12	-2.992407	-22.60207	29.8129312	-3.0543678	-22.73323	29.8092609
S33R13	-2.7835725	-22.628738	29.8133116	-2.7803419	-22.768369	29.8097563

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S33R14	-2.5454283	-22.656762	29.8114007	-2.4682191	-22.804315	29.8072717
S33R15	-2.1098425	-22.701468	29.8044391	-1.9032215	-22.858404	29.7983226
S33R16	-0.2387175	-22.79805	29.7664292	0.32974735	-22.93513	29.7534678

Source S34

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S34C01	22.7936002	0.50977423	48.1766687	22.9331325	0.44759223	48.338088
S34C02	22.7936002	0.50977423	39.4470363	22.9331325	0.44759223	39.5754763
S34C03	22.7936002	0.50977423	30.7174039	22.9331325	0.44759223	30.8128646
S34C04	22.7936002	0.50977423	21.9877715	22.9331325	0.44759223	22.0502529
S34C05	22.7936002	0.50977423	13.2581391	22.9331325	0.44759223	13.2876412
S34C06	22.7936002	0.50977423	4.52850672	22.9331325	0.44759223	4.52502948
S34C07	-2.615162	22.6488191	41.3532266	-2.2547755	22.8264078	42.4759054
S34C08	-2.615162	22.6488191	34.0176802	-2.2547755	22.8264078	34.9109864
S34C09	-2.615162	22.6488191	26.6821339	-2.2547755	22.8264078	27.3460674
S34C10	-2.615162	22.6488191	19.3465875	-2.2547755	22.8264078	19.7811484
S34C11	-2.615162	22.6488191	12.0110412	-2.2547755	22.8264078	12.2162295
S34C12	-2.615162	22.6488191	4.67549482	-2.2547755	22.8264078	4.65131048
S34C13	-22.697984	2.1469968	43.9265758	-22.861681	1.86345382	44.6626297
S34C14	-22.697984	2.1469968	36.0652728	-22.861681	1.86345382	36.6509447
S34C15	-22.697984	2.1469968	28.2039698	-22.861681	1.86345382	28.6392598
S34C16	-22.697984	2.1469968	20.3426667	-22.861681	1.86345382	20.6275748
S34C17	-22.697984	2.1469968	12.4813637	-22.861681	1.86345382	12.6158898
S34C18	-22.697984	2.1469968	4.62006067	-22.861681	1.86345382	4.60420486
S34C19	-0.3946327	-22.795884	48.2706372	-0.3465843	-22.934881	48.4203178
S34C20	-0.3946327	-22.795884	39.5218062	-0.3465843	-22.934881	39.6409059
S34C21	-0.3946327	-22.795884	30.7729753	-0.3465843	-22.934881	30.8614939
S34C22	-0.3946327	-22.795884	22.0241444	-0.3465843	-22.934881	22.082082
S34C23	-0.3946327	-22.795884	13.2753134	-0.3465843	-22.934881	13.3026701
S34C24	-0.3946327	-22.795884	4.52648248	-0.3465843	-22.934881	4.52325812
S34R01	18.4070519	13.4531974	9.8626638	18.592441	13.4331696	9.88780405
S34R02	5.67182216	22.0825387	8.33561884	5.94623057	22.1533575	8.37560027
S34R03	-8.294351	21.2370389	6.52982303	-7.8746357	21.5434217	6.60742195
S34R04	-13.150703	18.6243684	5.75524827	-12.978125	18.9128836	5.8086483
S34R05	-14.028005	17.972845	5.61861832	-14.006497	18.1644417	5.65101712
S34R06	-14.392037	17.6826853	5.58095624	-14.440818	17.8211024	5.60657527
S34R07	-14.654105	17.466118	5.5747453	-14.753965	17.5627282	5.5992142
S34R08	-14.937528	17.2243528	5.59288441	-15.091441	17.2736014	5.62068813
S34R09	-15.411076	16.8019887	5.65904126	-15.648378	16.7707234	5.69828755
S34R10	-16.922651	15.2784803	5.9514881	-17.322197	15.0356376	6.02366429
S34R11	-21.85466	6.49476171	7.33911825	-22.091011	6.17382823	7.39703201
S34R12	-21.105829	-8.6227643	9.10694106	-21.165214	-8.8409627	9.13812922
S34R13	-10.867671	-20.0425	10.3792541	-10.853088	-20.207409	10.4012215
S34R14	4.06142705	-22.434636	11.0811394	4.12128529	-22.564218	11.0996611

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S34R15	17.1191758	-15.057951	11.2283938	17.2159843	-15.157137	11.2462922
S34R16	22.7714908	-1.1257391	10.8270488	22.9065103	-1.1919285	10.8467212

Source S35

Line	XINTi	ZINTi	YINTi	XINTo	ZINTo	YINTo
S35C01	22.6475534	2.62610088	45.5337179	22.8255141	2.26380463	46.0809052
S35C02	22.6475534	2.62610088	38.3752176	22.8255141	2.26380463	38.6683521
S35C03	22.6475534	2.62610088	31.2167174	22.8255141	2.26380463	31.255799
S35C04	22.6475534	2.62610088	24.0582172	22.8255141	2.26380463	23.8432459
S35C05	22.6475534	2.62610088	16.899717	22.8255141	2.26380463	16.4306928
S35C06	22.6475534	2.62610088	9.74121674	22.8255141	2.26380463	9.01813972
S35C07	1.93879367	22.7167154	47.3686394	1.68678757	22.8753941	47.6456755
S35C08	1.93879367	22.7167154	39.3582059	1.68678757	22.8753941	39.5066173
S35C09	1.93879367	22.7167154	31.3477725	1.68678757	22.8753941	31.3675591
S35C10	1.93879367	22.7167154	23.337339	1.68678757	22.8753941	23.228501
S35C11	1.93879367	22.7167154	15.3269056	1.68678757	22.8753941	15.0894428
S35C12	1.93879367	22.7167154	7.31647212	1.68678757	22.8753941	6.95038461
S35C13	-22.796579	0.35225037	48.9679853	-22.935413	0.30938627	49.0327243
S35C14	-22.796579	0.35225037	40.2149937	-22.935413	0.30938627	40.2496751
S35C15	-22.796579	0.35225037	31.4620021	-22.935413	0.30938627	31.4666259
S35C16	-22.796579	0.35225037	22.7090105	-22.935413	0.30938627	22.6835767
S35C17	-22.796579	0.35225037	13.9560189	-22.935413	0.30938627	13.9005276
S35C18	-22.796579	0.35225037	5.20302728	-22.935413	0.30938627	5.11747838
S35C19	0.54896429	-22.79269	48.8965109	0.48195262	-22.932436	48.9701784
S35C20	0.54896429	-22.79269	40.176704	0.48195262	-22.932436	40.2161685
S35C21	0.54896429	-22.79269	31.4568972	0.48195262	-22.932436	31.4621587
S35C22	0.54896429	-22.79269	22.7370903	0.48195262	-22.932436	22.7081489
S35C23	0.54896429	-22.79269	14.0172835	0.48195262	-22.932436	13.9541391
S35C24	0.54896429	-22.79269	5.29747662	0.48195262	-22.932436	5.20012923
S35R01	18.9336427	12.7013879	30.0805768	19.1119677	12.6831225	30.0757872
S35R02	18.5981916	13.1876969	30.0871218	18.7326799	13.2369033	30.0831661
S35R03	18.3243692	13.5656026	30.0876255	18.4208048	13.6675842	30.0837358
S35R04	17.9952233	13.9992863	30.0826293	18.045146	14.1598592	30.0780966
S35R05	17.3712982	14.7663834	30.0655356	17.3371415	15.0184031	30.0590163
S35R06	15.0059983	17.164734	29.9932725	14.7755461	17.5445759	29.98255
S35R07	4.9632822	22.2525035	29.7562944	4.6951301	22.4518298	29.7486918
S35R08	-9.9035279	20.5360224	29.4963963	-10.104123	20.5921247	29.4918863
S35R09	-20.595647	9.77892744	29.3142449	-20.75451	9.76622933	29.3109151
S35R10	-22.211902	-5.1419358	29.2196651	-22.340327	-5.1998761	29.2167777
S35R11	-14.271386	-17.780203	29.2109569	-14.371942	-17.876694	29.208106
S35R12	-0.1558042	-22.798768	29.2878239	-0.2245137	-22.936401	29.284627
S35R13	14.1572777	-17.871194	29.4520985	14.1354187	-18.064298	29.4479264
S35R14	22.2213984	-5.1007383	29.6989095	22.2953063	-5.3896402	29.6921989
S35R15	21.5209144	7.5271723	29.958693	21.7925641	7.15632988	29.9477361

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S35R16 19.5752774 11.6883102 30.0583831 19.8213657 11.5430658 30.051145

**TABLE 9 - Calculate Microshield input data sheets for the simulations from each source to each
measuring point in inches.**

	Cs-137	Ba-137m	Source 01	X Posit	Z Posit	Y Posit
	29.4975	27.9047		19.3677	0.5818	25.9034
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S01C01	18.0515	0.7276	24.0421	5.2629		
S01C02	11.4924	0.4633	15.3063	3.3506		
S01C03	5.4425	0.2194	7.2487	1.5868		
S01C04	4.3004	0.1733	5.7275	1.2538		
S01C05	9.9344	0.4005	13.2312	2.8964		
S01C06	16.4383	0.6626	21.8935	4.7926		
S01C07	36.5304	0.2353	38.4369	1.6712		
S01C08	31.9998	0.2061	33.6698	1.4639		
S01C09	29.3228	0.1889	30.8532	1.3414		
S01C10	29.0172	0.1869	30.5316	1.3275		
S01C11	31.1528	0.2007	32.7787	1.4252		
S01C12	35.2892	0.2273	37.1309	1.6144		
S01C13	48.0239	0.1574	49.3202	1.1389		
S01C14	44.5015	0.1459	45.7027	1.0554		
S01C15	42.5215	0.1394	43.6692	1.0084		
S01C16	42.3008	0.1386	43.4426	1.0032		
S01C17	43.8662	0.1438	45.0502	1.0403		
S01C18	47.0395	0.1542	48.3093	1.1156		
S01C19	37.3081	0.2276	39.1549	1.6192		
S01C20	32.8605	0.2005	34.4872	1.4262		
S01C21	30.2459	0.1845	31.7431	1.3127		
S01C22	29.9482	0.1827	31.4307	1.2998		
S01C23	32.0320	0.1954	33.6177	1.3902		
S01C24	36.0872	0.2201	37.8736	1.5663		
S01R01	3.4247	0.1383	123.5741	120.0111		
S01R02	3.6910	0.1472	125.0134	121.1752		
S01R03	4.7913	0.1801	129.5169	124.5455		
S01R04	7.6629	0.2364	136.1426	128.2433		
S01R05	14.2208	0.2566	143.6696	129.1922		
S01R06	24.0113	0.2091	150.9054	126.6850		
S01R07	33.3288	0.1671	156.8590	123.3631		
S01R08	39.7194	0.1453	160.8071	120.9424		
S01R09	42.1638	0.1382	162.3085	120.0064		
S01R10	40.3627	0.1434	161.2024	120.6963		
S01R11	34.5327	0.1626	157.6070	122.9118		
S01R12	25.5517	0.2013	151.9203	126.1673		
S01R13	15.5924	0.2518	144.8227	128.9785		
S01R14	8.3804	0.2445	137.2666	128.6417		
S01R15	5.0767	0.1876	130.4218	125.1575		
S01R16	3.7934	0.1505	125.5215	121.5776		

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	Cs-137	Ba-137m	Source 02	X Posit	Z Posit	Y Posit
	13.8502	13.1023		-10.6176	-19.5689	18.8660
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S02C01	48.4887	0.2037	50.1542	1.4617		
S02C02	43.7203	0.1837	45.2220	1.3180		
S02C03	40.2889	0.1693	41.6728	1.2145		
S02C04	38.5532	0.1620	39.8774	1.1622		
S02C05	38.7417	0.1628	40.0723	1.1679		
S02C06	40.8278	0.1715	42.2301	1.2308		
S02C07	52.8369	0.1728	54.2585	1.2488		
S02C08	48.4320	0.1584	49.7351	1.1447		
S02C09	45.3122	0.1482	46.5313	1.0709		
S02C10	43.7533	0.1431	44.9305	1.0341		
S02C11	43.9219	0.1437	45.1036	1.0381		
S02C12	45.7989	0.1498	47.0311	1.0824		
S02C13	35.2054	0.4510	38.7144	3.0581		
S02C14	29.1619	0.3735	32.0686	2.5331		
S02C15	24.4004	0.3126	26.8325	2.1195		
S02C16	21.7786	0.2790	23.9493	1.8918		
S02C17	22.0725	0.2827	24.2725	1.9173		
S02C18	25.1803	0.3225	27.6901	2.1873		
S02C19	22.3069	1.5713	32.7149	8.8367		
S02C20	16.7000	1.1763	24.4918	6.6155		
S02C21	11.6404	0.8199	17.0715	4.6112		
S02C22	8.2114	0.5784	12.0426	3.2528		
S02C23	8.6414	0.6087	12.6733	3.4232		
S02C24	12.5395	0.8833	18.3902	4.9674		
S02R01	26.9442	0.2258	154.9977	127.8277		
S02R02	37.5951	0.1650	161.0405	123.2805		
S02R03	43.7484	0.1425	164.5935	120.7025		
S02R04	44.9347	0.1389	165.2844	120.2108		
S02R05	41.0753	0.1515	163.0437	121.8168		
S02R06	32.4387	0.1899	158.1007	125.4721		
S02R07	19.8210	0.2970	150.9915	130.8735		
S02R08	6.2069	0.5926	142.5676	135.7681		
S02R09	1.4454	0.3421	133.9912	132.2037		
S02R10	0.7549	0.1921	126.6644	125.7174		
S02R11	0.5684	0.1464	122.0120	121.2972		
S02R12	0.5407	0.1395	121.0742	120.3940		
S02R13	0.6395	0.1640	124.0754	123.2718		
S02R14	0.9998	0.2490	130.3153	129.0665		
S02R15	2.7805	0.5278	138.4901	135.1819		
S02R16	13.1223	0.4122	147.1475	133.6130		

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	Cs-137	Ba-137m	Source 03	X Posit	Z Posit	Y Posit
	23.5916	22.3177		1.7704	-7.2590	41.8874
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S03C01	23.2729	0.1538	24.5362	1.1095		
S03C02	22.1635	0.1464	23.3666	1.0566		
S03C03	24.2191	0.1600	25.5337	1.1546		
S03C04	28.7690	0.1901	30.3305	1.3715		
S03C05	34.8496	0.2302	36.7412	1.6614		
S03C06	41.7981	0.2762	44.0668	1.9926		
S03C07	30.9872	0.1425	32.1607	1.0310		
S03C08	30.1363	0.1386	31.2775	1.0027		
S03C09	31.7265	0.1459	32.9280	1.0556		
S03C10	35.4309	0.1629	36.7726	1.1788		
S03C11	40.6757	0.1870	42.2161	1.3533		
S03C12	46.9476	0.2159	48.7255	1.5620		
S03C13	26.5444	0.1499	27.7767	1.0824		
S03C14	25.5625	0.1443	26.7491	1.0423		
S03C15	27.3901	0.1547	28.6616	1.1168		
S03C16	31.5427	0.1781	33.0070	1.2862		
S03C17	37.2507	0.2104	38.9799	1.5189		
S03C18	43.9116	0.2480	45.9500	1.7905		
S03C19	17.1616	0.1527	18.4190	1.1046		
S03C20	15.6806	0.1395	16.8295	1.0093		
S03C21	18.3815	0.1636	19.7282	1.1831		
S03C22	23.8855	0.2125	25.6354	1.5374		
S03C23	30.7212	0.2734	32.9719	1.9774		
S03C24	38.1799	0.3397	40.9771	2.4575		
S03R01	20.3055	0.1468	142.1618	121.7096		
S03R02	23.2392	0.1467	145.0607	121.6749		
S03R03	26.2300	0.1444	147.7349	121.3605		
S03R04	28.7068	0.1414	149.7986	120.9504		
S03R05	30.1684	0.1393	150.9678	120.6601		
S03R06	30.3184	0.1391	151.0860	120.6285		
S03R07	29.1267	0.1408	150.1378	120.8703		
S03R08	26.8344	0.1437	148.2492	121.2711		
S03R09	23.9068	0.1463	145.6785	121.6254		
S03R10	20.9147	0.1470	142.7920	121.7304		
S03R11	18.3599	0.1451	140.0237	121.5187		
S03R12	16.5458	0.1419	137.8135	121.1258		
S03R13	15.5837	0.1395	136.5318	120.8086		
S03R14	15.4891	0.1393	136.4009	120.7726		
S03R15	16.2617	0.1413	137.4440	121.0410		
S03R16	17.8942	0.1445	139.4789	121.4402		

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	Cs-137	Ba-137m	Source 04	X Posit	Z Posit	Y Posit
	20.6982	19.5805		5.5262	-19.2179	28.6756
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S04C01	31.6437	0.2680	33.7929	1.8813		
S04C02	27.2703	0.2310	29.1225	1.6213		
S04C03	25.0613	0.2123	26.7635	1.4899		
S04C04	25.5835	0.2167	27.3211	1.5210		
S04C05	28.6881	0.2430	30.6366	1.7056		
S04C06	33.6682	0.2852	35.9550	2.0016		
S04C07	46.9620	0.1546	48.2347	1.1181		
S04C08	43.8964	0.1445	45.0860	1.0451		
S04C09	42.4490	0.1397	43.5994	1.0106		
S04C10	42.7844	0.1408	43.9439	1.0186		
S04C11	44.8627	0.1477	46.0785	1.0681		
S04C12	48.4601	0.1595	49.7734	1.1538		
S04C13	39.2827	0.1958	40.8790	1.4006		
S04C14	35.6622	0.1777	37.1114	1.2715		
S04C15	33.9123	0.1690	35.2904	1.2091		
S04C16	34.3205	0.1710	35.7152	1.2236		
S04C17	36.8150	0.1835	38.3110	1.3126		
S04C18	41.0169	0.2044	42.6837	1.4624		
S04C19	16.5410	0.6929	22.0561	4.8221		
S04C20	10.4087	0.4360	13.8791	3.0344		
S04C21	5.8473	0.2449	7.7968	1.7046		
S04C22	7.1522	0.2996	9.5368	2.0850		
S04C23	12.6187	0.5286	16.8259	3.6786		
S04C24	18.9320	0.7931	25.2442	5.5191		
S04R01	8.4965	0.2762	138.7621	129.9894		
S04R02	16.9309	0.2604	146.5523	129.3611		
S04R03	27.5749	0.1968	153.6308	125.8591		
S04R04	36.4316	0.1585	159.0781	122.4881		
S04R05	41.6714	0.1415	162.2610	120.4482		
S04R06	42.6156	0.1387	162.8342	120.0798		
S04R07	39.1620	0.1492	160.7376	121.4265		
S04R08	31.7119	0.1772	156.1943	124.3052		
S04R09	21.4809	0.2316	149.7147	128.0022		
S04R10	11.5186	0.2845	142.0978	130.2947		
S04R11	5.8528	0.2378	134.4136	128.3229		
S04R12	3.7017	0.1742	127.9200	124.0441		
S04R13	2.9371	0.1439	123.8579	120.7769		
S04R14	2.8242	0.1391	123.1033	120.1400		
S04R15	3.2712	0.1576	125.8286	122.3998		
S04R16	4.6695	0.2068	131.4257	126.5494		

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	Cs-137	Ba-137m	Source 05	X Posit	Z Posit	Y Posit
	10.9510	10.3596		-12.5171	2.4304	36.3581
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S05C01	37.6148	0.1472	38.8272	1.0652		
S05C02	35.6214	0.1394	36.7695	1.0087		
S05C03	35.7062	0.1398	36.8571	1.0111		
S05C04	37.8553	0.1482	39.0754	1.0720		
S05C05	41.7511	0.1634	43.0968	1.1823		
S05C06	46.9609	0.1838	48.4745	1.3299		
S05C07	26.6394	0.1838	28.1415	1.3183		
S05C08	23.8802	0.1648	25.2267	1.1817		
S05C09	24.0008	0.1656	25.3542	1.1877		
S05C10	26.9626	0.1861	28.4830	1.3343		
S05C11	31.9859	0.2207	33.7894	1.5829		
S05C12	38.2671	0.2641	40.4249	1.8937		
S05C13	15.8256	0.2132	17.5796	1.5408		
S05C14	11.1529	0.1502	12.3890	1.0859		
S05C15	11.3847	0.1534	12.6465	1.1085		
S05C16	16.3132	0.2198	18.1213	1.5883		
S05C17	23.1066	0.3113	25.6676	2.2497		
S05C18	30.5450	0.4115	33.9304	2.9740		
S05C19	30.6205	0.1696	32.0102	1.2200		
S05C20	28.2007	0.1562	29.4804	1.1236		
S05C21	28.3050	0.1568	29.5896	1.1278		
S05C22	30.9082	0.1712	32.3108	1.2315		
S05C23	35.4640	0.1964	37.0734	1.4130		
S05C24	41.3317	0.2289	43.2074	1.6468		
S05R01	35.3103	0.1391	155.7702	120.3207		
S05R02	32.8497	0.1445	154.0327	121.0384		
S05R03	28.3836	0.1541	150.7481	122.2104		
S05R04	22.8949	0.1639	146.3335	123.2747		
S05R05	17.6765	0.1665	141.3904	123.5474		
S05R06	13.7360	0.1587	136.6556	122.7609		
S05R07	11.3223	0.1471	132.9079	121.4385		
S05R08	10.2135	0.1396	130.8213	120.4682		
S05R09	10.2012	0.1395	130.7965	120.4558		
S05R10	11.2827	0.1469	132.8381	121.4085		
S05R11	13.6629	0.1584	136.5543	122.7330		
S05R12	17.5677	0.1664	141.2747	123.5406		
S05R13	22.7653	0.1641	146.2218	123.2924		
S05R14	28.2627	0.1544	150.6562	122.2391		
S05R15	32.7657	0.1447	153.9726	121.0623		
S05R16	35.2804	0.1392	155.7493	120.3297		

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

	Cs-137	Ba-137m	Source 06	X Posit	Z Posit	Y Posit
	16.3182	15.4370		10.1481	-6.8169	29.6428
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S06C01	23.0321	0.2547	25.1182	1.8314		
S06C02	17.2644	0.1909	18.8281	1.3728		
S06C03	14.2073	0.1571	15.4941	1.1297		
S06C04	15.5513	0.1720	16.9599	1.2365		
S06C05	20.4462	0.2261	22.2981	1.6258		
S06C06	27.0271	0.2989	29.4750	2.1490		
S06C07	36.5787	0.1716	37.9885	1.2382		
S06C08	32.8893	0.1543	34.1569	1.1133		
S06C09	31.2348	0.1465	32.4386	1.0573		
S06C10	31.9330	0.1498	33.1638	1.0809		
S06C11	34.8428	0.1635	36.1857	1.1794		
S06C12	39.4782	0.1852	40.9997	1.3363		
S06C13	38.6945	0.1626	40.0326	1.1755		
S06C14	35.1995	0.1479	36.4167	1.0693		
S06C15	33.6466	0.1414	34.8102	1.0221		
S06C16	34.3007	0.1442	35.4869	1.0420		
S06C17	37.0450	0.1557	38.3261	1.1254		
S06C18	41.4666	0.1743	42.9006	1.2597		
S06C19	26.2285	0.2309	28.1142	1.6549		
S06C20	21.1504	0.1862	22.6711	1.3345		
S06C21	18.6480	0.1641	19.9887	1.1766		
S06C22	19.7269	0.1736	21.1452	1.2447		
S06C23	23.9071	0.2104	25.6259	1.5084		
S06C24	29.9156	0.2633	32.0665	1.8875		
S06R01	11.8070	0.1459	132.9957	121.0428		
S06R02	14.1692	0.1562	136.5813	122.2559		
S06R03	17.9670	0.1632	141.1225	122.9924		
S06R04	22.9367	0.1611	145.8738	122.7761		
S06R05	28.1424	0.1525	150.1257	121.8307		
S06R06	32.3846	0.1438	153.2957	120.7673		
S06R07	34.7320	0.1389	154.9785	120.1076		
S06R08	34.7168	0.1389	154.9676	120.1119		
S06R09	32.3417	0.1439	153.2646	120.7790		
S06R10	28.0809	0.1526	150.0781	121.8446		
S06R11	22.8705	0.1612	145.8161	122.7845		
S06R12	17.9109	0.1631	141.0628	122.9887		
S06R13	14.1309	0.1561	136.5290	122.2421		
S06R14	11.7860	0.1458	132.9598	121.0280		
S06R15	10.7047	0.1391	130.9946	120.1507		
S06R16	10.7113	0.1392	131.0073	120.1568		

Cs-137	Ba-137m	Source 07	X Posit	Z Posit	Y Posit
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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

	25.9358	24.5353		-3.0040	-18.4824	1.5181
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S07C01	55.5673	0.3047	58.0492	2.1772		
S07C02	48.6882	0.2670	50.8629	1.9077		
S07C03	42.4477	0.2328	44.3436	1.6632		
S07C04	37.1688	0.2038	38.8289	1.4563		
S07C05	33.3117	0.1827	34.7996	1.3052		
S07C06	31.4048	0.1722	32.8075	1.2305		
S07C07	62.3945	0.2089	64.1150	1.5116		
S07C08	56.1412	0.1880	57.6894	1.3601		
S07C09	50.6362	0.1696	52.0325	1.2267		
S07C10	46.1480	0.1545	47.4206	1.1180		
S07C11	42.9962	0.1440	44.1819	1.0417		
S07C12	41.4865	0.1389	42.6305	1.0051		
S07C13	52.4367	0.3810	55.5165	2.6987		
S07C14	45.2920	0.3291	47.9521	2.3310		
S07C15	38.6994	0.2812	40.9723	1.9917		
S07C16	32.9916	0.2397	34.9292	1.6980		
S07C17	28.7014	0.2085	30.3871	1.4772		
S07C18	26.5259	0.1927	28.0838	1.3652		
S07C19	38.2115	1.2439	48.3844	8.9289		
S07C20	31.1763	1.0149	39.4763	7.2850		
S07C21	24.1836	0.7873	30.6219	5.6510		
S07C22	17.2849	0.5627	21.8866	4.0390		
S07C23	10.6645	0.3472	13.5037	2.4920		
S07C24	5.4530	0.1775	6.9047	1.2742		
S07R01	19.6312	0.2265	149.2554	129.3977		
S07R02	29.1582	0.1839	155.6719	126.3298		
S07R03	36.9240	0.1551	160.5047	123.4255		
S07R04	41.3086	0.1419	163.1824	121.7319		
S07R05	41.6786	0.1408	163.4076	121.5882		
S07R06	37.9873	0.1517	161.1559	123.0168		
S07R07	30.7462	0.1774	156.6757	125.7521		
S07R08	21.3487	0.2188	150.4891	128.9216		
S07R09	12.6587	0.2443	143.3863	130.4833		
S07R10	7.4536	0.2100	136.3929	128.7294		
S07R11	5.1529	0.1665	130.6716	125.3521		
S07R12	4.2802	0.1444	127.3118	122.8873		
S07R13	4.2164	0.1426	127.0227	122.6636		
S07R14	4.9194	0.1609	129.8675	124.7872		
S07R15	6.8800	0.2011	135.2389	128.1577		
S07R16	11.4394	0.2421	142.0909	130.4094		
	Cs-137	Ba-137m	Source 08	X Posit	Z Posit	Y Posit
	25.1678	23.8087		-1.4468	-9.3997	20.8621

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

Line	Shield 1	Shield 2	Total Dist	Air Gap
S08C01	37.6331	0.2160	39.4061	1.5571
S08C02	31.9373	0.1833	33.4419	1.3214
S08C03	27.7754	0.1594	29.0840	1.1492
S08C04	25.8981	0.1486	27.1182	1.0715
S08C05	26.7899	0.1537	28.0520	1.1084
S08C06	30.2065	0.1733	31.6296	1.2498
S08C07	42.4712	0.1823	43.9726	1.3191
S08C08	37.3964	0.1605	38.7183	1.1615
S08C09	33.8274	0.1452	35.0233	1.0506
S08C10	32.2681	0.1385	33.4088	1.0022
S08C11	33.0044	0.1417	34.1711	1.0251
S08C12	35.8953	0.1541	37.1643	1.1148
S08C13	35.6958	0.2330	37.6074	1.6785
S08C14	29.7112	0.1940	31.3023	1.3971
S08C15	25.2442	0.1648	26.5961	1.1871
S08C16	23.1891	0.1514	24.4309	1.0904
S08C17	24.1692	0.1578	25.4635	1.1365
S08C18	27.8660	0.1819	29.3583	1.3104
S08C19	29.6315	0.3058	32.1492	2.2119
S08C20	22.5595	0.2328	24.4762	1.6840
S08C21	16.6569	0.1719	18.0722	1.2434
S08C22	13.5498	0.1398	14.7011	1.0115
S08C23	15.0786	0.1556	16.3597	1.1256
S08C24	20.2175	0.2086	21.9353	1.5092
S08R01	22.8959	0.1514	144.8097	121.7624
S08R02	26.8000	0.1473	148.2116	121.2643
S08R03	30.0637	0.1422	150.8271	120.6211
S08R04	31.9946	0.1389	152.3060	120.1725
S08R05	32.1959	0.1385	152.4578	120.1234
S08R06	30.6273	0.1413	151.2632	120.4947
S08R07	27.6086	0.1461	148.8755	121.1208
S08R08	23.7770	0.1507	145.6106	121.6829
S08R09	19.9339	0.1520	141.9248	121.8389
S08R10	16.7610	0.1487	138.3683	121.4586
S08R11	14.5970	0.1432	135.5127	120.7725
S08R12	13.4856	0.1391	133.8483	120.2235
S08R13	13.3761	0.1387	133.6753	120.1606
S08R14	14.2607	0.1421	135.0256	120.6228
S08R15	16.1881	0.1476	137.6539	121.3183
S08R16	19.1530	0.1516	141.1029	121.7982

Line	Cs-137 24.9347 Shield 1	Ba-137m 23.5882 Shield 2	Source 09 Total Dist	X Posit -11.3240 Air Gap	Z Posit -1.2877	Y Posit 45.4810
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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

S09C01	34.3668	0.1392	35.5132	1.0072
S09C02	34.4846	0.1397	35.6348	1.0106
S09C03	36.7288	0.1488	37.9539	1.0764
S09C04	40.7496	0.1650	42.1089	1.1942
S09C05	46.0844	0.1867	47.6216	1.3506
S09C06	52.3327	0.2120	54.0784	1.5337
S09C07	26.6738	0.1546	27.9410	1.1126
S09C08	26.8213	0.1554	28.0955	1.1187
S09C09	29.5789	0.1714	30.9841	1.2337
S09C10	34.3232	0.1989	35.9537	1.4316
S09C11	40.3595	0.2339	42.2768	1.6834
S09C12	47.1947	0.2735	49.4367	1.9685
S09C13	12.1003	0.1458	13.3008	1.0547
S09C14	12.3928	0.1493	13.6224	1.0802
S09C15	17.1704	0.2069	18.8740	1.4967
S09C16	23.8776	0.2877	26.2466	2.0813
S09C17	31.2974	0.3771	34.4026	2.7281
S09C18	39.0256	0.4702	42.8975	3.4017
S09C19	24.3432	0.1583	25.6398	1.1382
S09C20	24.5029	0.1594	25.8080	1.1457
S09C21	27.4632	0.1786	28.9260	1.2841
S09C22	32.4668	0.2112	34.1961	1.5181
S09C23	38.7296	0.2519	40.7925	1.8109
S09C24	45.7374	0.2975	48.1735	2.1386
S09R01	34.3529	0.1394	155.3999	120.9076
S09R02	33.8764	0.1404	155.0599	121.0431
S09R03	31.2751	0.1456	153.1707	121.7500
S09R04	27.0812	0.1534	149.9694	122.7347
S09R05	22.2193	0.1598	145.8767	123.4976
S09R06	17.7553	0.1598	141.4678	123.5527
S09R07	14.4251	0.1529	137.4158	122.8378
S09R08	12.4037	0.1445	134.3946	121.8464
S09R09	11.5608	0.1399	132.9459	121.2452
S09R10	11.7838	0.1412	133.3422	121.4173
S09R11	13.1057	0.1478	135.5083	122.2547
S09R12	15.6739	0.1564	139.0428	123.2126
S09R13	19.5363	0.1608	143.3309	123.6338
S09R14	24.2887	0.1576	147.6841	123.2378
S09R15	28.9991	0.1500	151.4617	122.3126
S09R16	32.6115	0.1429	154.1487	121.3942

	Cs-137	Ba-137m	Source 10	X Posit	Z Posit	Y Posit
	26.8139	25.3659		-8.1594	10.5475	46.4380
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S10C01	32.7178	0.1468	33.9240	1.0594		

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S10C02	33.0836	0.1485	34.3034	1.0713
S10C03	35.6271	0.1599	36.9406	1.1536
S10C04	39.9341	0.1792	41.4064	1.2931
S10C05	45.5067	0.2042	47.1844	1.4735
S10C06	51.9391	0.2331	53.8540	1.6818
S10C07	14.6055	0.1679	15.9764	1.2030
S10C08	15.3282	0.1762	16.7669	1.2625
S10C09	19.7984	0.2276	21.6567	1.6307
S10C10	26.1609	0.3007	28.6163	2.1547
S10C11	33.3496	0.3834	36.4798	2.7468
S10C12	40.9316	0.4705	44.7734	3.3713
S10C13	17.8216	0.1721	19.2243	1.2305
S10C14	18.4352	0.1780	19.8861	1.2729
S10C15	22.3902	0.2162	24.1524	1.5460
S10C16	28.3198	0.2735	30.5487	1.9554
S10C17	35.2410	0.3403	38.0145	2.4333
S10C18	42.6739	0.4121	46.0325	2.9465
S10C19	34.3935	0.1429	35.5692	1.0327
S10C20	34.7436	0.1444	35.9312	1.0432
S10C21	37.1858	0.1545	38.4569	1.1165
S10C22	41.3512	0.1718	42.7647	1.2416
S10C23	46.7817	0.1944	48.3808	1.4047
S10C24	53.0905	0.2206	54.9052	1.5941
S10R01	29.6331	0.1548	152.7388	122.9509
S10R02	23.8860	0.1666	148.3162	124.2636
S10R03	18.2233	0.1717	143.2266	124.8316
S10R04	13.8498	0.1645	138.2153	124.2010
S10R05	11.1306	0.1513	134.0944	122.8125
S10R06	9.8147	0.1418	131.5986	121.6421
S10R07	9.6276	0.1402	131.2063	121.4385
S10R08	10.5231	0.1472	132.9949	122.3246
S10R09	12.7067	0.1600	136.6162	123.7495
S10R10	16.4916	0.1705	141.4052	124.7431
S10R11	21.8007	0.1696	146.5582	124.5879
S10R12	27.6850	0.1591	151.2933	123.4492
S10R13	32.7306	0.1477	154.9575	122.0793
S10R14	35.7967	0.1407	157.0826	121.1452
S10R15	36.2770	0.1396	157.4105	120.9939
S10R16	34.0829	0.1446	155.9021	121.6746

	Cs-137	Ba-137m	Source 11	X Posit	Z Posit	Y Posit
	12.5933	11.9133		13.0540	6.4320	29.1917
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S11C01	21.3977	0.3090	23.9217	2.2150		
S11C02	15.1720	0.2191	16.9616	1.5705		

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S11C03	11.4951	0.1660	12.8510	1.1899
S11C04	12.7947	0.1847	14.3038	1.3244
S11C05	18.0246	0.2603	20.1507	1.8658
S11C06	24.8131	0.3583	27.7399	2.5685
S11C07	27.8541	0.2420	29.8207	1.7247
S11C08	22.9695	0.1995	24.5912	1.4222
S11C09	20.5104	0.1782	21.9586	1.2700
S11C10	21.3330	0.1853	22.8392	1.3209
S11C11	25.1168	0.2182	26.8902	1.5552
S11C12	30.7888	0.2674	32.9626	1.9064
S11C13	41.3724	0.1597	42.6869	1.1547
S11C14	38.0050	0.1467	39.2125	1.0607
S11C15	36.4591	0.1407	37.6174	1.0176
S11C16	36.9638	0.1427	38.1382	1.0317
S11C17	39.4406	0.1523	40.6937	1.1008
S11C18	43.5543	0.1681	44.9380	1.2156
S11C19	37.3353	0.1781	38.7961	1.2827
S11C20	33.6215	0.1604	34.9369	1.1551
S11C21	31.8890	0.1521	33.1367	1.0955
S11C22	32.4568	0.1549	33.7267	1.1151
S11C23	35.2138	0.1680	36.5916	1.2098
S11C24	39.7065	0.1894	41.2601	1.3641
S11R01	8.9571	0.1453	130.0656	120.9631
S11R02	8.2620	0.1384	128.4424	120.0420
S11R03	8.6049	0.1419	129.2668	120.5199
S11R04	10.0948	0.1551	132.3706	122.1207
S11R05	13.1356	0.1720	137.1500	123.8424
S11R06	18.0972	0.1791	142.7522	124.4759
S11R07	24.4757	0.1698	148.2818	123.6363
S11R08	30.7393	0.1545	152.9476	122.0538
S11R09	35.3379	0.1430	156.1432	120.6622
S11R10	37.3148	0.1383	157.4810	120.0279
S11R11	36.3129	0.1407	156.8052	120.3516
S11R12	32.5091	0.1500	154.1938	121.5347
S11R13	26.6511	0.1647	149.9587	123.1429
S11R14	20.1173	0.1775	144.6358	124.3410
S11R15	14.5663	0.1761	138.9614	124.2189
S11R16	10.9059	0.1608	133.8087	122.7420

	Cs-137	Ba-137m	Source 12	X Posit	Z Posit	Y Posit
	17.5307	16.5841		17.0889	8.7507	21.2880
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S12C01	25.0580	0.6661	30.3215	4.5974		
S12C02	18.3414	0.4876	22.1941	3.3651		
S12C03	12.4720	0.3315	15.0918	2.2883		

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S12C04	9.2376	0.2456	11.1780	1.6948
S12C05	11.2140	0.2981	13.5695	2.0574
S12C06	16.6376	0.4423	20.1325	3.0525
S12C07	33.4988	0.3525	36.3123	2.4610
S12C08	27.5487	0.2899	29.8625	2.0239
S12C09	23.0990	0.2431	25.0390	1.6970
S12C10	21.1202	0.2222	22.8941	1.5516
S12C11	22.2807	0.2344	24.1521	1.6369
S12C12	26.1662	0.2753	28.3638	1.9223
S12C13	49.1494	0.1707	50.5535	1.2334
S12C14	44.8578	0.1558	46.1393	1.1257
S12C15	41.9752	0.1458	43.1743	1.0534
S12C16	40.8011	0.1417	41.9667	1.0239
S12C17	41.4810	0.1440	42.6660	1.0410
S12C18	43.9288	0.1525	45.1838	1.1024
S12C19	44.8096	0.1989	46.4377	1.4292
S12C20	40.1309	0.1782	41.5890	1.2800
S12C21	36.9312	0.1640	38.2731	1.1779
S12C22	35.6116	0.1581	36.9055	1.1358
S12C23	36.3771	0.1615	37.6988	1.1602
S12C24	39.1055	0.1736	40.5263	1.2473
S12R01	4.0936	0.1535	126.2707	122.0236
S12R02	3.6169	0.1388	123.9307	120.1751
S12R03	3.8076	0.1448	124.9250	120.9726
S12R04	4.8029	0.1734	129.0305	124.0541
S12R05	7.4032	0.2254	135.3808	127.7521
S12R06	13.3855	0.2537	142.7862	129.1470
S12R07	22.8062	0.2134	150.0503	127.0307
S12R08	32.2247	0.1706	156.1590	123.7637
S12R09	38.9857	0.1471	160.3585	121.2257
S12R10	41.9330	0.1385	162.1736	120.1021
S12R11	40.6906	0.1420	161.4091	120.5764
S12R12	35.4096	0.1588	158.1463	122.5779
S12R13	26.8663	0.1936	152.7454	125.6855
S12R14	17.0008	0.2421	145.8466	128.6037
S12R15	9.3435	0.2454	138.3621	128.7731
S12R16	5.5935	0.1927	131.4286	125.6424

	Cs-137	Ba-137m	Source 13	X Posit	Z Posit	Y Posit
	17.9331	16.9647		3.5123	8.3040	41.4473
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S13C01	22.1597	0.1601	23.4732	1.1534		
S13C02	20.8342	0.1505	22.0691	1.0844		
S13C03	22.8353	0.1650	24.1888	1.1886		
S13C04	27.4447	0.1983	29.0715	1.4285		

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S13C05	33.6058	0.2428	35.5978	1.7492
S13C06	40.6186	0.2935	43.0262	2.1142
S13C07	16.6256	0.1589	17.9328	1.1483
S13C08	14.8810	0.1422	16.0511	1.0278
S13C09	17.4849	0.1671	18.8598	1.2077
S13C10	23.0053	0.2199	24.8142	1.5890
S13C11	29.8665	0.2855	32.2148	2.0629
S13C12	37.3364	0.3569	40.2722	2.5789
S13C13	28.5495	0.1506	29.7874	1.0873
S13C14	27.5014	0.1451	28.6940	1.0474
S13C15	29.0930	0.1535	30.3545	1.1080
S13C16	32.9437	0.1738	34.3722	1.2547
S13C17	38.3795	0.2025	40.0437	1.4617
S13C18	44.8275	0.2365	46.7713	1.7073
S13C19	32.2370	0.1433	33.4170	1.0367
S13C20	31.3003	0.1392	32.4461	1.0066
S13C21	32.7255	0.1455	33.9235	1.0524
S13C22	36.2349	0.1611	37.5613	1.1653
S13C23	41.3006	0.1836	42.8125	1.3282
S13C24	47.4265	0.2109	49.1626	1.5252
S13R01	18.2441	0.1497	140.4435	122.0496
S13R02	15.7852	0.1452	137.4494	121.5190
S13R03	14.3309	0.1408	135.4247	120.9530
S13R04	13.8660	0.1390	134.7255	120.7205
S13R05	14.3677	0.1409	135.4788	120.9703
S13R06	15.8602	0.1454	137.5480	121.5424
S13R07	18.3560	0.1498	140.5696	122.0638
S13R08	21.6979	0.1511	144.0403	122.1913
S13R09	25.4184	0.1485	147.4195	121.8526
S13R10	28.8049	0.1440	150.2149	121.2660
S13R11	31.1486	0.1402	152.0429	120.7541
S13R12	31.9637	0.1388	152.6626	120.5600
S13R13	31.0855	0.1403	151.9946	120.7687
S13R14	28.6916	0.1442	150.1246	121.2889
S13R15	25.2786	0.1487	147.2993	121.8720
S13R16	21.5604	0.1511	143.9071	122.1956

	Cs-137	Ba-137m	Source 14	X Posit	Z Posit	Y Posit
	26.2138	24.7983		-18.2417	6.1323	39.9213
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S14C01	42.5063	0.1433	43.6858	1.0362		
S14C02	41.4757	0.1398	42.6266	1.0111		
S14C03	42.2736	0.1425	43.4466	1.0305		
S14C04	44.8024	0.1510	46.0456	1.0922		
S14C05	48.7936	0.1645	50.1476	1.1895		

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S14C06	53.9236	0.1818	55.4198	1.3145
S14C07	25.4422	0.2229	27.2312	1.5661
S14C08	23.8224	0.2087	25.4975	1.4664
S14C09	25.0823	0.2197	26.8459	1.5440
S14C10	28.8470	0.2527	30.8753	1.7757
S14C11	34.3014	0.3005	36.7133	2.1114
S14C12	40.7731	0.3571	43.6400	2.5098
S14C13	10.0999	0.3273	12.7200	2.2928
S14C14	6.6613	0.2159	8.3894	1.5122
S14C15	9.4273	0.3055	11.8729	2.1401
S14C16	15.3463	0.4974	19.3274	3.4837
S14C17	22.0064	0.7132	27.7152	4.9956
S14C18	28.8996	0.9366	36.3966	6.5604
S14C19	35.0587	0.1706	36.4514	1.2221
S14C20	33.8312	0.1646	35.1751	1.1793
S14C21	34.7828	0.1692	36.1645	1.2125
S14C22	37.7491	0.1836	39.2486	1.3159
S14C23	42.3084	0.2058	43.9891	1.4748
S14C24	48.0090	0.2336	49.9161	1.6735
S14R01	40.7390	0.1427	161.8327	120.9510
S14R02	35.3135	0.1602	158.4992	123.0255
S14R03	26.6410	0.1960	153.0452	126.2082
S14R04	16.7177	0.2453	146.1197	129.1567
S14R05	9.1368	0.2464	138.6431	129.2599
S14R06	5.4847	0.1923	131.7562	126.0792
S14R07	4.0349	0.1535	126.6804	122.4920
S14R08	3.5839	0.1393	124.4436	120.7203
S14R09	3.7938	0.1460	125.5393	121.5995
S14R10	4.8168	0.1757	129.7226	124.7301
S14R11	7.4874	0.2290	136.1144	128.3980
S14R12	13.6245	0.2556	143.5234	129.6433
S14R13	23.1687	0.2132	150.7583	127.3763
S14R14	32.5933	0.1703	156.8127	124.0491
S14R15	39.2839	0.1471	160.9412	121.5102
S14R16	42.1180	0.1388	162.6768	120.4199

	Cs-137	Ba-137m	Source 15	X Posit	Z Posit	Y Posit
	22.7469	21.5186		21.0026	5.4076	10.7056
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S15C01	22.4706	2.2513	39.2793	14.5573		
S15C02	17.4042	1.7437	30.4230	11.2751		
S15C03	12.4057	1.2429	21.6855	8.0369		
S15C04	7.6101	0.7625	13.3028	4.9302		
S15C05	3.8658	0.3873	6.7576	2.5044		
S15C06	4.9992	0.5009	8.7388	3.2387		

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S15C07	44.8084	0.3811	47.8484	2.6590
S15C08	38.2941	0.3257	40.8922	2.2724
S15C09	32.6673	0.2778	34.8837	1.9385
S15C10	28.4595	0.2420	30.3903	1.6888
S15C11	26.3590	0.2242	28.1473	1.5642
S15C12	26.8649	0.2285	28.6875	1.5942
S15C13	58.1038	0.1835	59.6142	1.3269
S15C14	52.8170	0.1668	54.1900	1.2062
S15C15	48.5502	0.1533	49.8122	1.1088
S15C16	45.5905	0.1439	46.7756	1.0412
S15C17	44.2014	0.1396	45.3504	1.0094
S15C18	44.5301	0.1406	45.6877	1.0170
S15C19	50.9014	0.2559	52.9835	1.8262
S15C20	44.9580	0.2260	46.7969	1.6129
S15C21	40.0125	0.2011	41.6491	1.4355
S15C22	36.4733	0.1833	37.9651	1.3085
S15C23	34.7724	0.1748	36.1947	1.2475
S15C24	35.1774	0.1768	36.6163	1.2620
S15R01	1.1698	0.1451	123.1048	121.7900
S15R02	1.1362	0.1411	122.5570	121.2797
S15R03	1.3623	0.1672	125.7785	124.2491
S15R04	2.1322	0.2475	132.0340	129.6543
S15R05	5.2206	0.4203	140.0464	134.4055
S15R06	15.5571	0.3347	148.4194	132.5277
S15R07	28.2986	0.2110	155.9209	127.4113
S15R08	38.1586	0.1611	161.5994	123.2797
S15R09	43.6839	0.1419	164.8120	120.9862
S15R10	44.3811	0.1398	165.2197	120.6988
S15R11	40.1965	0.1535	162.7808	122.4308
S15R12	31.4792	0.1920	157.7492	126.0779
S15R13	19.2856	0.2884	150.6811	131.1071
S15R14	7.3356	0.4384	142.4410	134.6671
S15R15	2.5973	0.2888	134.1882	131.3022
S15R16	1.4981	0.1823	127.2926	125.6122

	Cs-137	Ba-137m	Source 16	X Posit	Z Posit	Y Posit
	27.6556	26.1622		12.7799	10.3319	39.3081
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S16C01	16.3969	0.2367	18.3061	1.6726		
S16C02	13.6624	0.1972	15.2532	1.3936		
S16C03	15.3112	0.2210	17.0940	1.5618		
S16C04	20.3022	0.2930	22.6661	2.0709		
S16C05	26.8308	0.3873	29.9550	2.7369		
S16C06	34.0232	0.4911	37.9848	3.4706		
S16C07	19.4474	0.2258	21.2677	1.5944		

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S16C08	17.1037	0.1986	18.7045	1.4023
S16C09	18.5021	0.2148	20.2338	1.5169
S16C10	22.9690	0.2667	25.1188	1.8832
S16C11	29.1252	0.3381	31.8512	2.3879
S16C12	36.1170	0.4193	39.4974	2.9611
S16C13	38.2552	0.1492	39.4815	1.0771
S16C14	36.9767	0.1442	38.1620	1.0411
S16C15	37.7250	0.1471	38.9344	1.0622
S16C16	40.3878	0.1575	41.6825	1.1372
S16C17	44.6236	0.1740	46.0541	1.2565
S16C18	50.0345	0.1951	51.6384	1.4088
S16C19	36.7028	0.1541	37.9683	1.1113
S16C20	35.3746	0.1486	36.5942	1.0711
S16C21	36.1525	0.1518	37.3990	1.0947
S16C22	38.9105	0.1634	40.2521	1.1782
S16C23	43.2716	0.1817	44.7636	1.3102
S16C24	48.8080	0.2050	50.4908	1.4778
S16R01	7.9099	0.1597	131.1695	123.0999
S16R02	6.6437	0.1426	127.8798	121.0934
S16R03	6.4295	0.1394	127.2281	120.6593
S16R04	7.1699	0.1502	129.3522	122.0321
S16R05	9.1973	0.1735	133.8106	124.4398
S16R06	13.2698	0.1964	139.7434	126.2772
S16R07	19.8257	0.1947	146.1293	126.1089
S16R08	27.5701	0.1726	151.9998	124.2571
S16R09	34.2890	0.1523	156.5643	122.1229
S16R10	38.4211	0.1410	159.2626	120.7004
S16R11	39.2280	0.1389	159.7837	120.4167
S16R12	36.5829	0.1459	158.0690	121.3402
S16R13	30.9219	0.1623	154.3131	123.2290
S16R14	23.3985	0.1854	148.9617	125.3778
S16R15	16.0253	0.1995	142.7027	126.4780
S16R16	10.7741	0.1857	136.4326	125.4728

	Cs-137	Ba-137m	Source 17	X Posit	Z Posit	Y Posit
	28.5227	26.9825		-14.4903	3.0983	8.6941
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S17C01	54.4744	0.2020	56.1375	1.4611		
S17C02	48.4985	0.1798	49.9791	1.3008		
S17C03	43.4659	0.1611	44.7929	1.1658		
S17C04	39.7368	0.1473	40.9499	1.0658		
S17C05	37.6999	0.1398	38.8509	1.0112		
S17C06	37.6311	0.1395	38.7799	1.0093		
S17C07	45.3986	0.3263	48.0558	2.3309		
S17C08	38.4422	0.2763	40.6922	1.9737		

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S17C09	32.2358	0.2317	34.1226	1.6551
S17C10	27.2960	0.1962	28.8937	1.4014
S17C11	24.4045	0.1754	25.8329	1.2530
S17C12	24.3036	0.1747	25.7261	1.2478
S17C13	36.9259	0.6176	41.9997	4.4562
S17C14	29.2980	0.4900	33.3236	3.5357
S17C15	21.8734	0.3658	24.8789	2.6397
S17C16	14.9580	0.2502	17.0133	1.8051
S17C17	9.7089	0.1624	11.0429	1.1717
S17C18	9.4872	0.1587	10.7907	1.1449
S17C19	48.8844	0.2646	51.0492	1.9002
S17C20	42.3135	0.2290	44.1873	1.6448
S17C21	36.6023	0.1981	38.2232	1.4228
S17C22	32.2114	0.1744	33.6378	1.2521
S17C23	29.7317	0.1609	31.0483	1.1557
S17C24	29.6467	0.1605	30.9595	1.1524
S17R01	37.4172	0.1402	158.4901	120.9328
S17R02	34.3152	0.1478	156.4124	121.9494
S17R03	28.7996	0.1622	152.5764	123.6146
S17R04	22.0975	0.1779	147.4572	125.1818
S17R05	15.9417	0.1822	141.7427	125.6188
S17R06	11.6226	0.1689	136.2834	124.4919
S17R07	9.1993	0.1512	131.9898	122.6393
S17R08	8.1687	0.1408	129.6560	121.3465
S17R09	8.2057	0.1412	129.7471	121.4002
S17R10	9.3228	0.1523	132.2444	122.7692
S17R11	11.8678	0.1703	136.6525	124.6144
S17R12	16.3364	0.1825	142.1611	125.6422
S17R13	22.5887	0.1770	147.8595	125.0938
S17R14	29.2601	0.1610	152.9060	123.4850
S17R15	34.6330	0.1470	156.6274	121.8473
S17R16	37.5296	0.1399	158.5646	120.8951

	Cs-137	Ba-137m	Source 18	X Posit	Z Posit	Y Posit
	23.2528	21.9972		18.7646	-12.0033	10.5209
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S18C01	30.3310	1.5786	41.1122	9.2026		
S18C02	24.1281	1.2558	32.7045	7.3206		
S18C03	18.2357	0.9491	24.7176	5.5328		
S18C04	13.0802	0.6808	17.7296	3.9686		
S18C05	9.8902	0.5148	13.4057	3.0007		
S18C06	10.6168	0.5526	14.3906	3.2212		
S18C07	54.4491	0.2191	56.2425	1.5743		
S18C08	48.8163	0.1965	50.4242	1.4114		
S18C09	44.1949	0.1779	45.6506	1.2778		

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S18C10	40.9290	0.1647	42.2771	1.1834
S18C11	39.3574	0.1584	40.6537	1.1379
S18C12	39.6820	0.1597	40.9890	1.1473
S18C13	57.4731	0.1918	59.0502	1.3852
S18C14	52.1080	0.1739	53.5378	1.2559
S18C15	47.7576	0.1594	49.0680	1.1511
S18C16	44.7190	0.1493	45.9461	1.0778
S18C17	43.2697	0.1444	44.4570	1.0429
S18C18	43.5683	0.1454	44.7638	1.0501
S18C19	40.2932	0.5948	44.8766	3.9886
S18C20	33.5144	0.4947	37.3267	3.3176
S18C21	27.4497	0.4052	30.5722	2.7173
S18C22	22.6795	0.3348	25.2594	2.2451
S18C23	20.1453	0.2974	22.4368	1.9942
S18C24	20.6857	0.3054	23.0388	2.0477
S18R01	0.6671	0.1744	125.8029	124.9614
S18R02	1.1189	0.2811	132.4683	131.0684
S18R03	3.7273	0.5961	140.7976	136.4741
S18R04	15.8064	0.3618	149.3589	133.1907
S18R05	29.3119	0.2106	156.9144	127.3919
S18R06	39.2367	0.1596	162.5231	123.1268
S18R07	44.5190	0.1412	165.5604	120.9002
S18R08	44.7776	0.1404	165.7101	120.7921
S18R09	39.9957	0.1567	162.9571	122.8048
S18R10	30.5115	0.2028	157.5866	126.8723
S18R11	17.2764	0.3367	150.1915	132.5784
S18R12	4.4655	0.6136	141.6803	136.6012
S18R13	1.2115	0.3012	133.2639	131.7512
S18R14	0.6914	0.1805	126.3631	125.4911
S18R15	0.5460	0.1439	122.3567	121.6668
S18R16	0.5401	0.1424	122.1538	121.4713

	Cs-137	Ba-137m	Source 19	X Posit	Z Posit	Y Posit
	15.3416	14.5131		-18.2584	0.2785	21.1001
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S19C01	49.4918	0.1666	50.8638	1.2054		
S19C02	45.1900	0.1521	46.4427	1.1006		
S19C03	42.2872	0.1423	43.4595	1.0299		
S19C04	41.0812	0.1383	42.2200	1.0006		
S19C05	41.7192	0.1404	42.8758	1.0161		
S19C06	44.1215	0.1485	45.3446	1.0746		
S19C07	39.2133	0.2480	41.2271	1.7658		
S19C08	33.8893	0.2143	35.6297	1.5260		
S19C09	30.0973	0.1903	31.6429	1.3553		
S19C10	28.4565	0.1800	29.9178	1.2814		

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S19C11	29.3301	0.1855	30.8363	1.3207
S19C12	32.5161	0.2056	34.1860	1.4642
S19C13	23.1583	0.7049	28.9635	5.1003
S19C14	16.1641	0.4920	20.2160	3.5599
S19C15	9.4771	0.2885	11.8527	2.0872
S19C16	4.6821	0.1425	5.8557	1.0312
S19C17	7.5892	0.2310	9.4917	1.6714
S19C18	14.0300	0.4270	17.5469	3.0899
S19C19	39.5678	0.2438	41.5492	1.7376
S19C20	34.2850	0.2113	36.0019	1.5056
S19C21	30.5325	0.1882	32.0615	1.3408
S19C22	28.9124	0.1782	30.3602	1.2697
S19C23	29.7747	0.1835	31.2657	1.3075
S19C24	32.9250	0.2029	34.5738	1.4459
S19R01	41.0820	0.1383	161.2951	120.0748
S19R02	38.9572	0.1442	159.9635	120.8621
S19R03	33.1797	0.1624	156.3043	122.9622
S19R04	24.7520	0.1948	150.7329	125.7861
S19R05	15.8572	0.2273	143.9336	127.8492
S19R06	9.4584	0.2153	136.8411	127.1674
S19R07	6.2482	0.1744	130.5733	124.1507
S19R08	4.8991	0.1467	126.2685	121.2226
S19R09	4.5440	0.1384	124.8074	120.1250
S19R10	4.9620	0.1482	126.5095	121.3993
S19R11	6.4140	0.1774	131.0037	124.4123
S19R12	9.8283	0.2180	137.3775	127.3312
S19R13	16.4920	0.2258	144.4857	127.7679
S19R14	25.4606	0.1919	151.2200	125.5675
S19R15	33.7420	0.1605	156.6641	122.7615
S19R16	39.2604	0.1433	160.1538	120.7501

	Cs-137	Ba-137m	Source 20	X Posit	Z Posit	Y Posit
	16.4988	15.6078		2.8644	9.2261	44.4497
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S20C01	22.2739	0.1559	23.5521	1.1223		
S20C02	22.0741	0.1545	23.3409	1.1123		
S20C03	24.9660	0.1747	26.3987	1.2580		
S20C04	30.0704	0.2105	31.7960	1.5152		
S20C05	36.4698	0.2553	38.5627	1.8377		
S20C06	43.5977	0.3051	46.0997	2.1968		
S20C07	14.5909	0.1488	15.8157	1.0760		
S20C08	14.2991	0.1459	15.4994	1.0544		
S20C09	18.2733	0.1864	19.8072	1.3475		
S20C10	24.5203	0.2501	26.5786	1.8082		
S20C11	31.7247	0.3236	34.3877	2.3394		

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S20C12	39.3643	0.4016	42.6686	2.9028
S20C13	27.5654	0.1493	28.7918	1.0770
S20C14	27.4002	0.1484	28.6192	1.0706
S20C15	29.8360	0.1616	31.1634	1.1658
S20C16	34.3234	0.1859	35.8504	1.3411
S20C17	40.1808	0.2176	41.9684	1.5699
S20C18	46.8977	0.2540	48.9841	1.8324
S20C19	32.5123	0.1404	33.6680	1.0154
S20C20	32.3699	0.1397	33.5206	1.0109
S20C21	34.4912	0.1489	35.7173	1.0772
S20C22	38.5038	0.1662	39.8725	1.2025
S20C23	43.8921	0.1895	45.4523	1.3708
S20C24	50.2151	0.2168	52.0001	1.5682
S20R01	18.6687	0.1528	141.4881	122.6666
S20R02	15.8063	0.1481	138.1010	122.1465
S20R03	14.0181	0.1425	135.6235	121.4628
S20R04	13.2812	0.1395	134.4902	121.0695
S20R05	13.5473	0.1407	134.9082	121.2202
S20R06	14.8365	0.1454	136.8004	121.8185
S20R07	17.2037	0.1510	139.8276	122.4729
S20R08	20.5776	0.1536	143.4744	122.7432
S20R09	24.5558	0.1515	147.1618	122.4545
S20R10	28.3983	0.1464	150.3448	121.8001
S20R11	31.2913	0.1416	152.5836	121.1507
S20R12	32.6265	0.1392	153.5833	120.8175
S20R13	32.1335	0.1401	153.2163	120.9427
S20R14	29.9112	0.1440	151.5292	121.4741
S20R15	26.4183	0.1493	148.7405	122.1729
S20R16	22.3990	0.1532	145.2258	122.6736

	Cs-137	Ba-137m	Source 21	X Posit	Z Posit	Y Posit
	28.6466	27.0997		3.0621	-7.9137	19.8848
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S21C01	35.0579	0.2472	37.0874	1.7822		
S21C02	28.7246	0.2026	30.3875	1.4602		
S21C03	23.7888	0.1678	25.1659	1.2093		
S21C04	21.2478	0.1498	22.4777	1.0802		
S21C05	21.9495	0.1548	23.2201	1.1158		
S21C06	25.6291	0.1807	27.1127	1.3029		
S21C07	42.0414	0.1893	43.5998	1.3691		
S21C08	36.7034	0.1652	38.0640	1.1953		
S21C09	32.8243	0.1478	34.0410	1.0690		
S21C10	30.9573	0.1394	32.1048	1.0082		
S21C11	31.4626	0.1416	32.6289	1.0246		
S21C12	34.2354	0.1541	35.5045	1.1149		

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S21C13	39.1236	0.2100	40.8493	1.5158
S21C14	33.4061	0.1793	34.8797	1.2943
S21C15	29.1528	0.1564	30.4388	1.1295
S21C16	27.0630	0.1452	28.2568	1.0485
S21C17	27.6320	0.1483	28.8508	1.0706
S21C18	30.7123	0.1648	32.0671	1.1899
S21C19	31.4074	0.2921	33.8112	2.1118
S21C20	24.4202	0.2271	26.2893	1.6420
S21C21	18.6025	0.1730	20.0263	1.2508
S21C22	15.3473	0.1427	16.5220	1.0319
S21C23	16.2731	0.1514	17.5186	1.0942
S21C24	20.8296	0.1937	22.4238	1.4005
S21R01	18.7340	0.1479	140.2672	121.3853
S21R02	21.8990	0.1489	143.5523	121.5044
S21R03	25.3709	0.1466	146.7345	121.2169
S21R04	28.4927	0.1427	149.3499	120.7145
S21R05	30.6199	0.1395	151.0384	120.2790
S21R06	31.3141	0.1383	151.5763	120.1239
S21R07	30.4347	0.1398	150.8939	120.3195
S21R08	28.1601	0.1432	149.0797	120.7765
S21R09	24.9600	0.1470	146.3750	121.2680
S21R10	21.4925	0.1490	143.1546	121.5131
S21R11	18.4001	0.1475	139.8912	121.3435
S21R12	16.1009	0.1436	137.0953	120.8508
S21R13	14.7445	0.1398	135.2329	120.3485
S21R14	14.3341	0.1384	134.6296	120.1571
S21R15	14.8566	0.1402	135.3941	120.3974
S21R16	16.3274	0.1441	137.3891	120.9175

	Cs-137	Ba-137m	Source 22	X Posit	Z Posit	Y Posit
	20.3724	19.2723		-17.9782	12.8570	50.0431
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S22C01	42.6531	0.1452	43.8466	1.0482		
S22C02	43.6485	0.1486	44.8698	1.0727		
S22C03	46.3076	0.1577	47.6033	1.1380		
S22C04	50.3676	0.1715	51.7769	1.2378		
S22C05	55.5221	0.1890	57.0756	1.3645		
S22C06	61.4964	0.2094	63.2171	1.5113		
S22C07	18.7900	0.3047	21.1255	2.0309		
S22C08	20.6126	0.3342	23.1747	2.2279		
S22C09	24.9971	0.4053	28.1041	2.7017		
S22C10	30.8705	0.5005	34.7076	3.3365		
S22C11	37.5404	0.6087	42.2066	4.0574		
S22C12	44.6513	0.7240	50.2013	4.8260		
S22C13	11.0507	0.4418	14.1813	2.6888		

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S22C14	13.3131	0.5322	17.0847	3.2393
S22C15	18.1860	0.7271	23.3380	4.4250
S22C16	24.1369	0.9650	30.9748	5.8729
S22C17	30.5421	1.2210	39.1946	7.4314
S22C18	37.1675	1.4859	47.6969	9.0435
S22C19	39.6808	0.1556	40.9554	1.1189
S22C20	40.7404	0.1598	42.0490	1.1488
S22C21	43.5554	0.1708	44.9544	1.2282
S22C22	47.8167	0.1875	49.3525	1.3484
S22C23	53.1777	0.2085	54.8858	1.4995
S22C24	59.3412	0.2327	61.2473	1.6733
S22R01	39.0995	0.1610	163.1004	123.8399
S22R02	29.1334	0.2123	157.4927	128.1470
S22R03	15.7794	0.3565	149.9915	133.8556
S22R04	4.2630	0.5267	141.5391	136.7493
S22R05	1.4463	0.2713	133.3669	131.6493
S22R06	0.8835	0.1735	126.8846	125.8276
S22R07	0.7228	0.1433	123.4061	122.5401
S22R08	0.7352	0.1456	123.7229	122.8421
S22R09	0.9345	0.1829	127.7603	126.6429
S22R10	1.6338	0.3006	134.6123	132.6778
S22R11	5.4643	0.5460	142.9231	136.9127
S22R12	18.0624	0.3212	151.2981	132.9145
S22R13	31.0227	0.2003	158.5487	127.3258
S22R14	40.2987	0.1564	163.7825	123.3275
S22R15	44.9019	0.1409	166.4193	121.3764
S22R16	44.4930	0.1422	166.1838	121.5486

	Cs-137	Ba-137m	Source 23	X Posit	Z Posit	Y Posit
	13.0146	12.3118		5.0992	14.6169	52.0038
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S23C01	22.5041	0.1812	23.9751	1.2898		
S23C02	24.8497	0.2001	26.4740	1.4243		
S23C03	29.5180	0.2376	31.4474	1.6918		
S23C04	35.6068	0.2867	37.9343	2.0408		
S23C05	42.5101	0.3422	45.2888	2.4365		
S23C06	49.8909	0.4017	53.1521	2.8595		
S23C07	9.5722	0.1642	10.9153	1.1788		
S23C08	13.7325	0.2356	15.6592	1.6912		
S23C09	20.2514	0.3474	23.0928	2.4940		
S23C10	27.4999	0.4718	31.3584	3.3867		
S23C11	35.0280	0.6009	39.9426	4.3138		
S23C12	42.6879	0.7323	48.6773	5.2571		
S23C13	31.3182	0.1571	32.6045	1.1291		
S23C14	33.1232	0.1662	34.4836	1.1942		

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S23C15	36.9180	0.1852	38.4342	1.3310
S23C16	42.1687	0.2115	43.9005	1.5203
S23C17	48.4038	0.2428	50.3917	1.7451
S23C18	55.2913	0.2774	57.5621	1.9935
S23C19	37.8197	0.1398	38.9707	1.0112
S23C20	39.3581	0.1455	40.5559	1.0523
S23C21	42.6657	0.1577	43.9642	1.1408
S23C22	47.3734	0.1751	48.8151	1.2666
S23C23	53.1101	0.1963	54.7265	1.4200
S23C24	59.5794	0.2202	61.3926	1.5930
S23R01	13.7999	0.1868	140.8929	126.9062
S23R02	10.0427	0.1674	135.5090	125.2988
S23R03	8.1279	0.1489	131.6171	123.3402
S23R04	7.4710	0.1410	129.9621	122.3500
S23R05	7.8257	0.1454	130.8813	122.9102
S23R06	9.3268	0.1613	134.1858	124.6977
S23R07	12.4809	0.1822	139.2285	126.5654
S23R08	17.8228	0.1905	145.1076	127.0943
S23R09	24.8203	0.1776	150.8849	125.8870
S23R10	31.6714	0.1587	155.7382	123.9081
S23R11	36.6427	0.1453	159.0410	122.2530
S23R12	38.7288	0.1400	160.3961	121.5273
S23R13	37.5728	0.1429	159.6470	121.9312
S23R14	33.3681	0.1540	156.8796	123.3575
S23R15	26.9149	0.1720	152.4221	125.3353
S23R16	19.7510	0.1885	146.8361	126.8966

	Cs-137	Ba-137m	Source 24	X Posit	Z Posit	Y Posit
	12.5419	11.8646		7.9617	19.2122	33.0332
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S24C01	27.7095	0.2789	29.9247	1.9363		
S24C02	24.1480	0.2430	26.0785	1.6874		
S24C03	23.1806	0.2333	25.0337	1.6198		
S24C04	25.1088	0.2527	27.1161	1.7545		
S24C05	29.3679	0.2956	31.7156	2.0522		
S24C06	35.1197	0.3535	37.9273	2.4541		
S24C07	13.9615	0.6475	18.8911	4.2821		
S24C08	8.7904	0.4076	11.8941	2.6961		
S24C09	6.9356	0.3216	9.3845	2.1272		
S24C10	10.3643	0.4806	14.0238	3.1789		
S24C11	15.9756	0.7409	21.6163	4.8999		
S24C12	22.1698	1.0281	29.9977	6.7998		
S24C13	39.2502	0.1795	40.7164	1.2867		
S24C14	36.6116	0.1675	37.9793	1.2002		
S24C15	35.9275	0.1643	37.2696	1.1777		

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S24C16	37.3055	0.1706	38.6991	1.2229
S24C17	40.5359	0.1854	42.0502	1.3288
S24C18	45.2235	0.2069	46.9129	1.4825
S24C19	45.6289	0.1503	46.8662	1.0869
S24C20	43.3338	0.1428	44.5089	1.0323
S24C21	42.7458	0.1408	43.9049	1.0183
S24C22	43.9334	0.1448	45.1247	1.0465
S24C23	46.7615	0.1541	48.0295	1.1139
S24C24	50.9578	0.1679	52.3396	1.2139
S24R01	5.5122	0.2922	136.4809	130.6765
S24R02	3.0251	0.1971	129.2226	126.0005
S24R03	2.2111	0.1511	124.1373	121.7751
S24R04	2.0054	0.1384	122.3024	120.1586
S24R05	2.2115	0.1511	124.1403	121.7778
S24R06	3.0262	0.1971	129.2281	126.0047
S24R07	5.5158	0.2923	136.4877	130.6796
S24R08	12.8228	0.3172	144.5825	131.4425
S24R09	24.2701	0.2253	152.2471	127.7516
S24R10	34.5739	0.1698	158.4541	123.7104
S24R11	41.3093	0.1453	162.4690	121.0144
S24R12	43.6280	0.1383	163.8546	120.0883
S24R13	41.3054	0.1453	162.4666	121.0160
S24R14	34.5664	0.1699	158.4497	123.7134
S24R15	24.2602	0.2254	152.2410	127.7554
S24R16	12.8139	0.3173	144.5756	131.4443

	Cs-137	Ba-137m	Source 25	X Posit	Z Posit	Y Posit
	19.7625	18.6953		8.3975	9.5559	39.8544
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S25C01	19.1100	0.1869	20.6360	1.3391		
S25C02	16.9046	0.1654	18.2545	1.1845		
S25C03	18.5813	0.1818	20.0650	1.3020		
S25C04	23.3171	0.2281	25.1791	1.6339		
S25C05	29.6823	0.2903	32.0525	2.0799		
S25C06	36.8418	0.3604	39.7837	2.5815		
S25C07	17.7090	0.1880	19.2454	1.3483		
S25C08	15.3358	0.1628	16.6663	1.1676		
S25C09	17.1445	0.1820	18.6318	1.3053		
S25C10	22.1325	0.2350	24.0525	1.6851		
S25C11	28.6867	0.3046	31.1754	2.1841		
S25C12	35.9608	0.3818	39.0805	2.7379		
S25C13	33.8328	0.1505	35.0699	1.0867		
S25C14	32.5339	0.1447	33.7236	1.0449		
S25C15	33.5116	0.1491	34.7370	1.0763		
S25C16	36.5837	0.1628	37.9215	1.1750		

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S25C17	41.2854	0.1837	42.7951	1.3260
S25C18	47.1314	0.2097	48.8549	1.5138
S25C19	34.6317	0.1484	35.8520	1.0719
S25C20	33.3606	0.1429	34.5361	1.0325
S25C21	34.3172	0.1470	35.5264	1.0622
S25C22	37.3305	0.1599	38.6459	1.1554
S25C23	41.9598	0.1798	43.4383	1.2987
S25C24	47.7372	0.2045	49.4193	1.4775
S25R01	12.7874	0.1549	135.5141	122.5718
S25R02	10.8572	0.1441	132.2928	121.2915
S25R03	10.1430	0.1390	130.9027	120.6208
S25R04	10.5000	0.1416	131.6136	120.9720
S25R05	12.0037	0.1510	134.2866	122.1319
S25R06	14.9002	0.1623	138.4179	123.3554
S25R07	19.3174	0.1670	143.2848	123.8004
S25R08	24.7556	0.1613	148.1120	123.1951
S25R09	30.0389	0.1509	152.2015	122.0117
S25R10	33.9324	0.1424	155.0096	120.9347
S25R11	35.6115	0.1388	156.1854	120.4351
S25R12	34.7534	0.1406	155.5867	120.6926
S25R13	31.5204	0.1477	153.2856	121.6175
S25R14	26.5721	0.1580	149.5655	122.8354
S25R15	21.0376	0.1661	144.9099	123.7061
S25R16	16.1894	0.1649	139.9722	123.6178

	Cs-137	Ba-137m	Source 26	X Posit	Z Posit	Y Posit
	24.8512	23.5093		4.1090	16.2164	34.1935
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S26C01	28.0976	0.2150	29.8401	1.5275		
S26C02	24.8397	0.1900	26.3802	1.3504		
S26C03	24.2524	0.1856	25.7565	1.3185		
S26C04	26.5138	0.2029	28.1581	1.4414		
S26C05	31.0068	0.2372	32.9297	1.6857		
S26C06	36.9254	0.2825	39.2154	2.0074		
S26C07	15.0117	0.3199	17.6292	2.2975		
S26C08	9.1820	0.1957	10.7829	1.4053		
S26C09	7.7930	0.1661	9.1517	1.1927		
S26C10	12.4346	0.2650	14.6027	1.9031		
S26C11	19.1304	0.4077	22.4660	2.9279		
S26C12	26.3590	0.5617	30.9549	4.0342		
S26C13	34.3646	0.1795	35.8311	1.2870		
S26C14	31.6545	0.1653	33.0053	1.1855		
S26C15	31.1785	0.1628	32.5090	1.1677		
S26C16	33.0333	0.1725	34.4429	1.2371		
S26C17	36.8688	0.1925	38.4421	1.3808		

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S26C18	42.1478	0.2201	43.9464	1.5785
S26C19	41.9444	0.1486	43.1684	1.0753
S26C20	39.6950	0.1407	40.8533	1.0177
S26C21	39.3064	0.1393	40.4534	1.0077
S26C22	40.8318	0.1447	42.0233	1.0468
S26C23	44.0729	0.1562	45.3590	1.1299
S26C24	48.6884	0.1725	50.1091	1.2482
S26R01	13.4651	0.2010	139.9705	126.3044
S26R02	9.1288	0.1777	133.8173	124.5107
S26R03	6.9670	0.1522	129.0649	121.9457
S26R04	6.1410	0.1394	126.6250	120.3445
S26R05	6.2598	0.1414	127.0060	120.6049
S26R06	7.3800	0.1579	130.1266	122.5887
S26R07	10.0231	0.1853	135.3475	125.1392
S26R08	15.0617	0.2029	141.6953	126.4307
S26R09	22.4526	0.1900	148.1251	125.4825
S26R10	30.2477	0.1651	153.7065	123.2937
S26R11	36.2920	0.1471	157.7183	121.2792
S26R12	39.3285	0.1390	159.6837	120.2162
S26R13	38.8583	0.1402	159.3808	120.3823
S26R14	34.9535	0.1509	156.8433	121.7389
S26R15	28.2873	0.1714	152.3609	123.9022
S26R16	20.3612	0.1958	146.4760	125.9190

	Cs-137	Ba-137m	Source 27	X Posit	Z Posit	Y Posit
	10.2138	9.6622		2.2698	-21.1016	13.9713
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S27C01	44.1470	0.3121	46.6589	2.1999		
S27C02	38.0652	0.2691	40.2311	1.8968		
S27C03	33.0754	0.2338	34.9574	1.6482		
S27C04	29.7328	0.2102	31.4246	1.4816		
S27C05	28.6203	0.2023	30.2488	1.4262		
S27C06	29.9871	0.2120	31.6934	1.4943		
S27C07	55.9595	0.1762	57.4105	1.2748		
S27C08	50.9983	0.1606	52.3206	1.1617		
S27C09	47.1603	0.1485	48.3831	1.0743		
S27C10	44.7357	0.1408	45.8956	1.0191		
S27C11	43.9589	0.1384	45.0987	1.0014		
S27C12	44.9155	0.1414	46.0801	1.0232		
S27C13	46.7718	0.2664	48.9325	1.8943		
S27C14	40.9551	0.2333	42.8471	1.6587		
S27C15	36.2636	0.2066	37.9388	1.4687		
S27C16	33.1780	0.1890	34.7108	1.3437		
S27C17	32.1641	0.1832	33.6500	1.3027		
S27C18	33.4108	0.1903	34.9543	1.3532		

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S27C19	21.1432	1.7963	35.7139	12.7744
S27C20	15.8519	1.3468	26.7763	9.5775
S27C21	10.5977	0.9004	17.9011	6.4030
S27C22	5.4880	0.4663	9.2700	3.3158
S27C23	2.1685	0.1842	3.6629	1.3102
S27C24	6.0054	0.5102	10.1439	3.6284
S27R01	9.2994	0.3707	142.8145	133.1444
S27R02	20.7884	0.2608	150.8438	129.7946
S27R03	32.2268	0.1840	157.6439	125.2331
S27R04	40.3097	0.1507	162.3877	121.9272
S27R05	43.9771	0.1391	164.5517	120.4354
S27R06	42.8911	0.1424	163.9097	120.8762
S27R07	37.1453	0.1623	160.5280	123.2204
S27R08	27.3347	0.2114	154.7670	127.2209
S27R09	15.2005	0.3166	147.2879	131.7708
S27R10	5.9327	0.3526	139.0533	132.7681
S27R11	2.7871	0.2267	131.2941	128.2803
S27R12	1.8683	0.1615	125.3792	123.3494
S27R13	1.5964	0.1399	122.5253	120.7890
S27R14	1.6704	0.1459	123.3828	121.5665
S27R15	2.1633	0.1838	127.7516	125.4045
S27R16	3.7300	0.2800	134.6731	130.6631

	Cs-137	Ba-137m	Source 28	X Posit	Z Posit	Y Posit
	15.5133	14.6756		18.4153	-5.6775	6.4850
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S28C01	34.4715	1.1546	43.7381	8.1120		
S28C02	27.5256	0.9219	34.9249	6.4774		
S28C03	20.6798	0.6926	26.2389	4.8665		
S28C04	14.0812	0.4716	17.8664	3.3136		
S28C05	8.3386	0.2793	10.5801	1.9623		
S28C06	6.4352	0.2155	8.1651	1.5144		
S28C07	53.2264	0.2633	55.3757	1.8859		
S28C08	46.8247	0.2317	48.7154	1.6591		
S28C09	41.2519	0.2041	42.9176	1.4616		
S28C10	36.8858	0.1825	38.3752	1.3069		
S28C11	34.1916	0.1692	35.5722	1.2115		
S28C12	33.5744	0.1661	34.9301	1.1896		
S28C13	59.0022	0.1980	60.6324	1.4322		
S28C14	53.1486	0.1784	54.6170	1.2901		
S28C15	48.1838	0.1617	49.5151	1.1696		
S28C16	44.4072	0.1490	45.6342	1.0779		
S28C17	42.1394	0.1414	43.3037	1.0229		
S28C18	41.6276	0.1397	42.7777	1.0104		
S28C19	47.0132	0.4001	50.2279	2.8146		

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S28C20	40.0359	0.3407	42.7735	2.3969
S28C21	33.7259	0.2870	36.0320	2.0191
S28C22	28.5293	0.2428	30.4801	1.7080
S28C23	25.1462	0.2140	26.8657	1.5055
S28C24	24.3448	0.2072	26.0095	1.4575
S28R01	3.7611	0.1461	126.2881	122.3809
S28R02	4.7173	0.1744	130.2709	125.3793
S28R03	7.2409	0.2273	136.5221	129.0539
S28R04	13.1401	0.2587	143.8681	130.4692
S28R05	22.6238	0.2180	151.1165	128.2748
S28R06	32.2140	0.1734	157.2491	124.8617
S28R07	39.1616	0.1488	161.5035	122.1932
S28R08	42.2754	0.1396	163.3953	120.9803
S28R09	41.1624	0.1428	162.7195	121.4144
S28R10	35.9554	0.1594	159.5487	123.4340
S28R11	27.4009	0.1943	154.2338	126.6385
S28R12	17.3957	0.2446	147.4051	129.7648
S28R13	9.5137	0.2512	139.9647	130.1998
S28R14	5.6365	0.1973	133.0377	127.2039
S28R15	4.0922	0.1564	127.8395	123.5909
S28R16	3.5934	0.1406	125.4125	121.6785

	Cs-137	Ba-137m	Source 29	X Posit	Z Posit	Y Posit
	18.0653	17.0898		-0.0904	3.6427	38.3454
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S29C01	25.4727	0.1540	26.7401	1.1134		
S29C02	23.2413	0.1405	24.3977	1.0159		
S29C03	24.0514	0.1454	25.2481	1.0513		
S29C04	27.6367	0.1670	29.0118	1.2080		
S29C05	33.1076	0.2001	34.7549	1.4472		
S29C06	39.6919	0.2399	41.6668	1.7350		
S29C07	21.8596	0.1577	23.1584	1.1411		
S29C08	19.2645	0.1390	20.4091	1.0056		
S29C09	20.2172	0.1459	21.4184	1.0554		
S29C10	24.3041	0.1753	25.7481	1.2687		
S29C11	30.2817	0.2185	32.0809	1.5807		
S29C12	37.2507	0.2687	39.4639	1.9445		
S29C13	25.3085	0.1542	26.5778	1.1151		
S29C14	23.0631	0.1405	24.2198	1.0161		
S29C15	23.8786	0.1455	25.0762	1.0521		
S29C16	27.4839	0.1675	28.8623	1.2109		
S29C17	32.9764	0.2009	34.6302	1.4529		
S29C18	39.5779	0.2411	41.5628	1.7438		
S29C19	28.5228	0.1491	29.7506	1.0787		
S29C20	26.5227	0.1386	27.6643	1.0031		

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S29C21	27.2444	0.1424	28.4171	1.0303
S29C22	30.4954	0.1594	31.8080	1.1533
S29C23	35.5891	0.1860	37.1210	1.3459
S29C24	41.8581	0.2188	43.6599	1.5830
S29R01	22.7645	0.1404	143.5433	120.6384
S29R02	21.3825	0.1402	142.1415	120.6188
S29R03	20.2473	0.1396	140.9283	120.5414
S29R04	19.5010	0.1390	140.0952	120.4552
S29R05	19.2228	0.1387	139.7767	120.4152
S29R06	19.4390	0.1389	140.0246	120.4467
S29R07	20.1294	0.1395	140.7987	120.5297
S29R08	21.2219	0.1402	141.9735	120.6114
S29R09	22.5828	0.1404	143.3633	120.6401
S29R10	24.0166	0.1402	144.7532	120.5965
S29R11	25.2906	0.1395	145.9347	120.5046
S29R12	26.1810	0.1389	146.7346	120.4147
S29R13	26.5245	0.1386	147.0381	120.3750
S29R14	26.2569	0.1389	146.8020	120.4062
S29R15	25.4284	0.1395	146.0598	120.4920
S29R16	24.1913	0.1401	144.9180	120.5866

	Cs-137	Ba-137m	Source 30	X Posit	Z Posit	Y Posit
	15.0401	14.2280		7.3731	-19.7854	12.4003
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S30C01	41.9664	0.4058	45.1910	2.8188		
S30C02	35.4279	0.3425	38.1501	2.3797		
S30C03	29.8128	0.2882	32.1036	2.0025		
S30C04	25.7328	0.2488	27.7100	1.7284		
S30C05	23.9844	0.2319	25.8273	1.6110		
S30C06	25.0606	0.2423	26.9862	1.6833		
S30C07	56.3077	0.1830	57.8138	1.3231		
S30C08	51.1267	0.1662	52.4942	1.2014		
S30C09	47.0212	0.1528	48.2789	1.1049		
S30C10	44.2912	0.1439	45.4759	1.0407		
S30C11	43.1984	0.1404	44.3538	1.0151		
S30C12	43.8652	0.1426	45.0385	1.0307		
S30C13	50.4982	0.2359	52.4233	1.6891		
S30C14	44.7837	0.2092	46.4909	1.4980		
S30C15	40.1424	0.1876	41.6727	1.3427		
S30C16	36.9806	0.1728	38.3903	1.2370		
S30C17	35.6936	0.1668	37.0543	1.1939		
S30C18	36.4805	0.1704	37.8712	1.2203		
S30C19	26.6355	1.5159	38.0525	9.9011		
S30C20	20.5413	1.1690	29.3461	7.6357		
S30C21	14.6225	0.8322	20.8902	5.4355		

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S30C22	9.2228	0.5249	13.1760	3.4283
S30C23	5.9728	0.3399	8.5330	2.2202
S30C24	8.1032	0.4612	11.5766	3.0122
S30R01	5.2693	0.3229	137.7501	132.1578
S30R02	13.2921	0.3317	145.9453	132.3215
S30R03	25.2871	0.2240	153.5967	128.0856
S30R04	35.6199	0.1682	159.6929	123.9048
S30R05	42.1233	0.1446	163.5207	121.2527
S30R06	44.0614	0.1388	164.6665	120.4663
S30R07	41.2608	0.1474	163.0116	121.6035
S30R08	33.9775	0.1753	158.7284	124.5755
S30R09	23.1036	0.2400	152.2847	128.9411
S30R10	11.3179	0.3494	144.4496	132.7822
S30R11	4.5266	0.2993	136.2857	131.4598
S30R12	2.4845	0.1949	129.0886	126.4092
S30R13	1.8415	0.1500	124.2044	122.2129
S30R14	1.6978	0.1393	122.6811	120.8440
S30R15	1.9113	0.1551	124.8718	122.8054
S30R16	2.7014	0.2089	130.2728	127.3626

	Cs-137	Ba-137m	Source 31	X Posit	Z Posit	Y Posit
	22.3550	21.1478		5.5574	-17.7939	21.2754
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S31C01	35.6762	0.3002	38.0931	2.1167		
S31C02	29.9703	0.2522	32.0006	1.7782		
S31C03	25.8019	0.2171	27.5499	1.5309		
S31C04	23.9866	0.2018	25.6116	1.4231		
S31C05	25.0414	0.2107	26.7378	1.4857		
S31C06	28.6510	0.2411	30.5919	1.6999		
S31C07	49.3025	0.1680	50.6856	1.2150		
S31C08	45.0187	0.1534	46.2816	1.1095		
S31C09	42.1415	0.1436	43.3237	1.0386		
S31C10	40.9684	0.1396	42.1177	1.0096		
S31C11	41.6436	0.1419	42.8118	1.0263		
S31C12	44.0824	0.1502	45.3190	1.0864		
S31C13	42.7987	0.2124	44.5331	1.5220		
S31C14	37.9118	0.1881	39.4482	1.3482		
S31C15	34.5326	0.1714	35.9321	1.2281		
S31C16	33.1260	0.1644	34.4684	1.1780		
S31C17	33.9379	0.1684	35.3133	1.2069		
S31C18	36.8220	0.1827	38.3143	1.3095		
S31C19	23.8494	0.6892	29.4153	4.8766		
S31C20	16.9726	0.4905	20.9336	3.4705		
S31C21	10.6695	0.3083	13.1594	2.1816		
S31C22	6.7897	0.1962	8.3742	1.3883		

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S31C23	9.2117	0.2662	11.3615	1.8836
S31C24	15.1692	0.4384	18.7094	3.1017
S31R01	10.2992	0.2320	138.6359	128.1047
S31R02	17.7680	0.2285	145.9023	127.9059
S31R03	27.1477	0.1879	152.5850	125.2495
S31R04	35.2628	0.1570	157.7981	122.3784
S31R05	40.2565	0.1416	160.9206	120.5225
S31R06	41.3573	0.1386	161.6051	120.1092
S31R07	38.4224	0.1470	159.7778	121.2084
S31R08	31.8526	0.1690	155.6375	123.6158
S31R09	22.8355	0.2069	149.6573	126.6150
S31R10	13.9170	0.2384	142.5823	128.4270
S31R11	8.1138	0.2139	135.4070	127.0793
S31R12	5.4359	0.1695	129.2940	123.6887
S31R13	4.3740	0.1440	125.3865	120.8685
S31R14	4.1800	0.1388	124.5030	120.1842
S31R15	4.7266	0.1530	126.8396	121.9601
S31R16	6.3834	0.1884	131.8870	125.3152

	Cs-137	Ba-137m	Source 32	X Posit	Z Posit	Y Posit
	21.6866	20.5156		-0.9171	17.9652	26.2433
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S32C01	36.7024	0.2196	38.4886	1.5666		
S32C02	32.2499	0.1929	33.8194	1.3766		
S32C03	29.6708	0.1775	31.1148	1.2665		
S32C04	29.4614	0.1763	30.8952	1.2575		
S32C05	31.6686	0.1895	33.2098	1.3517		
S32C06	35.8488	0.2145	37.5935	1.5302		
S32C07	19.4467	0.5567	24.0288	4.0254		
S32C08	12.5315	0.3587	15.4843	2.5940		
S32C09	6.4817	0.1855	8.0089	1.3417		
S32C10	5.7524	0.1647	7.1079	1.1908		
S32C11	11.4139	0.3267	14.1032	2.3627		
S32C12	18.2638	0.5228	22.5672	3.7806		
S32C13	35.4558	0.2309	37.3305	1.6437		
S32C14	30.8634	0.2010	32.4953	1.4308		
S32C15	28.1802	0.1836	29.6702	1.3065		
S32C16	27.9614	0.1821	29.4398	1.2963		
S32C17	30.2603	0.1971	31.8603	1.4029		
S32C18	34.5786	0.2252	36.4069	1.6031		
S32C19	46.6308	0.1581	47.9328	1.1439		
S32C20	43.0686	0.1460	44.2711	1.0565		
S32C21	41.0937	0.1393	42.2411	1.0081		
S32C22	40.9365	0.1388	42.0796	1.0042		
S32C23	42.6172	0.1445	43.8072	1.0455		

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S32C24	45.9345	0.1557	47.2170	1.1268
S32R01	17.4910	0.2185	144.9729	127.2634
S32R02	10.6408	0.2158	137.9558	127.0992
S32R03	6.9516	0.1788	131.5629	124.4326
S32R04	5.3288	0.1494	126.9269	121.4486
S32R05	4.8172	0.1383	124.9767	120.0211
S32R06	5.1108	0.1448	126.1340	120.8783
S32R07	6.3834	0.1695	130.1462	123.5933
S32R08	9.4052	0.2074	136.1887	126.5761
S32R09	15.4171	0.2228	143.1531	127.5132
S32R10	23.9896	0.1953	149.9271	125.7422
S32R11	32.3738	0.1638	155.5672	123.0296
S32R12	38.3239	0.1450	159.3722	120.9033
S32R13	40.7551	0.1383	160.9061	120.0127
S32R14	39.3181	0.1422	160.0005	120.5402
S32R15	34.2139	0.1576	156.7544	122.3829
S32R16	26.3002	0.1862	151.5340	125.0476

	Cs-137	Ba-137m	Source 33	X Posit	Z Posit	Y Posit
	17.8281	16.8653		-2.7939	-22.1819	29.8247
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S33C01	38.1914	0.2135	39.9215	1.5166		
S33C02	34.7647	0.1944	36.3396	1.3805		
S33C03	33.2695	0.1860	34.7766	1.3211		
S33C04	33.9616	0.1899	35.5001	1.3486		
S33C05	36.7176	0.2053	38.3810	1.4580		
S33C06	41.1247	0.2300	42.9877	1.6330		
S33C07	48.9793	0.1505	50.2187	1.0890		
S33C08	46.2507	0.1421	47.4212	1.0283		
S33C09	45.0932	0.1386	46.2343	1.0026		
S33C10	45.6263	0.1402	46.7809	1.0144		
S33C11	47.7936	0.1469	49.0031	1.0626		
S33C12	51.3887	0.1579	52.6891	1.1425		
S33C13	34.3996	0.2517	36.4171	1.7658		
S33C14	30.6530	0.2242	32.4507	1.5735		
S33C15	28.9901	0.2121	30.6903	1.4881		
S33C16	29.7622	0.2177	31.5078	1.5278		
S33C17	32.7980	0.2399	34.7215	1.6836		
S33C18	37.5522	0.2747	39.7546	1.9277		
S33C19	6.0731	1.8043	19.9501	12.0727		
S33C20	3.4014	1.0106	11.1736	6.7617		
S33C21	1.1265	0.3347	3.7006	2.2394		
S33C22	2.4455	0.7266	8.0336	4.8615		
S33C23	5.0699	1.5063	16.6548	10.0786		
S33C24	7.7743	2.3098	25.5388	15.4546		

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S33R01	13.6644	0.4071	147.4420	133.3705
S33R02	27.5571	0.2218	155.2579	127.4790
S33R03	38.0569	0.1632	161.2115	122.9914
S33R04	43.9831	0.1418	164.6348	120.5099
S33R05	44.9045	0.1390	165.1716	120.1282
S33R06	40.7616	0.1527	162.7677	121.8533
S33R07	31.8365	0.1936	157.6693	125.6391
S33R08	18.9342	0.3115	150.4300	131.1843
S33R09	5.2335	0.6518	141.9215	136.0362
S33R10	1.1484	0.3350	133.3260	131.8426
S33R11	0.6100	0.1885	126.0624	125.2638
S33R12	0.4649	0.1451	121.5575	120.9475
S33R13	0.4471	0.1397	120.8271	120.2402
S33R14	0.5361	0.1666	124.0464	123.3437
S33R15	0.8593	0.2595	130.4656	129.3468
S33R16	2.6291	0.5849	138.7503	135.5363

	Cs-137	Ba-137m	Source 34	X Posit	Z Posit	Y Posit
	14.6776	13.8850		-14.1407	16.9694	5.4489
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S34C01	58.8279	0.2222	60.6498	1.5997		
S34C02	52.8292	0.1996	54.4654	1.4366		
S34C03	47.6818	0.1801	49.1586	1.2966		
S34C04	43.6874	0.1650	45.0405	1.1880		
S34C05	41.1830	0.1556	42.4585	1.1199		
S34C06	40.4463	0.1528	41.6990	1.0999		
S34C07	38.1341	1.1924	46.7869	7.4603		
S34C08	31.3252	0.9795	38.4329	6.1283		
S34C09	24.8182	0.7760	30.4495	4.8553		
S34C10	18.9272	0.5918	23.2218	3.7028		
S34C11	14.4276	0.4511	17.7012	2.8225		
S34C12	12.8721	0.4025	15.7928	2.5182		
S34C13	42.1125	0.8056	48.2124	5.2943		
S34C14	35.0755	0.6710	40.1561	4.4097		
S34C15	28.4732	0.5447	32.5975	3.5796		
S34C16	22.6882	0.4340	25.9745	2.8523		
S34C17	18.5037	0.3540	21.1839	2.3263		
S34C18	17.1353	0.3278	19.6173	2.1542		
S34C19	60.0327	0.2098	61.7562	1.5136		
S34C20	54.1405	0.1892	55.6948	1.3651		
S34C21	49.1074	0.1717	50.5172	1.2382		
S34C22	45.2213	0.1581	46.5196	1.1402		
S34C23	42.7958	0.1496	44.0244	1.0790		
S34C24	42.0842	0.1471	43.2924	1.0611		
S34R01	33.0333	0.1882	159.4216	126.2001		

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S34R02	20.6643	0.2862	152.4830	131.5326
S34R03	7.3185	0.5254	144.2255	136.3815
S34R04	1.9527	0.3404	135.7862	133.4932
S34R05	1.0239	0.1955	128.5366	127.3172
S34R06	0.7678	0.1490	123.8707	122.9539
S34R07	0.7254	0.1411	122.8173	121.9508
S34R08	0.8490	0.1640	125.6248	124.6118
S34R09	1.2985	0.2425	131.6447	130.1036
S34R10	3.2941	0.4731	139.6226	135.8554
S34R11	13.1452	0.4028	148.1371	134.5891
S34R12	26.7741	0.2283	155.9091	128.9067
S34R13	37.4820	0.1670	161.9380	124.2890
S34R14	43.7689	0.1439	165.5343	121.6215
S34R15	45.1257	0.1397	166.3175	121.0520
S34R16	41.4592	0.1517	164.2071	122.5962

	Cs-137	Ba-137m	Source 35	X Posit	Z Posit	Y Posit
	28.0146	26.5018		17.6331	12.8346	30.1155
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S35C01	19.1593	0.6800	24.0880	4.2487		
S35C02	14.0563	0.4989	17.6723	3.1171		
S35C03	11.4268	0.4055	14.3662	2.5340		
S35C04	12.8860	0.4573	16.2009	2.8576		
S35C05	17.4360	0.6188	21.9214	3.8666		
S35C06	23.3339	0.8281	29.3364	5.1744		
S35C07	25.3306	0.4067	28.4598	2.7225		
S35C08	20.7219	0.3327	23.2817	2.2271		
S35C09	18.5873	0.2985	20.8834	1.9977		
S35C10	19.7462	0.3171	22.1855	2.1223		
S35C11	23.7207	0.3809	26.6510	2.5494		
S35C12	29.3899	0.4719	33.0205	3.1588		
S35C13	46.3226	0.1591	47.6298	1.1481		
S35C14	43.5014	0.1494	44.7290	1.0782		
S35C15	42.3342	0.1454	43.5288	1.0493		
S35C16	42.9561	0.1475	44.1683	1.0647		
S35C17	45.2935	0.1555	46.5716	1.1226		
S35C18	49.1019	0.1686	50.4876	1.2170		
S35C19	43.7481	0.1716	45.1539	1.2342		
S35C20	40.7725	0.1599	42.0827	1.1502		
S35C21	39.5344	0.1551	40.8048	1.1153		
S35C22	40.1947	0.1577	41.4863	1.1339		
S35C23	42.6653	0.1674	44.0362	1.2036		
S35C24	46.6595	0.1830	48.1588	1.3163		
S35R01	1.3078	0.1793	126.0049	124.5178		
S35R02	1.0280	0.1433	121.8887	120.7174		

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S35R03	1.0065	0.1404	121.4876	120.3408
S35R04	1.2201	0.1682	124.8969	123.5086
S35R05	1.9501	0.2544	131.3355	129.1310
S35R06	5.0662	0.4444	139.4896	133.9790
S35R07	15.7908	0.3342	147.9463	131.8213
S35R08	28.6000	0.2083	155.4707	126.6624
S35R09	38.3591	0.1594	161.1179	122.5994
S35R10	43.7217	0.1409	164.2539	120.3913
S35R11	44.2265	0.1394	164.5509	120.1850
S35R12	39.8355	0.1539	161.9782	121.9889
S35R13	30.9090	0.1944	156.8031	125.6997
S35R14	18.5176	0.2983	149.5956	130.7797
S35R15	6.5809	0.4598	141.2378	134.1971
S35R16	2.2559	0.2858	132.9099	130.3681

TABLE 10- Calculate Microshield input data sheets for the simulations from each source to each measuring point in centimeters.

	Cs-137	Ba-137m	Source 01	X Posit	Z Posit	Y Posit
	29.4975	27.9047		49.1940	1.4778	65.7946
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S01C01	45.8508	1.8482	61.0669	13.3679		
S01C02	29.1907	1.1767	38.8780	8.5106		
S01C03	13.8240	0.5572	18.4117	4.0304		
S01C04	10.9230	0.4403	14.5479	3.1846		
S01C05	25.2334	1.0171	33.6074	7.3568		
S01C06	41.7533	1.6831	55.6096	12.1732		
S01C07	92.7873	0.5977	97.6297	4.2448		
S01C08	81.2795	0.5236	85.5213	3.7183		
S01C09	74.4800	0.4798	78.3670	3.4073		
S01C10	73.7038	0.4748	77.5503	3.3717		
S01C11	79.1282	0.5097	83.2578	3.6199		
S01C12	89.6345	0.5774	94.3124	4.1005		
S01C13	121.9806	0.3998	125.2732	2.8928		
S01C14	113.0338	0.3705	116.0849	2.6806		
S01C15	108.0045	0.3540	110.9198	2.5614		
S01C16	107.4441	0.3521	110.3443	2.5481		
S01C17	111.4201	0.3652	114.4276	2.6424		
S01C18	119.4804	0.3916	122.7055	2.8335		
S01C19	94.7624	0.5781	99.4534	4.1129		
S01C20	83.4657	0.5092	87.5974	3.6226		
S01C21	76.8246	0.4687	80.6276	3.3343		
S01C22	76.0684	0.4640	79.8339	3.3015		
S01C23	81.3614	0.4963	85.3889	3.5312		
S01C24	91.6615	0.5592	96.1990	3.9783		
S01R01	8.6987	0.3512	313.8781	304.8282		
S01R02	9.3752	0.3738	317.5340	307.7850		
S01R03	12.1700	0.4574	328.9729	316.3455		

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S01R04	19.4637	0.6005	345.8021	325.7379
S01R05	36.1208	0.6519	364.9209	328.1482
S01R06	60.9888	0.5311	383.2997	321.7799
S01R07	84.6552	0.4244	398.4220	313.3423
S01R08	100.8873	0.3691	408.4500	307.1936
S01R09	107.0960	0.3511	412.2635	304.8164
S01R10	102.5212	0.3642	409.4541	306.5687
S01R11	87.7130	0.4130	400.3219	312.1959
S01R12	64.9012	0.5113	385.8775	320.4650
S01R13	39.6047	0.6396	367.8497	327.6054
S01R14	21.2862	0.6211	348.6573	326.7500
S01R15	12.8949	0.4764	331.2714	317.9000
S01R16	9.6352	0.3823	318.8247	308.8072

	Cs-137	Ba-137m	Source 02	X Posit	Z Posit	Y Posit
	13.8502	13.1023		-26.9687	-49.7051	47.9195
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S02C01	123.1614	0.5175	127.3917	3.7128		
S02C02	111.0497	0.4666	114.8639	3.3477		
S02C03	102.3339	0.4300	105.8488	3.0849		
S02C04	97.9251	0.4115	101.2886	2.9520		
S02C05	98.4038	0.4135	101.7838	2.9664		
S02C06	103.7025	0.4357	107.2644	3.1262		
S02C07	134.2058	0.4390	137.8167	3.1719		
S02C08	123.0172	0.4024	126.3270	2.9074		
S02C09	115.0929	0.3765	118.1895	2.7201		
S02C10	111.1334	0.3636	114.1235	2.6266		
S02C11	111.5616	0.3650	114.5632	2.6367		
S02C12	116.3291	0.3806	119.4590	2.7494		
S02C13	89.4217	1.1454	98.3347	7.7675		
S02C14	74.0713	0.9488	81.4542	6.4341		
S02C15	61.9770	0.7939	68.1545	5.3836		
S02C16	55.3175	0.7086	60.8312	4.8051		
S02C17	56.0641	0.7181	61.6522	4.8699		
S02C18	63.9580	0.8193	70.3329	5.5556		
S02C19	56.6596	3.9911	83.0958	22.4451		
S02C20	42.4180	2.9879	62.2093	16.8034		
S02C21	29.5666	2.0826	43.3617	11.7125		
S02C22	20.8569	1.4691	30.5882	8.2622		
S02C23	21.9491	1.5461	32.1901	8.6949		
S02C24	31.8504	2.2435	46.7111	12.6172		
S02R01	68.4382	0.5735	393.6941	324.6823		
S02R02	95.4914	0.4191	409.0429	313.1324		
S02R03	111.1209	0.3621	418.0674	306.5844		
S02R04	114.1341	0.3528	419.8225	305.3356		

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S02R05	104.3313	0.3848	414.1309	309.4148
S02R06	82.3944	0.4823	401.5757	318.6991
S02R07	50.3452	0.7544	383.5184	332.4187
S02R08	15.7655	1.5052	362.1218	344.8510
S02R09	3.6714	0.8690	340.3378	335.7974
S02R10	1.9174	0.4878	321.7275	319.3222
S02R11	1.4438	0.3719	309.9106	308.0948
S02R12	1.3733	0.3543	307.5285	305.8008
S02R13	1.6243	0.4166	315.1514	313.1105
S02R14	2.5395	0.6326	331.0010	327.8289
S02R15	7.0624	1.3406	351.7649	343.3620
S02R16	33.3307	1.0470	373.7546	339.3769

	Cs-137	Ba-137m	Source 03	X Posit	Z Posit	Y Posit
	23.5916	22.3177		4.4969	-18.4379	106.3939
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S03C01	59.1133	0.3906	62.3219	2.8181		
S03C02	56.2954	0.3719	59.3511	2.6837		
S03C03	61.5165	0.4064	64.8555	2.9326		
S03C04	73.0732	0.4828	77.0396	3.4836		
S03C05	88.5179	0.5848	93.3226	4.2199		
S03C06	106.1671	0.7014	111.9298	5.0612		
S03C07	78.7075	0.3619	81.6881	2.6187		
S03C08	76.5461	0.3520	79.4448	2.5468		
S03C09	80.5854	0.3706	83.6372	2.6812		
S03C10	89.9945	0.4138	93.4025	2.9942		
S03C11	103.3164	0.4751	107.2289	3.4374		
S03C12	119.2469	0.5484	123.7627	3.9675		
S03C13	67.4229	0.3807	70.5528	2.7492		
S03C14	64.9287	0.3666	67.9428	2.6475		
S03C15	69.5709	0.3929	72.8005	2.8368		
S03C16	80.1185	0.4524	83.8378	3.2668		
S03C17	94.6167	0.5343	99.0090	3.8580		
S03C18	111.5354	0.6298	116.7131	4.5479		
S03C19	43.5906	0.3879	46.7842	2.8058		
S03C20	39.8288	0.3544	42.7469	2.5636		
S03C21	46.6891	0.4154	50.1097	3.0052		
S03C22	60.6692	0.5398	65.1140	3.9050		
S03C23	78.0318	0.6943	83.7487	5.0226		
S03C24	96.9769	0.8629	104.0818	6.2420		
S03R01	51.5758	0.3728	361.0909	309.1423		
S03R02	59.0276	0.3725	368.4543	309.0542		
S03R03	66.6243	0.3667	375.2465	308.2556		
S03R04	72.9153	0.3590	380.4883	307.2140		
S03R05	76.6277	0.3538	383.4581	306.4767		

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S03R06	77.0088	0.3532	383.7585	306.3965
S03R07	73.9818	0.3576	381.3500	307.0107
S03R08	68.1593	0.3650	376.5529	308.0287
S03R09	60.7232	0.3716	370.0234	308.9286
S03R10	53.1232	0.3733	362.6917	309.1951
S03R11	46.6341	0.3686	355.6601	308.6574
S03R12	42.0263	0.3606	350.0463	307.6594
S03R13	39.5825	0.3544	346.7907	306.8538
S03R14	39.3422	0.3537	346.4582	306.7623
S03R15	41.3047	0.3589	349.1078	307.4441
S03R16	45.4514	0.3669	354.2763	308.4580

	Cs-137	Ba-137m	Source 04	X Posit	Z Posit	Y Posit
	20.6982	19.5805		14.0365	-48.8135	72.8360
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S04C01	80.3749	0.6808	85.8341	4.7784		
S04C02	69.2666	0.5867	73.9713	4.1180		
S04C03	63.6556	0.5392	67.9792	3.7844		
S04C04	64.9820	0.5504	69.3956	3.8633		
S04C05	72.8678	0.6172	77.8171	4.3321		
S04C06	85.5173	0.7243	91.3258	5.0841		
S04C07	119.2835	0.3927	122.5161	2.8400		
S04C08	111.4968	0.3670	114.5184	2.6546		
S04C09	107.8205	0.3549	110.7424	2.5670		
S04C10	108.6725	0.3577	111.6175	2.5873		
S04C11	113.9512	0.3751	117.0394	2.7130		
S04C12	123.0886	0.4052	126.4243	2.9306		
S04C13	99.7780	0.4973	103.8327	3.5574		
S04C14	90.5819	0.4514	94.2629	3.2295		
S04C15	86.1373	0.4293	89.6377	3.0711		
S04C16	87.1741	0.4344	90.7165	3.1080		
S04C17	93.5100	0.4660	97.3100	3.3339		
S04C18	104.1828	0.5192	108.4165	3.7144		
S04C19	42.0142	1.7600	56.0224	12.2482		
S04C20	26.4381	1.1075	35.2530	7.7074		
S04C21	14.8520	0.6222	19.8039	4.3297		
S04C22	18.1665	0.7610	24.2235	5.2960		
S04C23	32.0514	1.3427	42.7378	9.3438		
S04C24	48.0873	2.0144	64.1204	14.0186		
S04R01	21.5812	0.7015	352.4557	330.1730		
S04R02	43.0044	0.6614	372.2430	328.5771		
S04R03	70.0402	0.4999	390.2222	319.6822		
S04R04	92.5362	0.4026	404.0585	311.1197		
S04R05	105.8453	0.3593	412.1429	305.9383		
S04R06	108.2437	0.3524	413.5989	305.0028		

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S04R07	99.4714	0.3789	408.2736	308.4233
S04R08	80.5482	0.4501	396.7336	315.7352
S04R09	54.5615	0.5883	380.2754	325.1256
S04R10	29.2573	0.7227	360.9285	330.9485
S04R11	14.8662	0.6040	341.4104	325.9403
S04R12	9.4023	0.4426	324.9169	315.0720
S04R13	7.4603	0.3656	314.5991	306.7732
S04R14	7.1734	0.3534	312.6823	305.1555
S04R15	8.3088	0.4004	319.6047	310.8955
S04R16	11.8606	0.5253	333.8214	321.4355

	Cs-137	Ba-137m	Source 05	X Posit	Z Posit	Y Posit
	10.9510	10.3596		-31.7933	6.1732	92.3496
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S05C01	95.5415	0.3740	98.6211	2.7056		
S05C02	90.4782	0.3541	93.3946	2.5622		
S05C03	90.6937	0.3550	93.6169	2.5683		
S05C04	96.1524	0.3763	99.2516	2.7229		
S05C05	106.0477	0.4151	109.4659	3.0031		
S05C06	119.2807	0.4669	123.1253	3.3778		
S05C07	67.6640	0.4669	71.4793	3.3484		
S05C08	60.6557	0.4186	64.0759	3.0016		
S05C09	60.9621	0.4207	64.3996	3.0168		
S05C10	68.4851	0.4726	72.3468	3.3891		
S05C11	81.2441	0.5607	85.8252	4.0205		
S05C12	97.1985	0.6708	102.6793	4.8100		
S05C13	40.1969	0.5415	44.6522	3.9137		
S05C14	28.3284	0.3816	31.4682	2.7582		
S05C15	28.9171	0.3896	32.1222	2.8155		
S05C16	41.4355	0.5582	46.0280	4.0343		
S05C17	58.6908	0.7907	65.1958	5.7143		
S05C18	77.5842	1.0452	86.1833	7.5539		
S05C19	77.7762	0.4308	81.3058	3.0988		
S05C20	71.6297	0.3968	74.8803	2.8539		
S05C21	71.8948	0.3982	75.1575	2.8645		
S05C22	78.5067	0.4349	82.0695	3.1279		
S05C23	90.0785	0.4990	94.1664	3.5890		
S05C24	104.9826	0.5815	109.7469	4.1828		
S05R01	89.6882	0.3534	395.6562	305.6147		
S05R02	83.4383	0.3670	391.2430	307.4376		
S05R03	72.0943	0.3915	382.9003	310.4145		
S05R04	58.1530	0.4163	371.6870	313.1177		
S05R05	44.8983	0.4228	359.1316	313.8105		
S05R06	34.8895	0.4031	347.1053	311.8127		
S05R07	28.7586	0.3737	337.5860	308.4537		

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S05R08	25.9422	0.3546	332.2860	305.9892
S05R09	25.9110	0.3544	332.2230	305.9576
S05R10	28.6581	0.3731	337.4089	308.3777
S05R11	34.7038	0.4024	346.8479	311.7417
S05R12	44.6221	0.4227	358.8379	313.7931
S05R13	57.8238	0.4168	371.4033	313.1627
S05R14	71.7873	0.3921	382.6666	310.4872
S05R15	83.2249	0.3675	391.0905	307.4981
S05R16	89.6123	0.3536	395.6031	305.6373

	Cs-137	Ba-137m	Source 06	X Posit	Z Posit	Y Posit
	16.3182	15.4370		25.7762	-17.3149	75.2927
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S06C01	58.5016	0.6470	63.8003	4.6517		
S06C02	43.8515	0.4850	47.8233	3.4868		
S06C03	36.0865	0.3991	39.3550	2.8694		
S06C04	39.5003	0.4369	43.0780	3.1408		
S06C05	51.9334	0.5744	56.6373	4.1294		
S06C06	68.6488	0.7593	74.8666	5.4585		
S06C07	92.9099	0.4359	96.4908	3.1449		
S06C08	83.5389	0.3919	86.7586	2.8277		
S06C09	79.3365	0.3722	82.3941	2.6855		
S06C10	81.1099	0.3805	84.2360	2.7455		
S06C11	88.5008	0.4152	91.9117	2.9957		
S06C12	100.2746	0.4704	104.1392	3.3942		
S06C13	98.2839	0.4131	101.6828	2.9858		
S06C14	89.4066	0.3758	92.4985	2.7161		
S06C15	85.4624	0.3592	88.4178	2.5963		
S06C16	87.1238	0.3662	90.1366	2.6467		
S06C17	94.0943	0.3955	97.3482	2.8585		
S06C18	105.3251	0.4427	108.9674	3.1997		
S06C19	66.6203	0.5864	71.4101	4.2034		
S06C20	53.7221	0.4728	57.5846	3.3896		
S06C21	47.3659	0.4169	50.7713	2.9886		
S06C22	50.1063	0.4410	53.7088	3.1615		
S06C23	60.7240	0.5345	65.0899	3.8314		
S06C24	75.9857	0.6688	81.4489	4.7944		
S06R01	29.9898	0.3707	337.8091	307.4487		
S06R02	35.9897	0.3968	346.9165	310.5299		
S06R03	45.6362	0.4145	358.4513	312.4006		
S06R04	58.2591	0.4092	370.5195	311.8512		
S06R05	71.4818	0.3874	381.3193	309.4501		
S06R06	82.2568	0.3653	389.3711	306.7490		
S06R07	88.2194	0.3527	393.6454	305.0733		
S06R08	88.1806	0.3528	393.6177	305.0843		

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S06R09	82.1480	0.3655	389.2921	306.7787
S06R10	71.3254	0.3877	381.1984	309.4853
S06R11	58.0911	0.4094	370.3730	311.8726
S06R12	45.4938	0.4144	358.2994	312.3913
S06R13	35.8924	0.3965	346.7837	310.4948
S06R14	29.9363	0.3704	337.7179	307.4112
S06R15	27.1901	0.3534	332.7263	305.1829
S06R16	27.2068	0.3535	332.7586	305.1983

	Cs-137	Ba-137m	Source 07	X Posit	Z Posit	Y Posit
	25.9358	24.5353		-7.6301	-46.9452	3.8559
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S07C01	141.1409	0.7740	147.4450	5.5301		
S07C02	123.6681	0.6782	129.1917	4.8455		
S07C03	107.8172	0.5912	112.6329	4.2244		
S07C04	94.4086	0.5177	98.6254	3.6991		
S07C05	84.6117	0.4640	88.3909	3.3152		
S07C06	79.7683	0.4374	83.3311	3.1254		
S07C07	158.4820	0.5307	162.8522	3.8395		
S07C08	142.5988	0.4775	146.5310	3.4547		
S07C09	128.6161	0.4307	132.1627	3.1159		
S07C10	117.2160	0.3925	120.4483	2.8397		
S07C11	109.2104	0.3657	112.2219	2.6458		
S07C12	105.3758	0.3529	108.2815	2.5529		
S07C13	133.1893	0.9677	141.0118	6.8548		
S07C14	115.0416	0.8359	121.7983	5.9208		
S07C15	98.2964	0.7142	104.0696	5.0589		
S07C16	83.7986	0.6089	88.7203	4.3128		
S07C17	72.9016	0.5297	77.1833	3.7520		
S07C18	67.3758	0.4895	71.3329	3.4676		
S07C19	97.0572	3.1596	122.8964	22.6795		
S07C20	79.1878	2.5779	100.2697	18.5039		
S07C21	61.4263	1.9997	77.7796	14.3536		
S07C22	43.9037	1.4293	55.5920	10.2591		
S07C23	27.0879	0.8818	34.2994	6.3297		
S07C24	13.8505	0.4509	17.5379	3.2365		
S07R01	49.8633	0.5753	379.1087	328.6701		
S07R02	74.0619	0.4671	395.4067	320.8778		
S07R03	93.7871	0.3940	407.6819	313.5008		
S07R04	104.9239	0.3603	414.4832	309.1990		
S07R05	105.8636	0.3577	415.0553	308.8341		
S07R06	96.4878	0.3854	409.3359	312.4627		
S07R07	78.0953	0.4507	397.9563	319.4103		
S07R08	54.2256	0.5558	382.2422	327.4608		
S07R09	32.1530	0.6206	364.2012	331.4276		

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S07R10	18.9321	0.5334	346.4381	326.9726
S07R11	13.0885	0.4230	331.9059	318.3944
S07R12	10.8717	0.3667	323.3721	312.1337
S07R13	10.7097	0.3623	322.6375	311.5655
S07R14	12.4954	0.4087	329.8635	316.9595
S07R15	17.4751	0.5109	343.5067	325.5207
S07R16	29.0560	0.6151	360.9109	331.2398

	Cs-137	Ba-137m	Source 08	X Posit	Z Posit	Y Posit
	25.1678	23.8087		-3.6748	-23.8753	52.9898
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S08C01	95.5881	0.5485	100.0916	3.9549		
S08C02	81.1206	0.4655	84.9425	3.3563		
S08C03	70.5496	0.4049	73.8734	2.9190		
S08C04	65.7811	0.3775	68.8803	2.7217		
S08C05	68.0463	0.3905	71.2521	2.8154		
S08C06	76.7245	0.4403	80.3393	3.1744		
S08C07	107.8770	0.4631	111.6905	3.3505		
S08C08	94.9868	0.4077	98.3446	2.9501		
S08C09	85.9217	0.3688	88.9591	2.6686		
S08C10	81.9609	0.3518	84.8583	2.5456		
S08C11	83.8311	0.3598	86.7946	2.6036		
S08C12	91.1742	0.3914	94.3972	2.8317		
S08C13	90.6674	0.5919	95.5228	4.2635		
S08C14	75.4665	0.4927	79.5079	3.5487		
S08C15	64.1203	0.4186	67.5541	3.0152		
S08C16	58.9004	0.3845	62.0546	2.7697		
S08C17	61.3897	0.4008	64.6773	2.8868		
S08C18	70.7796	0.4621	74.5700	3.3283		
S08C19	75.2640	0.7766	81.6589	5.6182		
S08C20	57.3010	0.5913	62.1697	4.2773		
S08C21	42.3086	0.4366	45.9034	3.1582		
S08C22	34.4166	0.3551	37.3408	2.5691		
S08C23	38.2996	0.3952	41.5537	2.8589		
S08C24	51.3525	0.5299	55.7157	3.8333		
S08R01	58.1555	0.3844	367.8165	309.2765		
S08R02	68.0721	0.3740	376.4574	308.0112		
S08R03	76.3618	0.3613	383.1008	306.3777		
S08R04	81.2662	0.3528	386.8572	305.2381		
S08R05	81.7776	0.3519	387.2429	305.1134		
S08R06	77.7933	0.3588	384.2086	306.0564		
S08R07	70.1258	0.3711	378.1437	307.6468		
S08R08	60.3936	0.3827	369.8510	309.0747		
S08R09	50.6321	0.3860	360.4890	309.4709		
S08R10	42.5729	0.3778	351.4556	308.5049		

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S08R11	37.0764	0.3638	344.2023	306.7621
S08R12	34.2535	0.3533	339.9746	305.3678
S08R13	33.9754	0.3522	339.5354	305.2078
S08R14	36.2223	0.3609	342.9650	306.3818
S08R15	41.1177	0.3749	349.6410	308.1484
S08R16	48.6486	0.3851	358.4013	309.3675

	Cs-137	Ba-137m	Source 09	X Posit	Z Posit	Y Posit
	24.9347	23.5882		-28.7630	-3.2708	115.5217
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S09C01	87.2917	0.3536	90.2034	2.5582		
S09C02	87.5908	0.3548	90.5125	2.5670		
S09C03	93.2911	0.3779	96.4029	2.7340		
S09C04	103.5040	0.4192	106.9565	3.0333		
S09C05	117.0543	0.4741	120.9588	3.4304		
S09C06	132.9252	0.5384	137.3591	3.8956		
S09C07	67.7515	0.3926	70.9701	2.8259		
S09C08	68.1262	0.3948	71.3625	2.8416		
S09C09	75.1305	0.4354	78.6996	3.1337		
S09C10	87.1809	0.5052	91.3225	3.6363		
S09C11	102.5132	0.5941	107.3831	4.2758		
S09C12	119.8745	0.6947	125.5692	5.0000		
S09C13	30.7347	0.3703	33.7840	2.6790		
S09C14	31.4777	0.3793	34.6008	2.7438		
S09C15	43.6128	0.5255	47.9398	3.8015		
S09C16	60.6490	0.7308	66.6663	5.2865		
S09C17	79.4955	0.9579	87.3827	6.9293		
S09C18	99.1250	1.1944	108.9597	8.6403		
S09C19	61.8316	0.4022	65.1250	2.8911		
S09C20	62.2375	0.4048	65.5524	2.9101		
S09C21	69.7565	0.4538	73.4720	3.2617		
S09C22	82.4656	0.5364	86.8580	3.8560		
S09C23	98.3733	0.6399	103.6129	4.5998		
S09C24	116.1729	0.7557	122.3607	5.4321		
S09R01	87.2563	0.3541	394.7157	307.1053		
S09R02	86.0461	0.3565	393.8521	307.4494		
S09R03	79.4389	0.3698	389.0536	309.2450		
S09R04	68.7863	0.3896	380.9222	311.7463		
S09R05	56.4370	0.4059	370.5267	313.6838		
S09R06	45.0984	0.4058	359.3281	313.8239		
S09R07	36.6398	0.3884	349.0362	312.0080		
S09R08	31.5053	0.3671	341.3623	309.4899		
S09R09	29.3645	0.3552	337.6827	307.9629		
S09R10	29.9308	0.3585	338.6893	308.3999		
S09R11	33.2884	0.3755	344.1910	310.5270		

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S09R12	39.8116	0.3972	353.1688	312.9600
S09R13	49.6222	0.4083	364.0604	314.0299
S09R14	61.6933	0.4003	375.1176	313.0240
S09R15	73.6578	0.3809	384.7128	310.6741
S09R16	82.8333	0.3630	391.5376	308.3413

	Cs-137	Ba-137m	Source 10	X Posit	Z Posit	Y Posit
	26.8139	25.3659		-20.7250	26.7906	117.9524
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S10C01	83.1031	0.3729	86.1670	2.6909		
S10C02	84.0324	0.3771	87.1306	2.7210		
S10C03	90.4927	0.4061	93.8290	2.9302		
S10C04	101.4326	0.4552	105.1722	3.2845		
S10C05	115.5870	0.5187	119.8485	3.7428		
S10C06	131.9253	0.5920	136.7892	4.2718		
S10C07	37.0980	0.4265	40.5800	3.0556		
S10C08	38.9336	0.4476	42.5879	3.2067		
S10C09	50.2879	0.5781	55.0080	4.1419		
S10C10	66.4486	0.7639	72.6855	5.4730		
S10C11	84.7080	0.9738	92.6588	6.9769		
S10C12	103.9662	1.1952	113.7246	8.5631		
S10C13	45.2670	0.4371	48.8297	3.1255		
S10C14	46.8253	0.4522	50.5106	3.2331		
S10C15	56.8712	0.5492	61.3471	3.9268		
S10C16	71.9323	0.6947	77.5937	4.9667		
S10C17	89.5120	0.8644	96.5570	6.1805		
S10C18	108.3917	1.0468	116.9225	7.4841		
S10C19	87.3596	0.3630	90.3457	2.6231		
S10C20	88.2487	0.3667	91.2652	2.6498		
S10C21	94.4520	0.3925	97.6805	2.8360		
S10C22	105.0321	0.4365	108.6222	3.1537		
S10C23	118.8255	0.4938	122.8872	3.5679		
S10C24	134.8498	0.5604	139.4592	4.0490		
S10R01	75.2680	0.3932	387.9566	312.2954		
S10R02	60.6706	0.4231	376.7231	315.6295		
S10R03	46.2872	0.4361	363.7955	317.0722		
S10R04	35.1784	0.4179	351.0668	315.4706		
S10R05	28.2717	0.3844	340.5998	311.9436		
S10R06	24.9293	0.3602	334.2604	308.9709		
S10R07	24.4540	0.3562	333.2639	308.4537		
S10R08	26.7287	0.3739	337.8071	310.7045		
S10R09	32.2751	0.4063	347.0052	314.3238		
S10R10	41.8888	0.4330	359.1692	316.8474		
S10R11	55.3737	0.4309	372.2579	316.4533		
S10R12	70.3198	0.4041	384.2849	313.5610		

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S10R13	83.1356	0.3752	393.5921	310.0813
S10R14	90.9237	0.3574	398.9897	307.7087
S10R15	92.1436	0.3546	399.8227	307.3246
S10R16	86.5706	0.3673	395.9914	309.0535

	Cs-137	Ba-137m	Source 11	X Posit	Z Posit	Y Posit
	12.5933	11.9133		33.1572	16.3372	74.1470
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S11C01	54.3502	0.7848	60.7610	5.6260		
S11C02	38.5370	0.5564	43.0826	3.9891		
S11C03	29.1976	0.4216	32.6416	3.0224		
S11C04	32.4984	0.4693	36.3317	3.3641		
S11C05	45.7826	0.6611	51.1828	4.7392		
S11C06	63.0253	0.9100	70.4594	6.5240		
S11C07	70.7495	0.6146	75.7447	4.3807		
S11C08	58.3425	0.5068	62.4617	3.6125		
S11C09	52.0965	0.4525	55.7748	3.2257		
S11C10	54.1859	0.4707	58.0116	3.3551		
S11C11	63.7967	0.5542	68.3011	3.9502		
S11C12	78.2035	0.6793	83.7250	4.8422		
S11C13	105.0860	0.4057	108.4246	2.9330		
S11C14	96.5328	0.3726	99.5997	2.6943		
S11C15	92.6061	0.3575	95.5483	2.5847		
S11C16	93.8881	0.3624	96.8710	2.6205		
S11C17	100.1791	0.3867	103.3619	2.7960		
S11C18	110.6278	0.4271	114.1425	3.0877		
S11C19	94.8317	0.4524	98.5421	3.2580		
S11C20	85.3985	0.4074	88.7398	2.9339		
S11C21	80.9981	0.3864	84.1672	2.7827		
S11C22	82.4403	0.3933	85.6659	2.8322		
S11C23	89.4430	0.4267	92.9426	3.0728		
S11C24	100.8545	0.4812	104.8006	3.4649		
S11R01	22.7512	0.3692	330.3665	307.2462		
S11R02	20.9856	0.3515	326.2437	304.9067		
S11R03	21.8565	0.3605	328.3376	306.1206		
S11R04	25.6408	0.3939	336.2214	310.1867		
S11R05	33.3645	0.4368	348.3611	314.5597		
S11R06	45.9669	0.4549	362.5906	316.1688		
S11R07	62.1682	0.4313	376.6357	314.0362		
S11R08	78.0778	0.3925	388.4868	310.0166		
S11R09	89.7584	0.3633	396.6036	306.4820		
S11R10	94.7795	0.3513	400.0017	304.8709		
S11R11	92.2347	0.3574	398.2851	305.6931		
S11R12	82.5732	0.3811	391.6523	308.6980		
S11R13	67.6937	0.4185	380.8951	312.7829		

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S11R14	51.0979	0.4510	367.3750	315.8262
S11R15	36.9984	0.4474	352.9619	315.5161
S11R16	27.7009	0.4084	339.8741	311.7647

	Cs-137	Ba-137m	Source 12	X Posit	Z Posit	Y Posit
	17.5307	16.5841		43.4057	22.2267	54.0716
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S12C01	63.6473	1.6919	77.0167	11.6774		
S12C02	46.5872	1.2384	56.3730	8.5474		
S12C03	31.6789	0.8421	38.3332	5.8122		
S12C04	23.4635	0.6237	28.3921	4.3049		
S12C05	28.4835	0.7572	34.4665	5.2259		
S12C06	42.2596	1.1234	51.1364	7.7534		
S12C07	85.0870	0.8953	92.2333	6.2509		
S12C08	69.9738	0.7363	75.8508	5.1406		
S12C09	58.6715	0.6174	63.5992	4.3103		
S12C10	53.6453	0.5645	58.1509	3.9411		
S12C11	56.5931	0.5955	61.3462	4.1576		
S12C12	66.4621	0.6993	72.0441	4.8827		
S12C13	124.8394	0.4335	128.4058	3.1329		
S12C14	113.9389	0.3956	117.1939	2.8594		
S12C15	106.6169	0.3702	109.6628	2.6756		
S12C16	103.6348	0.3599	106.5955	2.6008		
S12C17	105.3617	0.3659	108.3717	2.6441		
S12C18	111.5792	0.3874	114.7668	2.8002		
S12C19	113.8164	0.5053	117.9518	3.6302		
S12C20	101.9324	0.4526	105.6361	3.2511		
S12C21	93.8053	0.4165	97.2137	2.9919		
S12C22	90.4534	0.4016	93.7400	2.8850		
S12C23	92.3977	0.4102	95.7550	2.9470		
S12C24	99.3279	0.4410	102.9369	3.1680		
S12R01	10.3978	0.3899	320.7275	309.9398		
S12R02	9.1870	0.3524	314.7841	305.2447		
S12R03	9.6714	0.3678	317.3095	307.2704		
S12R04	12.1994	0.4405	327.7374	315.0975		
S12R05	18.8043	0.5726	343.8673	324.4904		
S12R06	33.9992	0.6444	362.6769	328.0333		
S12R07	57.9278	0.5420	381.1277	322.6579		
S12R08	81.8507	0.4334	396.6439	314.3598		
S12R09	99.0236	0.3737	407.3106	307.9133		
S12R10	106.5098	0.3519	411.9210	305.0594		
S12R11	103.3541	0.3608	409.9791	306.2642		
S12R12	89.9403	0.4034	401.6916	311.3479		
S12R13	68.2405	0.4917	387.9734	319.2412		
S12R14	43.1819	0.6148	370.4503	326.6535		

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S12R15	23.7326	0.6233	351.4396	327.0838
S12R16	14.2076	0.4894	333.8286	319.1316

	Cs-137	Ba-137m	Source 13	X Posit	Z Posit	Y Posit
	17.9331	16.9647		8.9211	21.0922	105.2762
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S13C01	56.2858	0.4066	59.6220	2.9296		
S13C02	52.9188	0.3823	56.0555	2.7544		
S13C03	58.0015	0.4190	61.4395	3.0189		
S13C04	69.7095	0.5036	73.8415	3.6283		
S13C05	85.3588	0.6167	90.4183	4.4429		
S13C06	103.1712	0.7454	109.2865	5.3700		
S13C07	42.2290	0.4036	45.5494	2.9168		
S13C08	37.7978	0.3613	40.7699	2.6107		
S13C09	44.4117	0.4245	47.9038	3.0676		
S13C10	58.4334	0.5585	63.0280	4.0361		
S13C11	75.8608	0.7251	81.8257	5.2398		
S13C12	94.8345	0.9064	102.2913	6.5503		
S13C13	72.5157	0.3826	75.6601	2.7618		
S13C14	69.8537	0.3686	72.8827	2.6604		
S13C15	73.8961	0.3899	77.1004	2.8144		
S13C16	83.6770	0.4415	87.3054	3.1869		
S13C17	97.4839	0.5143	101.7111	3.7128		
S13C18	113.8617	0.6007	118.7990	4.3365		
S13C19	81.8819	0.3640	84.8793	2.6333		
S13C20	79.5029	0.3535	82.4131	2.5568		
S13C21	83.1229	0.3695	86.1656	2.6732		
S13C22	92.0368	0.4092	95.4058	2.9599		
S13C23	104.9036	0.4664	108.7436	3.3737		
S13C24	120.4633	0.5356	124.8729	3.8740		
S13R01	46.3401	0.3802	356.7264	310.0061		
S13R02	40.0944	0.3688	349.1214	308.6582		
S13R03	36.4004	0.3576	343.9787	307.2207		
S13R04	35.2196	0.3531	342.2029	306.6302		
S13R05	36.4939	0.3579	344.1163	307.2644		
S13R06	40.2850	0.3693	349.3719	308.7176		
S13R07	46.6242	0.3805	357.0468	310.0420		
S13R08	55.1126	0.3838	365.8623	310.3659		
S13R09	64.5627	0.3772	374.4454	309.5056		
S13R10	73.1644	0.3658	381.5459	308.0157		
S13R11	79.1174	0.3562	386.1889	306.7153		
S13R12	81.1879	0.3527	387.7631	306.2225		
S13R13	78.9572	0.3565	386.0662	306.7526		
S13R14	72.8766	0.3662	381.3165	308.0737		
S13R15	64.2078	0.3776	374.1401	309.5548		

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S13R16 54.7633 0.3839 365.5240 310.3768

	Cs-137	Ba-137m	Source 14	X Posit	Z Posit	Y Posit
	26.2138	24.7983		-46.3340	15.5761	101.4000
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S14C01	107.9659	0.3639	110.9618	2.6319		
S14C02	105.3484	0.3551	108.2716	2.5681		
S14C03	107.3750	0.3619	110.3545	2.6175		
S14C04	113.7980	0.3836	116.9557	2.7741		
S14C05	123.9358	0.4178	127.3748	3.0212		
S14C06	136.9659	0.4617	140.7664	3.3389		
S14C07	64.6233	0.5660	69.1672	3.9779		
S14C08	60.5089	0.5300	64.7636	3.7247		
S14C09	63.7090	0.5580	68.1887	3.9216		
S14C10	73.2713	0.6418	78.4234	4.5103		
S14C11	87.1257	0.7631	93.2519	5.3631		
S14C12	103.5636	0.9071	110.8457	6.3749		
S14C13	25.6539	0.8314	32.3089	5.8236		
S14C14	16.9198	0.5483	21.3090	3.8409		
S14C15	23.9453	0.7760	30.1571	5.4357		
S14C16	38.9796	1.2633	49.0915	8.8486		
S14C17	55.8962	1.8115	70.3965	12.6888		
S14C18	73.4050	2.3790	92.4474	16.6634		
S14C19	89.0492	0.4332	92.5866	3.1042		
S14C20	85.9313	0.4181	89.3448	2.9955		
S14C21	88.3483	0.4298	91.8579	3.0797		
S14C22	95.8827	0.4665	99.6915	3.3424		
S14C23	107.4634	0.5228	111.7322	3.7461		
S14C24	121.9429	0.5933	126.7870	4.2508		
S14R01	103.4771	0.3626	411.0551	307.2154		
S14R02	89.6962	0.4069	402.5879	312.4849		
S14R03	67.6682	0.4979	388.7349	320.5687		
S14R04	42.4629	0.6231	371.1441	328.0581		
S14R05	23.2074	0.6258	352.1534	328.3202		
S14R06	13.9312	0.4885	334.6608	320.2411		
S14R07	10.2485	0.3899	321.7681	311.1297		
S14R08	9.1032	0.3538	316.0866	306.6297		
S14R09	9.6362	0.3709	318.8699	308.8628		
S14R10	12.2346	0.4464	329.4953	316.8143		
S14R11	19.0180	0.5816	345.7306	326.1310		
S14R12	34.6063	0.6492	364.5494	329.2939		
S14R13	58.8486	0.5414	382.9260	323.5359		
S14R14	82.7871	0.4325	398.3044	315.0847		
S14R15	99.7811	0.3736	408.7906	308.6359		
S14R16	106.9797	0.3526	413.1990	305.8667		

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	Cs-137	Ba-137m	Source 15	X Posit	Z Posit	Y Posit
	22.7469	21.5186		53.3465	13.7354	27.1923
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S15C01	57.0753	5.7184	99.7693	36.9757		
S15C02	44.2066	4.4291	77.2745	28.6388		
S15C03	31.5105	3.1570	55.0813	20.4138		
S15C04	19.3298	1.9367	33.7890	12.5226		
S15C05	9.8192	0.9838	17.1642	6.3613		
S15C06	12.6980	1.2722	22.1965	8.2263		
S15C07	113.8132	0.9679	121.5349	6.7537		
S15C08	97.2670	0.8272	103.8661	5.7719		
S15C09	82.9751	0.7056	88.6045	4.9238		
S15C10	72.2871	0.6147	77.1914	4.2896		
S15C11	66.9519	0.5694	71.4942	3.9730		
S15C12	68.2368	0.5803	72.8663	4.0492		
S15C13	147.5837	0.4660	151.4201	3.3704		
S15C14	134.1553	0.4236	137.6426	3.0638		
S15C15	123.3174	0.3894	126.5231	2.8163		
S15C16	115.7999	0.3656	118.8101	2.6446		
S15C17	112.2716	0.3545	115.1901	2.5640		
S15C18	113.1065	0.3571	116.0466	2.5831		
S15C19	129.2896	0.6499	134.5780	4.6384		
S15C20	114.1932	0.5740	118.8641	4.0968		
S15C21	101.6317	0.5109	105.7888	3.6462		
S15C22	92.6421	0.4657	96.4314	3.3237		
S15C23	88.3218	0.4440	91.9344	3.1687		
S15C24	89.3507	0.4492	93.0054	3.2056		
S15R01	2.9712	0.3685	312.6862	309.3466		
S15R02	2.8859	0.3585	311.2949	308.0504		
S15R03	3.4601	0.4246	319.4775	315.5928		
S15R04	5.4159	0.6286	335.3665	329.3220		
S15R05	13.2604	1.0675	355.7179	341.3900		
S15R06	39.5149	0.8501	376.9854	336.6204		
S15R07	71.8786	0.5360	396.0392	323.6246		
S15R08	96.9230	0.4092	410.4625	313.1304		
S15R09	110.9571	0.3604	418.6226	307.3050		
S15R10	112.7280	0.3551	419.6581	306.5750		
S15R11	102.0992	0.3898	413.4632	310.9742		
S15R12	79.9572	0.4878	400.6828	320.2379		
S15R13	48.9854	0.7325	382.7301	333.0121		
S15R14	18.6323	1.1136	361.8002	342.0544		
S15R15	6.5970	0.7335	340.8381	333.5076		
S15R16	3.8051	0.4631	323.3233	319.0550		

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	Cs-137	Ba-137m	Source 16	X Posit	Z Posit	Y Posit
	27.6556	26.1622		32.4610	26.2430	99.8427
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S16C01	41.6481	0.6011	46.4975	4.2483		
S16C02	34.7024	0.5009	38.7431	3.5398		
S16C03	38.8905	0.5613	43.4189	3.9670		
S16C04	51.5675	0.7443	57.5719	5.2602		
S16C05	68.1502	0.9836	76.0856	6.9517		
S16C06	86.4189	1.2473	96.4814	8.8152		
S16C07	49.3965	0.5735	54.0199	4.0499		
S16C08	43.4434	0.5043	47.5095	3.5618		
S16C09	46.9952	0.5456	51.3938	3.8530		
S16C10	58.3411	0.6773	63.8017	4.7832		
S16C11	73.9780	0.8588	80.9021	6.0653		
S16C12	91.7371	1.0650	100.3234	7.5213		
S16C13	97.1683	0.3789	100.2831	2.7359		
S16C14	93.9207	0.3662	96.9315	2.6445		
S16C15	95.8216	0.3736	98.8933	2.6980		
S16C16	102.5851	0.4000	105.8735	2.8885		
S16C17	113.3440	0.4420	116.9773	3.1914		
S16C18	127.0876	0.4956	131.1615	3.5784		
S16C19	93.2252	0.3915	96.4395	2.8227		
S16C20	89.8514	0.3774	92.9494	2.7206		
S16C21	91.8274	0.3857	94.9934	2.7804		
S16C22	98.8327	0.4151	102.2403	2.9925		
S16C23	109.9099	0.4616	113.6995	3.3279		
S16C24	123.9723	0.5207	128.2467	3.7537		
S16R01	20.0911	0.4058	333.1706	312.6738		
S16R02	16.8751	0.3623	324.8147	307.5772		
S16R03	16.3308	0.3540	323.1595	306.4746		
S16R04	18.2115	0.3815	328.5545	309.9615		
S16R05	23.3612	0.4406	339.8790	316.0772		
S16R06	33.7054	0.4990	354.9483	320.7440		
S16R07	50.3573	0.4945	371.1685	320.3167		
S16R08	70.0279	0.4385	386.0796	315.6131		
S16R09	87.0941	0.3868	397.6732	310.1923		
S16R10	97.5897	0.3582	404.5269	306.5790		
S16R11	99.6392	0.3529	405.8507	305.8585		
S16R12	92.9206	0.3706	401.4953	308.2042		
S16R13	78.5416	0.4121	391.9553	313.0016		
S16R14	59.4321	0.4710	378.3626	318.4595		
S16R15	40.7041	0.5067	362.4649	321.2540		
S16R16	27.3662	0.4716	346.5387	318.7010		

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	Cs-137	Ba-137m	Source 17	X Posit	Z Posit	Y Posit
	28.5227	26.9825		-36.8053	7.8697	22.0830
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S17C01	138.3651	0.5130	142.5892	3.7111		
S17C02	123.1862	0.4567	126.9469	3.3040		
S17C03	110.4035	0.4093	113.7739	2.9611		
S17C04	100.9315	0.3742	104.0128	2.7071		
S17C05	95.7579	0.3550	98.6812	2.5683		
S17C06	95.5830	0.3544	98.5010	2.5636		
S17C07	115.3125	0.8289	122.0618	5.9204		
S17C08	97.6431	0.7019	103.3582	5.0132		
S17C09	81.8789	0.5886	86.6713	4.2038		
S17C10	69.3319	0.4984	73.3899	3.5597		
S17C11	61.9874	0.4456	65.6155	3.1826		
S17C12	61.7311	0.4437	65.3442	3.1694		
S17C13	93.7918	1.5687	106.6791	11.3187		
S17C14	74.4169	1.2446	84.6420	8.9806		
S17C15	55.5584	0.9292	63.1924	6.7047		
S17C16	37.9933	0.6354	43.2138	4.5850		
S17C17	24.6606	0.4124	28.0490	2.9760		
S17C18	24.0974	0.4030	27.4085	2.9081		
S17C19	124.1665	0.6721	129.6650	4.8265		
S17C20	107.4763	0.5818	112.2357	4.1777		
S17C21	92.9698	0.5032	97.0869	3.6138		
S17C22	81.8170	0.4429	85.4401	3.1803		
S17C23	75.5185	0.4088	78.8628	2.9355		
S17C24	75.3025	0.4076	78.6372	2.9271		
S17R01	95.0397	0.3560	402.5649	307.1692		
S17R02	87.1606	0.3755	397.2875	309.7513		
S17R03	73.1509	0.4119	387.5439	313.9812		
S17R04	56.1276	0.4519	374.5413	317.9618		
S17R05	40.4919	0.4627	360.0264	319.0718		
S17R06	29.5213	0.4291	346.1599	316.2095		
S17R07	23.3663	0.3840	335.2540	311.5037		
S17R08	20.7486	0.3575	329.3261	308.2200		
S17R09	20.8426	0.3586	329.5576	308.3564		
S17R10	23.6800	0.3868	335.9007	311.8338		
S17R11	30.1442	0.4324	347.0973	316.5206		
S17R12	41.4944	0.4636	361.0892	319.1311		
S17R13	57.3753	0.4495	375.5632	317.7383		
S17R14	74.3206	0.4088	388.3812	313.6518		
S17R15	87.9679	0.3735	397.8336	309.4922		
S17R16	95.3252	0.3553	402.7541	307.0736		

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	Cs-137	Ba-137m	Source 18	X Posit	Z Posit	Y Posit
	23.2528	21.9972		47.6621	-30.4883	26.7230
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S18C01	77.0407	4.0097	104.4249	23.3745		
S18C02	61.2855	3.1897	83.0695	18.5943		
S18C03	46.3187	2.4107	62.7828	14.0533		
S18C04	33.2237	1.7292	45.0331	10.0802		
S18C05	25.1211	1.3075	34.0505	7.6219		
S18C06	26.9667	1.4035	36.5520	8.1818		
S18C07	138.3008	0.5566	142.8560	3.9987		
S18C08	123.9934	0.4990	128.0774	3.5850		
S18C09	112.2550	0.4518	115.9524	3.2456		
S18C10	103.9595	0.4184	107.3837	3.0058		
S18C11	99.9677	0.4023	103.2604	2.8904		
S18C12	100.7923	0.4057	104.1121	2.9142		
S18C13	145.9816	0.4873	149.9874	3.5185		
S18C14	132.3542	0.4418	135.9860	3.1900		
S18C15	121.3042	0.4049	124.6328	2.9237		
S18C16	113.5864	0.3791	116.7032	2.7377		
S18C17	109.9049	0.3668	112.9207	2.6490		
S18C18	110.6634	0.3694	113.7001	2.6672		
S18C19	102.3446	1.5108	113.9866	10.1311		
S18C20	85.1265	1.2566	94.8099	8.4267		
S18C21	69.7223	1.0292	77.6534	6.9018		
S18C22	57.6060	0.8504	64.1588	5.7024		
S18C23	51.1689	0.7554	56.9895	5.0652		
S18C24	52.5418	0.7756	58.5186	5.2011		
S18R01	1.6943	0.4431	319.5394	317.4020		
S18R02	2.8419	0.7139	336.4695	332.9137		
S18R03	9.4675	1.5142	357.6258	346.6441		
S18R04	40.1484	0.9189	379.3717	338.3044		
S18R05	74.4522	0.5349	398.5627	323.5756		
S18R06	99.6612	0.4054	412.8087	312.7421		
S18R07	113.0783	0.3587	420.5235	307.0866		
S18R08	113.7351	0.3567	420.9037	306.8119		
S18R09	101.5891	0.3979	413.9111	311.9241		
S18R10	77.4992	0.5152	400.2699	322.2555		
S18R11	43.8821	0.8551	381.4863	336.7491		
S18R12	11.3424	1.5585	359.8679	346.9670		
S18R13	3.0772	0.7650	338.4903	334.6480		
S18R14	1.7562	0.4585	320.9622	318.7474		
S18R15	1.3869	0.3654	310.7861	309.0337		
S18R16	1.3720	0.3616	310.2706	308.5371		

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	Cs-137	Ba-137m	Source 19	X Posit	Z Posit	Y Posit
	15.3416	14.5131		-46.3763	0.7074	53.5943
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S19C01	125.7091	0.4231	129.1940	3.0618		
S19C02	114.7825	0.3864	117.9645	2.7956		
S19C03	107.4095	0.3615	110.3872	2.6161		
S19C04	104.3462	0.3512	107.2389	2.5415		
S19C05	105.9669	0.3567	108.9045	2.5809		
S19C06	112.0686	0.3772	115.1754	2.7295		
S19C07	99.6018	0.6299	104.7168	4.4851		
S19C08	86.0788	0.5444	90.4994	3.8762		
S19C09	76.4472	0.4835	80.3731	3.4424		
S19C10	72.2795	0.4571	75.9913	3.2548		
S19C11	74.4985	0.4711	78.3243	3.3547		
S19C12	82.5910	0.5223	86.8324	3.7191		
S19C13	58.8221	1.7905	73.5672	12.9547		
S19C14	41.0567	1.2497	51.3486	9.0421		
S19C15	24.0718	0.7327	30.1060	5.3015		
S19C16	11.8924	0.3620	14.8735	2.6191		
S19C17	19.2766	0.5868	24.1088	4.2454		
S19C18	35.6361	1.0847	44.5691	7.8483		
S19C19	100.5021	0.6194	105.5350	4.4135		
S19C20	87.0840	0.5367	91.4449	3.8242		
S19C21	77.5526	0.4779	81.4362	3.4057		
S19C22	73.4374	0.4526	77.1150	3.2249		
S19C23	75.6277	0.4661	79.4149	3.3211		
S19C24	83.6295	0.5154	87.8174	3.6725		
S19R01	104.3483	0.3513	409.6896	304.9900		
S19R02	98.9512	0.3662	406.3073	306.9898		
S19R03	84.2763	0.4126	397.0130	312.3241		
S19R04	62.8700	0.4949	382.8615	319.4966		
S19R05	40.2772	0.5773	365.5914	324.7369		
S19R06	24.0244	0.5468	347.5763	323.0051		
S19R07	15.8704	0.4431	331.6561	315.3427		
S19R08	12.4437	0.3727	320.7219	307.9054		
S19R09	11.5417	0.3514	317.0107	305.1175		
S19R10	12.6034	0.3764	321.3341	308.3543		
S19R11	16.2917	0.4505	332.7494	316.0072		
S19R12	24.9638	0.5538	348.9389	323.4212		
S19R13	41.8896	0.5735	366.9936	324.5304		
S19R14	64.6699	0.4875	384.0989	318.9415		
S19R15	85.7048	0.4077	397.9267	311.8143		
S19R16	99.7214	0.3640	406.7908	306.7053		

Cs-137	Ba-137m	Source 20	X Posit	Z Posit	Y Posit
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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

	16.4988	15.6078		7.2755	23.4343	112.9023
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S20C01	56.5757	0.3960	59.8224	2.8508		
S20C02	56.0683	0.3924	59.2859	2.8252		
S20C03	63.4136	0.4438	67.0528	3.1953		
S20C04	76.3788	0.5346	80.7619	3.8486		
S20C05	92.6333	0.6483	97.9493	4.6677		
S20C06	110.7382	0.7751	117.0931	5.5799		
S20C07	37.0608	0.3781	40.1718	2.7329		
S20C08	36.3196	0.3705	39.3684	2.6783		
S20C09	46.4142	0.4735	50.3103	3.4226		
S20C10	62.2815	0.6353	67.5096	4.5927		
S20C11	80.5807	0.8220	87.3448	5.9421		
S20C12	99.9853	1.0200	108.3783	7.3730		
S20C13	70.0162	0.3792	73.1311	2.7357		
S20C14	69.5966	0.3770	72.6929	2.7193		
S20C15	75.7835	0.4105	79.1550	2.9610		
S20C16	87.1814	0.4722	91.0600	3.4063		
S20C17	102.0592	0.5528	106.5997	3.9877		
S20C18	119.1201	0.6452	124.4196	4.6543		
S20C19	82.5811	0.3565	85.5167	2.5791		
S20C20	82.2195	0.3549	85.1422	2.5678		
S20C21	87.6076	0.3782	90.7219	2.7360		
S20C22	97.7997	0.4222	101.2762	3.0543		
S20C23	111.4859	0.4813	115.4489	3.4818		
S20C24	127.5463	0.5506	132.0802	3.9833		
S20R01	47.4186	0.3881	359.3798	311.5732		
S20R02	40.1481	0.3762	350.7765	310.2522		
S20R03	35.6060	0.3621	344.4837	308.5156		
S20R04	33.7343	0.3544	341.6052	307.5165		
S20R05	34.4102	0.3573	342.6669	307.8994		
S20R06	37.6848	0.3693	347.4730	309.4190		
S20R07	43.6975	0.3835	355.1621	311.0812		
S20R08	52.2671	0.3902	364.4251	311.7677		
S20R09	62.3716	0.3848	373.7909	311.0344		
S20R10	72.1317	0.3719	381.8759	309.3723		
S20R11	79.4799	0.3597	387.5624	307.7228		
S20R12	82.8714	0.3536	390.1015	306.8765		
S20R13	81.6191	0.3559	389.1695	307.1944		
S20R14	75.9744	0.3657	384.8842	308.5441		
S20R15	67.1024	0.3792	377.8008	310.3192		
S20R16	56.8935	0.3891	368.8736	311.5909		
	Cs-137	Ba-137m	Source 21	X Posit	Z Posit	Y Posit
	28.6466	27.0997		7.7777	-20.1009	50.5073

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

Line	Shield 1	Shield 2	Total Dist	Air Gap
S21C01	89.0471	0.6280	94.2019	4.5268
S21C02	72.9606	0.5145	77.1841	3.7090
S21C03	60.4236	0.4261	63.9214	3.0717
S21C04	53.9693	0.3806	57.0935	2.7436
S21C05	55.7518	0.3932	58.9792	2.8342
S21C06	65.0980	0.4591	68.8664	3.3093
S21C07	106.7851	0.4807	110.7434	3.4776
S21C08	93.2267	0.4197	96.6825	3.0361
S21C09	83.3737	0.3753	86.4642	2.7152
S21C10	78.6314	0.3540	81.5461	2.5607
S21C11	79.9150	0.3598	82.8773	2.6025
S21C12	86.9580	0.3915	90.1814	2.8319
S21C13	99.3739	0.5333	103.7573	3.8501
S21C14	84.8516	0.4554	88.5944	3.2875
S21C15	74.0482	0.3974	77.3145	2.8689
S21C16	68.7400	0.3689	71.7722	2.6633
S21C17	70.1852	0.3766	73.2811	2.7193
S21C18	78.0093	0.4186	81.4503	3.0224
S21C19	79.7747	0.7420	85.8805	5.3638
S21C20	62.0272	0.5769	66.7747	4.1706
S21C21	47.2502	0.4395	50.8667	3.1770
S21C22	38.9823	0.3626	41.9659	2.6211
S21C23	41.3337	0.3844	44.4973	2.7792
S21C24	52.9071	0.4921	56.9566	3.5573
S21R01	47.5844	0.3756	356.2787	308.3186
S21R02	55.6235	0.3782	364.6229	308.6211
S21R03	64.4422	0.3724	372.7056	307.8909
S21R04	72.3715	0.3625	379.3487	306.6147
S21R05	77.7745	0.3543	383.6376	305.5088
S21R06	79.5377	0.3514	385.0038	305.1147
S21R07	77.3041	0.3550	383.2706	305.6114
S21R08	71.5266	0.3637	378.6624	306.7722
S21R09	63.3984	0.3734	371.7925	308.0207
S21R10	54.5909	0.3784	363.6127	308.6433
S21R11	46.7363	0.3748	355.3236	308.2125
S21R12	40.8963	0.3648	348.2220	306.9610
S21R13	37.4511	0.3551	343.4914	305.6853
S21R14	36.4087	0.3515	341.9592	305.1991
S21R15	37.7358	0.3560	343.9011	305.8094
S21R16	41.4717	0.3661	348.9682	307.1305

	Cs-137	Ba-137m	Source 22	X Posit	Z Posit	Y Posit
	20.3724	19.2723		-45.6646	32.6567	127.1095
Line	Shield 1	Shield 2	Total Dist	Air Gap		

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OF HN-200 GROUT CONTAINERS.**

S22C01	108.3390	0.3689	111.3703	2.6625
S22C02	110.8672	0.3775	113.9693	2.7246
S22C03	117.6213	0.4005	120.9124	2.8906
S22C04	127.9338	0.4356	131.5134	3.1440
S22C05	141.0262	0.4802	144.9721	3.4658
S22C06	156.2009	0.5318	160.5715	3.8387
S22C07	47.7266	0.7738	53.6589	5.1584
S22C08	52.3560	0.8489	58.8636	5.6587
S22C09	63.4926	1.0295	71.3844	6.8624
S22C10	78.4111	1.2713	88.1573	8.4748
S22C11	95.3527	1.5460	107.2047	10.3059
S22C12	113.4144	1.8389	127.5113	12.2581
S22C13	28.0688	1.1222	36.0206	6.8296
S22C14	33.8153	1.3519	43.3951	8.2279
S22C15	46.1924	1.8467	59.2786	11.2394
S22C16	61.3078	2.4510	78.6760	14.9172
S22C17	77.5770	3.1014	99.5542	18.8758
S22C18	94.4054	3.7742	121.1501	22.9705
S22C19	100.7893	0.3953	104.0267	2.8421
S22C20	103.4807	0.4058	106.8045	2.9180
S22C21	110.6307	0.4339	114.1841	3.1196
S22C22	121.4543	0.4763	125.3554	3.4248
S22C23	135.0714	0.5297	139.4099	3.8088
S22C24	150.7266	0.5911	155.5680	4.2503
S22R01	99.3128	0.4089	414.2750	314.5532
S22R02	73.9989	0.5392	400.0315	325.4934
S22R03	40.0796	0.9055	380.9784	339.9932
S22R04	10.8280	1.3379	359.5092	347.3433
S22R05	3.6735	0.6890	338.7519	334.3893
S22R06	2.2441	0.4406	322.2868	319.6021
S22R07	1.8360	0.3639	313.4516	311.2517
S22R08	1.8675	0.3699	314.2563	312.0189
S22R09	2.3736	0.4645	324.5112	321.6731
S22R10	4.1499	0.7635	341.9152	337.0017
S22R11	13.8794	1.3868	363.0246	347.7583
S22R12	45.8786	0.8158	384.2971	337.6027
S22R13	78.7976	0.5087	402.7138	323.4075
S22R14	102.3587	0.3973	416.0077	313.2517
S22R15	114.0510	0.3579	422.7050	308.2961
S22R16	113.0122	0.3611	422.1068	308.7335

	Cs-137	Ba-137m	Source 23	X Posit	Z Posit	Y Posit
	13.0146	12.3118		12.9519	37.1270	132.0896
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S23C01	57.1604	0.4602	60.8968	3.2762		

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S23C02	63.1182	0.5082	67.2440	3.6177
S23C03	74.9756	0.6036	79.8765	4.2973
S23C04	90.4412	0.7281	96.3531	5.1837
S23C05	107.9756	0.8693	115.0336	6.1887
S23C06	126.7229	1.0202	135.0063	7.2632
S23C07	24.3135	0.4171	27.7248	2.9943
S23C08	34.8804	0.5984	39.7744	4.2956
S23C09	51.4386	0.8824	58.6558	6.3348
S23C10	69.8498	1.1983	79.6502	8.6022
S23C11	88.9710	1.5263	101.4543	10.9570
S23C12	108.4273	1.8601	123.6404	13.3530
S23C13	79.5483	0.3990	82.8154	2.8680
S23C14	84.1331	0.4220	87.5884	3.0333
S23C15	93.7717	0.4704	97.6229	3.3808
S23C16	107.1084	0.5373	111.5073	3.8617
S23C17	122.9455	0.6167	127.9949	4.4327
S23C18	140.4398	0.7045	146.2077	5.0634
S23C19	96.0621	0.3551	98.9856	2.5684
S23C20	99.9696	0.3696	103.0120	2.6729
S23C21	108.3709	0.4006	111.6691	2.8975
S23C22	120.3284	0.4448	123.9905	3.2172
S23C23	134.8997	0.4987	139.0052	3.6068
S23C24	151.3317	0.5594	155.9373	4.0461
S23R01	35.0518	0.4745	357.8680	322.3417
S23R02	25.5085	0.4253	344.1927	318.2589
S23R03	20.6448	0.3783	334.3073	313.2842
S23R04	18.9764	0.3582	330.1037	310.7691
S23R05	19.8773	0.3693	332.4386	312.1920
S23R06	23.6901	0.4097	340.8320	316.7323
S23R07	31.7015	0.4628	353.6405	321.4762
S23R08	45.2699	0.4838	368.5732	322.8195
S23R09	63.0437	0.4512	383.2478	319.7529
S23R10	80.4454	0.4030	395.5750	314.7265
S23R11	93.0725	0.3690	403.9642	310.5227
S23R12	98.3711	0.3557	407.4061	308.6794
S23R13	95.4350	0.3630	405.5033	309.7053
S23R14	84.7550	0.3911	398.4743	313.3281
S23R15	68.3637	0.4368	387.1522	318.3516
S23R16	50.1676	0.4788	372.9638	322.3174

	Cs-137	Ba-137m	Source 24	X Posit	Z Posit	Y Posit
	12.5419	11.8646		20.2228	48.7990	83.9044
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S24C01	70.3822	0.7084	76.0088	4.9181		
S24C02	61.3360	0.6173	66.2393	4.2860		

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S24C03	58.8786	0.5926	63.5855	4.1143
S24C04	63.7764	0.6419	68.8749	4.4565
S24C05	74.5944	0.7508	80.5577	5.2125
S24C06	89.2041	0.8978	96.3353	6.2334
S24C07	35.4621	1.6445	47.9833	10.8767
S24C08	22.3276	1.0354	30.2111	6.8481
S24C09	17.6165	0.8170	23.8366	5.4032
S24C10	26.3253	1.2208	35.6204	8.0743
S24C11	40.5779	1.8818	54.9054	12.4457
S24C12	56.3114	2.6114	76.1942	17.2714
S24C13	99.6955	0.4560	103.4197	3.2681
S24C14	92.9935	0.4254	96.4673	3.0484
S24C15	91.2558	0.4174	94.6647	2.9915
S24C16	94.7560	0.4334	98.2957	3.1062
S24C17	102.9613	0.4710	106.8075	3.3752
S24C18	114.8677	0.5254	119.1586	3.7655
S24C19	115.8975	0.3819	119.0402	2.7608
S24C20	110.0679	0.3627	113.0525	2.6220
S24C21	108.5742	0.3578	111.5184	2.5864
S24C22	111.5907	0.3677	114.6167	2.6582
S24C23	118.7742	0.3914	121.9950	2.8293
S24C24	129.4328	0.4265	132.9425	3.0833
S24R01	14.0009	0.7422	346.6615	331.9184
S24R02	7.6837	0.5005	328.2254	320.0412
S24R03	5.6162	0.3837	315.3086	309.3088
S24R04	5.0936	0.3515	310.6480	305.2029
S24R05	5.6171	0.3837	315.3164	309.3155
S24R06	7.6866	0.5007	328.2393	320.0520
S24R07	14.0101	0.7424	346.6788	331.9263
S24R08	32.5699	0.8058	367.2395	333.8638
S24R09	61.6460	0.5723	386.7076	324.4892
S24R10	87.8176	0.4314	402.4735	314.2245
S24R11	104.9256	0.3690	412.6712	307.3766
S24R12	110.8151	0.3513	416.1906	305.0243
S24R13	104.9156	0.3691	412.6652	307.3805
S24R14	87.7986	0.4315	402.4622	314.2321
S24R15	61.6210	0.5725	386.6922	324.4987
S24R16	32.5474	0.8060	367.2219	333.8686

	Cs-137	Ba-137m	Source 25	X Posit	Z Posit	Y Posit
	19.7625	18.6953		21.3295	24.2720	101.2303
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S25C01	48.5395	0.4748	52.4155	3.4012		
S25C02	42.9376	0.4200	46.3663	3.0087		
S25C03	47.1964	0.4617	50.9652	3.3071		

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S25C04	59.2255	0.5793	63.9548	4.1500
S25C05	75.3931	0.7375	81.4134	5.2829
S25C06	93.5782	0.9154	101.0507	6.5571
S25C07	44.9810	0.4776	48.8832	3.4247
S25C08	38.9530	0.4136	42.3323	2.9657
S25C09	43.5469	0.4624	47.3248	3.3155
S25C10	56.2164	0.5969	61.0934	4.2801
S25C11	72.8642	0.7737	79.1855	5.5476
S25C12	91.3403	0.9698	99.2644	6.9543
S25C13	85.9352	0.3823	89.0777	2.7601
S25C14	82.6362	0.3676	85.6580	2.6541
S25C15	85.1195	0.3787	88.2321	2.7339
S25C16	92.9227	0.4134	96.3207	2.9845
S25C17	104.8649	0.4665	108.6996	3.3681
S25C18	119.7138	0.5326	124.0914	3.8450
S25C19	87.9645	0.3769	91.0640	2.7226
S25C20	84.7360	0.3630	87.7217	2.6227
S25C21	87.1656	0.3735	90.2370	2.6979
S25C22	94.8195	0.4063	98.1605	2.9348
S25C23	106.5778	0.4566	110.3332	3.2987
S25C24	121.2525	0.5195	125.5249	3.7529
S25R01	32.4800	0.3934	344.2058	311.3324
S25R02	27.5772	0.3660	336.0237	308.0804
S25R03	25.7632	0.3531	332.4930	306.3767
S25R04	26.6699	0.3597	334.2987	307.2690
S25R05	30.4894	0.3835	341.0880	310.2151
S25R06	37.8465	0.4122	351.5814	313.3227
S25R07	49.0662	0.4241	363.9433	314.4530
S25R08	62.8792	0.4097	376.2044	312.9154
S25R09	76.2989	0.3833	386.5919	309.9097
S25R10	86.1884	0.3618	393.7244	307.1743
S25R11	90.4533	0.3525	396.7108	305.9051
S25R12	88.2736	0.3572	395.1901	306.5593
S25R13	80.0619	0.3752	389.3455	308.9084
S25R14	67.4931	0.4014	379.8965	312.0019
S25R15	53.4355	0.4220	368.0711	314.2136
S25R16	41.1212	0.4189	355.5293	313.9892

	Cs-137	Ba-137m	Source 26	X Posit	Z Posit	Y Posit
	24.8512	23.5093		10.4368	41.1896	86.8515
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S26C01	71.3678	0.5460	75.7938	3.8799		
S26C02	63.0929	0.4827	67.0056	3.4300		
S26C03	61.6012	0.4713	65.4215	3.3489		
S26C04	67.3451	0.5153	71.5216	3.6612		

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S26C05	78.7571	0.6026	83.6413	4.2816
S26C06	93.7906	0.7176	99.6071	5.0989
S26C07	38.1298	0.8126	44.7781	5.8357
S26C08	23.3222	0.4970	27.3886	3.5694
S26C09	19.7941	0.4218	23.2454	3.0295
S26C10	31.5838	0.6731	37.0907	4.8338
S26C11	48.5913	1.0355	57.0636	7.4368
S26C12	66.9517	1.4268	78.6254	10.2468
S26C13	87.2861	0.4558	91.0109	3.2690
S26C14	80.4024	0.4199	83.8334	3.0112
S26C15	79.1933	0.4135	82.5728	2.9659
S26C16	83.9045	0.4382	87.4850	3.1424
S26C17	93.6468	0.4890	97.6431	3.5072
S26C18	107.0553	0.5590	111.6237	4.0094
S26C19	106.5388	0.3776	109.6476	2.7313
S26C20	100.8252	0.3573	103.7673	2.5848
S26C21	99.8382	0.3538	102.7515	2.5595
S26C22	103.7128	0.3676	106.7392	2.6589
S26C23	111.9453	0.3967	115.2119	2.8699
S26C24	123.6684	0.4383	127.2772	3.1705
S26R01	34.2013	0.5105	355.5250	320.8132
S26R02	23.1872	0.4515	339.8959	316.2573
S26R03	17.6962	0.3865	327.8248	309.7420
S26R04	15.5982	0.3542	321.6274	305.6750
S26R05	15.8999	0.3591	322.5953	306.3364
S26R06	18.7452	0.4011	330.5215	311.3752
S26R07	25.4586	0.4706	343.7828	317.8536
S26R08	38.2567	0.5153	359.9060	321.1340
S26R09	57.0296	0.4825	376.2378	318.7257
S26R10	76.8291	0.4195	390.4145	313.1659
S26R11	92.1816	0.3736	400.6045	308.0492
S26R12	99.8945	0.3530	405.5966	305.3491
S26R13	98.7001	0.3561	404.8273	305.7712
S26R14	88.7820	0.3833	398.3821	309.2169
S26R15	71.8496	0.4354	386.9967	314.7116
S26R16	51.7175	0.4972	372.0489	319.8342

	Cs-137	Ba-137m	Source 27	X Posit	Z Posit	Y Posit
	10.2138	9.6622		5.7653	-53.5980	35.4870
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S27C01	112.1333	0.7927	118.5137	5.5877		
S27C02	96.6855	0.6835	102.1869	4.8179		
S27C03	84.0116	0.5939	88.7919	4.1864		
S27C04	75.5213	0.5339	79.8185	3.7633		
S27C05	72.6955	0.5139	76.8319	3.6225		

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S27C06	76.1673	0.5385	80.5012	3.7955
S27C07	142.1372	0.4475	145.8226	3.2379
S27C08	129.5357	0.4078	132.8943	2.9508
S27C09	119.7873	0.3771	122.8931	2.7287
S27C10	113.6287	0.3577	116.5749	2.5884
S27C11	111.6557	0.3515	114.5507	2.5435
S27C12	114.0854	0.3592	117.0435	2.5989
S27C13	118.8003	0.6767	124.2886	4.8115
S27C14	104.0259	0.5926	108.8316	4.2131
S27C15	92.1094	0.5247	96.3647	3.7305
S27C16	84.2722	0.4801	88.1654	3.4131
S27C17	81.6968	0.4654	85.4710	3.3088
S27C18	84.8635	0.4834	88.7840	3.4371
S27C19	53.7036	4.5627	90.7134	32.4471
S27C20	40.2639	3.4209	68.0117	24.3269
S27C21	26.9182	2.2870	45.4689	16.2637
S27C22	13.9395	1.1843	23.5459	8.4221
S27C23	5.5079	0.4680	9.3037	3.3278
S27C24	15.2536	1.2960	25.7656	9.2160
S27R01	23.6206	0.9415	362.7488	338.1868
S27R02	52.8026	0.6625	383.1433	329.6783
S27R03	81.8561	0.4674	400.4155	318.0921
S27R04	102.3866	0.3829	412.4647	309.6952
S27R05	111.7019	0.3534	417.9614	305.9060
S27R06	108.9433	0.3617	416.3306	307.0256
S27R07	94.3491	0.4123	407.7412	312.9798
S27R08	69.4301	0.5370	393.1083	323.1411
S27R09	38.6093	0.8042	374.1113	334.6979
S27R10	15.0690	0.8956	353.1954	337.2309
S27R11	7.0792	0.5759	333.4869	325.8318
S27R12	4.7456	0.4102	318.4631	313.3074
S27R13	4.0548	0.3554	311.2142	306.8040
S27R14	4.2429	0.3705	313.3922	308.7788
S27R15	5.4948	0.4668	324.4891	318.5275
S27R16	9.4743	0.7112	342.0698	331.8843

	Cs-137	Ba-137m	Source 28	X Posit	Z Posit	Y Posit
	15.5133	14.6756		46.7749	-14.4208	16.4718
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S28C01	87.5577	2.9326	111.0948	20.6044		
S28C02	69.9150	2.3417	88.7093	16.4527		
S28C03	52.5267	1.7593	66.6468	12.3608		
S28C04	35.7662	1.1979	45.3807	8.4166		
S28C05	21.1800	0.7094	26.8735	4.9842		
S28C06	16.3453	0.5475	20.7393	3.8465		

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S28C07	135.1952	0.6689	140.6542	4.7902
S28C08	118.9348	0.5884	123.7372	4.2140
S28C09	104.7799	0.5184	109.0108	3.7125
S28C10	93.6898	0.4635	97.4729	3.3196
S28C11	86.8466	0.4297	90.3534	3.0771
S28C12	85.2790	0.4219	88.7224	3.0216
S28C13	149.8657	0.5030	154.0063	3.6377
S28C14	134.9974	0.4531	138.7272	3.2768
S28C15	122.3870	0.4107	125.7684	2.9707
S28C16	112.7944	0.3785	115.9108	2.7379
S28C17	107.0340	0.3592	109.9913	2.5980
S28C18	105.7341	0.3549	108.6555	2.5665
S28C19	119.4136	1.0163	127.5790	7.1491
S28C20	101.6912	0.8655	108.6448	6.0881
S28C21	85.6637	0.7291	91.5213	5.1285
S28C22	72.4643	0.6167	77.4193	4.3383
S28C23	63.8713	0.5436	68.2388	3.8238
S28C24	61.8358	0.5263	66.0641	3.7020
S28R01	9.5533	0.3710	320.7717	310.8474
S28R02	11.9818	0.4430	330.8882	318.4634
S28R03	18.3919	0.5774	346.7662	327.7969
S28R04	33.3759	0.6572	365.4249	331.3918
S28R05	57.4644	0.5538	383.8360	325.8179
S28R06	81.8235	0.4404	399.4127	317.1488
S28R07	99.4704	0.3779	410.2190	310.3707
S28R08	107.3794	0.3546	415.0239	307.2899
S28R09	104.5525	0.3627	413.3076	308.3925
S28R10	91.3266	0.4048	405.2536	313.5222
S28R11	69.5984	0.4934	391.7537	321.6619
S28R12	44.1852	0.6213	374.4091	329.6026
S28R13	24.1647	0.6380	355.5103	330.7076
S28R14	14.3166	0.5012	337.9156	323.0979
S28R15	10.3943	0.3972	324.7124	313.9209
S28R16	9.1272	0.3572	318.5477	309.0633

	Cs-137	Ba-137m	Source 29	X Posit	Z Posit	Y Posit
	18.0653	17.0898		-0.2295	9.2524	97.3974
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S29C01	64.7006	0.3911	67.9198	2.8281		
S29C02	59.0330	0.3568	61.9702	2.5804		
S29C03	61.0906	0.3693	64.1302	2.6703		
S29C04	70.1973	0.4243	73.6900	3.0684		
S29C05	84.0933	0.5083	88.2774	3.6758		
S29C06	100.8174	0.6094	105.8336	4.4068		
S29C07	55.5235	0.4006	58.8224	2.8984		

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S29C08	48.9318	0.3530	51.8391	2.5543
S29C09	51.3517	0.3705	54.4028	2.6806
S29C10	61.7324	0.4454	65.4003	3.2225
S29C11	76.9155	0.5549	81.4855	4.0151
S29C12	94.6167	0.6826	100.2384	4.9391
S29C13	64.2837	0.3917	67.5076	2.8323
S29C14	58.5803	0.3569	61.5182	2.5810
S29C15	60.6517	0.3695	63.6935	2.6723
S29C16	69.8092	0.4253	73.3103	3.0757
S29C17	83.7600	0.5103	87.9607	3.6904
S29C18	100.5279	0.6125	105.5696	4.4292
S29C19	72.4480	0.3787	75.5665	2.7399
S29C20	67.3676	0.3521	70.2674	2.5478
S29C21	69.2008	0.3617	72.1795	2.6171
S29C22	77.4582	0.4048	80.7924	2.9294
S29C23	90.3962	0.4725	94.2874	3.4187
S29C24	106.3196	0.5557	110.8962	4.0209
S29R01	57.8217	0.3567	364.6001	306.4217
S29R02	54.3115	0.3562	361.0394	306.3717
S29R03	51.4282	0.3547	357.9579	306.1751
S29R04	49.5325	0.3530	355.8417	305.9562
S29R05	48.8258	0.3522	355.0327	305.8546
S29R06	49.3751	0.3528	355.6625	305.9345
S29R07	51.1286	0.3545	357.6286	306.1455
S29R08	53.9036	0.3561	360.6127	306.3530
S29R09	57.3602	0.3567	364.1427	306.4258
S29R10	61.0021	0.3560	367.6732	306.3150
S29R11	64.2381	0.3544	370.6742	306.0817
S29R12	66.4997	0.3528	372.7059	305.8534
S29R13	67.3721	0.3521	373.4768	305.7526
S29R14	66.6926	0.3527	372.8770	305.8317
S29R15	64.5881	0.3542	370.9920	306.0497
S29R16	61.4458	0.3559	368.0917	306.2900

	Cs-137	Ba-137m	Source 30	X Posit	Z Posit	Y Posit
	15.0401	14.2280		18.7276	-50.2548	31.4968
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S30C01	106.5947	1.0306	114.7852	7.1599		
S30C02	89.9870	0.8701	96.9014	6.0443		
S30C03	75.7246	0.7322	81.5431	5.0863		
S30C04	65.3612	0.6320	70.3834	4.3902		
S30C05	60.9204	0.5890	65.6014	4.0920		
S30C06	63.6540	0.6154	68.5450	4.2756		
S30C07	143.0216	0.4648	146.8471	3.3607		
S30C08	129.8619	0.4220	133.3353	3.0514		

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S30C09	119.4338	0.3881	122.6283	2.8064
S30C10	112.4996	0.3656	115.5087	2.6435
S30C11	109.7238	0.3566	112.6587	2.5783
S30C12	111.4176	0.3621	114.3978	2.6181
S30C13	128.2654	0.5993	133.1551	4.2904
S30C14	113.7506	0.5315	118.0869	3.8049
S30C15	101.9616	0.4764	105.8486	3.4106
S30C16	93.9306	0.4389	97.5114	3.1419
S30C17	90.6618	0.4236	94.1179	3.0326
S30C18	92.6605	0.4329	96.1928	3.0994
S30C19	67.6542	3.8503	96.6532	25.1488
S30C20	52.1750	2.9694	74.5391	19.3948
S30C21	37.1411	2.1138	53.0611	13.8063
S30C22	23.4258	1.3332	33.4670	8.7080
S30C23	15.1709	0.8634	21.6738	5.6394
S30C24	20.5822	1.1714	29.4045	7.6509
S30R01	13.3841	0.8203	349.8852	335.6808
S30R02	33.7620	0.8424	370.7011	336.0967
S30R03	64.2292	0.5690	390.1356	325.3374
S30R04	90.4746	0.4273	405.6201	314.7182
S30R05	106.9933	0.3674	415.3425	307.9818
S30R06	111.9161	0.3525	418.2529	305.9843
S30R07	104.8023	0.3744	414.0496	308.8728
S30R08	86.3028	0.4453	403.1701	316.4219
S30R09	58.6832	0.6096	386.8032	327.5105
S30R10	28.7475	0.8875	366.9019	337.2669
S30R11	11.4977	0.7603	346.1658	333.9078
S30R12	6.3106	0.4951	327.8851	321.0794
S30R13	4.6774	0.3810	315.4791	310.4207
S30R14	4.3125	0.3537	311.6100	306.9438
S30R15	4.8546	0.3940	317.1743	311.9256
S30R16	6.8616	0.5305	330.8930	323.5009

	Cs-137	Ba-137m	Source 31	X Posit	Z Posit	Y Posit
	22.3550	21.1478		14.1157	-45.1966	54.0394
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S31C01	90.6176	0.7625	96.7565	5.3764		
S31C02	76.1245	0.6406	81.2816	4.5165		
S31C03	65.5369	0.5515	69.9768	3.8884		
S31C04	60.9260	0.5127	65.0535	3.6148		
S31C05	63.6051	0.5352	67.9140	3.7737		
S31C06	72.7734	0.6124	77.7035	4.3177		
S31C07	125.2285	0.4267	128.7414	3.0862		
S31C08	114.3475	0.3896	117.5552	2.8180		
S31C09	107.0395	0.3647	110.0421	2.6379		

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S31C10	104.0598	0.3546	106.9788	2.5645
S31C11	105.7749	0.3604	108.7421	2.6068
S31C12	111.9692	0.3815	115.1102	2.7594
S31C13	108.7087	0.5395	113.1142	3.8660
S31C14	96.2959	0.4779	100.1983	3.4245
S31C15	87.7129	0.4353	91.2675	3.1193
S31C16	84.1399	0.4176	87.5497	2.9922
S31C17	86.2023	0.4278	89.6957	3.0656
S31C18	93.5280	0.4641	97.3182	3.3261
S31C19	60.5775	1.7507	74.7148	12.3866
S31C20	43.1104	1.2459	53.1713	8.8150
S31C21	27.1004	0.7832	33.4250	5.5414
S31C22	17.2458	0.4984	21.2705	3.5263
S31C23	23.3978	0.6762	28.8582	4.7843
S31C24	38.5299	1.1135	47.5218	7.8784
S31R01	26.1599	0.5893	352.1351	325.3858
S31R02	45.1306	0.5803	370.5918	324.8809
S31R03	68.9550	0.4772	387.5658	318.1336
S31R04	89.5674	0.3987	400.8073	310.8411
S31R05	102.2515	0.3597	408.7384	306.1271
S31R06	105.0476	0.3520	410.4769	305.0773
S31R07	97.5930	0.3733	405.8356	307.8693
S31R08	80.9057	0.4294	395.3192	313.9842
S31R09	58.0022	0.5254	380.1296	321.6020
S31R10	35.3491	0.6055	362.1592	326.2045
S31R11	20.6091	0.5433	343.9339	322.7814
S31R12	13.8071	0.4305	328.4068	314.1692
S31R13	11.1099	0.3657	318.4816	307.0060
S31R14	10.6172	0.3526	316.2376	305.2678
S31R15	12.0056	0.3885	322.1727	309.7786
S31R16	16.2139	0.4785	334.9929	318.3005

	Cs-137	Ba-137m	Source 32	X Posit	Z Posit	Y Posit
	21.6866	20.5156		-2.3294	45.6316	66.6580
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S32C01	93.2242	0.5577	97.7610	3.9792		
S32C02	81.9148	0.4900	85.9013	3.4965		
S32C03	75.3639	0.4509	79.0316	3.2168		
S32C04	74.8319	0.4477	78.4737	3.1941		
S32C05	80.4382	0.4812	84.3529	3.4334		
S32C06	91.0561	0.5447	95.4874	3.8866		
S32C07	49.3946	1.4139	61.0332	10.2246		
S32C08	31.8301	0.9111	39.3301	6.5888		
S32C09	16.4634	0.4713	20.3426	3.4079		
S32C10	14.6112	0.4182	18.0540	3.0245		

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S32C11	28.9912	0.8299	35.8222	6.0011
S32C12	46.3902	1.3279	57.3208	9.6027
S32C13	90.0576	0.5866	94.8194	4.1751
S32C14	78.3930	0.5106	82.5380	3.6343
S32C15	71.5777	0.4662	75.3623	3.3184
S32C16	71.0218	0.4626	74.7771	3.2926
S32C17	76.8613	0.5006	80.9252	3.5633
S32C18	87.8295	0.5721	92.4734	4.0718
S32C19	118.4422	0.4016	121.7493	2.9056
S32C20	109.3941	0.3709	112.4486	2.6836
S32C21	104.3780	0.3539	107.2924	2.5605
S32C22	103.9788	0.3525	106.8821	2.5507
S32C23	108.2478	0.3670	111.2702	2.6555
S32C24	116.6736	0.3956	119.9313	2.8622
S32R01	44.4271	0.5550	368.2312	323.2490
S32R02	27.0276	0.5480	350.4076	322.8320
S32R03	17.6570	0.4541	334.1698	316.0587
S32R04	13.5352	0.3795	322.3943	308.4795
S32R05	12.2357	0.3514	317.4408	304.8537
S32R06	12.9814	0.3678	320.3803	307.0310
S32R07	16.2139	0.4305	330.5714	313.9270
S32R08	23.8892	0.5268	345.9194	321.5034
S32R09	39.1593	0.5660	363.6089	323.8835
S32R10	60.9336	0.4961	380.8149	319.3852
S32R11	82.2296	0.4159	395.1408	312.4953
S32R12	97.3427	0.3683	404.8054	307.0944
S32R13	103.5179	0.3513	408.7015	304.8324
S32R14	99.8680	0.3612	406.4012	306.1720
S32R15	86.9032	0.4003	398.1561	310.8525
S32R16	66.8025	0.4729	384.8964	317.6210

	Cs-137	Ba-137m	Source 33	X Posit	Z Posit	Y Posit
	17.8281	16.8653		-7.0965	-56.3420	75.7547
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S33C01	97.0060	0.5424	101.4005	3.8520		
S33C02	88.3024	0.4937	92.3026	3.5064		
S33C03	84.5044	0.4725	88.3325	3.3556		
S33C04	86.2624	0.4823	90.1702	3.4254		
S33C05	93.2628	0.5215	97.4877	3.7034		
S33C06	104.4568	0.5841	109.1888	4.1479		
S33C07	124.4073	0.3823	127.5556	2.7660		
S33C08	117.4768	0.3610	120.4497	2.6119		
S33C09	114.5366	0.3520	117.4351	2.5465		
S33C10	115.8908	0.3561	118.8236	2.5766		
S33C11	121.3957	0.3730	124.4678	2.6990		

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S33C12	130.5272	0.4011	133.8304	2.9021
S33C13	87.3750	0.6392	92.4994	4.4852
S33C14	77.8586	0.5696	82.4249	3.9967
S33C15	73.6348	0.5387	77.9534	3.7799
S33C16	75.5961	0.5530	80.0297	3.8806
S33C17	83.3068	0.6094	88.1926	4.2764
S33C18	95.3826	0.6978	100.9767	4.8963
S33C19	15.4256	4.5830	50.6732	30.6646
S33C20	8.6396	2.5669	28.3811	17.1746
S33C21	2.8614	0.8501	9.3996	5.6881
S33C22	6.2117	1.8455	20.4054	12.3482
S33C23	12.8777	3.8260	42.3033	25.5996
S33C24	19.7468	5.8669	64.8684	39.2548
S33R01	34.7076	1.0340	374.5026	338.7610
S33R02	69.9949	0.5635	394.3551	323.7967
S33R03	96.6645	0.4145	409.4772	312.3982
S33R04	111.7170	0.3603	418.1724	306.0951
S33R05	114.0573	0.3531	419.5360	305.1256
S33R06	103.5345	0.3879	413.4299	309.5074
S33R07	80.8648	0.4918	400.4800	319.1234
S33R08	48.0930	0.7912	382.0923	333.2081
S33R09	13.2932	1.6556	360.4806	345.5319
S33R10	2.9170	0.8509	338.6480	334.8801
S33R11	1.5495	0.4789	320.1984	318.1701
S33R12	1.1807	0.3686	308.7559	307.2066
S33R13	1.1357	0.3549	306.9007	305.4102
S33R14	1.3617	0.4231	315.0780	313.2931
S33R15	2.1825	0.6592	331.3826	328.5408
S33R16	6.6779	1.4857	352.4257	344.2622

	Cs-137	Ba-137m	Source 34	X Posit	Z Posit	Y Posit
	14.6776	13.8850		-35.9173	43.1022	13.8403
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S34C01	149.4228	0.5645	154.0506	4.0633		
S34C02	134.1863	0.5069	138.3422	3.6490		
S34C03	121.1117	0.4575	124.8627	3.2934		
S34C04	110.9660	0.4192	114.4028	3.0175		
S34C05	104.6049	0.3952	107.8446	2.8446		
S34C06	102.7336	0.3881	105.9154	2.7937		
S34C07	96.8607	3.0287	118.8386	18.9492		
S34C08	79.5659	2.4879	97.6196	15.5658		
S34C09	63.0382	1.9711	77.3417	12.3324		
S34C10	48.0750	1.5032	58.9834	9.4051		
S34C11	36.6460	1.1459	44.9611	7.1692		
S34C12	32.6952	1.0223	40.1138	6.3963		

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OF HN-200 GROUT CONTAINERS.**

S34C13	106.9657	2.0462	122.4595	13.4476
S34C14	89.0918	1.7043	101.9966	11.2005
S34C15	72.3219	1.3835	82.7976	9.0922
S34C16	57.6280	1.1024	65.9753	7.2449
S34C17	46.9993	0.8991	53.8071	5.9087
S34C18	43.5236	0.8326	49.8279	5.4717
S34C19	152.4831	0.5330	156.8607	3.8446
S34C20	137.5168	0.4807	141.4647	3.4673
S34C21	124.7328	0.4360	128.3137	3.1449
S34C22	114.8621	0.4015	118.1597	2.8961
S34C23	108.7013	0.3800	111.8220	2.7407
S34C24	106.8939	0.3736	109.9627	2.6952
S34R01	83.9045	0.4779	404.9308	320.5484
S34R02	52.4872	0.7270	387.3069	334.0927
S34R03	18.5890	1.3345	366.3327	346.4091
S34R04	4.9597	0.8646	344.8971	339.0727
S34R05	2.6008	0.4966	326.4830	323.3856
S34R06	1.9501	0.3784	314.6315	312.3030
S34R07	1.8425	0.3583	311.9559	309.7550
S34R08	2.1564	0.4165	319.0869	316.5141
S34R09	3.2982	0.6161	334.3775	330.4632
S34R10	8.3671	1.2017	354.6414	345.0727
S34R11	33.3888	1.0230	376.2682	341.8564
S34R12	68.0062	0.5798	396.0090	327.4230
S34R13	95.2042	0.4242	411.3224	315.6940
S34R14	111.1729	0.3656	420.4571	308.9186
S34R15	114.6193	0.3550	422.4464	307.4722
S34R16	105.3063	0.3852	417.0859	311.3944

	Cs-137	Ba-137m	Source 35	X Posit	Z Posit	Y Posit
	28.0146	26.5018		44.7881	32.5999	76.4934
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S35C01	48.6646	1.7271	61.1835	10.7917		
S35C02	35.7031	1.2671	44.8876	7.9174		
S35C03	29.0239	1.0301	36.4903	6.4363		
S35C04	32.7304	1.1616	41.1502	7.2582		
S35C05	44.2875	1.5717	55.6803	9.8211		
S35C06	59.2680	2.1034	74.5145	13.1431		
S35C07	64.3397	1.0331	72.2879	6.9151		
S35C08	52.6335	0.8451	59.1356	5.6569		
S35C09	47.2117	0.7581	53.0439	5.0742		
S35C10	50.1553	0.8054	56.3512	5.3906		
S35C11	60.2505	0.9675	67.6936	6.4756		
S35C12	74.6503	1.1987	83.8721	8.0232		
S35C13	117.6595	0.4040	120.9798	2.9163		

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

S35C14	110.4935	0.3794	113.6116	2.7387
S35C15	107.5288	0.3693	110.5633	2.6652
S35C16	109.1085	0.3747	112.1875	2.7044
S35C17	115.0454	0.3951	118.2920	2.8515
S35C18	124.7189	0.4283	128.2385	3.0913
S35C19	111.1202	0.4359	114.6908	3.1348
S35C20	103.5622	0.4062	106.8900	2.9215
S35C21	100.4175	0.3939	103.6442	2.8328
S35C22	102.0945	0.4005	105.3751	2.8801
S35C23	108.3698	0.4251	111.8520	3.0572
S35C24	118.5151	0.4649	122.3233	3.3434
S35R01	3.3218	0.4555	320.0525	316.2752
S35R02	2.6112	0.3639	309.5972	306.6221
S35R03	2.5564	0.3566	308.5786	305.6655
S35R04	3.0991	0.4273	317.2382	313.7119
S35R05	4.9532	0.6462	333.5922	327.9928
S35R06	12.8682	1.1288	354.3037	340.3066
S35R07	40.1087	0.8489	375.7836	334.8260
S35R08	72.6441	0.5292	394.8957	321.7224
S35R09	97.4320	0.4049	409.2395	311.4026
S35R10	111.0530	0.3579	417.2050	305.7940
S35R11	112.3353	0.3541	417.9592	305.2699
S35R12	101.1822	0.3908	411.4247	309.8517
S35R13	78.5089	0.4937	398.2798	319.2771
S35R14	47.0347	0.7576	379.9728	332.1804
S35R15	16.7155	1.1680	358.7441	340.8607
S35R16	5.7301	0.7260	337.5912	331.1351

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

**TABLE 1
DATA FOR HN-200 GROUT CONTAINER LINER
DRAWING NUMBER H-3-49415**

Outer Height	54.0000	in	137.1600	cm
Inner Height (note 1)	53.5000	in	135.8900	cm
Outer Radius	22.9375	in	58.2613	cm
Inner Radius	22.7993	in	57.9102	cm
Wall Thickness	0.1382	in	0.3510	cm
Volume (inner)	87366.8507	in ³	1431686.17	cm ³
	50.5595201	ft ³	1.43168617	m ³

Note 1 - The top and bottom closure plates for the container are constructed of 0.125" steel. A bottom stiffening plate, constructed of 0.25" steel, is inserted into the container. This yields an internal height of 53.5" for the container.

Note 2 - For purposes of the coordinates and calculations presented in this attachment, the cylinder of interest is placed in an X,Z,Y coordinate frame to match the coordinate frame use in Microshield version 5.03. The circular portion of the cylinder is centered at X=0, Z=0. The bottom of the inner height of the cylinder is placed at Y=0. This placement matches the orientation used in Microshield for a cylindrical source.

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

TABLE 2
Coordinates of current contact measuring points.

Point	X	Z	Y
C01	23.9375	0.0000	49.5000
C02	23.9375	0.0000	40.5000
C03	23.9375	0.0000	31.5000
C04	23.9375	0.0000	22.5000
C05	23.9375	0.0000	13.5000
C06	23.9375	0.0000	4.5000
C07	0.0000	23.9375	49.5000
C08	0.0000	23.9375	40.5000
C09	0.0000	23.9375	31.5000
C10	0.0000	23.9375	22.5000
C11	0.0000	23.9375	13.5000
C12	0.0000	23.9375	4.5000
C13	-23.9375	0.0000	49.5000
C14	-23.9375	0.0000	40.5000
C15	-23.9375	0.0000	31.5000
C16	-23.9375	0.0000	22.5000
C17	-23.9375	0.0000	13.5000
C18	-23.9375	0.0000	4.5000
C19	0.0000	-23.9375	49.5000
C20	0.0000	-23.9375	40.5000
C21	0.0000	-23.9375	31.5000
C22	0.0000	-23.9375	22.5000
C23	0.0000	-23.9375	13.5000
C24	0.0000	-23.9375	4.5000

Note 1 - The radiation readings taken for this container are normally taken with an RO-7 radiation survey instrument. The coordinates for the contact readings are set at the center of the active portion of the RO-7 probe when the probe face is on contact with the surface of the container.

Note 2 - The center of the active portion of the RO-7 radiation survey instrument probe is one inch from the face of the probe.

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

TABLE 3
Coordinates of Remote Measuring Points.

Point	X	Z	Y
R01	142.9375	0.0000	26.7500
R02	132.0570	54.6998	26.7500
R03	101.0721	101.0721	26.7500
R04	54.6998	132.0570	26.7500
R05	0.0000	142.9375	26.7500
R06	-54.6998	132.0570	26.7500
R07	-101.0721	101.0721	26.7500
R08	-132.0570	54.6998	26.7500
R09	-142.9375	0.0000	26.7500
R10	-132.0570	-54.6998	26.7500
R11	-101.0721	-101.0721	26.7500
R12	-54.6998	-132.0570	26.7500
R13	0.0000	-142.9375	26.7500
R14	54.6998	-132.0570	26.7500
R15	101.0721	-101.0721	26.7500
R16	132.0570	-54.6998	26.7500

Note 1 - Remote Measuring Points (R) are 120 inches (10 feet) from the surface of the container.

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

TABLE 4
Coordinates and source strengths for random sources.

Source	X	Z	Y	Validity	Strength
S01	19.3677	0.5818	25.9034	Valid	29.4975
S02	-10.6176	-19.5689	18.8660	Valid	13.8502
S03	1.7704	-7.2590	41.8874	Valid	23.5916
S04	5.5262	-19.2179	28.6756	Valid	20.6982
S05	-12.5171	2.4304	36.3581	Valid	10.9510
S06	10.1481	-6.8169	29.6428	Valid	16.3182
S07	-3.0040	-18.4824	1.5181	Valid	25.9358
S08	-1.4468	-9.3997	20.8621	Valid	25.1678
S09	-11.3240	-1.2877	45.4810	Valid	24.9347
S10	-8.1594	10.5475	46.4380	Valid	26.8139
S11	13.0540	6.4320	29.1917	Valid	12.5933
S12	17.0889	8.7507	21.2880	Valid	17.5307
S13	3.5123	8.3040	41.4473	Valid	17.9331
S14	-18.2417	6.1323	39.9213	Valid	26.2138
S15	21.0026	5.4076	10.7056	Valid	22.7469
S16	12.7799	10.3319	39.3081	Valid	27.6556
S17	-14.4903	3.0983	8.6941	Valid	28.5227
S18	18.7646	-12.0033	10.5209	Valid	23.2528
S19	-18.2584	0.2785	21.1001	Valid	15.3416
S20	2.8644	9.2261	44.4497	Valid	16.4988
S21	3.0621	-7.9137	19.8848	Valid	28.6466
S22	-17.9782	12.8570	50.0431	Valid	20.3724
S23	5.0992	14.6169	52.0038	Valid	13.0146
S24	7.9617	19.2122	33.0332	Valid	12.5419
S25	8.3975	9.5559	39.8544	Valid	19.7625
S26	4.1090	16.2164	34.1935	Valid	24.8512
S27	2.2698	-21.1016	13.9713	Valid	10.2138
S28	18.4153	-5.6775	6.4850	Valid	15.5133
S29	-0.0904	3.6427	38.3454	Valid	18.0653
S30	7.3731	-19.7854	12.4003	Valid	15.0401
S31	5.5574	-17.7939	21.2754	Valid	22.3550
S32	-0.9171	17.9652	26.2433	Valid	21.6866
S33	-2.7939	-22.1819	29.8247	Valid	17.8281
S34	-14.1407	16.9694	5.4489	Valid	14.6776
S35	17.6331	12.8346	30.1155	Valid	28.0146

TABLE 5 - CALCULATION OF CONVERSION FACTORS FOR A GROUTED HN-200 GROUT

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

CONTAINER ASSUMING A HOMOGENEOUS MIXTURE OF ACTIVITY AND GROUT.

POINT	R/hr			
C01	1.391E-01			
C02	1.652E-01			
C03	1.674E+00			
C04	1.675E+00			
C05	1.655E-01			
C06	1.427E-01			
C07	1.391E-01			
C08	1.652E-01	AVERAGE CONTACT READING =	6.603E-01	R/hr
C09	1.674E+00	TOTAL Cs-137 =	1	Ci
C10	1.675E+00	GROUTED CONTACT CONV FACTOR =	6.603E-01	R/hr/Ci
C11	1.655E-01			
C12	1.427E-01	Contact readings are taken with the RO-7 probe on contact with the surface of the HN-200 grout container. Having the probe on contact with the surface of the container produces an effective distance from the container of 1-inch to account for the active volume of the RO-7 radiation survey instrument probe. The 24 readings are then averaged to obtain the most accurate representation of the Cs-137 content of the container possible for this method.		
C13	1.391E-01			
C14	1.652E-01			
C15	1.674E+00			
C16	1.675E+00			
C17	1.655E-01			
C18	1.427E-01			
C19	1.391E-01			
C20	1.652E-01			
C21	1.674E+00			
C22	1.675E+00			
C23	1.655E-01			
C24	1.427E-01			
R01	4.715E-03			
R02	4.715E-03			
R03	4.715E-03			
R04	4.715E-03			
R05	4.715E-03			
R06	4.715E-03			
R07	4.715E-03	AVERAGE REMOTE READING =	4.715E-03	R/hr
R08	4.715E-03	TOTAL Cs-137 =	1	Ci
R09	4.715E-03	GROUTED REMOTE CONV FACTOR =	4.715E-03	R/hr/Ci
R10	4.715E-03			
R11	4.715E-03	Remote readings are taken with the RO-7 probe 10 feet from the surface of the container. These readings are taken every 22.5 degrees around the container and averaged to produce the most accurate representation of the Cs-137 curie content of the container.		
R12	4.715E-03			
R13	4.715E-03			
R14	4.715E-03			
R15	4.715E-03			
R16	4.715E-03			

TABLE 6 - RESULTS OF MICROSIELD CALCULATION FOR EACH SOURCE TO EACH MEASUREMENT POINT FROM A GROUTED HN-200 GROUT CONTAINER.

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

POINT	SOURCE						
	S01	S02	S03	S04	S05	S06	S07
C01	4.851E-01	3.042E-05	1.977E-01	9.152E-03	8.594E-04	1.233E-01	5.093E-06
C02	7.441E+00	1.442E-04	2.896E-01	4.065E-02	1.657E-03	9.642E-01	4.827E-05
C03	1.373E+02	4.435E-04	1.430E-01	8.680E-02	1.611E-03	3.008E+00	3.745E-04
C04	2.734E+02	7.842E-04	3.038E-02	7.253E-02	7.941E-04	1.817E+00	2.139E-03
C05	1.483E+01	7.371E-04	3.929E-03	2.503E-02	2.214E-04	3.064E-01	7.707E-03
C06	9.309E-01	3.717E-04	3.902E-04	4.615E-03	4.043E-05	3.071E-02	1.458E-02
C07	2.836E-03	7.996E-06	1.598E-02	8.010E-05	2.868E-02	1.717E-03	6.778E-07
C08	1.290E-02	3.332E-05	2.125E-02	2.171E-04	7.364E-02	5.833E-03	5.108E-06
C09	3.180E-02	9.178E-05	1.249E-02	3.479E-04	7.066E-02	1.013E-02	3.034E-05
C10	3.526E-02	1.524E-04	3.648E-03	3.118E-04	2.569E-02	8.022E-03	1.302E-04
C11	1.715E-02	1.443E-04	6.476E-04	1.585E-04	4.687E-03	3.049E-03	3.632E-04
C12	4.290E-03	7.834E-05	8.302E-05	4.926E-05	5.736E-04	6.601E-04	5.943E-04
C13	8.096E-05	1.434E-03	6.767E-02	8.765E-04	1.018E+00	8.816E-04	1.221E-05
C14	2.543E-04	1.152E-02	9.444E-02	2.899E-03	6.201E+00	2.789E-03	1.290E-04
C15	4.846E-04	6.075E-02	5.081E-02	5.181E-03	5.647E+00	4.663E-03	1.151E-03
C16	5.208E-04	1.530E-01	1.254E-02	4.524E-03	8.482E-01	3.755E-03	7.765E-03
C17	3.127E-04	1.378E-01	1.873E-03	1.979E-03	7.286E-02	1.517E-03	3.312E-02
C18	1.114E-04	4.621E-02	2.078E-04	4.952E-04	5.390E-03	3.550E-04	6.949E-02
C19	2.236E-03	1.562E-02	1.557E+00	6.070E-01	7.981E-03	4.501E-02	2.784E-04
C20	9.847E-03	1.838E-01	2.680E+00	8.256E+00	1.803E-02	2.610E-01	3.784E-03
C21	2.369E-02	1.878E+00	1.002E+00	7.616E+01	1.741E-02	6.325E-01	5.260E-02
C22	2.620E-02	1.014E+01	1.452E-01	3.839E+01	7.246E-03	4.308E-01	7.465E-01
C23	1.300E-02	8.133E+00	1.390E-02	3.142E+00	1.584E-03	1.002E-01	1.130E+01
C24	3.356E-03	1.229E+00	1.120E-03	2.309E-01	2.274E-04	1.273E-02	1.372E+02
R01	6.719E-01	1.026E-03	1.206E-02	1.401E-01	7.999E-05	6.868E-02	1.294E-02
R02	6.295E-01	6.058E-05	5.622E-03	1.978E-02	1.922E-04	3.828E-02	1.125E-03
R03	4.858E-01	1.110E-05	2.550E-03	1.372E-03	6.436E-04	1.463E-02	1.386E-04
R04	2.529E-01	7.969E-06	1.311E-03	1.281E-04	2.739E-03	4.077E-03	4.138E-05
R05	5.556E-02	2.331E-05	8.822E-04	3.026E-05	1.045E-02	1.032E-03	3.733E-05
R06	4.974E-03	2.432E-04	8.469E-04	2.327E-05	2.822E-02	3.275E-04	1.036E-04
R07	4.271E-04	5.955E-03	1.170E-03	6.060E-05	5.113E-02	1.723E-04	7.373E-04
R08	7.450E-05	1.043E-01	2.170E-03	4.588E-04	6.705E-02	1.730E-04	8.436E-03
R09	3.781E-05	3.039E-01	4.718E-03	6.490E-03	6.725E-02	3.313E-04	7.054E-02
R10	6.235E-05	3.890E-01	1.030E-02	7.063E-02	5.163E-02	1.049E-03	2.359E-01
R11	3.083E-04	4.307E-01	1.995E-02	2.532E-01	2.873E-02	4.148E-03	3.998E-01
R12	3.350E-03	4.389E-01	3.186E-02	4.138E-01	1.074E-02	1.484E-02	4.910E-01
R13	4.001E-02	4.130E-01	4.078E-02	4.977E-01	2.832E-03	3.865E-02	4.985E-01
R14	2.149E-01	3.508E-01	4.178E-02	5.122E-01	6.648E-04	6.904E-02	4.221E-01
R15	4.549E-01	2.123E-01	3.428E-02	4.584E-01	1.966E-04	9.004E-02	2.689E-01
R16	6.142E-01	2.709E-02	2.251E-02	3.309E-01	9.879E-05	8.989E-02	9.392E-02

POINT	SOURCE						
	S08	S09	S10	S11	S12	S13	S14
C01	1.751E-03	5.663E-03	1.027E-02	1.480E-01	3.344E-02	2.150E-01	4.300E-04

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C02	1.166E-02	5.447E-03	9.090E-03	1.455E+00	4.133E-01	3.406E-01	6.019E-04
C03	4.737E-02	2.597E-03	3.912E-03	6.067E+00	4.192E+00	1.703E-01	4.639E-04
C04	8.953E-02	6.932E-04	9.462E-04	3.627E+00	1.654E+01	3.513E-02	2.035E-04
C05	6.615E-02	1.212E-04	1.524E-04	5.014E-01	7.058E+00	4.371E-03	5.564E-05
C06	2.086E-02	1.587E-05	1.870E-05	4.408E-02	7.970E-01	4.207E-04	1.056E-05
C07	3.915E-04	6.799E-02	4.200E+00	2.000E-02	3.689E-03	1.408E+00	9.517E-02
C08	2.072E-03	6.467E-02	3.202E+00	1.075E-01	2.838E-02	2.685E+00	1.664E-01
C09	6.739E-03	2.545E-02	6.241E-01	2.534E-01	1.329E-01	1.029E+00	1.077E-01
C10	1.131E-02	5.192E-03	6.683E-02	1.899E-01	2.659E-01	1.456E-01	2.959E-02
C11	8.855E-03	7.012E-04	5.600E-03	5.122E-02	1.769E-01	1.367E-02	4.642E-03
C12	3.400E-03	7.389E-05	4.257E-04	7.345E-03	4.578E-02	1.085E-03	5.285E-04
C13	3.175E-03	1.005E+01	1.358E+00	2.892E-04	3.289E-05	2.659E-02	1.479E+01
C14	2.366E-02	8.959E+00	1.088E+00	8.723E-04	1.327E-04	3.788E-02	7.386E+01
C15	1.079E-01	1.473E+00	2.689E-01	1.450E-03	3.396E-04	2.214E-02	1.993E+01
C16	2.179E-01	1.343E-01	3.460E-02	1.228E-03	4.983E-04	6.091E-03	1.656E+00
C17	1.557E-01	1.020E-02	3.274E-03	5.446E-04	3.990E-04	1.003E-03	1.236E+00
C18	4.420E-02	7.273E-04	2.686E-04	1.418E-04	1.796E-04	1.201E-04	9.105E-03
C19	1.999E-02	1.456E-01	6.000E-03	1.027E-03	1.256E-04	8.074E-03	4.516E-03
C20	2.312E-01	1.378E-01	5.344E-03	3.514E-03	5.818E-04	1.103E-02	6.787E-03
C21	1.904E+00	5.027E-02	2.387E-03	6.256E-03	1.668E-03	6.863E-03	4.948E-03
C22	6.080E+00	9.278E-03	6.077E-04	5.177E-03	2.579E-03	2.145E-03	1.855E-03
C23	3.418E+00	1.148E-03	1.030E-04	2.072E-03	2.003E-03	4.051E-04	4.136E-04
C24	5.267E-01	1.131E-04	1.323E-05	4.701E-04	8.151E-04	5.461E-05	6.393E-05
R01	6.521E-03	2.896E-04	1.106E-03	9.996E-02	3.447E-01	1.542E-02	4.964E-05
R02	2.326E-03	3.301E-04	5.077E-03	1.181E-01	3.867E-01	2.900E-02	2.204E-04
R03	9.657E-04	6.710E-04	2.174E-02	1.088E-01	3.692E-01	4.194E-02	2.232E-03
R04	5.710E-04	2.078E-03	6.542E-02	7.602E-02	2.918E-01	4.714E-02	2.696E-02
R05	5.405E-04	7.455E-03	1.275E-01	3.632E-02	1.612E-01	4.155E-02	1.607E-01
R06	8.287E-04	2.349E-02	1.756E-01	1.051E-02	4.052E-02	2.845E-02	3.687E-01
R07	1.874E-03	5.472E-02	1.838E-01	2.049E-03	4.023E-03	1.499E-02	5.165E-01
R08	5.179E-03	9.045E-02	1.479E-01	3.873E-04	3.421E-04	6.319E-03	5.759E-01
R09	1.405E-02	1.114E-01	8.672E-02	1.108E-04	5.424E-05	2.384E-03	5.472E-01
R10	3.181E-02	1.054E-01	3.375E-02	6.429E-05	2.397E-05	9.628E-04	4.300E-01
R11	5.519E-02	7.602E-02	8.708E-03	8.473E-05	3.385E-05	5.099E-04	2.340E-01
R12	7.297E-02	3.995E-02	1.865E-03	2.398E-04	1.445E-04	4.083E-04	5.671E-02
R13	7.500E-02	1.488E-02	4.779E-04	1.157E-03	1.418E-03	5.187E-04	5.445E-03
R14	6.007E-02	4.349E-03	2.066E-04	6.288E-03	1.698E-02	9.927E-04	4.601E-04
R15	3.684E-02	1.242E-03	1.810E-04	2.553E-02	1.036E-01	2.473E-03	7.425E-05
R16	1.719E-02	4.664E-04	3.305E-04	6.249E-02	2.432E-01	6.548E-03	3.384E-05

POINT	SOURCE						
	S15	S16	S17	S18	S19	S20	S21
C01	7.437E-03	2.020E+00	9.333E-06	1.946E-03	2.597E-05	1.919E-01	4.335E-03
C02	8.533E-02	5.704E+00	6.488E-05	2.387E-02	1.050E-04	2.056E-01	3.662E-02

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C03	1.011E+00	3.040E+00	3.341E-04	2.689E-01	2.704E-04	7.615E-02	1.974E-01
C04	1.296E+01	4.826E-01	1.131E-03	2.434E+00	4.008E-04	1.340E-02	4.743E-01
C05	1.389E+02	4.770E-02	2.205E-03	1.028E+01	3.254E-04	1.563E-03	3.718E-01
C06	6.281E+01	3.890E-03	2.256E-03	7.343E+00	1.487E-04	1.464E-04	1.051E-01
C07	1.216E-04	7.284E-01	1.377E-04	7.465E-06	6.094E-04	2.700E+00	5.056E-04
C08	1.070E-03	1.706E+00	1.384E-03	4.654E-05	3.584E-03	3.013E+00	2.926E-03
C09	7.103E-03	1.024E+00	1.105E-02	2.099E-04	1.280E-02	6.952E-01	1.058E-02
C10	2.971E-02	2.094E-01	5.893E-02	6.108E-04	2.230E-02	7.699E-01	1.970E-02
C11	6.101E-02	2.458E-02	1.583E-01	1.023E-03	1.659E-02	6.440E-03	1.664E-02
C12	5.129E-02	2.237E-03	1.639E-01	9.193E-04	5.676E-03	4.837E-04	6.619E-03
C13	2.418E-06	1.760E-03	1.277E-03	2.981E-06	4.990E-02	3.387E-02	1.246E-03
C14	1.335E-05	2.680E-03	1.839E-02	1.690E-05	7.332E-01	3.582E-02	8.297E-03
C15	5.314E-05	2.095E-03	2.580E-01	6.927E-05	1.177E+01	1.575E-02	3.450E-02
C16	1.389E-04	8.745E-04	3.329E+00	1.860E-04	1.311E+02	3.511E-03	6.987E-02
C17	2.181E-04	2.190E-04	2.709E+01	2.981E-04	2.808E+01	5.047E-04	5.764E-02
C18	1.960E-04	3.761E-05	2.977E+01	2.705E-04	1.727E+00	5.546E-05	2.042E-02
C19	2.130E-05	2.879E-03	5.004E-05	3.740E-04	5.476E-04	6.827E-03	1.308E-02
C20	1.488E-04	4.463E-03	4.324E-04	3.866E-03	3.169E-03	7.158E-03	1.440E-01
C21	7.544E-04	3.452E-03	2.850E-03	3.207E-02	1.115E-02	3.541E-03	1.107E+00
C22	2.430E-03	1.392E-03	1.228E-02	1.730E-01	1.927E-02	9.421E-04	3.635E+00
C23	4.269E-03	3.333E-04	2.821E-02	4.282E-01	1.440E-02	1.609E-04	2.582E+00
C24	3.732E-03	5.473E-05	2.903E-02	3.525E-01	4.994E-03	2.045E-05	5.024E-01
R01	6.645E-01	2.609E-01	1.395E-04	6.716E-01	2.678E-05	1.258E-02	2.200E-02
R02	6.737E-01	3.517E-01	3.269E-04	5.556E-01	4.826E-05	2.622E-02	9.696E-03
R03	6.195E-01	3.700E-01	1.453E-03	2.808E-01	2.341E-04	4.121E-02	3.899E-03
R04	5.000E-01	3.106E-01	8.422E-03	2.499E-02	2.186E-03	4.955E-02	1.691E-03
R05	2.468E-01	1.926E-01	4.015E-02	9.231E-04	2.033E-02	4.636E-02	9.500E-04
R06	2.705E-02	7.269E-02	1.162E-01	6.438E-05	9.317E-02	3.353E-02	7.864E-04
R07	1.192E-03	1.424E-02	2.084E-01	1.491E-05	1.955E-01	1.833E-02	9.991E-04
R08	8.522E-05	1.931E-03	2.667E-01	1.387E-05	2.679E-01	7.690E-03	1.849E-03
R09	1.852E-05	3.168E-04	2.643E-01	5.226E-05	2.917E-01	2.729E-03	4.347E-03
R10	1.525E-05	1.019E-04	2.023E-01	6.738E-04	2.639E-01	9.803E-04	1.078E-02
R11	4.870E-05	8.154E-05	1.095E-01	1.789E-02	1.881E-01	4.477E-04	2.398E-02
R12	5.161E-04	1.691E-04	3.636E-02	2.405E-01	8.548E-02	3.111E-04	4.334E-02
R13	1.130E-02	7.886E-04	7.424E-03	5.390E-01	1.740E-02	3.559E-04	6.122E-02
R14	1.583E-01	5.739E-03	1.285E-03	6.631E-01	1.820E-03	6.514E-04	6.792E-02
R15	4.466E-01	3.696E-02	2.997E-04	7.204E-01	2.011E-04	1.666E-03	5.951E-02
R16	5.932E-01	1.324E-01	1.352E-04	7.233E-01	4.438E-05	4.797E-03	4.089E-02

POINT	SOURCE						
	S22	S23	S24	S25	S26	S27	S28
C01	3.178E-04	1.340E-01	1.965E-02	6.266E-01	3.822E-02	7.533E-05	6.354E-04
C02	2.298E-04	5.971E-02	6.735E-02	1.392E+00	1.165E-01	5.670E-04	8.576E-03
C03	9.670E-05	1.209E-02	9.427E-02	7.574E-01	1.425E-01	3.007E-03	1.166E-01

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C04	2.588E-05	1.546E-03	4.827E-02	1.427E-01	6.564E-02	9.287E-03	1.587E+00
C05	4.877E-06	1.540E-04	1.111E-02	1.587E-02	1.423E-02	1.354E-02	1.894E+01
C06	7.076E-07	1.331E-05	1.564E-03	1.394E-03	1.945E-03	8.520E-03	4.807E+01
C07	5.838E-01	1.298E+01	9.759E-01	1.008E+00	2.476E+00	2.172E-06	6.848E-06
C08	3.008E-01	2.409E+00	9.825E+00	2.419E+00	2.668E+01	1.080E-05	5.538E-05
C09	6.270E-02	2.083E-01	2.454E+01	1.239E+00	4.984E+01	3.747E-05	3.444E-04
C10	7.880E-03	1.554E-02	4.733E+00	2.085E-01	6.850E+00	8.237E-05	1.452E-03
C11	7.730E-04	1.101E-03	4.161E-01	2.142E-02	5.163E-01	1.060E-04	3.546E-03
C12	6.652E-05	7.711E-05	3.341E-02	1.785E-03	3.678E-02	7.769E-05	4.354E-03
C13	6.738E+00	7.721E-03	5.513E-04	5.235E-03	5.278E-03	3.507E-05	1.211E-06
C14	2.550E+00	4.227E-03	1.315E-03	8.060E-03	1.302E-02	2.378E-04	8.039E-06
C15	3.443E-01	1.200E-03	1.649E-03	5.824E-03	1.528E-02	1.123E-03	4.018E-05
C16	3.304E-02	2.127E-04	1.046E-03	2.107E-03	8.221E-03	3.137E-03	1.371E-04
C17	2.768E-03	2.757E-05	3.612E-04	4.486E-04	2.300E-03	4.402E-03	2.871E-04
C18	2.205E-04	2.913E-06	7.773E-05	6.626E-05	4.032E-04	2.902E-03	3.393E-04
C19	8.111E-04	9.681E-04	7.484E-05	4.056E-03	4.838E-04	9.975E-03	3.979E-05
C20	5.732E-04	5.844E-04	1.580E-04	6.181E-03	1.009E-03	1.150E-01	4.068E-04
C21	2.283E-04	1.981E-04	1.913E-04	4.502E-03	1.146E-03	1.466E+00	3.384E-03
C22	5.691E-05	4.272E-05	1.299E-04	1.664E-03	6.959E-04	2.363E+01	1.976E-02
C23	9.968E-06	6.633E-06	5.180E-05	3.637E-04	2.416E-04	3.033E+02	6.305E-02
C24	1.352E-06	8.166E-07	1.328E-05	5.507E-05	5.384E-05	1.729E+01	8.310E-02
R01	5.802E-05	3.018E-02	1.511E-01	6.416E-02	6.204E-02	5.073E-02	3.215E-01
R02	8.395E-04	7.485E-02	2.655E-01	1.030E-01	1.747E-01	3.618E-03	2.566E-01
R03	2.197E-02	1.181E-01	3.250E-01	1.227E-01	2.904E-01	1.922E-04	1.444E-01
R04	2.346E-01	1.381E-01	3.441E-01	1.124E-01	3.530E-01	2.138E-05	3.711E-02
R05	4.670E-01	1.269E-01	3.249E-01	7.780E-02	3.432E-01	7.722E-06	3.653E-03
R06	5.680E-01	8.881E-02	2.654E-01	3.797E-02	2.636E-01	1.045E-05	2.983E-04
R07	6.145E-01	4.161E-02	1.510E-01	1.236E-02	1.414E-01	5.095E-05	4.501E-05
R08	6.106E-01	1.108E-02	3.001E-02	3.032E-03	4.202E-02	6.976E-04	1.899E-05
R09	5.554E-01	1.856E-03	1.909E-03	7.415E-04	6.567E-03	1.368E-02	2.588E-05
R10	4.431E-01	3.001E-04	1.271E-04	2.572E-04	8.502E-04	1.047E-01	1.084E-04
R11	1.828E-01	7.741E-05	2.010E-05	1.623E-04	1.649E-04	2.121E-01	1.071E-03
R12	1.301E-02	4.355E-05	1.054E-05	2.054E-04	7.138E-05	2.673E-01	1.334E-02
R13	5.111E-04	5.992E-05	2.012E-05	4.964E-04	8.130E-05	2.903E-01	8.604E-02
R14	4.174E-05	1.895E-04	1.274E-04	1.877E-03	2.738E-04	2.835E-01	2.077E-01
R15	1.164E-05	1.071E-03	1.914E-03	7.953E-03	1.435E-03	2.471E-01	2.970E-01
R16	1.304E-05	6.806E-03	3.007E-02	2.743E-02	1.117E-02	1.707E-01	3.348E-01

POINT	SOURCE						
	S29	S30	S31	S32	S33	S34	S35
C01	7.320E-02	1.915E-04	2.541E-03	2.025E-03	1.042E-03	1.166E-06	3.693E-01
C02	1.567E-01	1.729E-03	1.749E-02	8.939E-03	3.246E-03	8.140E-06	2.861E+00
C03	1.188E-01	1.167E-02	7.281E-02	2.127E-02	5.343E-03	4.332E-05	8.629E+00
C04	3.510E-02	4.747E-02	1.360E-01	2.283E-02	4.241E-03	1.592E-04	4.653E+00

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C05	5.562E-03	8.693E-02	9.458E-02	1.086E-02	1.697E-03	3.608E-04	7.278E-01
C06	6.229E-04	5.989E-02	2.744E-02	2.689E-03	3.953E-04	4.591E-04	7.340E-02
C07	2.402E-01	2.832E-06	4.011E-05	3.080E-01	3.648E-05	1.839E-04	7.705E-02
C08	5.953E-01	1.513E-05	1.613E-04	4.728E+00	8.838E-05	2.269E-03	3.996E-01
C09	4.257E-01	5.729E-05	4.120E-04	7.100E+01	1.287E-04	2.590E-02	8.688E-01
C10	1.035E-01	1.391E-04	6.043E-04	1.040E+02	1.082E-04	2.436E-01	5.689E-01
C11	1.350E-02	1.986E-04	4.847E-04	7.524E+00	5.358E-05	1.443E+00	1.366E-01
C12	1.301E-03	1.598E-04	2.188E-04	4.843E-01	1.672E-05	2.725E+00	1.835E-02
C13	7.724E-02	1.653E-05	2.982E-04	2.970E-03	3.320E-03	9.465E-05	1.320E-04
C14	1.663E-01	1.069E-04	1.490E-03	1.384E-02	1.172E-02	1.111E-03	3.308E-04
C15	1.258E-01	4.898E-04	4.559E-03	3.430E-02	2.060E-02	1.150E-02	4.840E-04
C16	3.688E-02	1.388E-03	7.277E-03	3.694E-02	1.585E-02	9.185E-02	3.951E-04
C17	5.796E-03	2.124E-03	5.555E-03	1.696E-02	5.686E-03	4.242E-01	1.845E-04
C18	6.448E-04	1.637E-03	2.135E-03	3.980E-03	1.157E-03	7.082E-01	5.354E-05
C19	2.709E-02	4.279E-03	6.018E-02	9.277E-05	2.224E+00	8.108E-07	2.948E-04
C20	5.324E-02	5.371E-02	8.220E-01	2.958E-04	2.624E+01	5.452E-06	7.800E-04
C21	4.171E-02	6.680E-01	1.064E+01	5.634E-04	5.374E+02	2.786E-05	1.170E-03
C22	1.395E-02	7.846E+00	6.279E+01	5.930E-04	7.523E+01	9.854E-05	9.425E-04
C23	2.553E-03	4.182E+01	2.012E+01	3.426E-04	5.362E+00	2.172E-04	4.199E-04
C24	3.221E-03	1.360E+01	1.676E+00	1.163E-04	5.311E-01	2.740E-04	1.141E-04
R01	4.985E-03	1.810E-01	1.094E-01	1.941E-02	3.086E-02	2.168E-04	7.601E-01
R02	7.154E-03	3.131E-02	1.828E-02	1.014E-01	1.128E-03	5.094E-03	8.463E-01
R03	9.614E-03	1.740E-03	1.697E-03	2.391E-01	6.882E-05	9.235E-02	8.546E-01
R04	1.167E-02	1.135E-04	1.930E-04	3.489E-01	1.340E-05	2.961E-01	7.837E-01
R05	1.255E-02	1.904E-05	4.893E-05	3.941E-01	1.036E-05	3.901E-01	6.330E-01
R06	1.186E-02	1.110E-05	3.604E-05	3.674E-01	3.275E-05	4.377E-01	3.087E-01
R07	9.913E-03	2.419E-05	8.122E-05	2.727E-01	3.676E-04	4.472E-01	3.175E-02
R08	7.460E-03	1.770E-04	4.857E-04	1.354E-01	9.427E-03	4.204E-01	1.369E-03
R09	5.228E-03	3.016E-03	5.159E-03	3.237E-02	1.547E-01	3.551E-01	1.002E-04
R10	3.586E-03	4.859E-02	4.671E-02	3.786E-03	4.090E-01	2.125E-01	2.276E-05
R11	2.559E-03	2.134E-01	1.813E-01	4.134E-04	5.126E-01	2.846E-02	1.977E-05
R12	2.018E-03	3.416E-01	3.352E-01	8.154E-05	5.620E-01	1.119E-03	6.682E-05
R13	1.840E-03	4.044E-01	4.304E-01	4.161E-05	5.701E-01	6.529E-05	7.461E-04
R14	1.977E-03	4.224E-01	4.510E-01	6.197E-05	5.345E-01	1.154E-05	1.682E-02
R15	2.467E-03	3.964E-01	3.957E-01	2.512E-04	4.543E-01	7.901E-06	2.251E-01
R16	3.424E-03	3.242E-01	2.695E-01	2.081E-03	2.675E-01	2.191E-05	5.864E-01

**TABLE 7 - TOTAL RADIATION LEVEL AT EACH MEASUREMENT POINT FOR EACH SET
OF SOURCES TO BE ANALYZED.**

	SOURCES						
POINT	S01-S35	S01-S30	S06-S35	S01-S25	S11-S35	S01-S20	S16-S35
C01	4.724E+00	4.349E+00	4.031E+00	4.237E+00	3.890E+00	3.452E+00	3.486E+00
C02	2.172E+01	1.883E+01	1.395E+01	1.855E+01	1.296E+01	1.699E+01	1.066E+01

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C03	1.656E+02	1.569E+02	2.807E+01	1.565E+02	2.501E+01	1.554E+02	1.357E+01
C04	3.187E+02	3.139E+02	4.523E+01	3.122E+02	4.332E+01	3.115E+02	1.016E+01
C05	1.923E+02	1.915E+02	1.775E+02	1.724E+02	1.771E+02	1.720E+02	3.063E+01
C06	1.204E+02	1.203E+02	1.194E+02	7.211E+01	1.194E+02	7.200E+01	5.570E+01
C07	2.792E+01	2.754E+01	2.788E+01	2.482E+01	2.361E+01	9.274E+00	2.208E+01
C08	5.846E+01	5.333E+01	5.835E+01	2.605E+01	5.507E+01	1.109E+01	5.209E+01
C09	1.523E+02	8.038E+01	1.522E+02	3.012E+01	1.515E+02	4.055E+00	1.500E+02
C10	1.186E+02	1.382E+01	1.186E+02	6.863E+00	1.185E+02	1.878E+00	1.178E+02
C11	1.065E+01	1.545E+00	1.063E+01	1.012E+00	1.061E+01	5.557E-01	1.030E+01
C12	3.602E+00	3.741E-01	3.597E+00	3.314E-01	3.592E+00	2.895E-01	3.486E+00
C13	3.425E+01	3.424E+01	3.316E+01	3.416E+01	2.175E+01	2.740E+01	6.929E+00
C14	9.385E+01	9.382E+01	8.754E+01	9.364E+01	7.747E+01	9.107E+01	3.570E+00
C15	4.022E+01	4.015E+01	3.446E+01	4.001E+01	3.260E+01	3.962E+01	1.265E+01
C16	1.378E+02	1.377E+02	1.368E+02	1.376E+02	1.364E+02	1.375E+02	1.347E+02
C17	5.736E+01	5.690E+01	5.714E+01	5.689E+01	5.694E+01	5.683E+01	5.570E+01
C18	3.242E+01	3.170E+01	3.236E+01	3.170E+01	3.225E+01	3.167E+01	3.224E+01
C19	4.777E+00	2.492E+00	2.587E+00	2.450E+00	2.370E+00	2.431E+00	2.356E+00
C20	3.927E+01	1.220E+01	2.812E+01	1.198E+01	2.748E+01	1.183E+01	2.746E+01
C21	6.331E+02	8.509E+01	5.540E+02	8.291E+01	5.514E+02	8.180E+01	5.514E+02
C22	2.294E+02	9.134E+01	1.807E+02	5.983E+01	1.734E+02	5.620E+01	1.734E+02
C23	3.999E+02	3.744E+02	3.886E+02	2.919E+01	3.737E+02	2.660E+01	3.737E+02
C24	1.733E+02	1.711E+02	1.718E+02	1.401E+02	3.408E+01	1.396E+02	3.407E+01
R01	4.792E+00	3.872E+00	3.967E+00	3.252E+00	3.878E+00	2.985E+00	2.753E+00
R02	4.743E+00	3.771E+00	4.088E+00	3.298E+00	4.041E+00	2.844E+00	2.833E+00
R03	4.590E+00	3.402E+00	4.099E+00	2.956E+00	4.061E+00	2.364E+00	2.920E+00
R04	4.329E+00	2.900E+00	4.072E+00	2.498E+00	3.999E+00	1.667E+00	3.057E+00
R05	3.925E+00	2.507E+00	3.858E+00	2.148E+00	3.721E+00	1.150E+00	3.075E+00
R06	3.376E+00	2.262E+00	3.342E+00	1.987E+00	3.141E+00	1.026E+00	2.666E+00
R07	2.999E+00	2.247E+00	2.941E+00	2.096E+00	2.699E+00	1.275E+00	2.160E+00
R08	2.827E+00	2.260E+00	2.653E+00	2.210E+00	2.401E+00	1.553E+00	1.818E+00
R09	2.915E+00	2.367E+00	2.532E+00	2.339E+00	2.249E+00	1.774E+00	1.699E+00
R10	3.113E+00	2.441E+00	2.591E+00	2.283E+00	2.183E+00	1.829E+00	1.752E+00
R11	3.187E+00	2.464E+00	2.454E+00	2.034E+00	1.910E+00	1.827E+00	1.675E+00
R12	3.520E+00	2.621E+00	2.621E+00	1.997E+00	2.000E+00	1.940E+00	1.942E+00
R13	4.053E+00	3.052E+00	3.059E+00	2.269E+00	2.431E+00	2.207E+00	2.411E+00
R14	4.520E+00	3.518E+00	3.400E+00	2.602E+00	2.844E+00	2.532E+00	2.661E+00
R15	4.985E+00	3.910E+00	3.825E+00	2.966E+00	3.428E+00	2.895E+00	2.850E+00
R16	5.038E+00	3.912E+00	4.043E+00	3.068E+00	3.841E+00	2.963E+00	2.936E+00

SOURCE

POINT	S01-S18	S19-S35	S01-S12	S13-S24	S25-S35	S01-S10	S13-S22
C01	3.260E+00	1.464E+00	1.015E+00	2.595E+00	1.114E+00	8.338E-01	2.441E+00
C02	1.679E+01	4.936E+00	1.063E+01	6.524E+00	4.567E+00	8.763E+00	6.397E+00
C03	1.553E+02	1.026E+01	1.509E+02	4.871E+00	9.878E+00	1.406E+02	4.765E+00
C04	3.115E+02	7.241E+00	2.956E+02	1.645E+01	6.703E+00	2.754E+02	1.640E+01
C05	1.720E+02	2.030E+01	2.280E+01	1.496E+02	1.991E+01	1.524E+01	1.496E+02
C06	7.200E+01	4.835E+01	1.844E+00	7.027E+01	4.825E+01	1.003E+00	7.026E+01

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C07	6.573E+00	2.135E+01	4.341E+00	1.947E+01	4.110E+00	4.318E+00	5.517E+00
C08	8.078E+00	5.038E+01	3.519E+00	2.011E+01	3.482E+01	3.383E+00	7.880E+00
C09	3.347E+00	1.489E+02	1.168E+00	2.771E+01	1.234E+02	7.818E-01	2.960E+00
C10	1.086E+00	1.175E+02	6.123E-01	6.042E+00	1.120E+02	1.565E-01	1.294E+00
C11	5.327E-01	1.012E+01	2.695E-01	7.209E-01	9.659E+00	4.136E-02	3.037E-01
C12	2.833E-01	3.319E+00	6.335E-02	2.663E-01	3.272E+00	1.023E-02	2.328E-01
C13	2.732E+01	6.926E+00	1.250E+01	2.165E+01	9.462E-02	1.250E+01	2.164E+01
C14	9.030E+01	3.549E+00	1.638E+01	7.725E+01	2.162E-01	1.638E+01	7.725E+01
C15	2.783E+01	1.239E+01	7.622E+00	3.238E+01	2.200E-01	7.620E+00	3.238E+01
C16	6.411E+00	1.314E+02	1.419E+00	1.362E+02	2.042E-01	1.417E+00	1.362E+02
C17	2.875E+01	2.861E+01	4.196E-01	5.647E+01	4.679E-01	4.186E-01	5.647E+01
C18	2.995E+01	2.469E+00	1.678E-01	3.153E+01	7.215E-01	1.675E-01	3.153E+01
C19	2.424E+00	2.353E+00	2.408E+00	3.822E-02	2.330E+00	2.407E+00	3.718E-02
C20	1.182E+01	2.745E+01	1.179E+01	1.824E-01	2.729E+01	1.179E+01	1.816E-01
C21	8.178E+01	5.513E+02	8.173E+01	1.173E+00	5.502E+02	8.172E+01	1.173E+00
C22	5.618E+01	1.732E+02	5.598E+01	3.849E+00	1.695E+02	5.598E+01	3.848E+00
C23	2.659E+01	3.733E+02	2.613E+01	3.058E+00	3.707E+02	2.612E+01	3.058E+00
C24	1.396E+02	3.369E+01	1.392E+02	8.929E-01	3.318E+01	1.392E+02	8.929E-01
R01	2.972E+00	1.820E+00	1.359E+00	1.829E+00	1.604E+00	9.147E-01	1.647E+00
R02	2.818E+00	1.926E+00	1.207E+00	1.988E+00	1.549E+00	7.023E-01	1.647E+00
R03	2.322E+00	2.267E+00	1.007E+00	1.826E+00	1.757E+00	5.285E-01	1.383E+00
R04	1.615E+00	2.713E+00	6.971E-01	1.688E+00	1.943E+00	3.293E-01	1.206E+00
R05	1.084E+00	2.841E+00	4.010E-01	1.669E+00	1.854E+00	2.035E-01	1.217E+00
R06	8.988E-01	2.477E+00	2.857E-01	1.663E+00	1.428E+00	2.347E-01	1.309E+00
R07	1.061E+00	1.938E+00	3.061E-01	1.777E+00	9.159E-01	3.000E-01	1.585E+00
R08	1.278E+00	1.550E+00	4.269E-01	1.780E+00	6.205E-01	4.262E-01	1.739E+00
R09	1.480E+00	1.435E+00	6.656E-01	1.672E+00	5.767E-01	6.654E-01	1.668E+00
R10	1.564E+00	1.549E+00	9.296E-01	1.353E+00	8.301E-01	9.295E-01	1.353E+00
R11	1.639E+00	1.548E+00	1.277E+00	7.575E-01	1.152E+00	1.277E+00	7.574E-01
R12	1.854E+00	1.665E+00	1.520E+00	4.769E-01	1.523E+00	1.519E+00	4.768E-01
R13	2.189E+00	1.864E+00	1.624E+00	6.440E-01	1.785E+00	1.622E+00	6.440E-01
R14	2.529E+00	1.991E+00	1.699E+00	9.006E-01	1.920E+00	1.676E+00	9.003E-01
R15	2.893E+00	2.092E+00	1.686E+00	1.271E+00	2.028E+00	1.557E+00	1.268E+00
R16	2.958E+00	2.080E+00	1.502E+00	1.538E+00	1.997E+00	1.197E+00	1.501E+00

POINT	SOURCE					
	S23-S32	S01-S07	S08-S14	S15-S21	S22-S28	S29-S35
C01	8.971E-01	8.161E-01	4.146E-01	2.226E+00	8.195E-01	4.483E-01
C02	1.830E+00	8.737E+00	2.236E+00	6.056E+00	1.645E+00	3.049E+00
C03	1.350E+00	1.405E+02	1.048E+01	4.594E+00	1.126E+00	8.859E+00
C04	2.096E+00	2.753E+02	2.029E+01	1.637E+01	1.854E+00	4.899E+00
C05	1.919E+01	1.517E+01	7.630E+00	1.496E+02	1.899E+01	9.278E-01
C06	4.817E+01	9.816E-01	8.624E-01	7.026E+01	4.808E+01	1.649E-01
C07	1.799E+01	4.930E-02	5.795E+00	3.430E+00	1.802E+01	6.255E-01

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C08	4.666E+01	1.139E-01	6.256E+00	4.728E+00	4.163E+01	5.725E+00
C09	1.473E+02	1.256E-01	2.179E+00	1.761E+00	7.589E+01	7.232E+01
C10	1.159E+02	7.321E-02	7.143E-01	1.111E+00	1.182E+01	1.049E+02
C11	8.497E+00	2.620E-02	2.616E-01	2.846E-01	9.593E-01	9.118E+00
C12	5.625E-01	6.329E-03	5.864E-02	2.311E-01	7.655E-02	3.229E+00
C13	9.935E-02	1.089E+00	2.623E+01	8.806E-02	6.757E+00	8.407E-02
C14	2.086E-01	6.313E+00	8.397E+01	7.984E-01	2.577E+00	1.949E-01
C15	1.903E-01	5.770E+00	2.180E+01	1.208E+01	3.694E-01	1.977E-01
C16	9.735E-02	1.030E+00	2.051E+00	1.345E+02	4.790E-02	1.906E-01
C17	3.826E-02	2.495E-01	1.407E+00	5.523E+01	1.059E-02	4.605E-01
C18	1.219E-02	1.223E-01	5.474E-02	3.152E+01	4.012E-03	7.178E-01
C19	1.072E-01	2.235E+00	1.853E-01	2.378E-02	1.641E-02	2.316E+00
C20	1.053E+00	1.141E+01	3.963E-01	1.632E-01	1.239E-01	2.717E+01
C21	1.283E+01	7.977E+01	1.976E+00	1.161E+00	1.476E+00	5.488E+02
C22	9.430E+01	4.989E+01	6.102E+00	3.844E+00	2.365E+01	1.459E+02
C23	3.653E+02	2.270E+01	3.424E+00	3.058E+00	3.034E+02	6.731E+01
C24	3.265E+01	1.387E+02	5.282E-01	8.927E-01	1.737E+01	1.581E+01
R01	9.945E-01	9.068E-01	4.680E-01	1.632E+00	6.798E-01	1.106E+00
R02	1.036E+00	6.946E-01	5.418E-01	1.617E+00	8.791E-01	1.011E+00
R03	1.253E+00	5.051E-01	5.455E-01	1.317E+00	1.023E+00	1.199E+00
R04	1.346E+00	2.612E-01	5.100E-01	8.974E-01	1.219E+00	1.441E+00
R05	1.283E+00	6.802E-02	5.353E-01	5.481E-01	1.343E+00	1.430E+00
R06	1.035E+00	3.474E-02	6.481E-01	3.435E-01	1.224E+00	1.126E+00
R07	6.292E-01	5.965E-02	7.780E-01	4.387E-01	9.610E-01	7.620E-01
R08	2.304E-01	1.827E-01	8.265E-01	5.462E-01	6.975E-01	5.747E-01
R09	7.055E-02	4.533E-01	7.619E-01	5.635E-01	5.802E-01	5.557E-01
R10	2.090E-01	7.586E-01	6.020E-01	4.788E-01	5.494E-01	7.242E-01
R11	6.113E-01	1.137E+00	3.745E-01	3.400E-01	3.964E-01	9.388E-01
R12	9.599E-01	1.404E+00	1.723E-01	4.067E-01	2.940E-01	1.242E+00
R13	1.214E+00	1.531E+00	9.890E-02	6.375E-01	3.775E-01	1.408E+00
R14	1.369E+00	1.611E+00	8.935E-02	8.988E-01	4.937E-01	1.427E+00
R15	1.351E+00	1.519E+00	1.699E-01	1.266E+00	5.565E-01	1.474E+00
R16	1.180E+00	1.179E+00	3.303E-01	1.495E+00	5.810E-01	1.453E+00

	SOURCE						
POINT	S01-S05	S06-S10	S11-S15	S16-S20	S21-S25	S26-S30	S31-S35
C01	6.928E-01	1.410E-01	4.043E-01	2.214E+00	7.849E-01	1.123E-01	3.749E-01
C02	7.773E+00	9.904E-01	2.295E+00	5.934E+00	1.556E+00	2.841E-01	2.891E+00
C03	1.375E+02	3.062E+00	1.144E+01	3.386E+00	1.061E+00	3.926E-01	8.728E+00
C04	2.735E+02	1.910E+00	3.316E+01	2.932E+00	6.668E-01	1.744E+00	4.816E+00
C05	1.486E+01	3.805E-01	1.465E+02	1.033E+01	3.989E-01	1.906E+01	8.353E-01
C06	9.363E-01	6.618E-02	6.365E+01	7.349E+00	1.081E-01	4.814E+01	1.044E-01
C07	4.758E-02	4.270E+00	1.527E+00	3.429E+00	1.555E+01	2.716E+00	3.853E-01
C08	1.080E-01	3.275E+00	2.988E+00	4.724E+00	1.496E+01	2.728E+01	5.130E+00

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C09	1.154E-01	6.664E-01	1.530E+00	1.743E+00	2.606E+01	5.027E+01	7.190E+01
C10	6.506E-02	9.148E-02	6.607E-01	1.061E+00	4.985E+00	6.955E+00	1.048E+02
C11	2.279E-02	1.857E-02	3.074E-01	2.069E-01	4.560E-01	5.337E-01	9.104E+00
C12	5.074E-03	5.154E-03	1.060E-01	1.732E-01	4.196E-02	4.267E-02	3.228E+00
C13	1.088E+00	1.141E+01	1.482E+01	8.681E-02	6.753E+00	8.257E-02	6.815E-03
C14	6.310E+00	1.007E+01	7.390E+01	7.901E-01	2.572E+00	1.797E-01	2.849E-02
C15	5.764E+00	1.856E+00	1.995E+01	1.205E+01	3.875E-01	1.427E-01	7.144E-02
C16	1.019E+00	3.983E-01	1.664E+00	1.344E+02	1.063E-01	4.976E-02	1.523E-01
C17	2.148E-01	2.038E-01	1.238E+00	5.517E+01	6.125E-02	1.491E-02	4.526E-01
C18	5.241E-02	1.150E-01	9.743E-03	3.150E+01	2.079E-02	5.926E-03	7.155E-01
C19	2.190E+00	2.169E-01	1.376E-02	1.068E-02	1.899E-02	4.187E-02	2.285E+00
C20	1.115E+01	6.391E-01	2.206E-02	1.909E-02	1.515E-01	2.234E-01	2.706E+01
C21	7.908E+01	2.642E+00	2.049E-02	5.306E-02	1.112E+00	2.180E+00	5.480E+02
C22	4.871E+01	7.267E+00	1.419E-02	2.069E-01	3.637E+00	3.151E+01	1.380E+02
C23	1.130E+01	1.482E+01	9.163E-03	4.713E-01	2.582E+00	3.452E+02	2.548E+01
C24	1.465E+00	1.377E+02	5.136E-03	3.866E-01	5.025E-01	3.098E+01	2.208E+00
R01	8.252E-01	8.954E-02	1.125E+00	9.452E-01	2.675E-01	6.203E-01	9.200E-01
R02	6.552E-01	4.714E-02	1.208E+00	9.339E-01	4.539E-01	4.734E-01	9.722E-01
R03	4.904E-01	3.815E-02	1.142E+00	6.937E-01	5.917E-01	4.463E-01	1.188E+00
R04	2.571E-01	7.219E-02	9.419E-01	3.957E-01	8.309E-01	4.019E-01	1.429E+00
R05	6.695E-02	1.366E-01	6.466E-01	3.004E-01	9.976E-01	3.594E-01	1.417E+00
R06	3.431E-02	2.003E-01	4.752E-01	3.157E-01	9.610E-01	2.758E-01	1.114E+00
R07	5.874E-02	2.413E-01	5.388E-01	4.365E-01	8.205E-01	1.514E-01	7.521E-01
R08	1.741E-01	2.521E-01	5.830E-01	5.442E-01	6.566E-01	5.037E-02	5.671E-01
R09	3.824E-01	2.830E-01	5.498E-01	5.591E-01	5.643E-01	2.852E-02	5.474E-01
R10	5.216E-01	4.079E-01	4.311E-01	4.680E-01	4.546E-01	1.578E-01	6.720E-01
R11	7.329E-01	5.439E-01	2.347E-01	3.160E-01	2.070E-01	4.293E-01	7.228E-01
R12	8.987E-01	6.206E-01	5.802E-02	3.628E-01	5.661E-02	6.243E-01	8.985E-01
R13	9.943E-01	6.275E-01	1.984E-02	5.650E-01	6.231E-02	7.827E-01	1.001E+00
R14	1.120E+00	5.558E-01	1.830E-01	6.726E-01	7.016E-02	9.159E-01	1.002E+00
R15	1.160E+00	3.972E-01	5.783E-01	7.595E-01	7.046E-02	9.444E-01	1.075E+00
R16	9.948E-01	2.018E-01	9.055E-01	8.607E-01	1.052E-01	8.443E-01	1.126E+00

SOURCE

POINT	S01-S03	S04-S06	S07-S09	S10-S12	S13-S15	S16-S18	S19-S21
C01	6.828E-01	1.333E-01	7.419E-03	1.917E-01	2.229E-01	2.022E+00	1.963E-01
C02	7.731E+00	1.007E+00	1.716E-02	1.877E+00	4.265E-01	5.728E+00	2.423E-01
C03	1.374E+02	3.096E+00	5.034E-02	1.026E+01	1.182E+00	3.309E+00	2.738E-01
C04	2.734E+02	1.890E+00	9.236E-02	2.017E+01	1.300E+01	2.918E+00	4.881E-01
C05	1.483E+01	3.317E-01	7.398E-02	7.560E+00	1.389E+02	1.033E+01	3.737E-01
C06	9.317E-01	3.537E-02	3.546E-02	8.411E-01	6.281E+01	7.349E+00	1.054E-01
C07	1.882E-02	3.048E-02	6.838E-02	4.224E+00	1.503E+00	7.285E-01	2.701E+00
C08	3.418E-02	7.969E-02	6.675E-02	3.338E+00	2.852E+00	1.707E+00	3.020E+00
C09	4.438E-02	8.114E-02	3.222E-02	1.010E+00	1.144E+00	1.035E+00	7.186E-01

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C10	3.906E-02	3.402E-02	1.663E-02	5.226E-01	2.049E-01	2.689E-01	8.119E-01
C11	1.794E-02	7.895E-03	9.919E-03	2.337E-01	7.932E-02	1.839E-01	3.967E-02
C12	4.451E-03	1.283E-03	4.068E-03	5.355E-02	5.290E-02	1.671E-01	1.278E-02
C13	6.918E-02	1.020E+00	1.005E+01	1.358E+00	1.482E+01	3.040E-03	8.502E-02
C14	1.062E-01	6.207E+00	8.983E+00	1.089E+00	7.390E+01	2.109E-02	7.773E-01
C15	1.120E-01	5.657E+00	1.582E+00	2.707E-01	1.995E+01	2.602E-01	1.182E+01
C16	1.661E-01	8.565E-01	3.600E-01	3.633E-02	1.662E+00	3.330E+00	1.312E+02
C17	1.400E-01	7.636E-02	1.990E-01	4.218E-03	1.237E+00	2.709E+01	2.814E+01
C18	4.653E-02	6.240E-03	1.144E-01	5.900E-04	9.421E-03	2.977E+01	1.747E+00
C19	1.575E+00	6.600E-01	1.659E-01	7.153E-03	1.261E-02	3.303E-03	2.045E-02
C20	2.874E+00	8.535E+00	3.728E-01	9.440E-03	1.797E-02	8.761E-03	1.543E-01
C21	2.904E+00	7.681E+01	2.007E+00	1.031E-02	1.257E-02	3.837E-02	1.122E+00
C22	1.031E+01	3.883E+01	6.836E+00	8.364E-03	6.430E-03	1.867E-01	3.655E+00
C23	8.160E+00	3.244E+00	1.472E+01	4.178E-03	5.088E-03	4.567E-01	2.597E+00
C24	1.233E+00	2.439E-01	1.377E+02	1.298E-03	3.851E-03	3.816E-01	5.074E-01
R01	6.850E-01	2.089E-01	1.975E-02	4.458E-01	6.800E-01	9.326E-01	3.461E-02
R02	6.352E-01	5.825E-02	3.781E-03	5.099E-01	7.029E-01	9.076E-01	3.596E-02
R03	4.884E-01	1.665E-02	1.775E-03	4.997E-01	6.637E-01	6.523E-01	4.534E-02
R04	2.542E-01	6.944E-03	2.690E-03	4.332E-01	5.741E-01	3.440E-01	5.343E-02
R05	5.647E-02	1.151E-02	8.033E-03	3.250E-01	4.491E-01	2.337E-01	6.764E-02
R06	6.064E-03	2.857E-02	2.442E-02	2.266E-01	4.242E-01	1.890E-01	1.275E-01
R07	7.552E-03	5.136E-02	5.733E-02	1.899E-01	5.327E-01	2.227E-01	2.148E-01
R08	1.065E-01	6.768E-02	1.041E-01	1.486E-01	5.823E-01	2.686E-01	2.774E-01
R09	3.087E-01	7.407E-02	1.960E-01	8.689E-02	5.496E-01	2.647E-01	2.988E-01
R10	3.994E-01	1.233E-01	3.731E-01	3.384E-02	4.310E-01	2.031E-01	2.757E-01
R11	4.510E-01	2.861E-01	5.310E-01	8.827E-03	2.346E-01	1.275E-01	2.125E-01
R12	4.741E-01	4.394E-01	6.039E-01	2.249E-03	5.763E-02	2.770E-01	1.291E-01
R13	4.938E-01	5.392E-01	5.884E-01	3.053E-03	1.726E-02	5.472E-01	7.898E-02
R14	6.075E-01	5.819E-01	4.865E-01	2.347E-02	1.598E-01	6.701E-01	7.039E-02
R15	7.015E-01	5.486E-01	3.070E-01	1.293E-01	4.491E-01	7.577E-01	6.138E-02
R16	6.638E-01	4.209E-01	1.116E-01	3.060E-01	5.998E-01	8.558E-01	4.573E-02

POINT	SOURCE				
	S22-S24	S25-S27	S28-S30	S31-S33	S34-S35
C01	1.540E-01	6.649E-01	7.403E-02	5.608E-03	3.693E-01
C02	1.273E-01	1.509E+00	1.670E-01	2.968E-02	2.861E+00
C03	1.065E-01	9.029E-01	2.471E-01	9.942E-02	8.629E+00
C04	4.984E-02	2.176E-01	1.670E+00	1.631E-01	4.653E+00
C05	1.127E-02	4.364E-02	1.903E+01	1.071E-01	7.282E-01
C06	1.578E-03	1.186E-02	4.813E+01	3.052E-02	7.386E-02
C07	1.454E+01	3.484E+00	2.402E-01	3.081E-01	7.723E-02
C08	1.253E+01	2.910E+01	5.954E-01	4.728E+00	4.019E-01
C09	2.481E+01	5.108E+01	4.261E-01	7.100E+01	8.947E-01
C10	4.756E+00	7.059E+00	1.051E-01	1.040E+02	8.125E-01

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C11	4.180E-01	5.378E-01	1.724E-02	7.525E+00	1.580E+00
C12	3.355E-02	3.864E-02	5.815E-03	4.845E-01	2.743E+00
C13	6.746E+00	1.055E-02	7.726E-02	6.588E-03	2.267E-04
C14	2.556E+00	2.132E-02	1.664E-01	2.705E-02	1.442E-03
C15	3.471E-01	2.223E-02	1.263E-01	5.946E-02	1.198E-02
C16	3.430E-02	1.347E-02	3.841E-02	6.007E-02	9.225E-02
C17	3.157E-03	7.151E-03	8.207E-03	2.820E-02	4.244E-01
C18	3.011E-04	3.371E-03	2.621E-03	7.272E-03	7.083E-01
C19	1.854E-03	1.451E-02	3.141E-02	2.284E+00	2.956E-04
C20	1.316E-03	1.222E-01	1.074E-01	2.706E+01	7.855E-04
C21	6.177E-04	1.472E+00	7.131E-01	5.480E+02	1.198E-03
C22	2.295E-04	2.363E+01	7.880E+00	1.380E+02	1.041E-03
C23	6.840E-05	3.033E+02	4.189E+01	2.548E+01	6.371E-04
C24	1.545E-05	1.729E+01	1.369E+01	2.207E+00	3.881E-04
R01	1.813E-01	1.769E-01	5.075E-01	1.597E-01	7.603E-01
R02	3.412E-01	2.813E-01	2.951E-01	1.208E-01	8.514E-01
R03	4.651E-01	4.133E-01	1.558E-01	2.409E-01	9.470E-01
R04	7.168E-01	4.654E-01	4.889E-02	3.491E-01	1.080E+00
R05	9.188E-01	4.210E-01	1.622E-02	3.942E-01	1.023E+00
R06	9.222E-01	3.016E-01	1.217E-02	3.675E-01	7.464E-01
R07	8.071E-01	1.538E-01	9.982E-03	2.731E-01	4.790E-01
R08	6.517E-01	4.575E-02	7.656E-03	1.453E-01	4.218E-01
R09	5.592E-01	2.099E-02	8.270E-03	1.922E-01	3.552E-01
R10	4.435E-01	1.058E-01	5.228E-02	4.595E-01	2.125E-01
R11	1.829E-01	2.124E-01	2.170E-01	6.943E-01	2.848E-02
R12	1.306E-02	2.676E-01	3.570E-01	8.973E-01	1.186E-03
R13	5.911E-04	2.909E-01	4.923E-01	1.001E+00	8.114E-04
R14	3.586E-04	2.857E-01	6.321E-01	9.856E-01	1.683E-02
R15	2.997E-03	2.565E-01	6.959E-01	8.503E-01	2.251E-01
R16	3.689E-02	2.093E-01	6.624E-01	5.391E-01	5.864E-01

**TABLE 8 - ESTIMATES OF CURIE CONTENT FOR VARIOUS SOURCE SETS COMPARED TO
ACTUAL CURIE CONTENT FOR A GROUTED CONTAINER.
MULTIPLE SOURCE SET ESTIMATE AND ERROR - CONTACT MEASUREMENT**

SOURCE SET	AVG CONT R/hr	CONT		EST Cs-137 CURIES	ACTUAL Cs-137 CURIES	ERROR	%
		CONV FACT	R/hr/Ci				
S01-S35	1.279E+02	6.603E-01	6.603E-01	193.7780	708.6318	-514.8538	-72.6546
S01-S30	8.807E+01	6.603E-01	6.603E-01	133.3947	604.0700	-470.6754	-77.9174
S06-S35	1.028E+02	6.603E-01	6.603E-01	155.6608	610.0433	-454.3826	-74.4837
S01-S25	6.440E+01	6.603E-01	6.603E-01	97.5422	520.3863	-422.8440	-81.2558
S11-S35	9.435E+01	6.603E-01	6.603E-01	142.8967	490.8729	-347.9762	-70.8893
S01-S20	6.088E+01	6.603E-01	6.603E-01	92.2078	426.0483	-333.8405	-78.3574

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S16-S25	7.867E+01	6.603E-01	119.1554	393.8550	-274.6996	-69.7464
S01-S18	5.332E+01	6.603E-01	80.7628	394.2079	-313.4452	-79.5126
S19-S35	7.462E+01	6.603E-01	113.0152	314.4239	-201.4086	-64.0564
S01-S12	3.535E+01	6.603E-01	53.5439	247.8830	-194.3390	-78.3995
S13-S24	2.872E+01	6.603E-01	43.5015	252.7408	-209.2393	-82.7881
S25-S35	6.387E+01	6.603E-01	96.7326	208.0080	-111.2755	-53.4957
S01-S10	3.359E+01	6.603E-01	50.8813	217.7589	-166.8776	-76.6341
S13-S22	2.636E+01	6.603E-01	39.9291	227.1843	-187.2552	-82.4243
S23-S32	3.822E+01	6.603E-01	57.8887	173.0444	-115.1557	-66.5469
S01-S07	3.172E+01	6.603E-01	48.0388	140.8425	-92.8038	-65.8919
S08-S14	8.555E+00	6.603E-01	12.9566	151.1873	-138.2307	-91.4301
S15-S21	2.100E+01	6.603E-01	31.8070	162.6650	-130.8580	-80.4463
S22-S28	2.403E+01	6.603E-01	36.3937	116.2697	-79.8760	-68.6989
S29-S35	4.264E+01	6.603E-01	64.5819	137.6673	-73.0854	-53.0884
S01-S05	2.517E+01	6.603E-01	38.1173	98.5885	-60.4712	-61.3370
S06-S10	8.427E+00	6.603E-01	12.7641	119.1704	-106.4063	-89.2892
S11-S15	1.568E+01	6.603E-01	23.7412	97.0179	-73.2767	-75.5290
S16-S20	1.161E+01	6.603E-01	17.5853	111.2715	-93.6862	-84.1961
S21-S25	3.522E+00	6.603E-01	5.3344	94.3380	-89.0036	-94.3454
S26-S30	2.367E+01	6.603E-01	35.8524	83.6838	-47.8313	-57.1573
S31-S35	3.987E+01	6.603E-01	60.3834	104.5618	-44.1784	-42.2510
S01-S03	1.929E+01	6.603E-01	29.2131	66.9394	-37.7263	-56.3589
S04-S06	6.203E+00	6.603E-01	9.3949	47.9673	-38.5725	-80.4140
S07-S09	7.650E+00	6.603E-01	11.5861	76.0383	-64.4522	-84.7628
S10-S12	2.212E+00	6.603E-01	3.3499	56.9379	-53.5881	-94.1166
S13-S15	1.392E+01	6.603E-01	21.0786	66.8938	-45.8152	-68.4894
S16-S18	4.054E+00	6.603E-01	6.1402	79.4311	-73.2909	-92.2698
S19-S21	7.949E+00	6.603E-01	12.0397	60.4869	-48.4473	-80.0954
S22-S24	2.801E+00	6.603E-01	4.2430	45.9289	-41.6859	-90.7618
S25-S27	1.836E+01	6.603E-01	27.8024	54.8275	-27.0251	-49.2911
S28-S30	5.643E+00	6.603E-01	8.5468	48.6188	-40.0719	-82.4207
S31-S33	3.882E+01	6.603E-01	58.8015	61.8697	-3.0682	-4.9592
S34-S35	1.044E+00	6.603E-01	1.5819	42.6921	-41.1102	-96.2947
Average % Error =					-73.1553	

MULTIPLE SOURCE SET ESTIMATE AND ERROR - REMOTE MEASUREMENT

SOURCE SET	REMOTE					
	AVG REMOTE R/hr	CONV FACT R/hr/Ci	EST Cs-137 CURIES	ACTUAL Cs-137 CURIES	ERROR	% ERROR
S01-S35	3.932E+00	4.715E-03	833.9262	708.6318	125.2944	17.6812
S01-S30	2.969E+00	4.715E-03	629.7304	604.0700	25.6603	4.2479
S06-S35	3.347E+00	4.715E-03	709.7623	610.0433	99.7189	16.3462
S01-S25	2.500E+00	4.715E-03	530.2328	520.3863	9.8465	1.8922
S11-S35	3.052E+00	4.715E-03	647.2612	490.8729	156.3883	31.8592
S01-S20	2.052E+00	4.715E-03	435.1891	426.0483	9.1408	2.1455
S16-S25	2.451E+00	4.715E-03	519.7471	393.8550	125.8920	31.9641

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S01-S18	1.947E+00	4.715E-03	412.9800	394.2079	18.7721	4.7620
S19-S35	1.985E+00	4.715E-03	420.9462	314.4239	106.5223	33.8786
S01-S12	1.037E+00	4.715E-03	219.9637	247.8830	-27.9193	-11.2631
S13-S24	1.427E+00	4.715E-03	302.6797	252.7408	49.9389	19.7589
S25-S35	1.468E+00	4.715E-03	311.2829	208.0080	103.2748	49.6494
S01-S10	8.801E-01	4.715E-03	186.6650	217.7589	-31.0939	-14.2790
S13-S22	1.269E+00	4.715E-03	269.1267	227.1843	41.9423	18.4618
S23-S32	9.233E-01	4.715E-03	195.8188	173.0444	22.7745	13.1611
S01-S07	7.692E-01	4.715E-03	163.1298	140.8425	22.2872	15.8242
S08-S14	4.658E-01	4.715E-03	98.7850	151.1873	-52.4023	-34.6605
S15-S21	8.391E-01	4.715E-03	177.9648	162.6650	15.2998	9.4057
S22-S28	7.410E-01	4.715E-03	157.1532	116.2697	40.8835	35.1626
S29-S35	1.117E+00	4.715E-03	236.8935	137.6673	99.2262	72.0768
S01-S05	5.854E-01	4.715E-03	124.1640	98.5885	25.5755	25.9416
S06-S10	2.947E-01	4.715E-03	62.5010	119.1704	-56.6694	-47.5532
S11-S15	6.012E-01	4.715E-03	127.5142	97.0179	30.4963	31.4337
S16-S20	5.706E-01	4.715E-03	121.0099	111.2715	9.7384	8.7519
S21-S25	4.481E-01	4.715E-03	95.0437	94.3380	0.7058	0.7481
S26-S30	4.691E-01	4.715E-03	99.4976	83.6838	15.8138	18.8971
S31-S35	9.628E-01	4.715E-03	204.1959	104.5618	99.6341	95.2872
S01-S03	3.962E-01	4.715E-03	84.0272	66.9394	17.0878	25.5273
S04-S06	2.165E-01	4.715E-03	45.9077	47.9673	-2.0596	-4.2938
S07-S09	2.137E-01	4.715E-03	45.3252	76.0383	-30.7131	-40.3916
S10-S12	2.108E-01	4.715E-03	44.7035	56.9379	-12.2344	-21.4873
S13-S15	4.442E-01	4.715E-03	94.2155	66.8938	27.3217	40.8433
S16-S18	4.658E-01	4.715E-03	98.8008	79.4311	19.3697	24.3855
S19-S21	1.268E-01	4.715E-03	26.8996	60.4869	-33.5873	-55.5282
S22-S24	3.902E-01	4.715E-03	82.7637	45.9289	36.8348	80.1996
S25-S27	2.443E-01	4.715E-03	51.8058	54.8275	-3.0217	-5.5113
S28-S30	2.607E-01	4.715E-03	55.2812	48.6188	6.6625	13.7035
S31-S33	4.793E-01	4.715E-03	101.6609	61.8697	39.7912	64.3145
S34-S35	4.835E-01	4.715E-03	102.5350	42.6921	59.8429	140.1731

Average % Error = 18.2953

INDIVIDUAL SOURCE ESTIMATE AND ERROR - CONTACT MEASUREMENT

SOURCE	AVG CONT R/hr	CONT CONV FACT R/hr/Ci	EST Cs-137 CURIES	ACTUAL Cs-137 CURIES	ERROR	%
S01	1.811E+01	6.603E-01	27.4247	29.4975	-2.0728	-7.0272
S02	9.164E-01	6.603E-01	1.3879	13.8502	-12.4623	-89.9790
S03	2.644E-01	6.603E-01	0.4005	23.5916	-23.1912	-98.3025
S04	5.293E+00	6.603E-01	8.0173	20.6982	-12.6809	-61.2658
S05	5.856E-01	6.603E-01	0.8869	10.9510	-10.0641	-91.9011
S06	3.240E-01	6.603E-01	0.4907	16.3182	-15.8275	-96.9931
S07	6.227E+00	6.603E-01	9.4308	25.9358	-16.5050	-63.6379
S08	5.418E-01	6.603E-01	0.8206	25.1678	-24.3473	-96.7397
S09	8.813E-01	6.603E-01	1.3347	24.9347	-23.5999	-94.6471
S10	4.538E-01	6.603E-01	0.6873	26.8139	-26.1266	-97.4368

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S11	5.206E-01	6.603E-01	0.7885	12.5933	-11.8048	-93.7386
S12	1.237E+00	6.603E-01	1.8741	17.5307	-15.6566	-89.3097
S13	2.571E-01	6.603E-01	0.3894	17.9331	-17.5437	-97.8285
S14	4.663E+00	6.603E-01	7.0621	26.2138	-19.1517	-73.0598
S15	8.997E+00	6.603E-01	13.6272	22.7469	-9.1198	-40.0923
S16	6.255E-01	6.603E-01	0.9474	27.6556	-26.7082	-96.5742
S17	2.539E+00	6.603E-01	3.8457	28.5227	-24.6770	-86.5170
S18	8.894E-01	6.603E-01	1.3471	23.2528	-21.9058	-94.2069
S19	7.232E+00	6.603E-01	10.9540	15.3416	-4.3876	-28.5995
S20	3.242E-01	6.603E-01	0.4911	16.4988	-16.0077	-97.0234
S21	3.926E-01	6.603E-01	0.5946	28.6466	-28.0520	-97.9244
S22	4.428E-01	6.603E-01	0.6706	20.3724	-19.7018	-96.7082
S23	6.599E-01	6.603E-01	0.9994	13.0146	-12.0152	-92.3208
S24	1.699E+00	6.603E-01	2.5730	12.5419	-9.9689	-79.4850
S25	3.280E-01	6.603E-01	0.4968	19.7625	-19.2657	-97.4862
S26	3.618E+00	6.603E-01	5.4794	24.8512	-19.3719	-77.9513
S27	1.441E+01	6.603E-01	21.8262	10.2138	11.6125	113.6943
S28	2.871E+00	6.603E-01	4.3483	15.5133	-11.1650	-71.9705
S29	9.683E-02	6.603E-01	0.1467	18.0653	-17.9187	-99.1882
S30	2.675E+00	6.603E-01	4.0519	15.0401	-10.9882	-73.0595
S31	4.020E+00	6.603E-01	6.0887	22.3550	-16.2662	-72.7633
S32	7.843E+00	6.603E-01	11.8783	21.6866	-9.8083	-45.2275
S33	2.696E+01	6.603E-01	40.8344	17.8281	23.0063	129.0456
S34	2.366E-01	6.603E-01	0.3584	14.6776	-14.3192	-97.5585
S35	8.078E-01	6.603E-01	1.2235	28.0146	-26.7910	-95.6325
Average % Error =						-69.9833

INDIVIDUAL SOURCE ESTIMATE AND ERROR - REMOTE MEASUREMENT

SOURCE	REMOTE					
	AVG REMOTE R/hr	CONV FACT R/hr/Ci	EST Cs-137 CURIES	ACTUAL Cs-137 CURIES	ERROR	% ERROR
S01	2.143E-01	4.715E-03	45.4521	29.4975	15.9546	54.0878
S02	1.673E-01	4.715E-03	35.4894	13.8502	21.6391	156.2369
S03	1.455E-02	4.715E-03	3.0858	23.5916	-20.5059	-86.9201
S04	1.691E-01	4.715E-03	35.8599	20.6982	15.1618	73.2517
S05	2.017E-02	4.715E-03	4.2769	10.9510	-6.6741	-60.9453
S06	2.721E-02	4.715E-03	5.7709	16.3182	-10.5472	-64.6349
S07	1.565E-01	4.715E-03	33.1948	25.9358	7.2590	27.9883
S08	2.387E-02	4.715E-03	5.0626	25.1678	-20.1052	-79.8844
S09	3.332E-02	4.715E-03	7.0678	24.9347	-17.8669	-71.6549
S10	5.377E-02	4.715E-03	11.4049	26.8139	-15.4090	-57.4666
S11	3.426E-02	4.715E-03	7.2655	12.5933	-5.3278	-42.3066

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S12	1.227E-01	4.715E-03	26.0331	17.5307	8.5024	48.5002
S13	1.498E-02	4.715E-03	3.1761	17.9331	-14.7570	-82.2891
S14	1.828E-01	4.715E-03	38.7750	26.2138	12.5612	47.9182
S15	2.464E-01	4.715E-03	52.2644	22.7469	29.5175	129.7646
S16	1.095E-01	4.715E-03	23.2134	27.6556	-4.4422	-16.0626
S17	7.896E-02	4.715E-03	16.7470	28.5227	-11.7757	-41.2853
S18	2.774E-01	4.715E-03	58.8404	23.2528	35.5876	153.0464
S19	8.925E-02	4.715E-03	18.9295	15.3416	3.5879	23.3869
S20	1.546E-02	4.715E-03	3.2795	16.4988	-13.2192	-80.1225
S21	2.212E-02	4.715E-03	4.6906	28.6466	-23.9560	-83.6260
S22	2.320E-01	4.715E-03	49.2107	20.3724	28.8383	141.5556
S23	4.000E-02	4.715E-03	8.4840	13.0146	-4.5306	-34.8117
S24	1.182E-01	4.715E-03	25.0690	12.5419	12.5272	99.8826
S25	3.578E-02	4.715E-03	7.5894	19.7625	-12.1731	-61.5969
S26	1.057E-01	4.715E-03	22.4148	24.8512	-2.4364	-9.8040
S27	1.028E-01	4.715E-03	21.8015	10.2138	11.5878	113.4528
S28	1.065E-01	4.715E-03	22.5837	15.5133	7.0703	45.5760
S29	6.144E-03	4.715E-03	1.3031	18.0653	-16.7623	-92.7868
S30	1.480E-01	4.715E-03	31.3945	15.0401	16.3544	108.7382
S31	1.403E-01	4.715E-03	29.7613	22.3550	7.4063	33.1304
S32	1.198E-01	4.715E-03	25.4175	21.6866	3.7309	17.2035
S33	2.192E-01	4.715E-03	46.4821	17.8281	28.6540	160.7242
S34	1.679E-01	4.715E-03	35.6104	14.6776	20.9328	142.6175
S35	3.155E-01	4.715E-03	66.9246	28.0146	38.9101	138.8924
Average % Error =						21.4216

TABLE 9 - CALCULATION OF CONVERSION FACTORS FOR AN UNGROUTED HN-200 GROUT CONTAINER ASSUMING A HOMOGENEOUS MIXTURE OF ACTIVITY AND A MATERIAL WITH LITTLE OR NO SHIELDING VALUE (e.g., PAPER).

POINT	R/hr			
C01	6.278E-01			
C02	7.651E-01			
C03	8.172E-01			
C04	8.185E-01			
C05	7.696E-01			
C06	6.394E-01			
C07	6.278E-01			
C08	7.651E-01	AVERAGE CONTACT READING =	7.396E-01	R/hr
C09	8.172E-01	TOTAL Cs-137 =	1	Ci
C10	8.185E-01	UNGROUTED CONT CONV FACTOR =	7.396E-01	R/hr/Ci
C11	7.696E-01			
C12	6.394E-01	Contact readings are taken with the RO-7 probe on contact with the surface of		

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C13	6.278E-01	the HN-200 grout container. Having the probe on contact with the surface of the
C14	7.651E-01	container produces an effective distance from the container of 1-inch to account
C15	8.172E-01	for the active volume of the RO-7 radiation survey instrument probe. The 24
C16	8.185E-01	readings are then averaged to obtain the most accurate representation of the Cs-
C17	7.696E-01	137 content of the container possible for this method.
C18	6.394E-01	
C19	6.278E-01	
C20	7.651E-01	
C21	8.172E-01	
C22	8.185E-01	
C23	7.696E-01	
C24	6.394E-01	
R01	2.264E-02	
R02	2.264E-02	
R03	2.264E-02	
R04	2.264E-02	
R05	2.264E-02	
R06	2.264E-02	
R07	2.264E-02	AVERAGE REMOTE READING = 2.264E-02 R/hr
R08	2.264E-02	TOTAL Cs-137 = 1 Ci
R09	2.264E-02	UNGROUTED REMOTE CONV FACT = 2.264E-02 R/hr/Ci
R10	2.264E-02	
R11	2.264E-02	Remote readings are taken with the RO-7 probe 10 feet from the surface of the
R12	2.264E-02	container. These readings are taken every 22.5 degrees around the container and
R13	2.264E-02	averaged to produce the most accurate representation of the Cs-137 curie content
R14	2.264E-02	of the container.
R15	2.264E-02	
R16	2.264E-02	

TABLE 10 - RESULTS OF MICROSHIELD CALCULATION FOR EACH SOURCE TO EACH MEASUREMENT POINT FROM AN UNGROUTED HN-200 GROUT CONTAINER.

POINT	SOURCE						
	S01	S02	S03	S04	S05	S06	S07
C01	1.764E+01	2.534E+00	1.841E+01	8.152E+00	3.417E+00	1.170E+01	3.410E+00
C02	5.142E+01	3.142E+00	2.035E+01	1.113E+01	3.822E+00	2.133E+01	4.506E+00
C03	2.576E+02	3.720E+00	1.696E+01	1.328E+01	3.804E+00	3.191E+01	6.007E+00
C04	4.198E+02	4.075E+00	1.188E+01	1.272E+01	3.373E+00	2.648E+01	7.923E+00
C05	7.138E+01	4.034E+00	7.971E+00	1.001E+01	2.756E+00	1.501E+01	9.945E+00
C06	2.223E+01	3.620E+00	5.444E+00	7.154E+00	2.161E+00	8.353E+00	1.123E+01
C07	9.088E+00	2.190E+00	1.075E+01	4.171E+00	6.421E+00	5.272E+00	2.896E+00
C08	1.198E+01	2.621E+00	1.139E+01	4.793E+00	8.049E+00	6.565E+00	3.606E+00
C09	1.436E+01	3.007E+00	1.025E+01	5.135E+00	7.966E+00	7.300E+00	4.466E+00
C10	1.467E+01	3.231E+00	8.161E+00	5.053E+00	6.263E+00	6.976E+00	5.408E+00
C11	1.266E+01	3.206E+00	6.134E+00	4.583E+00	4.391E+00	5.828E+00	6.256E+00
C12	9.769E+00	2.941E+00	4.553E+00	3.910E+00	3.017E+00	4.502E+00	6.733E+00
C13	5.680E+00	3.793E+00	1.438E+01	5.721E+00	1.629E+01	4.762E+00	3.591E+00

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C14	6.644E+00	5.784E+00	1.554E+01	6.991E+00	3.359E+01	5.788E+00	4.954E+00
C15	7.296E+00	8.513E+00	1.348E+01	7.757E+00	3.219E+01	6.351E+00	6.912E+00
C16	7.375E+00	1.082E+01	1.007E+01	7.567E+00	1.529E+01	6.104E+00	9.663E+00
C17	6.844E+00	1.052E+01	7.134E+00	6.545E+00	7.360E+00	5.210E+00	1.292E+01
C18	5.927E+00	7.963E+00	5.060E+00	5.230E+00	3.996E+00	4.128E+00	1.522E+01
C19	8.783E+00	2.215E+00	3.269E+01	1.506E+01	4.988E+00	9.419E+00	2.535E+00
C20	1.144E+01	5.619E+00	3.935E+01	4.459E+01	5.912E+00	1.473E+01	4.624E+00
C21	1.359E+01	1.540E+01	2.838E+01	1.547E+02	5.867E+00	1.911E+01	9.161E+00
C22	1.387E+01	3.642E+01	1.650E+01	1.013E+02	4.893E+00	1.702E+01	2.083E+01
C23	1.206E+01	3.227E+01	9.742E+00	2.872E+01	3.680E+00	1.143E+01	6.212E+01
C24	9.414E+00	1.265E+01	6.147E+00	1.072E+01	2.676E+00	7.151E+00	2.535E+02
R01	9.071E-01	2.615E-01	5.458E-01	4.789E-01	2.114E-01	4.317E-01	5.281E-01
R02	8.833E-01	2.477E-01	5.241E-01	4.317E-01	2.158E-01	4.077E-01	4.931E-01
R03	8.126E-01	2.391E-01	5.057E-01	4.021E-01	2.246E-01	3.808E-01	4.687E-01
R04	7.198E-01	2.374E-01	4.923E-01	3.803E-01	2.375E-01	3.565E-01	4.556E-01
R05	6.412E-01	2.428E-01	4.851E-01	3.678E-01	2.543E-01	3.376E-01	4.545E-01
R06	5.913E-01	2.547E-01	4.843E-01	3.656E-01	2.731E-01	3.248E-01	4.655E-01
R07	5.558E-01	2.684E-01	4.902E-01	3.738E-01	2.900E-01	3.183E-01	4.879E-01
R08	5.330E-01	2.541E-01	5.023E-01	3.918E-01	3.002E-01	3.184E-01	5.209E-01
R09	5.245E-01	3.341E-01	5.197E-01	4.180E-01	3.003E-01	3.249E-01	5.686E-01
R10	5.308E-01	3.972E-01	5.409E-01	4.552E-01	2.903E-01	3.378E-01	6.368E-01
R11	5.514E-01	4.356E-01	5.630E-01	5.179E-01	2.735E-01	3.568E-01	7.054E-01
R12	5.851E-01	4.435E-01	5.820E-01	5.858E-01	2.547E-01	3.811E-01	7.495E-01
R13	6.321E-01	4.184E-01	5.935E-01	6.322E-01	2.379E-01	4.080E-01	7.534E-01
R14	7.059E-01	3.673E-01	5.947E-01	6.411E-01	2.248E-01	4.320E-01	7.157E-01
R15	7.991E-01	2.804E-01	5.853E-01	6.093E-01	2.160E-01	4.462E-01	6.499E-01
R16	8.750E-01	2.657E-01	5.676E-01	5.482E-01	2.115E-01	4.461E-01	5.795E-01

POINT	SOURCE						
	S08	S09	S10	S11	S12	S13	S14
C01	7.431E+00	9.331E+00	1.097E+01	9.754E+00	6.864E+00	1.525E+01	6.470E+00
C02	1.045E+01	9.266E+00	1.072E+01	2.007E+01	1.432E+01	1.732E+01	6.804E+00
C03	1.394E+01	8.139E+00	9.202E+00	3.568E+01	3.385E+01	1.434E+01	6.543E+00
C04	1.610E+01	6.570E+00	7.269E+00	2.860E+01	6.373E+01	9.800E+00	5.806E+00
C05	1.502E+01	5.094E+00	5.544E+00	1.400E+01	4.240E+01	6.425E+00	4.869E+00
C06	1.173E+01	3.911E+00	4.208E+00	7.093E+00	1.787E+01	4.313E+00	3.960E+00
C07	6.042E+00	1.499E+01	4.911E+01	6.433E+00	5.777E+00	2.615E+01	1.618E+01
C08	7.859E+00	1.482E+01	4.445E+01	9.615E+00	8.772E+00	3.285E+01	1.855E+01
C09	9.662E+00	1.211E+01	2.613E+01	1.216E+01	1.270E+01	2.357E+01	1.667E+01
C10	1.065E+01	8.902E+00	1.455E+01	1.121E+01	1.531E+01	1.335E+01	1.244E+01
C11	1.016E+01	6.352E+00	8.601E+01	7.984E+00	1.370E+01	7.723E+00	8.641E+00
C12	8.551E+00	4.575E+00	5.424E+00	5.215E+00	9.778E+00	4.791E+00	5.961E+00
C13	8.108E+00	6.645E+01	3.386E+01	3.235E+00	3.197E+00	9.502E+00	7.136E+01
C14	1.188E+01	6.326E+01	3.157E+01	3.854E+00	3.860E+00	1.026E+01	1.711E+02
C15	1.664E+01	3.224E+01	2.109E+01	4.197E+00	4.426E+00	9.140E+00	8.259E+01
C16	1.982E+01	1.617E+01	1.290E+01	4.080E+00	4.692E+00	7.072E+00	1.808E+01
C17	1.820E+01	9.027E+00	8.118E+00	3.570E+00	4.535E+00	5.153E+00	1.191E+01

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C18	1.357E+01	5.497E+00	5.308E+00	2.910E+00	4.030E+00	3.728E+00	5.855E+00
C19	1.080E+01	1.778E+01	9.989E+00	3.891E+00	3.749E+00	7.569E+00	9.202E+00
C20	1.916E+01	1.755E+01	9.783E+00	4.831E+00	4.712E+00	8.041E+00	9.905E+00
C21	3.597E+01	1.386E+01	8.506E+00	5.387E+00	5.595E+00	7.338E+00	9.353E+00
C22	5.502E+01	9.797E+00	6.833E+00	5.195E+00	6.031E+00	5.949E+00	7.897E+00
C23	4.416E+01	6.778E+00	5.292E+00	4.391E+00	5.773E+00	4.540E+00	6.233E+00
C24	2.407E+01	4.775E+00	4.067E+00	3.425E+00	4.972E+00	3.406E+00	4.789E+00
R01	5.601E-01	4.837E-01	5.354E-01	3.485E-01	5.133E-01	4.247E-01	4.681E-01
R02	5.354E-01	4.857E-01	5.655E-01	3.583E-01	5.359E-01	4.442E-01	4.849E-01
R03	5.179E-01	4.968E-01	6.054E-01	3.533E-01	5.261E-01	4.584E-01	5.133E-01
R04	5.085E-01	5.168E-01	6.521E-01	3.352E-01	4.878E-01	4.635E-01	5.531E-01
R05	5.075E-01	5.450E-01	6.964E-01	3.102E-01	4.344E-01	4.580E-01	6.144E-01
R06	5.151E-01	5.797E-01	7.257E-01	2.854E-01	3.862E-01	4.435E-01	6.945E-01
R07	5.308E-01	6.161E-01	7.305E-01	2.654E-01	3.549E-01	4.239E-01	7.625E-01
R08	5.541E-01	6.463E-01	7.091E-01	2.508E-01	3.382E-01	4.034E-01	7.945E-01
R09	5.831E-01	6.617E-01	6.686E-01	2.416E-01	3.183E-01	3.854E-01	7.787E-01
R10	6.143E-01	6.574E-01	6.215E-01	2.379E-01	3.122E-01	3.718E-01	7.210E-01
R11	6.419E-01	6.349E-01	5.785E-01	2.398E-01	3.148E-01	3.634E-01	6.417E-01
R12	6.591E-01	6.010E-01	5.449E-01	2.472E-01	3.259E-01	3.606E-01	5.712E-01
R13	6.609E-01	5.645E-01	5.215E-01	2.599E-01	3.450E-01	3.636E-01	5.257E-01
R14	6.468E-01	5.322E-01	5.088E-01	2.782E-01	3.717E-01	3.772E-01	4.936E-01
R15	6.210E-01	5.073E-01	5.068E-01	3.016E-01	4.217E-01	3.860E-01	4.726E-01
R16	5.900E-01	4.910E-01	5.158E-01	3.273E-01	4.667E-01	4.042E-01	4.639E-01

POINT	SOURCE						
	S15	S16	S17	S18	S19	S20	S21
C01	1.313E+00	3.759E+01	4.167E+00	2.336E+00	2.768E+00	1.396E+01	9.439E+00
C02	3.587E+00	5.496E+01	5.303E+00	4.934E+00	3.338E+00	1.422E+01	1.430E+01
C03	1.112E+01	4.337E+01	6.651E+00	1.117E+01	3.827E+00	1.103E+01	2.113E+01
C04	4.342E+01	2.400E+01	8.001E+00	2.641E+01	4.062E+00	7.501E+00	2.667E+01
C05	2.128E+02	1.314E+01	8.915E+00	5.127E+01	3.935E+00	5.013E+00	2.495E+01
C06	1.191E+02	7.685E+00	8.948E+00	4.349E+01	3.507E+00	3.441E+00	1.812E+01
C07	4.242E+00	2.796E+01	5.430E+00	3.363E+00	4.089E+00	3.106E+01	6.977E+00
C08	5.985E+00	3.653E+01	7.720E+00	4.221E+00	5.545E+00	3.237E+01	9.240E+00
C09	8.377E+00	3.102E+01	1.117E+01	5.187E+00	7.096E+00	1.952E+01	1.163E+01
C10	1.119E+01	1.974E+01	1.579E+01	6.079E+00	7.970E+00	1.058E+01	1.312E+01
C11	1.313E+01	1.195E+01	1.991E+01	6.591E+00	7.486E+00	6.146E+00	1.269E+01
C12	1.262E+01	7.410E+00	2.008E+01	6.480E+00	6.044E+00	3.826E+00	1.067E+01
C13	2.967E+00	8.340E+00	5.998E+00	3.081E+00	6.417E+00	9.362E+00	7.888E+00
C14	3.614E+00	8.994E+00	1.031E+01	3.775E+00	1.507E+01	9.478E+00	1.095E+01
C15	4.300E+00	8.583E+00	1.989E+01	4.520E+00	4.881E+01	7.953E+00	1.450E+01
C16	4.895E+00	7.458E+00	4.467E+01	5.176E+00	2.113E+02	5.954E+00	1.690E+01
C17	5.216E+00	6.070E+00	1.096E+02	5.539E+00	7.778E+01	4.291E+00	1.619E+01
C18	5.137E+00	4.789E+00	1.149E+02	5.461E+00	2.078E+01	3.106E+00	1.303E+01

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C19	3.657E+00	9.002E+00	4.924E+00	4.344E+00	4.032E+00	6.867E+00	1.117E+01
C20	4.742E+00	9.712E+00	6.663E+00	6.677E+00	5.437E+00	6.930E+00	1.894E+01
C21	6.045E+00	9.287E+00	9.011E+00	1.049E+01	6.917E+00	6.082E+00	3.332E+01
C22	7.325E+00	7.981E+00	1.174E+01	1.600E+01	7.744E+00	4.847E+00	4.952E+01
C23	8.086E+00	6.407E+00	1.385E+01	2.056E+01	7.287E+00	3.697E+00	4.390E+01
C24	7.895E+00	4.991E+00	1.394E+01	1.944E+01	5.915E+00	2.794E+00	2.637E+01
R01	7.031E-01	7.484E-01	5.317E-01	6.805E-01	2.763E-01	3.845E-01	6.806E-01
R02	7.104E-01	7.926E-01	5.444E-01	5.895E-01	2.803E-01	4.044E-01	6.494E-01
R03	6.678E-01	8.108E-01	5.692E-01	4.366E-01	2.916E-01	4.202E-01	6.219E-01
R04	5.879E-01	7.724E-01	6.060E-01	4.457E-01	3.099E-01	4.278E-01	6.011E-01
R05	4.799E-01	7.153E-01	6.550E-01	4.307E-01	3.359E-01	4.250E-01	5.884E-01
R06	4.485E-01	6.500E-01	7.123E-01	4.091E-01	3.735E-01	4.125E-01	5.845E-01
R07	4.267E-01	5.946E-01	7.647E-01	3.969E-01	4.167E-01	3.940E-01	5.895E-01
R08	4.046E-01	5.539E-01	7.957E-01	3.963E-01	4.503E-01	3.738E-01	6.032E-01
R09	3.917E-01	5.259E-01	7.944E-01	4.074E-01	4.624E-01	3.555E-01	6.249E-01
R10	3.901E-01	5.103E-01	7.614E-01	4.283E-01	4.484E-01	3.411E-01	6.530E-01
R11	3.999E-01	5.074E-01	7.081E-01	4.472E-01	4.135E-01	3.318E-01	6.843E-01
R12	4.198E-01	5.172E-01	6.511E-01	4.264E-01	3.702E-01	3.277E-01	7.137E-01
R13	4.440E-01	5.395E-01	6.029E-01	5.781E-01	3.335E-01	3.292E-01	7.346E-01
R14	4.590E-01	5.741E-01	5.670E-01	6.730E-01	3.082E-01	3.361E-01	7.416E-01
R15	5.603E-01	6.225E-01	5.431E-01	7.279E-01	2.905E-01	3.482E-01	7.328E-01
R16	6.483E-01	6.849E-01	5.312E-01	7.307E-01	2.797E-01	3.648E-01	7.105E-01

POINT	SOURCE						
	S22	S23	S24	S25	S26	S27	S28
C01	4.987E+00	1.053E+01	6.276E+00	2.153E+01	1.281E+01	2.074E+00	2.005E+00
C02	4.756E+00	8.571E+00	8.377E+00	2.775E+01	1.655E+01	2.863E+00	3.807E+00
C03	4.211E+00	5.988E+00	9.125E+00	2.282E+01	1.739E+01	3.807E+00	7.974E+00
C04	3.540E+00	4.039E+00	7.720E+00	1.424E+01	1.445E+01	4.755E+00	1.975E+01
C05	2.893E+00	2.771E+00	5.552E+00	8.581E+00	1.043E+01	5.147E+00	6.216E+01
C06	2.340E+00	1.943E+00	3.786E+00	5.399E+00	7.227E+00	4.671E+00	1.069E+02
C07	2.027E+01	5.115E+01	1.282E+01	2.475E+01	3.531E+01	1.440E+00	2.277E+00
C08	1.665E+01	2.419E+01	3.741E+01	3.332E+01	9.891E+01	1.745E+00	2.978E+00
C09	1.088E+01	1.065E+01	6.288E+01	2.647E+01	1.389E+02	2.050E+00	3.878E+00
C10	6.745E+00	5.370E+00	2.579E+01	1.557E+01	5.254E+01	2.286E+00	4.891E+00
C11	4.266E+00	3.059E+00	9.169E+00	9.023E+00	2.075E+01	2.369E+00	5.722E+00
C12	2.793E+00	1.887E+00	3.837E+00	5.527E+00	9.973E+00	2.267E+00	5.941E+00
C13	4.190E+01	5.741E+00	3.516E+00	7.552E+00	8.999E+00	1.918E+00	1.945E+00
C14	2.736E+01	5.114E+00	4.060E+00	8.158E+00	1.066E+01	2.534E+00	2.416E+00
C15	1.294E+01	4.087E+00	4.221E+00	7.701E+00	1.100E+01	3.265E+00	2.959E+00
C16	6.148E+00	3.100E+00	3.906E+00	6.428E+00	9.765E+00	3.927E+00	3.501E+00
C17	3.099E+00	2.325E+00	3.289E+00	5.006E+00	7.778E+00	4.188E+00	3.899E+00
C18	1.653E+00	1.758E+00	2.621E+00	3.803E+00	5.889E+00	3.871E+00	3.999E+00
C19	5.695E+00	4.043E+00	2.682E+00	7.231E+00	6.269E+00	1.112E+00	2.596E+00

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C20	5.394E+00	3.725E+00	2.982E+00	7.809E+00	7.021E+00	2.987E+00	3.707E+00
C21	4.699E+00	3.154E+00	3.067E+00	7.368E+00	7.165E+00	9.721E+00	5.336E+00
C22	3.873E+00	2.541E+00	2.899E+00	6.195E+00	6.625E+00	4.849E+01	7.584E+00
C23	3.106E+00	2.005E+00	2.550E+00	4.866E+00	5.661E+00	3.540E+02	9.870E+00
C24	2.471E+00	1.579E+00	2.136E+00	3.724E+00	4.609E+00	3.945E+01	1.056E+01
R01	3.557E-01	3.020E-01	2.982E-01	5.018E-01	5.812E-01	2.132E-01	4.554E-01
R02	3.744E-01	3.290E-01	3.449E-01	5.288E-01	6.417E-01	2.010E-01	4.233E-01
R03	3.884E-01	3.512E-01	3.803E-01	5.412E-01	6.967E-01	1.893E-01	3.777E-01
R04	3.951E-01	3.613E-01	3.938E-01	5.348E-01	7.273E-01	1.806E-01	3.360E-01
R05	5.114E-01	3.557E-01	3.803E-01	5.118E-01	7.224E-01	1.766E-01	3.091E-01
R06	5.863E-01	3.363E-01	3.449E-01	4.796E-01	6.838E-01	1.778E-01	2.902E-01
R07	6.270E-01	3.098E-01	2.982E-01	4.466E-01	6.254E-01	1.840E-01	2.775E-01
R08	6.232E-01	2.842E-01	2.631E-01	4.188E-01	5.667E-01	1.944E-01	2.721E-01
R09	5.762E-01	2.641E-01	2.455E-01	3.980E-01	5.209E-01	2.065E-01	2.740E-01
R10	4.965E-01	2.496E-01	2.313E-01	3.849E-01	4.881E-01	2.273E-01	2.833E-01
R11	3.829E-01	2.405E-01	2.220E-01	3.796E-01	4.666E-01	2.690E-01	2.993E-01
R12	3.895E-01	2.369E-01	2.188E-01	3.823E-01	4.565E-01	3.024E-01	3.217E-01
R13	3.710E-01	2.388E-01	2.220E-01	3.928E-01	4.580E-01	3.193E-01	3.561E-01
R14	3.533E-01	2.464E-01	2.313E-01	4.111E-01	4.712E-01	3.142E-01	4.024E-01
R15	3.442E-01	2.593E-01	2.455E-01	4.368E-01	4.956E-01	2.888E-01	4.426E-01
R16	3.450E-01	2.778E-01	2.632E-01	4.685E-01	5.316E-01	2.506E-01	4.627E-01

POINT	SOURCE						
	S29	S30	S31	S32	S33	S34	
C01	1.186E+01	3.101E+00	6.845E+00	6.703E+00	5.133E+00	1.823E+00	1.724E+01
C02	1.433E+01	4.515E+00	9.878E+00	8.772E+00	6.241E+00	2.280E+00	3.587E+01
C03	1.335E+01	6.515E+00	1.351E+01	1.042E+01	6.837E+00	2.821E+00	5.733E+01
C04	1.003E+01	8.877E+00	1.572E+01	1.058E+01	6.551E+00	3.380E+00	4.374E+01
C05	6.900E+00	1.028E+01	1.438E+01	9.109E+00	5.571E+00	3.818E+00	2.166E+01
C06	4.728E+00	9.383E+00	1.086E+01	7.040E+00	4.399E+00	3.962E+00	1.047E+01
C07	1.580E+01	2.086E+00	4.059E+00	1.450E+01	3.319E+00	1.604E+00	1.458E+01
C08	2.049E+01	2.547E+00	4.896E+00	3.924E+01	3.735E+00	2.841E+00	2.271E+01
C09	1.856E+01	3.028E+00	5.609E+00	1.571E+02	3.934E+00	5.286E+00	2.859E+01
C10	1.270E+01	3.424E+00	5.944E+00	2.010E+02	3.841E+00	1.028E+01	2.515E+01
C11	8.044E+00	3.605E+00	5.748E+00	4.803E+01	3.491E+00	1.926E+01	1.688E+01
C12	5.214E+00	3.493E+00	5.113E+00	1.678E+01	3.006E+00	2.490E+01	1.042E+01
C13	1.201E+01	2.488E+00	5.173E+00	7.096E+00	6.083E+00	2.060E+00	5.781E+00
C14	1.454E+01	3.197E+00	6.655E+00	9.473E+00	7.741E+00	3.263E+00	6.580E+00
C15	1.354E+01	4.013E+00	8.074E+00	1.144E+01	8.695E+00	5.366E+00	6.959E+00
C16	1.013E+01	4.755E+00	8.798E+00	1.163E+01	8.232E+00	9.028E+00	6.753E+00
C17	6.948E+00	5.116E+00	8.369E+00	9.869E+00	6.721E+00	1.422E+01	6.055E+00
C18	4.749E+00	4.891E+00	7.070E+00	7.477E+00	5.059E+00	1.679E+01	5.126E+00
C19	9.601E+00	1.868E+00	9.161E+00	4.420E+00	6.186E+00	1.766E+00	6.403E+00
C20	1.115E+01	4.274E+00	2.049E+01	5.206E+00	3.997E+01	2.189E+00	7.405E+00

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C21	1.055E+01	1.106E+01	5.727E+01	5.734E+00	5.722E+02	2.679E+00	7.891E+00
C22	8.366E+00	3.412E+01	1.475E+02	5.779E+00	9.572E+01	3.176E+00	7.626E+00
C23	6.079E+00	9.058E+01	7.806E+01	5.320E+00	1.170E+01	3.558E+00	6.743E+00
C24	4.339E+00	4.591E+01	2.646E+01	4.559E+00	2.299E+00	3.683E+00	5.604E+00
R01	4.109E-01	3.470E-01	5.269E-01	4.696E-01	3.417E-01	2.656E-01	8.158E-01
R02	4.191E-01	3.073E-01	4.761E-01	5.193E-01	3.359E-01	2.800E-01	8.839E-01
R03	4.265E-01	2.894E-01	4.418E-01	5.792E-01	3.184E-01	2.743E-01	8.907E-01
R04	4.317E-01	2.732E-01	4.178E-01	6.294E-01	3.077E-01	3.451E-01	8.338E-01
R05	4.337E-01	2.628E-01	4.039E-01	6.519E-01	3.060E-01	4.082E-01	7.299E-01
R06	4.321E-01	2.598E-01	4.010E-01	6.384E-01	3.135E-01	4.474E-01	5.875E-01
R07	4.273E-01	2.642E-01	4.089E-01	5.940E-01	3.292E-01	4.565E-01	5.561E-01
R08	4.201E-01	2.759E-01	4.276E-01	5.346E-01	3.461E-01	4.325E-01	5.291E-01
R09	4.119E-01	2.926E-01	4.561E-01	4.809E-01	3.178E-01	3.823E-01	5.016E-01
R10	4.040E-01	3.106E-01	4.968E-01	4.428E-01	4.362E-01	3.021E-01	4.859E-01
R11	3.976E-01	3.577E-01	5.561E-01	4.160E-01	5.169E-01	2.794E-01	4.844E-01
R12	3.933E-01	4.148E-01	6.204E-01	3.991E-01	5.652E-01	2.736E-01	4.973E-01
R13	3.918E-01	4.558E-01	6.662E-01	3.924E-01	5.732E-01	2.594E-01	5.228E-01
R14	3.930E-01	4.691E-01	6.770E-01	3.963E-01	5.383E-01	2.503E-01	5.528E-01
R15	3.969E-01	4.500E-01	6.488E-01	4.106E-01	4.698E-01	2.484E-01	5.678E-01
R16	4.031E-01	4.051E-01	5.920E-01	4.349E-01	3.472E-01	2.537E-01	7.043E-01

**TABLE 11 - TOTAL RADIATION LEVEL AT EACH MEASUREMENT POINT FOR EACH SET
OF SOURCES TO BE ANALYZED.**

POINT	SOURCES						
	S01-S35	S01-S30	S06-S35	S01-S25	S11-S35	S01-S20	S16-S35
C01	3.158E+02	2.781E+02	2.657E+02	2.462E+02	2.228E+02	1.935E+02	1.832E+02
C02	4.599E+02	3.968E+02	3.700E+02	3.547E+02	3.137E+02	2.910E+02	2.516E+02
C03	7.454E+02	6.545E+02	4.500E+02	6.054E+02	3.808E+02	5.421E+02	2.793E+02
C04	9.316E+02	8.516E+02	4.797E+02	7.937E+02	4.154E+02	7.375E+02	2.640E+02
C05	7.037E+02	6.492E+02	6.076E+02	5.543E+02	5.570E+02	5.095E+02	2.765E+02
C06	5.007E+02	4.639E+02	4.601E+02	3.310E+02	4.206E+02	2.994E+02	2.683E+02
C07	4.526E+02	4.145E+02	4.199E+02	3.576E+02	3.416E+02	2.416E+02	2.828E+02
C08	5.992E+02	5.258E+02	5.604E+02	3.991E+02	4.831E+02	2.783E+02	4.073E+02
C09	7.373E+02	5.368E+02	6.966E+02	3.704E+02	6.369E+02	2.479E+02	5.634E+02
C10	5.962E+02	3.500E+02	5.588E+02	2.741E+02	5.123E+02	2.075E+02	4.488E+02
C11	4.209E+02	3.275E+02	3.900E+02	2.870E+02	2.754E+02	2.488E+02	2.242E+02
C12	2.480E+02	1.878E+02	2.238E+02	1.609E+02	1.940E+02	1.362E+02	1.557E+02
C13	4.062E+02	3.801E+02	3.604E+02	3.527E+02	2.436E+02	2.861E+02	1.533E+02
C14	5.490E+02	5.153E+02	4.805E+02	4.820E+02	3.630E+02	4.263E+02	1.703E+02
C15	4.656E+02	4.251E+02	3.964E+02	3.903E+02	3.132E+02	3.469E+02	2.085E+02
C16	5.422E+02	4.977E+02	4.910E+02	4.656E+02	4.264E+02	4.292E+02	3.876E+02
C17	4.286E+02	3.834E+02	3.902E+02	3.555E+02	3.367E+02	3.255E+02	3.064E+02
C18	3.304E+02	2.889E+02	3.022E+02	2.655E+02	2.585E+02	2.426E+02	2.368E+02

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

C19	2.517E+02	2.238E+02	1.880E+02	2.023E+02	1.374E+02	1.715E+02	1.094E+02
C20	3.837E+02	3.084E+02	2.767E+02	2.793E+02	2.109E+02	2.404E+02	1.787E+02
C21	1.121E+03	4.755E+02	9.033E+02	4.317E+02	8.167E+02	3.800E+02	7.830E+02
C22	7.932E+02	5.334E+02	6.202E+02	4.282E+02	5.107E+02	3.632E+02	4.783E+02
C23	9.251E+02	8.197E+02	8.386E+02	3.535E+02	7.088E+02	2.971E+02	6.798E+02
C24	5.905E+02	5.479E+02	5.489E+02	4.430E+02	2.553E+02	4.067E+02	2.308E+02
R01	1.659E+01	1.417E+01	1.418E+01	1.216E+01	1.164E+01	1.002E+01	9.187E+00
R02	1.665E+01	1.415E+01	1.435E+01	1.216E+01	1.186E+01	9.935E+00	9.325E+00
R03	1.647E+01	1.396E+01	1.428E+01	1.198E+01	1.181E+01	9.701E+00	9.295E+00
R04	1.631E+01	1.378E+01	1.425E+01	1.183E+01	1.176E+01	9.546E+00	9.331E+00
R05	1.614E+01	1.364E+01	1.415E+01	1.174E+01	1.161E+01	9.391E+00	9.314E+00
R06	1.596E+01	1.357E+01	1.399E+01	1.173E+01	1.138E+01	9.395E+00	9.121E+00
R07	1.586E+01	1.351E+01	1.388E+01	1.173E+01	1.119E+01	9.462E+00	8.961E+00
R08	1.568E+01	1.341E+01	1.370E+01	1.168E+01	1.095E+01	9.492E+00	8.762E+00
R09	1.552E+01	1.338E+01	1.342E+01	1.167E+01	1.061E+01	9.565E+00	8.499E+00
R10	1.550E+01	1.333E+01	1.328E+01	1.162E+01	1.041E+01	9.605E+00	8.382E+00
R11	1.558E+01	1.333E+01	1.324E+01	1.154E+01	1.032E+01	9.627E+00	8.360E+00
R12	1.579E+01	1.343E+01	1.334E+01	1.155E+01	1.040E+01	9.604E+00	8.478E+00
R13	1.610E+01	1.368E+01	1.358E+01	1.170E+01	1.068E+01	9.744E+00	8.737E+00
R14	1.626E+01	1.384E+01	1.372E+01	1.179E+01	1.089E+01	9.807E+00	8.907E+00
R15	1.633E+01	1.399E+01	1.384E+01	1.191E+01	1.111E+01	9.896E+00	8.970E+00
R16	1.644E+01	1.411E+01	1.397E+01	1.206E+01	1.135E+01	9.992E+00	9.042E+00

POINT	SOURCE						
	S01-S18	S19-S35	S01-S12	S13-S24	S25-S35	S01-S10	S13-S22
C01	1.767E+02	1.391E+02	1.096E+02	1.151E+02	9.112E+01	9.300E+01	9.828E+01
C02	2.734E+02	1.864E+02	1.805E+02	1.465E+02	1.329E+02	1.461E+02	1.295E+02
C03	5.273E+02	2.181E+02	4.341E+02	1.485E+02	1.628E+02	3.646E+02	1.334E+02
C04	7.260E+02	2.056E+02	6.085E+02	1.710E+02	1.521E+02	5.162E+02	1.592E+02
C05	5.006E+02	2.032E+02	2.032E+02	3.425E+02	1.580E+02	1.468E+02	3.342E+02
C06	2.925E+02	2.082E+02	1.050E+02	2.206E+02	1.750E+02	8.004E+01	2.149E+02
C07	2.065E+02	2.461E+02	1.231E+02	2.097E+02	1.197E+02	1.109E+02	1.457E+02
C08	2.404E+02	3.588E+02	1.345E+02	2.313E+02	2.334E+02	1.161E+02	1.697E+02
C09	2.212E+02	5.161E+02	1.252E+02	2.187E+02	3.934E+02	1.004E+02	1.451E+02
C10	1.890E+02	4.072E+02	1.104E+02	1.482E+02	3.376E+02	8.386E+01	1.170E+02
C11	2.352E+02	1.857E+02	1.673E+02	1.108E+02	1.429E+02	1.456E+02	9.853E+01
C12	1.263E+02	1.217E+02	6.897E+01	8.640E+01	9.263E+01	5.398E+01	8.068E+01
C13	2.703E+02	1.359E+02	1.691E+02	1.761E+02	6.111E+01	1.626E+02	1.668E+02
C14	4.018E+02	1.472E+02	1.937E+02	2.801E+02	7.522E+01	1.860E+02	2.709E+02
C15	2.901E+02	1.755E+02	1.611E+02	2.215E+02	8.301E+01	1.525E+02	2.132E+02
C16	2.119E+02	3.303E+02	1.246E+02	3.347E+02	8.295E+01	1.158E+02	3.277E+02
C17	2.435E+02	1.851E+02	9.998E+01	2.505E+02	7.817E+01	9.188E+01	2.448E+02
C18	2.187E+02	1.117E+02	7.884E+01	1.828E+02	6.872E+01	7.190E+01	1.784E+02
C19	1.606E+02	9.110E+01	1.219E+02	7.319E+01	5.661E+01	1.143E+02	6.646E+01
C20	2.280E+02	1.556E+02	1.823E+02	8.915E+01	1.122E+02	1.728E+02	8.244E+01
C21	3.671E+02	7.542E+02	3.155E+02	1.088E+02	6.970E+02	3.045E+02	1.025E+02
C22	3.506E+02	4.426E+02	2.937E+02	1.283E+02	3.712E+02	2.825E+02	1.229E+02

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OF HN-200 GROUT CONTAINERS.**

C23	2.861E+02	6.390E+02	2.264E+02	1.222E+02	5.764E+02	2.163E+02	1.177E+02
C24	3.980E+02	1.925E+02	3.436E+02	9.573E+01	1.512E+02	3.352E+02	9.201E+01
R01	9.362E+00	7.226E+00	5.806E+00	5.854E+00	4.929E+00	4.944E+00	5.254E+00
R02	9.250E+00	7.399E+00	5.684E+00	5.948E+00	5.016E+00	4.790E+00	5.275E+00
R03	8.989E+00	7.479E+00	5.533E+00	5.910E+00	5.025E+00	4.654E+00	5.178E+00
R04	8.808E+00	7.506E+00	5.380E+00	5.918E+00	5.017E+00	4.557E+00	5.163E+00
R05	8.630E+00	7.513E+00	5.277E+00	5.950E+00	4.916E+00	4.532E+00	5.214E+00
R06	8.609E+00	7.349E+00	5.251E+00	5.996E+00	4.711E+00	4.580E+00	5.315E+00
R07	8.651E+00	7.205E+00	5.282E+00	6.005E+00	4.570E+00	4.662E+00	5.397E+00
R08	8.668E+00	7.016E+00	5.319E+00	5.946E+00	4.418E+00	4.730E+00	5.399E+00
R09	8.747E+00	6.771E+00	5.463E+00	5.812E+00	4.243E+00	4.904E+00	5.303E+00
R10	8.815E+00	6.682E+00	5.632E+00	5.603E+00	4.262E+00	5.082E+00	5.122E+00
R11	8.881E+00	6.698E+00	5.814E+00	5.343E+00	4.423E+00	5.259E+00	4.880E+00
R12	8.906E+00	6.883E+00	5.960E+00	5.203E+00	4.627E+00	5.387E+00	4.747E+00
R13	9.081E+00	7.017E+00	6.027E+00	5.283E+00	4.788E+00	5.422E+00	4.822E+00
R14	9.163E+00	7.093E+00	6.019E+00	5.361E+00	4.876E+00	5.369E+00	4.883E+00
R15	9.257E+00	7.077E+00	5.945E+00	5.533E+00	4.856E+00	5.221E+00	5.028E+00
R16	9.348E+00	7.095E+00	5.884E+00	5.704E+00	4.854E+00	5.090E+00	5.163E+00

POINT	SOURCE					
	S23-S32	S01-S07	S08-S14	S15-S21	S22-S28	S29-S35
C01	8.373E+01	6.526E+01	6.607E+01	7.157E+01	6.021E+01	5.271E+01
C02	1.054E+02	1.157E+02	8.895E+01	1.006E+02	7.267E+01	8.189E+01
C03	1.109E+02	3.333E+02	1.217E+02	1.083E+02	7.132E+01	1.108E+02
C04	1.102E+02	4.863E+02	1.379E+02	1.401E+02	6.849E+01	9.888E+01
C05	1.353E+02	1.211E+02	9.335E+01	3.200E+02	9.753E+01	7.172E+01
C06	1.619E+02	6.019E+01	5.309E+01	2.043E+02	1.323E+02	5.084E+01
C07	1.642E+02	4.079E+01	1.247E+02	8.312E+01	1.480E+02	5.595E+01
C08	2.657E+02	4.900E+01	1.369E+02	1.016E+02	2.152E+02	9.646E+01
C09	4.291E+02	5.248E+01	1.130E+02	9.400E+01	2.557E+02	2.221E+02
C10	3.295E+02	4.976E+01	8.641E+01	8.447E+01	1.132E+02	2.623E+02
C11	1.155E+02	4.306E+01	1.406E+02	7.790E+01	5.436E+01	1.051E+02
C12	6.003E+01	3.543E+01	4.430E+01	6.713E+01	3.223E+01	6.893E+01
C13	5.644E+01	5.422E+01	1.957E+02	4.405E+01	7.157E+01	4.069E+01
C14	6.681E+01	7.929E+01	2.958E+02	6.219E+01	6.030E+01	5.145E+01
C15	7.030E+01	8.250E+01	1.703E+02	1.086E+02	4.617E+01	5.809E+01
C16	6.594E+01	6.689E+01	8.281E+01	2.964E+02	3.678E+01	5.933E+01
C17	5.679E+01	5.653E+01	6.051E+01	2.247E+02	2.958E+01	5.730E+01
C18	4.613E+01	4.752E+01	4.090E+01	1.672E+02	2.359E+01	5.116E+01
C19	4.898E+01	7.569E+01	6.298E+01	4.400E+01	2.963E+01	3.941E+01
C20	6.935E+01	1.263E+02	7.398E+01	5.910E+01	3.363E+01	9.068E+01
C21	1.204E+02	2.462E+02	8.601E+01	8.115E+01	4.051E+01	6.674E+02
C22	2.701E+02	2.108E+02	9.672E+01	1.052E+02	7.821E+01	3.023E+02
C23	5.590E+02	1.600E+02	7.717E+01	1.038E+02	3.821E+02	2.020E+02

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OF HN-200 GROUT CONTAINERS.**

C24	1.433E+02	3.023E+02	4.950E+01	8.135E+01	6.453E+01	9.285E+01
R01	4.106E+00	3.365E+00	3.334E+00	4.005E+00	2.708E+00	3.178E+00
R02	4.191E+00	3.203E+00	3.410E+00	3.971E+00	2.843E+00	3.222E+00
R03	4.273E+00	3.034E+00	3.471E+00	3.818E+00	2.925E+00	3.220E+00
R04	4.286E+00	2.879E+00	3.517E+00	3.751E+00	2.929E+00	3.239E+00
R05	4.208E+00	2.783E+00	3.566E+00	3.630E+00	2.967E+00	3.196E+00
R06	4.044E+00	2.759E+00	3.630E+00	3.590E+00	2.899E+00	3.080E+00
R07	3.836E+00	2.784E+00	3.684E+00	3.583E+00	2.769E+00	3.036E+00
R08	3.658E+00	2.821E+00	3.696E+00	3.578E+00	2.623E+00	2.966E+00
R09	3.551E+00	2.990E+00	3.637E+00	3.562E+00	2.485E+00	2.843E+00
R10	3.519E+00	3.189E+00	3.536E+00	3.533E+00	2.361E+00	2.878E+00
R11	3.604E+00	3.404E+00	3.415E+00	3.492E+00	2.260E+00	3.008E+00
R12	3.746E+00	3.582E+00	3.310E+00	3.426E+00	2.308E+00	3.164E+00
R13	3.893E+00	3.676E+00	3.241E+00	3.562E+00	2.358E+00	3.262E+00
R14	4.012E+00	3.682E+00	3.209E+00	3.659E+00	2.430E+00	3.277E+00
R15	4.075E+00	3.586E+00	3.217E+00	3.825E+00	2.513E+00	3.192E+00
R16	4.090E+00	3.494E+00	3.259E+00	3.950E+00	2.599E+00	3.140E+00

POINT	SOURCE						
	S01-S05	S06-S10	S11-S15	S16-S20	S21-S25	S26-S30	S31-S35
C01	5.015E+01	4.284E+01	3.965E+01	6.082E+01	5.276E+01	3.185E+01	3.774E+01
C02	8.986E+01	5.627E+01	6.210E+01	8.276E+01	6.375E+01	4.207E+01	6.304E+01
C03	2.954E+02	6.920E+01	1.015E+02	7.605E+01	6.327E+01	4.904E+01	9.092E+01
C04	4.518E+02	6.434E+01	1.514E+02	6.997E+01	5.621E+01	5.786E+01	7.997E+01
C05	9.615E+01	5.061E+01	2.805E+02	8.227E+01	4.475E+01	9.492E+01	5.454E+01
C06	4.061E+01	3.943E+01	1.523E+02	6.707E+01	3.159E+01	1.329E+02	3.673E+01
C07	3.262E+01	7.831E+01	5.878E+01	7.190E+01	1.160E+02	5.691E+01	3.806E+01
C08	3.883E+01	7.730E+01	7.577E+01	8.639E+01	1.208E+02	1.267E+02	7.342E+01
C09	4.072E+01	5.967E+01	7.348E+01	7.399E+01	1.225E+02	1.664E+02	2.005E+02
C10	3.738E+01	4.649E+01	6.350E+01	6.016E+01	6.660E+01	7.584E+01	2.462E+02
C11	3.097E+01	1.146E+02	5.118E+01	5.208E+01	3.821E+01	4.049E+01	9.341E+01
C12	2.419E+01	2.979E+01	3.837E+01	4.384E+01	2.471E+01	2.689E+01	6.022E+01
C13	4.586E+01	1.168E+02	9.026E+01	3.320E+01	6.660E+01	2.736E+01	2.619E+01
C14	6.855E+01	1.175E+02	1.927E+02	4.763E+01	5.564E+01	3.335E+01	3.371E+01
C15	6.924E+01	8.323E+01	1.047E+02	8.976E+01	4.345E+01	3.478E+01	4.053E+01
C16	5.112E+01	6.466E+01	3.882E+01	2.746E+02	3.648E+01	3.208E+01	4.444E+01
C17	3.840E+01	5.348E+01	3.038E+01	2.033E+02	2.991E+01	2.793E+01	4.523E+01
C18	2.818E+01	4.372E+01	2.166E+01	1.490E+02	2.287E+01	2.340E+01	4.152E+01
C19	6.374E+01	5.052E+01	2.807E+01	2.917E+01	3.082E+01	2.145E+01	2.794E+01
C20	1.069E+02	6.585E+01	3.223E+01	3.542E+01	3.885E+01	2.914E+01	7.526E+01
C21	2.179E+02	8.661E+01	3.372E+01	4.179E+01	5.161E+01	4.383E+01	6.458E+02
C22	1.730E+02	1.095E+02	3.240E+01	4.831E+01	6.503E+01	1.052E+02	2.598E+02
C23	8.647E+01	1.298E+02	2.902E+01	5.180E+01	5.643E+01	4.662E+02	1.054E+02
C24	4.161E+01	2.936E+02	2.449E+01	4.708E+01	3.628E+01	1.049E+02	4.261E+01

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

R01	2.405E+00	2.539E+00	2.458E+00	2.621E+00	2.138E+00	2.008E+00	2.420E+00
R02	2.303E+00	2.487E+00	2.534E+00	2.611E+00	2.227E+00	1.992E+00	2.495E+00
R03	2.184E+00	2.470E+00	2.519E+00	2.528E+00	2.283E+00	1.980E+00	2.504E+00
R04	2.067E+00	2.490E+00	2.428E+00	2.562E+00	2.286E+00	1.949E+00	2.534E+00
R05	1.991E+00	2.541E+00	2.297E+00	2.562E+00	2.348E+00	1.905E+00	2.500E+00
R06	1.969E+00	2.611E+00	2.258E+00	2.557E+00	2.332E+00	1.844E+00	2.388E+00
R07	1.978E+00	2.684E+00	2.233E+00	2.567E+00	2.271E+00	1.778E+00	2.345E+00
R08	1.981E+00	2.749E+00	2.192E+00	2.570E+00	2.193E+00	1.729E+00	2.270E+00
R09	2.097E+00	2.807E+00	2.116E+00	2.546E+00	2.109E+00	1.706E+00	2.139E+00
R10	2.214E+00	2.868E+00	2.033E+00	2.490E+00	2.015E+00	1.713E+00	2.164E+00
R11	2.341E+00	2.918E+00	1.960E+00	2.408E+00	1.909E+00	1.790E+00	2.253E+00
R12	2.451E+00	2.936E+00	1.925E+00	2.293E+00	1.941E+00	1.889E+00	2.356E+00
R13	2.514E+00	2.908E+00	1.938E+00	2.383E+00	1.959E+00	1.981E+00	2.414E+00
R14	2.534E+00	2.836E+00	1.980E+00	2.458E+00	1.984E+00	2.050E+00	2.415E+00
R15	2.490E+00	2.731E+00	2.142E+00	2.532E+00	2.019E+00	2.074E+00	2.345E+00
R16	2.468E+00	2.622E+00	2.310E+00	2.591E+00	2.065E+00	2.053E+00	2.332E+00

POINT	SOURCE						
	S01-S03	S04-S06	S07-S09	S10-S12	S13-S15	S16-S18	S19-S21
C01	3.858E+01	2.327E+01	2.017E+01	2.759E+01	2.303E+01	4.409E+01	2.617E+01
C02	7.491E+01	3.628E+01	2.422E+01	4.511E+01	2.771E+01	6.520E+01	3.186E+01
C03	2.783E+02	4.899E+01	2.809E+01	7.873E+01	3.200E+01	6.119E+01	3.599E+01
C04	4.358E+02	4.257E+01	3.059E+01	9.960E+01	5.903E+01	5.841E+01	3.823E+01
C05	8.339E+01	2.778E+01	3.006E+01	6.194E+01	2.241E+02	7.333E+01	3.390E+01
C06	3.129E+01	1.767E+01	2.687E+01	2.917E+01	1.274E+02	6.012E+01	2.507E+01
C07	2.203E+01	1.586E+01	2.393E+01	6.132E+01	4.657E+01	3.675E+01	4.213E+01
C08	2.599E+01	1.941E+01	2.629E+01	6.284E+01	5.739E+01	4.847E+01	4.716E+01
C09	2.762E+01	2.040E+01	2.624E+01	5.099E+01	4.862E+01	4.738E+01	3.825E+01
C10	2.606E+01	1.829E+01	2.496E+01	4.107E+01	3.698E+01	4.161E+01	3.167E+01
C11	2.200E+01	1.480E+01	2.277E+01	1.077E+02	2.949E+01	3.845E+01	2.632E+01
C12	1.726E+01	1.143E+01	1.986E+01	2.042E+01	2.337E+01	3.397E+01	2.054E+01
C13	2.385E+01	2.677E+01	7.815E+01	4.029E+01	8.383E+01	1.742E+01	2.367E+01
C14	2.797E+01	4.637E+01	8.009E+01	3.928E+01	1.850E+02	2.308E+01	3.550E+01
C15	2.929E+01	4.630E+01	5.579E+01	2.971E+01	9.603E+01	3.299E+01	7.126E+01
C16	2.827E+01	2.896E+01	4.565E+01	2.167E+01	3.005E+01	5.730E+01	2.342E+02
C17	2.450E+01	1.912E+01	4.015E+01	1.622E+01	2.228E+01	1.212E+02	9.826E+01
C18	1.895E+01	1.335E+01	3.429E+01	1.225E+01	1.472E+01	1.252E+02	3.692E+01
C19	4.369E+01	2.947E+01	3.112E+01	1.763E+01	2.043E+01	1.827E+01	2.207E+01
C20	5.641E+01	6.523E+01	4.133E+01	1.933E+01	2.269E+01	2.305E+01	3.131E+01
C21	5.737E+01	1.797E+02	5.899E+01	1.949E+01	2.274E+01	2.879E+01	4.632E+01
C22	6.679E+01	1.232E+02	8.565E+01	1.806E+01	2.117E+01	3.572E+01	6.211E+01
C23	5.407E+01	4.383E+01	1.131E+02	1.546E+01	1.886E+01	4.082E+01	5.488E+01
C24	2.821E+01	2.055E+01	2.823E+02	1.246E+01	1.609E+01	3.837E+01	3.508E+01
R01	1.714E+00	1.122E+00	1.572E+00	1.397E+00	1.596E+00	1.961E+00	1.341E+00

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R02	1.655E+00	1.055E+00	1.514E+00	1.460E+00	1.640E+00	1.927E+00	1.334E+00
R03	1.557E+00	1.008E+00	1.483E+00	1.485E+00	1.640E+00	1.817E+00	1.334E+00
R04	1.450E+00	9.743E-01	1.481E+00	1.475E+00	1.605E+00	1.824E+00	1.339E+00
R05	1.369E+00	9.597E-01	1.507E+00	1.441E+00	1.552E+00	1.801E+00	1.349E+00
R06	1.330E+00	9.635E-01	1.560E+00	1.397E+00	1.587E+00	1.771E+00	1.371E+00
R07	1.314E+00	9.821E-01	1.635E+00	1.351E+00	1.613E+00	1.756E+00	1.400E+00
R08	1.289E+00	1.010E+00	1.721E+00	1.298E+00	1.603E+00	1.746E+00	1.427E+00
R09	1.378E+00	1.043E+00	1.813E+00	1.229E+00	1.556E+00	1.728E+00	1.443E+00
R10	1.469E+00	1.083E+00	1.909E+00	1.172E+00	1.483E+00	1.700E+00	1.443E+00
R11	1.550E+00	1.148E+00	1.982E+00	1.133E+00	1.405E+00	1.663E+00	1.430E+00
R12	1.611E+00	1.222E+00	2.010E+00	1.118E+00	1.352E+00	1.595E+00	1.412E+00
R13	1.644E+00	1.278E+00	1.979E+00	1.126E+00	1.333E+00	1.721E+00	1.397E+00
R14	1.668E+00	1.298E+00	1.895E+00	1.159E+00	1.330E+00	1.814E+00	1.386E+00
R15	1.665E+00	1.272E+00	1.778E+00	1.230E+00	1.419E+00	1.894E+00	1.372E+00
R16	1.708E+00	1.206E+00	1.661E+00	1.310E+00	1.516E+00	1.947E+00	1.355E+00

POINT	SOURCE				
	S22-S24	S25-S27	S28-S30	S31-S33	S34-S35
C01	2.179E+01	3.641E+01	1.697E+01	1.868E+01	1.906E+01
C02	2.170E+01	4.716E+01	2.265E+01	2.489E+01	3.815E+01
C03	1.932E+01	4.402E+01	2.784E+01	3.077E+01	6.015E+01
C04	1.530E+01	3.345E+01	3.866E+01	3.285E+01	4.712E+01
C05	1.122E+01	2.416E+01	7.934E+01	2.906E+01	2.548E+01
C06	8.069E+00	1.730E+01	1.210E+02	2.230E+01	1.443E+01
C07	8.424E+01	6.150E+01	2.016E+01	2.188E+01	1.618E+01
C08	7.825E+01	1.340E+02	2.602E+01	4.787E+01	2.555E+01
C09	8.441E+01	1.674E+02	2.547E+01	1.666E+02	3.388E+01
C10	3.791E+01	7.040E+01	2.102E+01	2.108E+02	3.543E+01
C11	1.649E+01	3.214E+01	1.737E+01	5.727E+01	3.614E+01
C12	8.517E+00	1.777E+01	1.465E+01	2.490E+01	3.532E+01
C13	5.116E+01	1.847E+01	1.644E+01	1.835E+01	7.841E+00
C14	3.653E+01	2.135E+01	2.015E+01	2.387E+01	9.843E+00
C15	2.125E+01	2.197E+01	2.051E+01	2.821E+01	1.233E+01
C16	1.315E+01	2.012E+01	1.839E+01	2.866E+01	1.578E+01
C17	8.713E+00	1.697E+01	1.596E+01	2.496E+01	2.028E+01
C18	6.032E+00	1.356E+01	1.364E+01	1.961E+01	2.192E+01
C19	1.242E+01	1.461E+01	1.407E+01	1.977E+01	8.169E+00
C20	1.210E+01	1.782E+01	1.913E+01	6.567E+01	9.594E+00
C21	1.092E+01	2.425E+01	2.695E+01	6.352E+02	1.057E+01
C22	9.313E+00	6.131E+01	5.007E+01	2.490E+02	1.080E+01
C23	7.661E+00	3.645E+02	1.065E+02	9.508E+01	1.030E+01
C24	6.186E+00	4.778E+01	6.081E+01	3.332E+01	9.287E+00
R01	9.559E-01	1.296E+00	1.213E+00	1.338E+00	1.081E+00
R02	1.048E+00	1.372E+00	1.150E+00	1.331E+00	1.164E+00

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R03	1.120E+00	1.427E+00	1.094E+00	1.339E+00	1.165E+00
R04	1.150E+00	1.443E+00	1.041E+00	1.355E+00	1.179E+00
R05	1.247E+00	1.411E+00	1.006E+00	1.362E+00	1.138E+00
R06	1.268E+00	1.341E+00	9.821E-01	1.353E+00	1.035E+00
R07	1.235E+00	1.256E+00	9.690E-01	1.332E+00	1.013E+00
R08	1.171E+00	1.180E+00	9.681E-01	1.308E+00	9.616E-01
R09	1.086E+00	1.125E+00	9.785E-01	1.255E+00	8.839E-01
R10	9.774E-01	1.100E+00	9.979E-01	1.376E+00	7.880E-01
R11	8.454E-01	1.115E+00	1.055E+00	1.489E+00	7.638E-01
R12	8.452E-01	1.141E+00	1.130E+00	1.585E+00	7.709E-01
R13	8.318E-01	1.170E+00	1.204E+00	1.632E+00	7.822E-01
R14	8.310E-01	1.197E+00	1.265E+00	1.612E+00	8.031E-01
R15	8.490E-01	1.221E+00	1.290E+00	1.529E+00	8.162E-01
R16	8.860E-01	1.251E+00	1.271E+00	1.374E+00	9.580E-01

**TABLE 12 - ESTIMATES OF CURIE CONTENT FOR VARIOUS SOURCE SETS COMPARED
TO ACTUAL CURIE CONTENT FOR AN UNGROUTED CONTAINER.
MULTIPLE SOURCE SET ESTIMATE AND ERROR - CONTACT MEASUREMENT**

SOURCE SET	AVG CONT R/hr	CONT CONV FACT R/hr/Ci	EST Cs-137 CURIES	ACTUAL Cs-137 CURIES	ERROR	% ERROR
S01-S35	5.624E+02	7.396E-01	760.4690	708.6318	51.8372	7.3151
S01-S30	4.598E+02	7.396E-01	621.7013	604.0700	17.6313	2.9187
S06-S35	4.700E+02	7.396E-01	635.4184	610.0433	25.3751	4.1596
S01-S25	3.827E+02	7.396E-01	517.3990	520.3863	-2.9872	-0.5740
S11-S35	3.890E+02	7.396E-01	525.9006	490.8729	35.0277	7.1358
S01-S20	3.270E+02	7.396E-01	442.1841	426.0483	16.1358	3.7873
S16-S25	3.137E+02	7.396E-01	424.1038	393.8550	30.2488	7.6802
S01-S18	2.976E+02	7.396E-01	402.3437	394.2079	8.1357	2.0638
S19-S35	2.649E+02	7.396E-01	358.1253	314.4239	43.7015	13.8989
S01-S12	1.950E+02	7.396E-01	263.7183	247.8830	15.8354	6.3882
S13-S24	1.755E+02	7.396E-01	237.2968	252.7408	-15.4440	-6.1106
S25-S35	1.919E+02	7.396E-01	259.4539	208.0080	51.4458	24.7326
S01-S10	1.735E+02	7.396E-01	234.5684	217.7589	16.8095	7.7193
S13-S22	1.588E+02	7.396E-01	214.7626	227.1843	-12.4217	-5.4677
S23-S32	1.519E+02	7.396E-01	205.3553	173.0444	32.3109	18.6720
S01-S07	1.234E+02	7.396E-01	166.7874	140.8425	25.9449	18.4212
S08-S14	1.041E+02	7.396E-01	140.8031	151.1873	-10.3843	-6.8685
S15-S21	1.179E+02	7.396E-01	159.4727	162.6650	-3.1923	-1.9625
S22-S28	9.241E+01	7.396E-01	124.9411	116.2697	8.6714	7.4580
S29-S35	1.246E+02	7.396E-01	168.4647	137.6673	30.7974	22.3709
S01-S05	9.249E+01	7.396E-01	125.0506	98.5885	26.4621	26.8409
S06-S10	8.100E+01	7.396E-01	109.5178	119.1704	-9.6526	-8.0998

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S11-S15	7.529E+01	7.396E-01	101.7968	97.0179	4.7789	4.9258
S16-S20	7.826E+01	7.396E-01	105.8189	111.2715	-5.4526	-4.9002
S21-S25	5.563E+01	7.396E-01	75.2149	94.3380	-19.1230	-20.2708
S26-S30	7.714E+01	7.396E-01	104.3023	83.6838	20.6185	24.6386
S31-S35	1.026E+02	7.396E-01	138.7677	104.5618	34.2059	32.7136
S01-S03	6.427E+01	7.396E-01	86.9014	66.9394	19.9620	29.8210
S04-S06	3.915E+01	7.396E-01	52.9336	47.9673	4.9663	10.3535
S07-S09	5.211E+01	7.396E-01	70.4577	76.0383	-5.5806	-7.3392
S10-S12	3.951E+01	7.396E-01	53.4256	56.9379	-3.5123	-6.1687
S13-S15	5.373E+01	7.396E-01	72.6469	66.8938	5.7530	8.6002
S16-S18	4.880E+01	7.396E-01	65.9785	79.4311	-13.4527	-16.9363
S19-S21	4.787E+01	7.396E-01	64.7196	60.4869	4.2326	6.9976
S22-S24	2.511E+01	7.396E-01	33.9519	45.9289	-11.9770	-26.0773
S25-S27	5.535E+01	7.396E-01	74.8399	54.8275	20.0125	36.5009
S28-S30	3.391E+01	7.396E-01	45.8462	48.6188	-2.7725	-5.7026
S31-S33	8.040E+01	7.396E-01	108.7065	61.8697	46.8368	75.7023
S34-S35	2.223E+01	7.396E-01	30.0612	42.6921	-12.6309	-29.5860
Average % Error =					6.8142	

MULTIPLE SOURCE SET ESTIMATE AND ERROR - REMOTE MEASUREMENT

SOURCE SET	AVG	CONV	EST	ACTUAL	ERROR	%
	REMOTE R/hr	FACT R/hr/Ci	Cs-137 CURIES	Cs-137 CURIES		
S01-S35	1.607E+01	2.264E-02	709.9558	708.6318	1.3240	0.1868
S01-S30	1.371E+01	2.264E-02	605.4053	604.0700	1.3352	0.2210
S06-S35	1.382E+01	2.264E-02	610.6073	610.0433	0.5640	0.0925
S01-S25	1.180E+01	2.264E-02	521.3715	520.3863	0.9852	0.1893
S11-S35	1.112E+01	2.264E-02	491.3635	490.8729	0.4905	0.0999
S01-S20	9.674E+00	2.264E-02	427.2965	426.0483	1.2483	0.2930
S16-S25	8.917E+00	2.264E-02	393.8557	393.8550	0.0007	0.0002
S01-S18	8.948E+00	2.264E-02	395.2253	394.2079	1.0173	0.2581
S19-S35	7.126E+00	2.264E-02	314.7306	314.4239	0.3067	0.0975
S01-S12	5.642E+00	2.264E-02	249.2176	247.8830	1.3347	0.5384
S13-S24	5.710E+00	2.264E-02	252.2295	252.7408	-0.5114	-0.2023
S25-S35	4.721E+00	2.264E-02	208.5087	208.0080	0.5007	0.2407
S01-S10	4.949E+00	2.264E-02	218.5924	217.7589	0.8335	0.3827
S13-S22	5.134E+00	2.264E-02	226.7596	227.1843	-0.4247	-0.1869
S23-S32	3.943E+00	2.264E-02	174.1685	173.0444	1.1242	0.6496
S01-S07	3.202E+00	2.264E-02	141.4250	140.8425	0.5825	0.4136
S08-S14	3.446E+00	2.264E-02	152.1983	151.1873	1.0109	0.6687
S15-S21	3.683E+00	2.264E-02	162.6982	162.6650	0.0332	0.0204
S22-S28	2.623E+00	2.264E-02	115.8784	116.2697	-0.3913	-0.3365
S29-S35	3.119E+00	2.264E-02	137.7559	137.6673	0.0886	0.0644
S01-S05	2.249E+00	2.264E-02	99.3485	98.5885	0.7600	0.7709
S06-S10	2.700E+00	2.264E-02	119.2439	119.1704	0.0735	0.0617
S11-S15	2.208E+00	2.264E-02	97.5077	97.0179	0.4898	0.5049

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S16-S20	2.517E+00	2.264E-02	111.1964	111.2715	-0.0750	-0.0674
S21-S25	2.130E+00	2.264E-02	94.0749	94.3380	-0.2630	-0.2788
S26-S30	1.903E+00	2.264E-02	84.0338	83.6838	0.3500	0.4183
S31-S35	2.367E+00	2.264E-02	104.5506	104.5618	-0.0112	-0.0107
S01-S03	1.523E+00	2.264E-02	67.2825	66.9394	0.3431	0.5126
S04-S06	1.102E+00	2.264E-02	48.6537	47.9673	0.6863	1.4308
S07-S09	1.719E+00	2.264E-02	75.9157	76.0383	-0.1226	-0.1613
S10-S12	1.299E+00	2.264E-02	57.3658	56.9379	0.4279	0.7515
S13-S15	1.514E+00	2.264E-02	66.8825	66.8938	-0.0114	-0.0170
S16-S18	1.791E+00	2.264E-02	79.1252	79.4311	-0.3060	-0.3852
S19-S21	1.383E+00	2.264E-02	61.0962	60.4869	0.6093	1.0073
S22-S24	1.022E+00	2.264E-02	45.1256	45.9289	-0.8033	-1.7490
S25-S27	1.253E+00	2.264E-02	55.3393	54.8275	0.5118	0.9335
S28-S30	1.101E+00	2.264E-02	48.6189	48.6188	0.0001	0.0002
S31-S33	1.411E+00	2.264E-02	62.3065	61.8697	0.4368	0.7060
S34-S35	9.564E-01	2.264E-02	42.2441	42.6921	-0.4480	-1.0495

Average % Error = 0.1813

INDIVIDUAL SOURCE ESTIMATE AND ERROR - CONTACT MEASUREMENT

SOURCE	CONT		EST		ACTUAL	
	AVG CONT R/hr	CONV FACT R/hr/Ci	Cs-137 CURIES	Cs-137 CURIES	ERROR	% ERROR
S01	4.256E+01	7.396E-01	57.5491	29.4975	28.0516	95.0982
S02	7.929E+00	7.396E-01	10.7202	13.8502	-3.1300	-22.5990
S03	1.378E+01	7.396E-01	18.6320	23.5916	-4.9596	-21.0227
S04	2.021E+01	7.396E-01	27.3229	20.6982	6.6247	32.0062
S05	8.007E+00	7.396E-01	10.8263	10.9510	-0.1246	-1.1381
S06	1.093E+01	7.396E-01	14.7844	16.3182	-1.5338	-9.3993
S07	1.993E+01	7.396E-01	26.9524	25.9358	1.0166	3.9196
S08	1.687E+01	7.396E-01	22.8160	25.1678	-2.3518	-9.3445
S09	1.530E+01	7.396E-01	20.6893	24.9347	-4.2453	-17.0258
S10	1.795E+01	7.396E-01	24.2757	26.8139	-2.5382	-9.4661
S11	9.033E+00	7.396E-01	12.2127	12.5933	-0.3807	-3.0227
S12	1.253E+01	7.396E-01	16.9373	17.5307	-0.5935	-3.3853
S13	1.073E+01	7.396E-01	14.5112	17.9331	-3.4219	-19.0813
S14	2.172E+01	7.396E-01	29.3609	26.2138	3.1471	12.0055
S15	2.128E+01	7.396E-01	28.7747	22.7469	6.0278	26.4994
S16	1.696E+01	7.396E-01	22.9273	27.6556	-4.7283	-17.0970
S17	2.032E+01	7.396E-01	27.4687	28.5227	-1.0540	-3.6953
S18	1.152E+01	7.396E-01	15.5824	23.2528	-7.6704	-32.9870
S19	1.988E+01	7.396E-01	26.8814	15.3416	11.5398	75.2195
S20	9.585E+00	7.396E-01	12.9590	16.4988	-3.5397	-21.4546
S21	1.840E+01	7.396E-01	24.8791	28.6466	-3.7675	-13.1516
S22	8.445E+00	7.396E-01	11.4177	20.3724	-8.9547	-43.9550
S23	7.055E+00	7.396E-01	9.5389	13.0146	-3.4757	-26.7060
S24	9.611E+00	7.396E-01	12.9953	12.5419	0.4534	3.6149
S25	1.212E+01	7.396E-01	16.3839	19.7625	-3.3785	-17.0958
S26	2.195E+01	7.396E-01	29.6715	24.8512	4.8203	19.3965

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S27	2.129E+01	7.396E-01	28.7845	10.2138	18.5708	181.8213
S28	1.194E+01	7.396E-01	16.1492	15.5133	0.6359	4.0991
S29	1.058E+01	7.396E-01	14.3100	18.0653	-3.7554	-20.7876
S30	1.138E+01	7.396E-01	15.3870	15.0401	0.3469	2.3065
S31	2.024E+01	7.396E-01	27.3595	22.3550	5.0045	22.3866
S32	2.572E+01	7.396E-01	34.7754	21.6866	13.0887	60.3540
S33	3.444E+01	7.396E-01	46.5716	17.8281	28.7435	161.2262
S34	6.251E+00	7.396E-01	8.4524	14.6776	-6.2252	-42.4130
S35	1.598E+01	7.396E-01	21.6089	28.0146	-6.4057	-22.8656

Average % Error = 9.2074

INDIVIDUAL SOURCE ESTIMATE AND ERROR - REMOTE MEASUREMENT

SOURCE	REMOTE					
	AVG REMOTE R/hr	CONV FACT R/hr/Ci	EST Cs-137 CURIES	ACTUAL Cs-137 CURIES	ERROR	% ERROR
S01	6.780E-01	2.264E-02	29.9470	29.4975	0.4495	1.5238
S02	3.092E-01	2.264E-02	13.6592	13.8502	-0.1910	-1.3793
S03	5.360E-01	2.264E-02	23.6763	23.5916	0.0847	0.3589
S04	4.750E-01	2.264E-02	20.9797	20.6982	0.2816	1.3603
S05	2.510E-01	2.264E-02	11.0863	10.9510	0.1353	1.2356
S06	3.755E-01	2.264E-02	16.5876	16.3182	0.2694	1.6511
S07	5.771E-01	2.264E-02	25.4889	25.9358	-0.4469	-1.7232
S08	5.779E-01	2.264E-02	25.5259	25.1678	0.3581	1.4228
S09	5.638E-01	2.264E-02	24.9009	24.9347	-0.0338	-0.1354
S10	6.054E-01	2.264E-02	26.7406	26.8139	-0.0733	-0.2735
S11	2.900E-01	2.264E-02	12.8108	12.5933	0.2175	1.7271
S12	4.033E-01	2.264E-02	17.8144	17.5307	0.2837	1.6184
S13	4.082E-01	2.264E-02	18.0317	17.9331	0.0986	0.5498
S14	5.971E-01	2.264E-02	26.3740	26.2138	0.1601	0.6109
S15	5.089E-01	2.264E-02	22.4768	22.7469	-0.2701	-1.1875
S16	6.325E-01	2.264E-02	27.9367	27.6556	0.2811	1.0165
S17	6.461E-01	2.264E-02	28.5396	28.5227	0.0169	0.0593
S18	5.128E-01	2.264E-02	22.6488	23.2528	-0.6040	-2.5977
S19	3.526E-01	2.264E-02	15.5723	15.3416	0.2307	1.5037
S20	3.735E-01	2.264E-02	16.4990	16.4988	0.0002	0.0014
S21	6.571E-01	2.264E-02	29.0250	28.6466	0.3784	1.3208
S22	4.450E-01	2.264E-02	19.6558	20.3724	-0.7167	-3.5178
S23	2.902E-01	2.264E-02	12.8172	13.0146	-0.1974	-1.5170
S24	2.865E-01	2.264E-02	12.6527	12.5419	0.1108	0.8833
S25	4.511E-01	2.264E-02	19.9244	19.7625	0.1619	0.8192
S26	5.709E-01	2.264E-02	25.2145	24.8512	0.3633	1.4617
S27	2.309E-01	2.264E-02	10.2004	10.2138	-0.0133	-0.1305

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S28	3.490E-01	2.264E-02	15.4135	15.5133	-0.0998	-0.6431
S29	4.121E-01	2.264E-02	18.2006	18.0653	0.1353	0.7489
S30	3.397E-01	2.264E-02	15.0047	15.0401	-0.0354	-0.2356
S31	5.136E-01	2.264E-02	22.6850	22.3550	0.3300	1.4761
S32	4.993E-01	2.264E-02	22.0555	21.6866	0.3689	1.7011
S33	3.977E-01	2.264E-02	17.5660	17.8281	-0.2621	-1.4701
S34	3.224E-01	2.264E-02	14.2414	14.6776	-0.4362	-2.9718
S35	6.340E-01	2.264E-02	28.0027	28.0146	-0.0118	-0.0423

Average % Error = 0.1493

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

**THIS ATTACHMENT CALCULATES MICROSHIELD INPUT DATA SHEETS FOR READINGS
TAKEN ON HN-200 GROUT CONTAINERS WITH THE MEASUREMENT PROBE 5 FEET
FROM THE SURFACE OF THE CONTAINER.**

TABLE 1

Coordinates of Remote Measuring Points.

Point	X	Z	Y
R01	82.9375	0.0000	26.7500
R02	76.6243	31.7388	26.7500
R03	58.6457	58.6457	26.7500
R04	31.7388	76.6243	26.7500
R05	0.0000	82.9375	26.7500
R06	-31.7388	76.6243	26.7500
R07	-58.6457	58.6457	26.7500
R08	-76.6243	31.7388	26.7500
R09	-82.9375	0.0000	26.7500
R10	-76.6243	-31.7388	26.7500
R11	-58.6457	-58.6457	26.7500
R12	-31.7388	-76.6243	26.7500
R13	0.0000	-82.9375	26.7500
R14	31.7388	-76.6243	26.7500
R15	58.6457	-58.6457	26.7500
R16	76.6243	-31.7388	26.7500

Note 1 - Remote Measuring Points (R) are 60 inches (5 feet) from the surface of the container.

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OF HN-200 GROUT CONTAINERS.**

TABLE 2
Coordinates and source strengths for random sources.

Source	X	Z	Y	Validity	Strength
S01	19.3677	0.5818	25.9034	Valid	29.4975
S02	-10.6176	-19.5689	18.8660	Valid	13.8502
S03	1.7704	-7.2590	41.8874	Valid	23.5916
S04	5.5262	-19.2179	28.6756	Valid	20.6982
S05	-12.5171	2.4304	36.3581	Valid	10.9510
S06	10.1481	-6.8169	29.6428	Valid	16.3182
S07	-3.0040	-18.4824	1.5181	Valid	25.9358
S08	-1.4468	-9.3997	20.8621	Valid	25.1678
S09	-11.3240	-1.2877	45.4810	Valid	24.9347
S10	-8.1594	10.5475	46.4380	Valid	26.8139
S11	13.0540	6.4320	29.1917	Valid	12.5933
S12	17.0889	8.7507	21.2880	Valid	17.5307
S13	3.5123	8.3040	41.4473	Valid	17.9331
S14	-18.2417	6.1323	39.9213	Valid	26.2138
S15	21.0026	5.4076	10.7056	Valid	22.7469
S16	12.7799	10.3319	39.3081	Valid	27.6556
S17	-14.4903	3.0983	8.6941	Valid	28.5227
S18	18.7646	-12.0033	10.5209	Valid	23.2528
S19	-18.2584	0.2785	21.1001	Valid	15.3416
S20	2.8644	9.2261	44.4497	Valid	16.4988
S21	3.0621	-7.9137	19.8848	Valid	28.6466
S22	-17.9782	12.8570	50.0431	Valid	20.3724
S23	5.0992	14.6169	52.0038	Valid	13.0146
S24	7.9617	19.2122	33.0332	Valid	12.5419
S25	8.3975	9.5559	39.8544	Valid	19.7625
S26	4.1090	16.2164	34.1935	Valid	24.8512
S27	2.2698	-21.1016	13.9713	Valid	10.2138
S28	18.4153	-5.6775	6.4850	Valid	15.5133
S29	-0.0904	3.6427	38.3454	Valid	18.0653
S30	7.3731	-19.7854	12.4003	Valid	15.0401
S31	5.5574	-17.7939	21.2754	Valid	22.3550
S32	-0.9171	17.9652	26.2433	Valid	21.6866
S33	-2.7939	-22.1819	29.8247	Valid	17.8281
S34	-14.1407	16.9694	5.4489	Valid	14.6776
S35	17.6331	12.8346	30.1155	Valid	28.0146

**TABLE 3 - Calculate Microshield input data sheets for the simulations from each source to each
measuring point in inches.**

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OF HN-200 GROUT CONTAINERS.**

	Cs-137	Ba-137m	Source 01	X Posit	Z Posit	Y Posit
	29.4975	27.9047		19.3677	0.5818	25.9034
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S01R01	3.4254	0.1383	63.5781	60.0144		
S01R02	3.7651	0.1496	65.1904	61.2757		
S01R03	5.1838	0.1903	70.1063	64.7323		
S01R04	8.8835	0.2490	77.0469	67.9143		
S01R05	16.4904	0.2480	84.6066	67.8683		
S01R06	26.1607	0.1983	91.6245	65.2655		
S01R07	34.5576	0.1625	97.2534	62.5333		
S01R08	40.0868	0.1442	100.9254	60.6944		
S01R09	42.1666	0.1382	102.3104	60.0056		
S01R10	40.6358	0.1426	101.2907	60.5123		
S01R11	35.6106	0.1587	97.9526	62.1832		
S01R12	27.5858	0.1915	92.5925	64.8152		
S01R13	17.9345	0.2410	85.7397	67.5642		
S01R14	9.7811	0.2549	78.1956	68.1595		
S01R15	5.5544	0.1991	71.0730	65.3196		
S01R16	3.8961	0.1538	65.7545	61.7046		

	Cs-137	Ba-137m	Source 02	X Posit	Z Posit	Y Posit
	13.8502	13.1023		-10.6176	-19.5689	18.8660
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S02R01	29.7139	0.2070	95.9044	65.9835		
S02R02	38.8848	0.1603	101.5175	62.4723		
S02R03	44.0530	0.1421	104.7716	60.5766		
S02R04	45.0402	0.1390	105.4010	60.2217		
S02R05	41.8180	0.1494	103.3560	61.3886		
S02R06	34.4851	0.1799	98.7998	64.1349		
S02R07	23.3624	0.2582	92.1216	68.5010		
S02R08	9.7760	0.4995	83.9734	73.6978		
S02R09	1.9814	0.4339	75.3344	72.9191		
S02R10	0.8431	0.2131	67.5807	66.5244		
S02R11	0.5827	0.1500	62.4167	61.6841		
S02R12	0.5454	0.1407	61.3480	60.6619		
S02R13	0.6798	0.1739	64.7338	63.8801		
S02R14	1.2155	0.2961	71.4950	69.9835		
S02R15	4.5803	0.6074	79.9159	74.7282		
S02R16	17.1086	0.3377	88.4388	70.9925		

Cs-137	Ba-137m	Source 03	X Posit	Z Posit	Y Posit
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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
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	23.5916	22.3177		1.7704	-7.2590	41.8874
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S03R01	20.8022	0.1485	82.8850	61.9343		
S03R02	23.7711	0.1481	85.7500	61.8309		
S03R03	26.7065	0.1455	88.3593	61.5073		
S03R04	29.0771	0.1425	90.3529	61.1333		
S03R05	30.4533	0.1405	91.4751	60.8812		
S03R06	30.5937	0.1403	91.5883	60.8543		
S03R07	29.4741	0.1419	90.6790	61.0630		
S03R08	27.2896	0.1448	88.8578	61.4233		
S03R09	24.4338	0.1476	86.3555	61.7741		
S03R10	21.4266	0.1487	83.5113	61.9360		
S03R11	18.7783	0.1471	80.7455	61.8201		
S03R12	16.8486	0.1440	78.5083	61.5157		
S03R13	15.8079	0.1414	77.1978	61.2485		
S03R14	15.7049	0.1412	77.0635	61.2175		
S03R15	16.5426	0.1433	78.1315	61.4456		
S03R16	18.2870	0.1465	80.1966	61.7631		

	Cs-137	Ba-137m	Source 04	X Posit	Z Posit	Y Posit
	20.6982	19.5805		5.5262	-19.2179	28.6756
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S04R01	10.2463	0.2843	79.7844	69.2538		
S04R02	19.5488	0.2439	87.4942	67.7015		
S04R03	29.5836	0.1869	94.2769	64.5064		
S04R04	37.3753	0.1552	99.3808	61.8503		
S04R05	41.8506	0.1410	102.3229	60.3314		
S04R06	42.6488	0.1387	102.8500	60.0626		
S04R07	39.7175	0.1474	100.9182	61.0532		
S04R08	33.2652	0.1707	96.6902	63.2543		
S04R09	23.9702	0.2166	90.5475	66.3607		
S04R10	13.8198	0.2776	83.1215	69.0240		
S04R11	6.8398	0.2567	75.3411	68.2447		
S04R12	3.9740	0.1841	68.4681	64.3100		
S04R13	2.9766	0.1456	63.9877	60.8655		
S04R14	2.8312	0.1394	63.1372	60.1666		
S04R15	3.4097	0.1631	66.1811	62.6083		
S04R16	5.2603	0.2235	72.2179	66.7341		

	Cs-137	Ba-137m	Source 05	X Posit	Z Posit	Y Posit
	10.9510	10.3596		-12.5171	2.4304	36.3581

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Line	Shield 1	Shield 2	Total Dist	Air Gap
S05R01	35.4544	0.1395	95.9677	60.3738
S05R02	33.2396	0.1444	94.3265	60.9425
S05R03	29.1265	0.1533	91.1955	61.9156
S05R04	23.8601	0.1633	86.9232	62.8998
S05R05	18.5556	0.1676	82.0390	63.3157
S05R06	14.3013	0.1612	77.2433	62.7809
S05R07	11.5796	0.1492	73.3507	61.6220
S05R08	10.3019	0.1407	71.1410	60.6984
S05R09	10.2877	0.1406	71.1144	60.6862
S05R10	11.5343	0.1489	73.2775	61.5943
S05R11	14.2201	0.1609	77.1392	62.7582
S05R12	18.4413	0.1676	81.9233	63.3145
S05R13	23.7322	0.1635	86.8140	62.9182
S05R14	29.0133	0.1536	91.1073	61.9404
S05R15	33.1633	0.1445	94.2695	60.9617
S05R16	35.4277	0.1396	95.9481	60.3809

	Cs-137	Ba-137m	Source 06	X Posit	Z Posit	Y Posit
	16.3182	15.4370		10.1481	-6.8169	29.6428
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S06R01	11.9888	0.1470	73.1651	61.0294		
S06R02	14.6287	0.1577	76.9025	62.1161		
S06R03	18.7011	0.1636	81.5214	62.6567		
S06R04	23.7384	0.1601	86.2378	62.3393		
S06R05	28.7368	0.1514	90.3726	61.4843		
S06R06	32.6534	0.1433	93.4094	60.6127		
S06R07	34.7732	0.1388	95.0069	60.0948		
S06R08	34.7595	0.1389	94.9966	60.0982		
S06R09	32.6144	0.1434	93.3797	60.6219		
S06R10	28.6791	0.1515	90.3267	61.4962		
S06R11	23.6732	0.1602	86.1811	62.3477		
S06R12	18.6425	0.1635	81.4614	62.6553		
S06R13	14.5865	0.1576	76.8486	62.1045		
S06R14	11.9649	0.1468	73.1273	61.0156		
S06R15	10.7302	0.1393	71.0395	60.1700		
S06R16	10.7378	0.1394	71.0532	60.1760		

	Cs-137	Ba-137m	Source 07	X Posit	Z Posit	Y Posit
	25.9358	24.5353		-3.0040	-18.4824	1.5181
Line	Shield 1	Shield 2	Total Dist	Air Gap		

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S07R01	22.3793	0.2222	91.4559	68.8544
S07R02	31.4434	0.1812	97.4653	65.8407
S07R03	38.3710	0.1558	101.9121	63.3853
S07R04	42.1682	0.1441	104.3503	62.0379
S07R05	42.4856	0.1432	104.5546	61.9258
S07R06	39.2983	0.1528	102.5067	63.0556
S07R07	32.8853	0.1754	98.3941	65.3333
S07R08	24.0805	0.2141	92.6216	68.3270
S07R09	14.9639	0.2508	85.8348	70.6202
S07R10	8.6446	0.2295	78.9451	70.0710
S07R11	5.6645	0.1805	73.1146	67.2695
S07R12	4.5354	0.1528	69.5904	64.9022
S07R13	4.4533	0.1506	69.2830	64.6792
S07R14	5.3616	0.1736	72.2786	66.7434
S07R15	7.9063	0.2205	77.7845	69.6578
S07R16	13.5526	0.2522	84.5757	70.7709

	Cs-137	Ba-137m	Source 08	X Posit	Z Posit	Y Posit
	25.1678	23.8087		-1.4468	-9.3997	20.8621
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S08R01	23.4033	0.1513	85.1101	61.5556		
S08R02	27.2028	0.1470	88.4428	61.0931		
S08R03	30.2796	0.1421	90.9723	60.5505		
S08R04	32.0641	0.1390	92.3909	60.1878		
S08R05	32.2488	0.1387	92.5361	60.1485		
S08R06	30.8030	0.1412	91.3915	60.4473		
S08R07	27.9727	0.1458	89.0874	60.9688		
S08R08	24.2735	0.1505	85.8994	61.4754		
S08R09	20.4164	0.1523	82.2421	61.6734		
S08R10	17.0996	0.1496	78.6471	61.3980		
S08R11	14.7613	0.1440	75.7070	60.8017		
S08R12	13.5358	0.1395	73.9690	60.2937		
S08R13	13.4142	0.1390	73.7873	60.2341		
S08R14	14.3923	0.1428	75.2003	60.6653		
S08R15	16.4867	0.1484	77.9162	61.2811		
S08R16	19.6119	0.1521	81.4174	61.6534		

	Cs-137	Ba-137m	Source 09	X Posit	Z Posit	Y Posit
	24.9347	23.5882		-11.3240	-1.2877	45.4810
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S09R01	34.7785	0.1411	96.1132	61.1936		

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S09R02	34.3466	0.1420	95.7941	61.3055
S09R03	31.9648	0.1469	94.0140	61.9023
S09R04	28.0271	0.1545	90.9700	62.7883
S09R05	23.2724	0.1616	87.0228	63.5888
S09R06	18.6738	0.1631	82.6916	63.8546
S09R07	15.0668	0.1571	78.6270	63.4032
S09R08	12.7989	0.1483	75.5363	62.5890
S09R09	11.8366	0.1432	74.0338	62.0541
S09R10	12.0921	0.1446	74.4463	62.2096
S09R11	13.5931	0.1519	76.6820	62.9370
S09R12	16.4381	0.1604	80.2696	63.6711
S09R13	20.5390	0.1635	84.5326	63.8302
S09R14	25.3247	0.1590	88.7742	63.2905
S09R15	29.8442	0.1511	92.3934	62.3981
S09R16	33.1936	0.1444	94.9369	61.5990

	Cs-137	Ba-137m	Source 10	X Posit	Z Posit	Y Posit
	26.8139	25.3659		-8.1594	10.5475	46.4380
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S10R01	30.7104	0.1555	93.7951	62.9291		
S10R02	25.2285	0.1676	89.5822	64.1861		
S10R03	19.4920	0.1749	84.6403	64.9734		
S10R04	14.7546	0.1700	79.6595	64.7349		
S10R05	11.6575	0.1567	75.4620	63.6478		
S10R06	10.1205	0.1459	72.8680	62.6016		
S10R07	9.9001	0.1442	72.4563	62.4120		
S10R08	10.9507	0.1521	74.3245	63.2216		
S10R09	13.4666	0.1656	78.0425	64.4102		
S10R10	17.6518	0.1746	82.8443	65.0179		
S10R11	23.1612	0.1712	87.8873	64.5549		
S10R12	28.8833	0.1598	92.4258	63.3827		
S10R13	33.5609	0.1488	95.8834	62.1738		
S10R14	36.3261	0.1423	97.8693	61.4008		
S10R15	36.7548	0.1414	98.1745	61.2784		
S10R16	34.7868	0.1459	96.7679	61.8351		

	Cs-137	Ba-137m	Source 11	X Posit	Z Posit	Y Posit
	12.5933	11.9133		13.0540	6.4320	29.1917
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S11R01	9.0908	0.1466	70.2213	60.9839		
S11R02	8.2684	0.1385	68.4659	60.0590		

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S11R03	8.6747	0.1426	69.3602	60.5429
S11R04	10.4244	0.1576	72.6777	62.0957
S11R05	13.8957	0.1745	77.6496	63.5794
S11R06	19.2322	0.1785	83.3026	63.8919
S11R07	25.5857	0.1673	88.7304	62.9774
S11R08	31.4435	0.1528	93.2127	61.6164
S11R09	35.5810	0.1425	96.2378	60.5142
S11R10	37.3270	0.1383	97.4945	60.0291
S11R11	36.4443	0.1404	96.8603	60.2755
S11R12	33.0496	0.1487	94.3965	61.1982
S11R13	27.6549	0.1623	90.3508	62.5336
S11R14	21.2978	0.1760	85.1671	63.6933
S11R15	15.4760	0.1778	79.4963	63.8425
S11R16	11.3645	0.1637	74.1900	62.6618

	Cs-137	Ba-137m	Source 12	X Posit	Z Posit	Y Posit
	17.5307	16.5841		17.0889	8.7507	21.2880
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S12R01	4.2380	0.1578	66.6517	62.2558		
S12R02	3.6302	0.1392	64.0527	60.2833		
S12R03	3.8728	0.1469	65.1638	61.1441		
S12R04	5.1497	0.1824	69.6511	64.3190		
S12R05	8.4914	0.2386	76.3253	67.5953		
S12R06	15.5374	0.2484	83.7902	68.0044		
S12R07	25.0133	0.2028	90.8574	65.6413		
S12R08	33.5869	0.1657	96.6460	62.8934		
S12R09	39.4679	0.1459	100.5569	60.9430		
S12R10	41.9827	0.1386	102.2320	60.1108		
S12R11	40.9258	0.1416	101.5275	60.4601		
S12R12	36.3789	0.1558	98.5031	61.9685		
S12R13	28.7794	0.1853	93.4269	64.4622		
S12R14	19.3408	0.2314	86.7948	67.2226		
S12R15	10.8955	0.2531	79.3667	68.2182		
S12R16	6.1711	0.2049	72.2060	65.8300		

	Cs-137	Ba-137m	Source 13	X Posit	Z Posit	Y Posit
	17.9331	16.9647		3.5123	8.3040	41.4473
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S13R01	18.7858	0.1517	81.1994	62.2619		
S13R02	16.1593	0.1475	78.1701	61.8634		
S13R03	14.5678	0.1428	76.0920	61.3814		

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S13R04	14.0530	0.1409	75.3685	61.1746
S13R05	14.6084	0.1429	76.1479	61.3965
S13R06	16.2407	0.1476	78.2707	61.8824
S13R07	18.9034	0.1518	81.3259	62.2707
S13R08	22.3452	0.1525	84.7766	62.2788
S13R09	26.0308	0.1494	88.0825	61.9023
S13R10	29.2736	0.1449	90.7816	61.3631
S13R11	31.4656	0.1413	92.5305	60.9236
S13R12	32.2191	0.1400	93.1207	60.7617
S13R13	31.4071	0.1414	92.4844	60.9359
S13R14	29.1666	0.1451	90.6949	61.3832
S13R15	25.8949	0.1496	87.9658	61.9213
S13R16	22.2062	0.1526	84.6452	62.2864

	Cs-137	Ba-137m	Source 14	X Posit	Z Posit	Y Posit
	26.2138	24.7983		-18.2417	6.1323	39.9213
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S14R01	41.1628	0.1428	102.2171	60.9114		
S14R02	36.4830	0.1577	99.1400	62.4993		
S14R03	28.7441	0.1883	94.0363	65.1038		
S14R04	19.1924	0.2361	87.4109	67.9824		
S14R05	10.7449	0.2568	80.0330	69.0313		
S14R06	6.1003	0.2066	72.9711	66.6642		
S14R07	4.2199	0.1595	67.5546	63.1752		
S14R08	3.6416	0.1415	65.0976	61.3145		
S14R09	3.9102	0.1501	66.3071	62.2468		
S14R10	5.2314	0.1870	70.8253	65.4069		
S14R11	8.6853	0.2443	77.4736	68.5440		
S14R12	15.9245	0.2511	84.8782	68.7026		
S14R13	25.5166	0.2036	91.8677	66.1475		
S14R14	34.0953	0.1662	97.5715	63.3100		
S14R15	39.9174	0.1465	101.3970	61.3331		
S14R16	42.3372	0.1395	102.9916	60.5149		

	Cs-137	Ba-137m	Source 15	X Posit	Z Posit	Y Posit
	22.7469	21.5186		21.0026	5.4076	10.7056
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S15R01	1.2138	0.1504	64.2075	62.8433		
S15R02	1.1689	0.1452	63.5966	62.2825		
S15R03	1.4757	0.1802	67.1470	65.4911		
S15R04	2.5994	0.2902	73.7869	70.8973		

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S15R05	7.4544	0.4442	81.9110	74.0124
S15R06	19.2291	0.2943	90.0605	70.5370
S15R07	30.9572	0.1981	97.1368	65.9815
S15R08	39.4954	0.1583	102.3805	62.7267
S15R09	44.1590	0.1424	105.3100	61.0086
S15R10	44.7424	0.1406	105.6801	60.7971
S15R11	41.2242	0.1520	103.4606	62.0844
S15R12	33.7467	0.1832	98.8348	64.9048
S15R13	22.7887	0.2578	92.2138	69.1673
S15R14	10.3360	0.4173	84.2729	73.5197
S15R15	3.3266	0.3440	76.0083	72.3376
S15R16	1.6652	0.2009	68.7827	66.9166

	Cs-137	Ba-137m	Source 16	X Posit	Z Posit	Y Posit
	27.6556	26.1622		12.7799	10.3319	39.3081
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S16R01	8.3230	0.1653	72.0176	63.5293		
S16R02	6.7801	0.1452	68.4987	61.5733		
S16R03	6.5180	0.1413	67.7909	61.1316		
S16R04	7.4227	0.1542	70.0844	62.5075		
S16R05	9.8747	0.1803	74.7837	64.7287		
S16R06	14.5944	0.2003	80.8351	66.0404		
S16R07	21.5366	0.1923	87.1410	65.4121		
S16R08	29.0030	0.1697	92.7851	63.6124		
S16R09	35.0999	0.1513	97.0890	61.8378		
S16R10	38.7339	0.1414	99.6030	60.7278		
S16R11	39.4353	0.1396	100.0861	60.5113		
S16R12	37.1263	0.1457	98.4937	61.2217		
S16R13	32.0781	0.1602	94.9748	62.7365		
S16R14	25.0561	0.1821	89.8806	64.6424		
S16R15	17.6027	0.2001	83.7812	65.9784		
S16R16	11.7398	0.1922	77.4839	65.5519		

	Cs-137	Ba-137m	Source 17	X Posit	Z Posit	Y Posit
	28.5227	26.9825		-14.4903	3.0983	8.6941
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S17R01	37.8611	0.1415	99.1352	61.1326		
S17R02	35.1040	0.1484	97.2016	61.9492		
S17R03	30.0711	0.1617	93.5970	63.3642		
S17R04	23.6444	0.1779	88.7086	64.8863		
S17R05	17.2854	0.1858	83.1281	65.6569		

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S17R06	12.4618	0.1754	77.6505	65.0134
S17R07	9.6194	0.1565	73.2204	63.4446
S17R08	8.3873	0.1444	70.7597	62.2280
S17R09	8.4317	0.1449	70.8565	62.2798
S17R10	9.7663	0.1578	73.4866	63.5625
S17R11	12.7444	0.1766	78.0259	65.1049
S17R12	17.7101	0.1858	83.5417	65.6458
S17R13	24.1304	0.1768	89.0962	64.7890
S17R14	30.4988	0.1605	93.9086	63.2493
S17R15	35.3887	0.1477	97.4023	61.8659
S17R16	37.9602	0.1413	99.2044	61.1029

	Cs-137	Ba-137m	Source 18	X Posit	Z Posit	Y Posit
	23.2528	21.9972		18.7646	-12.0033	10.5209
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S18R01	0.7334	0.1911	67.2728	66.3483		
S18R02	1.4355	0.3482	74.3270	72.5432		
S18R03	6.3650	0.6069	82.7355	75.7636		
S18R04	19.8449	0.3054	91.0306	70.8803		
S18R05	32.0166	0.1971	98.1287	65.9150		
S18R06	40.5319	0.1570	103.2900	62.6011		
S18R07	44.9644	0.1418	106.0519	60.9457		
S18R08	45.1799	0.1411	106.1875	60.8665		
S18R09	41.1726	0.1546	103.6860	62.3588		
S18R10	33.0608	0.1911	98.7518	65.4998		
S18R11	21.2204	0.2880	91.8219	70.3135		
S18R12	7.5339	0.5777	83.6053	75.4938		
S18R13	1.5949	0.3787	75.1476	73.1740		
S18R14	0.7681	0.1996	67.8792	66.9115		
S18R15	0.5658	0.1490	63.4776	62.7628		
S18R16	0.5578	0.1470	63.2505	62.5457		

	Cs-137	Ba-137m	Source 19	X Posit	Z Posit	Y Posit
	15.3416	14.5131		-18.2584	0.2785	21.1001
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S19R01	41.1212	0.1384	101.3539	60.0943		
S19R02	39.2983	0.1435	100.1219	60.6802		
S19R03	34.2588	0.1591	96.7104	62.2925		
S19R04	26.6081	0.1876	91.4348	64.6391		
S19R05	17.8410	0.2223	84.8399	66.7766		
S19R06	10.6596	0.2233	77.7324	66.8496		

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S19R07	6.6976	0.1824	71.2024	64.3225
S19R08	5.0020	0.1492	66.5451	61.3940
S19R09	4.5568	0.1387	64.9260	60.2305
S19R10	5.0809	0.1510	66.8102	61.5784
S19R11	6.9059	0.1857	71.6597	64.5681
S19R12	11.1023	0.2253	78.2795	66.9519
S19R13	18.5041	0.2201	85.3826	66.6584
S19R14	27.2697	0.1849	91.9004	64.4458
S19R15	34.7553	0.1574	97.0475	62.1348
S19R16	39.5593	0.1427	100.2983	60.5963

	Cs-137	Ba-137m	Source 20	X Posit	Z Posit	Y Posit
	16.4988	15.6078		2.8644	9.2261	44.4497
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S20R01	19.3906	0.1555	82.5234	62.9772		
S20R02	16.3352	0.1513	79.1242	62.6376		
S20R03	14.3697	0.1456	76.5972	62.0820		
S20R04	13.5470	0.1423	75.4290	61.7397		
S20R05	13.8449	0.1436	75.8608	61.8723		
S20R06	15.2747	0.1486	77.8022	62.3789		
S20R07	17.8406	0.1540	80.8645	62.8699		
S20R08	21.3689	0.1559	84.4899	62.9651		
S20R09	25.3558	0.1531	88.0929	62.5841		
S20R10	29.0593	0.1477	91.1584	61.9514		
S20R11	31.7694	0.1430	93.2917	61.3793		
S20R12	33.0008	0.1408	94.2388	61.0972		
S20R13	32.5474	0.1416	93.8915	61.2024		
S20R14	30.4841	0.1453	92.2892	61.6598		
S20R15	27.1671	0.1507	89.6182	62.3004		
S20R16	23.2157	0.1551	86.2086	62.8378		

	Cs-137	Ba-137m	Source 21	X Posit	Z Posit	Y Posit
	28.6466	27.0997		3.0621	-7.9137	19.8848
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S21R01	19.0850	0.1485	80.5595	61.3261		
S21R02	22.3224	0.1491	83.8502	61.3786		
S21R03	25.7489	0.1466	86.9875	61.0920		
S21R04	28.7355	0.1427	89.5330	60.6548		
S21R05	30.7271	0.1396	91.1617	60.2949		
S21R06	31.3702	0.1386	91.6783	60.1695		
S21R07	30.5550	0.1399	91.0228	60.3278		

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S21R08	28.4211	0.1432	89.2714	60.7072
S21R09	25.3494	0.1470	86.6354	61.1389
S21R10	21.9130	0.1493	83.4547	61.3924
S21R11	18.7364	0.1482	80.1793	61.2947
S21R12	16.2975	0.1443	77.3264	60.8845
S21R13	14.8263	0.1403	75.3994	60.4328
S21R14	14.3764	0.1388	74.7705	60.2553
S21R15	14.9488	0.1407	75.5672	60.4777
S21R16	16.5409	0.1449	77.6284	60.9426

	Cs-137	Ba-137m	Source 22	X Posit	Z Posit	Y Posit
	20.3724	19.2723		-17.9782	12.8570	50.0431
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S22R01	40.7334	0.1595	104.3640	63.4711		
S22R02	32.1273	0.2005	99.2407	66.9129		
S22R03	19.9427	0.3079	92.2518	72.0013		
S22R04	6.8506	0.5542	84.1464	76.7416		
S22R05	1.8533	0.3350	76.0070	73.8186		
S22R06	0.9874	0.1931	69.2690	68.0885		
S22R07	0.7640	0.1514	65.5212	64.6058		
S22R08	0.7809	0.1546	65.8670	64.9315		
S22R09	1.0604	0.2063	70.1967	68.9300		
S22R10	2.1697	0.3776	77.2704	74.7231		
S22R11	8.6588	0.5218	85.4930	76.3124		
S22R12	22.1087	0.2820	93.4817	71.0910		
S22R13	33.7826	0.1912	100.2116	66.2378		
S22R14	41.7501	0.1557	104.9821	63.0763		
S22R15	45.6210	0.1427	107.3612	61.5975		
S22R16	45.2791	0.1438	107.1494	61.7265		

	Cs-137	Ba-137m	Source 23	X Posit	Z Posit	Y Posit
	13.0146	12.3118		5.0992	14.6169	52.0038
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S23R01	15.3065	0.1952	83.1277	67.6260		
S23R02	10.9414	0.1778	77.7609	66.6417		
S23R03	8.6293	0.1571	73.7802	64.9938		
S23R04	7.8271	0.1477	72.0579	64.0830		
S23R05	8.2607	0.1530	73.0168	64.6032		
S23R06	10.0824	0.1712	76.4179	66.1643		
S23R07	13.8035	0.1918	81.4843	67.4889		
S23R08	19.6928	0.1948	87.2332	67.3456		

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S23R09	26.7455	0.1785	92.7462	65.8222
S23R10	33.1755	0.1599	97.2899	63.9546
S23R11	37.6491	0.1475	100.3423	62.5457
S23R12	39.4898	0.1428	101.5862	61.9536
S23R13	38.4722	0.1454	100.8991	62.2815
S23R14	34.7175	0.1555	98.3483	63.4753
S23R15	28.7510	0.1728	94.1934	65.2696
S23R16	21.7002	0.1913	88.8957	67.0042

	Cs-137	Ba-137m	Source 24	X Posit	Z Posit	Y Posit
	12.5419	11.8646		7.9617	19.2122	33.0332
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S24R01	6.8756	0.3185	77.6528	70.4587		
S24R02	3.3809	0.2151	70.0781	66.4821		
S24R03	2.2825	0.1554	64.5240	62.0860		
S24R04	2.0129	0.1389	62.4578	60.3060		
S24R05	2.2830	0.1555	64.5274	62.0889		
S24R06	3.3825	0.2151	70.0840	66.4863		
S24R07	6.8806	0.3186	77.6597	70.4605		
S24R08	15.7304	0.2941	85.7391	69.7146		
S24R09	26.8459	0.2094	93.1196	66.0643		
S24R10	35.9710	0.1645	98.9459	62.8103		
S24R11	41.7238	0.1443	102.6542	60.7861		
S24R12	43.6758	0.1385	103.9242	60.1100		
S24R13	41.7205	0.1443	102.6520	60.7872		
S24R14	35.9646	0.1646	98.9417	62.8126		
S24R15	26.8369	0.2095	93.1139	66.0675		
S24R16	15.7209	0.2942	85.7323	69.7172		

	Cs-137	Ba-137m	Source 25	X Posit	Z Posit	Y Posit
	19.7625	18.6953		8.3975	9.5559	39.8544
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S25R01	13.2970	0.1581	76.2841	62.8290		
S25R02	11.0957	0.1465	72.9295	61.6873		
S25R03	10.2684	0.1407	71.4592	61.0501		
S25R04	10.6827	0.1437	72.2130	61.3865		
S25R05	12.4096	0.1541	75.0140	62.4504		
S25R06	15.6432	0.1652	79.2516	63.4431		
S25R07	20.3322	0.1681	84.1209	63.6206		
S25R08	25.7587	0.1610	88.8398	62.9200		
S25R09	30.7575	0.1507	92.7638	61.8556		

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S25R10	34.3142	0.1429	95.4237	60.9666
S25R11	35.8213	0.1396	96.5296	60.5687
S25R12	35.0529	0.1412	95.9670	60.7729
S25R13	32.1218	0.1477	93.7938	61.5242
S25R14	27.5033	0.1577	90.2418	62.5808
S25R15	22.0856	0.1666	85.7209	63.4687
S25R16	17.0414	0.1674	80.8201	63.6113

	Cs-137	Ba-137m	Source 26	X Posit	Z Posit	Y Posit
	24.8512	23.5093		4.1090	16.2164	34.1935
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S26R01	14.8147	0.2033	80.8227	65.8047		
S26R02	9.8092	0.1840	74.5307	64.5374		
S26R03	7.1928	0.1556	69.4975	62.1491		
S26R04	6.1823	0.1403	66.8426	60.5200		
S26R05	6.3277	0.1426	67.2607	60.7903		
S26R06	7.6966	0.1623	70.6370	62.7782		
S26R07	10.8718	0.1914	76.1170	65.0539		
S26R08	16.5617	0.2031	82.5483	65.7834		
S26R09	24.0966	0.1855	88.8565	64.5743		
S26R10	31.3941	0.1621	94.1965	62.6402		
S26R11	36.7831	0.1462	97.9688	61.0395		
S26R12	39.4284	0.1391	99.7991	60.2316		
S26R13	39.0211	0.1402	99.5178	60.3565		
S26R14	35.6051	0.1495	97.1504	61.3958		
S26R15	29.6025	0.1677	92.9193	63.1490		
S26R16	22.0418	0.1918	87.2558	65.0222		

	Cs-137	Ba-137m	Source 27	X Posit	Z Posit	Y Posit
	10.2138	9.6622		2.2698	-21.1016	13.9713
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S27R01	12.1881	0.3522	84.3555	71.8152		
S27R02	23.9084	0.2378	92.1086	67.9625		
S27R03	34.1772	0.1765	98.4945	64.1407		
S27R04	41.1145	0.1494	102.8692	61.6053		
S27R05	44.2030	0.1397	104.8455	60.5028		
S27R06	43.2918	0.1424	104.2604	60.8262		
S27R07	38.4219	0.1589	101.1614	62.5806		
S27R08	29.8677	0.1984	95.8107	65.7445		
S27R09	18.5288	0.2851	88.7066	69.8927		
S27R10	7.8783	0.3751	80.6271	72.3737		

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S27R11	3.2773	0.2570	72.6881	69.1538
S27R12	1.9878	0.1709	66.3525	64.1938
S27R13	1.6249	0.1424	63.1833	61.4160
S27R14	1.7228	0.1502	64.1443	62.2712
S27R15	2.3916	0.2006	68.9282	66.3360
S27R16	4.6689	0.3207	76.1908	71.2012

	Cs-137	Ba-137m	Source 28	X Posit	Z Posit	Y Posit
	15.5133	14.6756		18.4153	-5.6775	6.4850
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S28R01	3.9423	0.1527	67.8676	63.7726		
S28R02	5.1872	0.1883	72.1036	66.7281		
S28R03	8.4877	0.2465	78.5279	69.7937		
S28R04	15.5736	0.2582	85.8008	69.9689		
S28R05	25.2468	0.2098	92.7492	67.2926		
S28R06	34.0465	0.1702	98.4870	64.2703		
S28R07	40.1196	0.1491	102.4038	62.1351		
S28R08	42.7854	0.1412	104.1306	61.2040		
S28R09	41.8360	0.1439	103.5147	61.5348		
S28R10	37.3406	0.1582	100.6101	63.1113		
S28R11	29.7072	0.1884	95.6802	65.7847		
S28R12	20.0983	0.2370	89.2164	68.8811		
S28R13	11.3475	0.2635	81.9689	70.3579		
S28R14	6.3942	0.2154	74.9776	68.3680		
S28R15	4.3714	0.1659	69.5326	64.9954		
S28R16	3.7259	0.1458	66.9190	63.0473		

	Cs-137	Ba-137m	Source 29	X Posit	Z Posit	Y Posit
	18.0653	17.0898		-0.0904	3.6427	38.3454
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S29R01	22.9780	0.1413	83.9127	60.7934		
S29R02	21.5828	0.1412	82.5166	60.7926		
S29R03	20.4212	0.1406	81.3001	60.7383		
S29R04	19.6496	0.1400	80.4604	60.6708		
S29R05	19.3603	0.1397	80.1382	60.6383		
S29R06	19.5852	0.1399	80.3890	60.6639		
S29R07	20.2997	0.1405	81.1697	60.7294		
S29R08	21.4194	0.1411	82.3486	60.7881		
S29R09	22.7957	0.1413	83.7339	60.7969		
S29R10	24.2251	0.1410	85.1102	60.7441		
S29R11	25.4784	0.1403	86.2730	60.6542		

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S29R12	26.3454	0.1397	87.0567	60.5716
S29R13	26.6780	0.1394	87.3532	60.5358
S29R14	26.4190	0.1397	87.1225	60.5639
S29R15	25.6130	0.1403	86.3957	60.6424
S29R16	24.3978	0.1409	85.2727	60.7340

	Cs-137	Ba-137m	Source 30	X Posit	Z Posit	Y Posit
	15.0401	14.2280		7.3731	-19.7854	12.4003
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S30R01	6.8508	0.3557	79.4189	72.2124		
S30R02	16.5466	0.3029	87.5008	70.6512		
S30R03	28.0445	0.2090	94.7957	66.5422		
S30R04	37.1445	0.1640	100.4710	63.1625		
S30R05	42.6834	0.1445	103.9820	61.1542		
S30R06	44.3126	0.1396	105.0261	60.5739		
S30R07	41.9553	0.1468	103.5173	61.4152		
S30R08	35.7258	0.1698	99.5802	63.6845		
S30R09	26.0548	0.2218	93.5595	67.2829		
S30R10	14.4271	0.3246	86.0486	71.2968		
S30R11	5.7728	0.3377	77.9392	71.8287		
S30R12	2.8008	0.2157	70.4721	67.4557		
S30R13	1.9217	0.1562	65.1803	63.1024		
S30R14	1.7314	0.1420	63.4844	61.6110		
S30R15	2.0149	0.1629	65.9160	63.7381		
S30R16	3.1067	0.2339	71.7254	68.3847		

	Cs-137	Ba-137m	Source 31	X Posit	Z Posit	Y Posit
	22.3550	21.1478		5.5574	-17.7939	21.2754
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S31R01	11.8035	0.2378	79.5882	67.5470		
S31R02	19.9321	0.2201	86.7985	66.6463		
S31R03	28.9098	0.1809	93.2275	64.1369		
S31R04	36.1534	0.1543	98.1338	61.8261		
S31R05	40.4694	0.1413	101.0331	60.4224		
S31R06	41.4095	0.1386	101.6650	60.1168		
S31R07	38.8943	0.1458	99.9751	60.9350		
S31R08	33.1500	0.1646	96.1108	62.7962		
S31R09	24.8922	0.1980	90.4319	65.3417		
S31R10	15.8991	0.2350	83.5360	67.4019		
S31R11	9.1583	0.2246	76.2946	66.9117		
S31R12	5.7855	0.1770	69.8712	63.9087		

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S31R13	4.4403	0.1458	65.6090	61.0229
S31R14	4.1958	0.1393	64.6255	60.2904
S31R15	4.8860	0.1569	67.2102	62.1673
S31R16	6.9879	0.1988	72.6288	65.4421

	Cs-137	Ba-137m	Source 32	X Posit	Z Posit	Y Posit
	21.6866	20.5156		-0.9171	17.9652	26.2433
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S32R01	19.4232	0.2126	85.7589	66.1231		
S32R02	11.9468	0.2211	78.7568	66.5889		
S32R03	7.4807	0.1865	72.1310	64.4638		
S32R04	5.4570	0.1521	67.1383	61.5292		
S32R05	4.8189	0.1384	64.9807	60.0235		
S32R06	5.1850	0.1464	66.2656	60.9342		
S32R07	6.7734	0.1760	70.6240	63.6746		
S32R08	10.4828	0.2149	76.9516	66.2539		
S32R09	17.2630	0.2191	83.9664	66.4843		
S32R10	25.7938	0.1882	90.5667	64.5847		
S32R11	33.4572	0.1601	95.9275	62.3102		
S32R12	38.6691	0.1440	99.4857	60.6726		
S32R13	40.7601	0.1383	100.9081	60.0097		
S32R14	39.5267	0.1416	100.0692	60.4009		
S32R15	35.0850	0.1548	97.0423	61.8026		
S32R16	27.9539	0.1798	92.1054	63.9717		

	Cs-137	Ba-137m	Source 33	X Posit	Z Posit	Y Posit
	17.8281	16.8653		-2.7939	-22.1819	29.8247
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S33R01	17.6639	0.3309	88.6079	70.6131		
S33R02	30.2193	0.2036	96.0424	65.6196		
S33R03	39.2272	0.1586	101.5745	62.1887		
S33R04	44.1943	0.1413	104.7121	60.3766		
S33R05	44.9601	0.1389	105.2015	60.1025		
S33R06	41.5034	0.1501	103.0045	61.3509		
S33R07	33.9267	0.1823	98.2953	64.1863		
S33R08	22.5513	0.2670	91.4758	68.6576		
S33R09	8.7404	0.5468	83.2135	73.9262		
S33R10	1.5615	0.4279	74.5098	72.5204		
S33R11	0.6751	0.2075	66.7719	65.8892		
S33R12	0.4730	0.1476	61.7352	61.1147		
S33R13	0.4492	0.1403	60.8975	60.3080		

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S33R14	0.5705	0.1768	64.5441	63.7968
S33R15	1.0577	0.3122	71.5115	70.1415
S33R16	4.5971	0.6590	80.0502	74.7941

	Cs-137	Ba-137m	Source 34	X Posit	Z Posit	Y Posit
	14.6776	13.8850		-14.1407	16.9694	5.4489
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S34R01	35.4234	0.1810	100.8259	65.2215		
S34R02	24.4333	0.2555	94.3936	69.7048		
S34R03	11.0068	0.4623	86.5361	75.0670		
S34R04	2.7029	0.4300	78.2136	75.0807		
S34R05	1.1783	0.2230	70.7495	69.3481		
S34R06	0.8157	0.1581	65.7430	64.7692		
S34R07	0.7581	0.1474	64.5860	63.6804		
S34R08	0.9279	0.1787	67.6467	66.5401		
S34R09	1.5964	0.2912	73.9912	72.1036		
S34R10	5.1498	0.5493	82.0392	76.3401		
S34R11	17.2894	0.3418	90.2888	72.6576		
S34R12	29.9416	0.2122	97.5869	67.4331		
S34R13	39.2440	0.1640	103.1265	63.7185		
S34R14	44.5553	0.1449	106.3881	61.6880		
S34R15	45.6896	0.1414	107.0945	61.2636		
S34R16	42.6150	0.1514	105.1879	62.4215		

	Cs-137	Ba-137m	Source 35	X Posit	Z Posit	Y Posit
	28.0146	26.5018		17.6331	12.8346	30.1155
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S35R01	1.4227	0.1936	66.6387	65.0224		
S35R02	1.0415	0.1450	62.0375	60.8510		
S35R03	1.0129	0.1413	61.5793	60.4252		
S35R04	1.3012	0.1785	65.4173	63.9376		
S35R05	2.3691	0.2968	72.3648	69.6989		
S35R06	7.3253	0.4581	80.7344	72.9510		
S35R07	19.3180	0.2891	89.0418	69.4347		
S35R08	30.9753	0.1941	96.1933	65.0239		
S35R09	39.3757	0.1557	101.4421	61.9108		
S35R10	43.8843	0.1405	104.3196	60.2948		
S35R11	44.3055	0.1392	104.5907	60.1460		
S35R12	40.6236	0.1512	102.2341	61.4593		
S35R13	32.9895	0.1834	97.4400	64.2671		
S35R14	21.8961	0.2618	90.6267	68.4687		

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S35R15	9.4154	0.4352	82.4790	72.6285
S35R16	2.8499	0.3385	74.0140	70.8257

**TABLE 4- Calculate Microshield input data sheets for the simulations from each source to each
measuring point in centimeters.**

	Cs-137	Ba-137m	Source 01	X Posit	Z Posit	Y Posit
	29.4975	27.9047		49.1940	1.4778	65.7946
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S01R01	8.7005	0.3513	161.4884	152.4366		
S01R02	9.5634	0.3799	165.5837	155.6403		
S01R03	13.1668	0.4833	178.0700	164.4200		
S01R04	22.5641	0.6325	195.6990	172.5024		
S01R05	41.8856	0.6298	214.9009	172.3855		
S01R06	66.4481	0.5037	232.7263	165.7745		
S01R07	87.7762	0.4128	247.0236	158.8347		
S01R08	101.8204	0.3663	256.3506	154.1638		
S01R09	107.1031	0.3511	259.8683	152.4141		
S01R10	103.2149	0.3622	257.2784	153.7012		
S01R11	90.4509	0.4032	248.7995	157.9454		
S01R12	70.0679	0.4864	235.1850	164.6307		
S01R13	45.5537	0.6122	217.7789	171.6130		

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S01R14	24.8440	0.6475	198.6167	173.1252
S01R15	14.1081	0.5058	180.5255	165.9117
S01R16	9.8961	0.3906	167.0165	156.7298

	Cs-137	Ba-137m	Source 02	X Posit	Z Posit	Y Posit
	13.8502	13.1023		-26.9687	-49.7051	47.9195
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S02R01	75.4733	0.5259	243.5973	167.5981		
S02R02	98.7674	0.4072	257.8543	158.6798		
S02R03	111.8946	0.3608	266.1199	153.8645		
S02R04	114.4021	0.3531	267.7184	152.9632		
S02R05	106.2177	0.3795	262.5242	155.9269		
S02R06	87.5920	0.4568	250.9515	162.9026		
S02R07	59.3405	0.6558	233.9888	173.9924		
S02R08	24.8311	1.2688	213.2923	187.1924		
S02R09	5.0328	1.1021	191.3493	185.2144		
S02R10	2.1416	0.5413	171.6549	168.9720		
S02R11	1.4799	0.3810	158.5385	156.6776		
S02R12	1.3853	0.3574	155.8239	154.0813		
S02R13	1.7266	0.4418	164.4239	162.2555		
S02R14	3.0873	0.7521	181.5974	177.7580		
S02R15	11.6339	1.5429	202.9865	189.8097		
S02R16	43.4559	0.8577	224.6345	180.3209		

	Cs-137	Ba-137m	Source 03	X Posit	Z Posit	Y Posit
	23.5916	22.3177		4.4969	-18.4379	106.3939
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S03R01	52.8376	0.3773	210.5279	157.3131		
S03R02	60.3785	0.3761	217.8051	157.0505		
S03R03	67.8345	0.3696	224.4326	156.2285		
S03R04	73.8558	0.3620	229.4964	155.2787		
S03R05	77.3515	0.3568	232.3466	154.6383		
S03R06	77.7081	0.3563	232.6343	154.5699		
S03R07	74.8642	0.3605	230.3247	155.1000		
S03R08	69.3157	0.3679	225.6988	156.0152		
S03R09	62.0618	0.3750	219.3429	156.9061		
S03R10	54.4236	0.3776	212.1187	157.3175		
S03R11	47.6970	0.3736	205.0937	157.0231		
S03R12	42.7955	0.3657	199.4111	156.2498		
S03R13	40.1521	0.3593	196.0825	155.5712		
S03R14	39.8904	0.3585	195.7413	155.4923		
S03R15	42.0181	0.3640	198.4539	156.0718		
S03R16	46.4491	0.3721	203.6994	156.8783		

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	Cs-137	Ba-137m	Source 04	X Posit	Z Posit	Y Posit
	20.6982	19.5805		14.0365	-48.8135	72.8360
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S04R01	26.0256	0.7222	202.6524	175.9045		
S04R02	49.6540	0.6194	222.2353	171.9619		
S04R03	75.1423	0.4748	239.4634	163.8462		
S04R04	94.9332	0.3942	252.4272	157.0998		
S04R05	106.3005	0.3580	259.9002	153.2416		
S04R06	108.3279	0.3522	261.2389	152.5589		
S04R07	100.8825	0.3745	256.3322	155.0752		
S04R08	84.4937	0.4336	245.5931	160.6659		
S04R09	60.8844	0.5502	229.9907	168.5561		
S04R10	35.1024	0.7051	211.1285	175.3211		
S04R11	17.3730	0.6519	191.3665	173.3416		
S04R12	10.0939	0.4676	173.9089	163.3474		
S04R13	7.5606	0.3698	162.5289	154.5984		
S04R14	7.1912	0.3542	160.3684	152.8230		
S04R15	8.6607	0.4144	168.1001	159.0250		
S04R16	13.3611	0.5677	183.4335	169.5047		

	Cs-137	Ba-137m	Source 05	X Posit	Z Posit	Y Posit
	10.9510	10.3596		-31.7933	6.1732	92.3496
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S05R01	90.0541	0.3543	243.7579	153.3495		
S05R02	84.4285	0.3667	239.5892	154.7941		
S05R03	73.9814	0.3895	231.6365	157.2657		
S05R04	60.6046	0.4148	220.7848	159.7654		
S05R05	47.1313	0.4257	208.3789	160.8220		
S05R06	36.3252	0.4094	196.1980	159.4634		
S05R07	29.4121	0.3789	186.3109	156.5199		
S05R08	26.1669	0.3574	180.6981	154.1738		
S05R09	26.1307	0.3571	180.6306	154.1429		
S05R10	29.2971	0.3782	186.1248	156.4495		
S05R11	36.1190	0.4087	195.9335	159.4058		
S05R12	46.8409	0.4256	208.0853	160.8187		
S05R13	60.2799	0.4153	220.5075	159.8123		
S05R14	73.6938	0.3901	231.4125	157.3286		
S05R15	84.2348	0.3671	239.4446	154.8426		
S05R16	89.9862	0.3545	243.7081	153.3674		

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	Cs-137	Ba-137m	Source 06	X Posit	Z Posit	Y Posit
	16.3182	15.4370		25.7762	-17.3149	75.2927
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S06R01	30.4515	0.3733	185.8394	155.0146		
S06R02	37.1568	0.4005	195.3323	157.7750		
S06R03	47.5008	0.4154	207.0643	159.1480		
S06R04	60.2956	0.4067	219.0440	158.3417		
S06R05	72.9916	0.3846	229.5463	156.1702		
S06R06	82.9397	0.3640	237.2598	153.9562		
S06R07	88.3240	0.3526	241.3175	152.6409		
S06R08	88.2892	0.3527	241.2914	152.6495		
S06R09	82.8406	0.3642	237.1844	153.9796		
S06R10	72.8448	0.3849	229.4299	156.2003		
S06R11	60.1300	0.4070	218.9000	158.3630		
S06R12	47.3520	0.4154	206.9119	159.1445		
S06R13	37.0496	0.4002	195.1953	157.7455		
S06R14	30.3908	0.3730	185.7433	154.9795		
S06R15	27.2547	0.3539	180.4403	152.8318		
S06R16	27.2739	0.3540	180.4751	152.8471		

	Cs-137	Ba-137m	Source 07	X Posit	Z Posit	Y Posit
	25.9358	24.5353		-7.6301	-46.9452	3.8559
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S07R01	56.8435	0.5645	232.2981	174.8901		
S07R02	79.8661	0.4602	247.5618	167.2355		
S07R03	97.4623	0.3957	258.8567	160.9987		
S07R04	107.1074	0.3661	265.0498	157.5764		
S07R05	107.9134	0.3638	265.5687	157.2914		
S07R06	99.8177	0.3881	260.3670	160.1611		
S07R07	83.5286	0.4456	249.9209	165.9467		
S07R08	61.1644	0.5439	235.2589	173.5507		
S07R09	38.0082	0.6369	218.0204	179.3752		
S07R10	21.9572	0.5830	200.5206	177.9804		
S07R11	14.3879	0.4585	185.7111	170.8646		
S07R12	11.5199	0.3880	176.7596	164.8517		
S07R13	11.3114	0.3824	175.9789	164.2851		
S07R14	13.6184	0.4409	183.5877	169.5283		
S07R15	20.0819	0.5600	197.5726	176.9307		
S07R16	34.4236	0.6407	214.8223	179.7580		

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	Cs-137	Ba-137m	Source 08	X Posit	Z Posit	Y Posit
	25.1678	23.8087		-3.6748	-23.8753	52.9898
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S08R01	59.4443	0.3842	216.1796	156.3511		
S08R02	69.0952	0.3733	224.6448	155.1764		
S08R03	76.9102	0.3610	231.0695	153.7983		
S08R04	81.4429	0.3531	234.6729	152.8769		
S08R05	81.9120	0.3523	235.0416	152.7773		
S08R06	78.2397	0.3587	232.1344	153.5360		
S08R07	71.0508	0.3704	226.2820	154.8608		
S08R08	61.6546	0.3823	218.1845	156.1476		
S08R09	51.8576	0.3869	208.8949	156.6504		
S08R10	43.4329	0.3799	199.7636	155.9508		
S08R11	37.4937	0.3657	192.2958	154.4364		
S08R12	34.3809	0.3543	187.8814	153.1461		
S08R13	34.0720	0.3531	187.4197	152.9946		
S08R14	36.5563	0.3626	191.0089	154.0899		
S08R15	41.8761	0.3770	197.9072	155.6540		
S08R16	49.8142	0.3864	206.8002	156.5996		

	Cs-137	Ba-137m	Source 09	X Posit	Z Posit	Y Posit
	24.9347	23.5882		-28.7630	-3.2708	115.5217
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S09R01	88.3374	0.3583	244.1274	155.4317		
S09R02	87.2404	0.3606	243.3170	155.7160		
S09R03	81.1905	0.3731	238.7955	157.2319		
S09R04	71.1889	0.3925	231.0638	159.4824		
S09R05	59.1120	0.4106	221.0380	161.5154		
S09R06	47.4315	0.4143	210.0366	162.1908		
S09R07	38.2696	0.3990	199.7126	161.0441		
S09R08	32.5093	0.3767	191.8622	158.9762		
S09R09	30.0649	0.3636	188.0458	157.6173		
S09R10	30.7138	0.3673	189.0935	158.0123		
S09R11	34.5264	0.3858	194.7723	159.8600		
S09R12	41.7529	0.4073	203.8848	161.7246		
S09R13	52.1690	0.4152	214.7129	162.1287		
S09R14	64.3247	0.4039	225.4864	160.7578		
S09R15	75.8042	0.3838	234.6793	158.4912		
S09R16	84.3117	0.3667	241.1398	156.4614		

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	Cs-137	Ba-137m	Source 10	X Posit	Z Posit	Y Posit
	26.8139	25.3659		-20.7250	26.7906	117.9524
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S10R01	78.0045	0.3950	238.2395	159.8400		
S10R02	64.0805	0.4256	227.5388	163.0327		
S10R03	49.5098	0.4441	214.9864	165.0325		
S10R04	37.4768	0.4317	202.3351	164.4266		
S10R05	29.6101	0.3979	191.6734	161.6653		
S10R06	25.7060	0.3707	185.0848	159.0081		
S10R07	25.1463	0.3662	184.0390	158.5265		
S10R08	27.8148	0.3864	188.7841	160.5829		
S10R09	34.2052	0.4207	198.2278	163.6019		
S10R10	44.8357	0.4436	210.4246	165.1454		
S10R11	58.8296	0.4348	223.2337	163.9694		
S10R12	73.3636	0.4058	234.7614	160.9921		
S10R13	85.2446	0.3780	243.5439	157.9214		
S10R14	92.2684	0.3615	248.5881	155.9582		
S10R15	93.3572	0.3590	249.3633	155.6471		
S10R16	88.3586	0.3706	245.7905	157.0612		

	Cs-137	Ba-137m	Source 11	X Posit	Z Posit	Y Posit
	12.5933	11.9133		33.1572	16.3372	74.1470
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S11R01	23.0905	0.3724	178.3621	154.8992		
S11R02	21.0017	0.3517	173.9034	152.5499		
S11R03	22.0337	0.3623	176.1749	153.7789		
S11R04	26.4781	0.4002	184.6013	157.7231		
S11R05	35.2952	0.4432	197.2301	161.4917		
S11R06	48.8497	0.4534	211.5886	162.2855		
S11R07	64.9876	0.4250	225.3752	159.9626		
S11R08	79.8665	0.3881	236.7601	156.5056		
S11R09	90.3759	0.3619	244.4439	153.7061		
S11R10	94.8107	0.3514	247.6359	152.4739		
S11R11	92.5686	0.3567	246.0251	153.0999		
S11R12	83.9460	0.3778	239.7672	155.4433		
S11R13	70.2435	0.4123	229.4911	158.8353		
S11R14	54.0964	0.4470	216.3243	161.7809		
S11R15	39.3090	0.4517	201.9207	162.1600		
S11R16	28.8659	0.4157	188.4425	159.1609		

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	Cs-137	Ba-137m	Source 12	X Posit	Z Posit	Y Posit
	17.5307	16.5841		43.4057	22.2267	54.0716
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S12R01	10.7646	0.4009	169.2953	158.1298		
S12R02	9.2206	0.3537	162.6940	153.1197		
S12R03	9.8370	0.3731	165.5160	155.3059		
S12R04	13.0803	0.4632	176.9139	163.3704		
S12R05	21.5682	0.6060	193.8662	171.6920		
S12R06	39.4650	0.6308	212.8272	172.7313		
S12R07	63.5338	0.5151	230.7778	166.7289		
S12R08	85.3107	0.4209	245.4808	159.7492		
S12R09	100.2486	0.3705	255.4144	154.7953		
S12R10	106.6360	0.3521	259.6694	152.6813		
S12R11	103.9515	0.3596	257.8798	153.5687		
S12R12	92.4023	0.3956	250.1979	157.3999		
S12R13	73.0998	0.4705	237.3043	163.7340		
S12R14	49.1256	0.5878	220.4589	170.7455		
S12R15	27.6745	0.6429	201.5915	173.2741		
S12R16	15.6745	0.5206	183.4031	167.2081		

	Cs-137	Ba-137m	Source 13	X Posit	Z Posit	Y Posit
	17.9331	16.9647		8.9211	21.0922	105.2762
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S13R01	47.7159	0.3854	206.2464	158.1451		
S13R02	41.0446	0.3745	198.5522	157.1330		
S13R03	37.0022	0.3627	193.2737	155.9088		
S13R04	35.6947	0.3579	191.4359	155.3834		
S13R05	37.1054	0.3631	193.4157	155.9472		
S13R06	41.2513	0.3750	198.8077	157.1814		
S13R07	48.0146	0.3857	206.5679	158.1676		
S13R08	56.7569	0.3874	215.3325	158.1882		
S13R09	66.1182	0.3796	223.7296	157.2318		
S13R10	74.3550	0.3680	230.5854	155.8624		
S13R11	79.9226	0.3588	235.0274	154.7460		
S13R12	81.8365	0.3555	236.5267	154.3346		
S13R13	79.7741	0.3591	234.9104	154.7773		
S13R14	74.0833	0.3684	230.3651	155.9134		
S13R15	65.7729	0.3800	223.4330	157.2801		
S13R16	56.4038	0.3875	214.9988	158.2075		

Cs-137	Ba-137m	Source 14	X Posit	Z Posit	Y Posit
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	26.2138	24.7983		-46.3340	15.5761	101.4000
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S14R01	104.5535	0.3628	259.6313	154.7149		
S14R02	92.6669	0.4005	251.8156	158.7482		
S14R03	73.0101	0.4783	238.8521	165.3636		
S14R04	48.7487	0.5996	222.0236	172.6752		
S14R05	27.2920	0.6523	203.2838	175.3395		
S14R06	15.4947	0.5247	185.3465	169.3271		
S14R07	10.7185	0.4052	171.5886	160.4650		
S14R08	9.2498	0.3594	165.3479	155.7387		
S14R09	9.9319	0.3812	168.4200	158.1069		
S14R10	13.2877	0.4750	179.8963	166.1336		
S14R11	22.0607	0.6204	196.7828	174.1018		
S14R12	40.4481	0.6378	215.5906	174.5047		
S14R13	64.8122	0.5171	233.3439	168.0147		
S14R14	86.6020	0.4223	247.8315	160.8073		
S14R15	101.3901	0.3722	257.5484	155.7860		
S14R16	107.5364	0.3543	261.5986	153.7079		

	Cs-137	Ba-137m	Source 15	X Posit	Z Posit	Y Posit
	22.7469	21.5186		53.3465	13.7354	27.1923
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S15R01	3.0831	0.3820	163.0870	159.6219		
S15R02	2.9691	0.3687	161.5354	158.1976		
S15R03	3.7483	0.4577	170.5534	166.3474		
S15R04	6.6024	0.7371	187.4187	180.0791		
S15R05	18.9341	1.1282	208.0539	187.9916		
S15R06	48.8419	0.7476	228.7536	179.1641		
S15R07	78.6312	0.5032	246.7275	167.5931		
S15R08	100.3184	0.4021	260.0463	159.3259		
S15R09	112.1640	0.3617	267.4875	154.9618		
S15R10	113.6457	0.3571	268.4275	154.4246		
S15R11	104.7096	0.3861	262.7899	157.6943		
S15R12	85.7167	0.4653	251.0403	164.8583		
S15R13	57.8834	0.6548	234.2231	175.6849		
S15R14	26.2533	1.0598	214.0532	186.7401		
S15R15	8.4496	0.8738	193.0610	183.7376		
S15R16	4.2295	0.5102	174.7080	169.9683		

Cs-137	Ba-137m	Source 16	X Posit	Z Posit	Y Posit
27.6556	26.1622		32.4610	26.2430	99.8427

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Line	Shield 1	Shield 2	Total Dist	Air Gap
S16R01	21.1405	0.4199	182.9248	161.3644
S16R02	17.2216	0.3689	173.9866	156.3962
S16R03	16.5558	0.3588	172.1888	155.2742
S16R04	18.8537	0.3918	178.0145	158.7690
S16R05	25.0818	0.4579	189.9507	164.4110
S16R06	37.0697	0.5089	205.3211	167.7425
S16R07	54.7031	0.4884	221.3381	166.1466
S16R08	73.6676	0.4310	235.6742	161.5756
S16R09	89.1538	0.3843	246.6061	157.0681
S16R10	98.3840	0.3591	252.9917	154.2486
S16R11	100.1656	0.3545	254.2188	153.6986
S16R12	94.3009	0.3700	250.1739	155.5030
S16R13	81.4784	0.4069	241.2360	159.3507
S16R14	63.6425	0.4625	228.2968	164.1917
S16R15	44.7108	0.5082	212.8042	167.5851
S16R16	29.8191	0.4881	196.8091	166.5018

	Cs-137	Ba-137m	Source 17	X Posit	Z Posit	Y Posit
	28.5227	26.9825		-36.8053	7.8697	22.0830
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S17R01	96.1672	0.3594	251.8034	155.2768		
S17R02	89.1643	0.3770	246.8922	157.3509		
S17R03	76.3806	0.4107	237.7364	160.9451		
S17R04	60.0569	0.4518	225.3199	164.8112		
S17R05	43.9049	0.4720	211.1454	166.7686		
S17R06	31.6530	0.4454	197.2323	165.1339		
S17R07	24.4333	0.3975	185.9799	161.1492		
S17R08	21.3037	0.3668	179.7296	158.0591		
S17R09	21.4166	0.3680	179.9754	158.1908		
S17R10	24.8063	0.4007	186.6559	161.4489		
S17R11	32.3707	0.4486	198.1857	165.3664		
S17R12	44.9837	0.4720	212.1960	166.7402		
S17R13	61.2913	0.4491	226.3045	164.5641		
S17R14	77.4669	0.4078	238.5280	160.6532		
S17R15	89.8873	0.3751	247.4018	157.1394		
S17R16	96.4188	0.3588	251.9791	155.2015		

	Cs-137	Ba-137m	Source 18	X Posit	Z Posit	Y Posit
	23.2528	21.9972		47.6621	-30.4883	26.7230
Line	Shield 1	Shield 2	Total Dist	Air Gap		

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S18R01	1.8627	0.4854	170.8728	168.5247
S18R02	3.6463	0.8845	188.7905	184.2598
S18R03	16.1672	1.5416	210.1482	192.4395
S18R04	50.4061	0.7756	231.2176	180.0359
S18R05	81.3222	0.5006	249.2469	167.4242
S18R06	102.9510	0.3987	262.3566	159.0069
S18R07	114.2096	0.3602	269.3719	154.8022
S18R08	114.7569	0.3585	269.7164	154.6010
S18R09	104.5785	0.3927	263.3623	158.3912
S18R10	83.9745	0.4855	250.8296	166.3696
S18R11	53.8997	0.7314	233.2275	178.5963
S18R12	19.1360	1.4674	212.3576	191.7542
S18R13	4.0509	0.9619	190.8749	185.8621
S18R14	1.9509	0.5070	172.4133	169.9553
S18R15	1.4371	0.3785	161.2331	159.4175
S18R16	1.4169	0.3734	160.6562	158.8660

	Cs-137	Ba-137m	Source 19	X Posit	Z Posit	Y Posit
	15.3416	14.5131		-46.3763	0.7074	53.5943
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S19R01	104.4478	0.3516	257.4388	152.6394		
S19R02	99.8176	0.3644	254.3097	154.1276		
S19R03	87.0172	0.4040	245.6443	158.2231		
S19R04	67.5846	0.4764	232.2444	164.1834		
S19R05	45.3160	0.5647	215.4933	169.6125		
S19R06	27.0753	0.5671	197.4403	169.7979		
S19R07	17.0120	0.4632	180.8542	163.3790		
S19R08	12.7050	0.3789	169.0246	155.9407		
S19R09	11.5742	0.3524	164.9120	152.9855		
S19R10	12.9054	0.3834	169.6980	156.4091		
S19R11	17.5410	0.4717	182.0157	164.0029		
S19R12	28.1999	0.5723	198.8299	170.0578		
S19R13	47.0003	0.5591	216.8718	169.3124		
S19R14	69.2649	0.4697	233.4270	163.6924		
S19R15	88.2786	0.3998	246.5007	157.8223		
S19R16	100.4807	0.3625	254.7577	153.9145		

	Cs-137	Ba-137m	Source 20	X Posit	Z Posit	Y Posit
	16.4988	15.6078		7.2755	23.4343	112.9023
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S20R01	49.2522	0.3950	209.6094	159.9622		

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S20R02	41.4914	0.3844	200.9753	159.0996
S20R03	36.4989	0.3698	194.5570	157.6883
S20R04	34.4094	0.3615	191.5896	156.8187
S20R05	35.1661	0.3646	192.6864	157.1557
S20R06	38.7977	0.3774	197.6175	158.4425
S20R07	45.3151	0.3912	205.3958	159.6894
S20R08	54.2769	0.3960	214.6044	159.9315
S20R09	64.4037	0.3887	223.7560	158.9635
S20R10	73.8105	0.3753	231.5423	157.3565
S20R11	80.6942	0.3633	236.9610	155.9035
S20R12	83.8219	0.3576	239.3665	155.1870
S20R13	82.6705	0.3597	238.4844	155.4542
S20R14	77.4295	0.3691	234.4146	156.6160
S20R15	69.0044	0.3827	227.6302	158.2430
S20R16	58.9679	0.3939	218.9700	159.6081

	Cs-137	Ba-137m	Source 21	X Posit	Z Posit	Y Posit
	28.6466	27.0997		7.7777	-20.1009	50.5073
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S21R01	48.4758	0.3773	204.6212	155.7682		
S21R02	56.6989	0.3788	212.9795	155.9018		
S21R03	65.4022	0.3723	220.9483	155.1738		
S21R04	72.9883	0.3625	227.4139	154.0632		
S21R05	78.0469	0.3547	231.5507	153.1491		
S21R06	79.6804	0.3520	232.8629	152.8305		
S21R07	77.6097	0.3554	231.1978	153.2327		
S21R08	72.1895	0.3636	226.7493	154.1962		
S21R09	64.3876	0.3734	220.0539	155.2929		
S21R10	55.6590	0.3791	211.9749	155.9368		
S21R11	47.5904	0.3765	203.6554	155.6885		
S21R12	41.3957	0.3666	196.4091	154.6467		
S21R13	37.6589	0.3564	191.5145	153.4992		
S21R14	36.5159	0.3525	189.9170	153.0486		
S21R15	37.9700	0.3574	191.9407	153.6133		
S21R16	42.0139	0.3680	197.1760	154.7942		

	Cs-137	Ba-137m	Source 22	X Posit	Z Posit	Y Posit
	20.3724	19.2723		-45.6646	32.6567	127.1095
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S22R01	103.4629	0.4052	265.0846	161.2165		
S22R02	81.6034	0.5093	252.0715	169.9587		

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S22R03	50.6544	0.7821	234.3196	182.8832
S22R04	17.4005	1.4077	213.7319	194.9237
S22R05	4.7075	0.8510	193.0578	187.4993
S22R06	2.5080	0.4904	175.9433	172.9449
S22R07	1.9406	0.3845	166.4238	164.0986
S22R08	1.9835	0.3927	167.3021	164.9259
S22R09	2.6935	0.5241	178.2997	175.0822
S22R10	5.5110	0.9592	196.2669	189.7967
S22R11	21.9933	1.3254	217.1522	193.8335
S22R12	56.1562	0.7162	237.4434	180.5710
S22R13	85.8079	0.4856	254.5375	168.2440
S22R14	106.0453	0.3955	266.6546	160.2138
S22R15	115.8774	0.3625	272.6974	156.4576
S22R16	115.0088	0.3652	272.1594	156.7854

	Cs-137	Ba-137m	Source 23	X Posit	Z Posit	Y Posit
	13.0146	12.3118		12.9519	37.1270	132.0896
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S23R01	38.8784	0.4959	211.1443	171.7700		
S23R02	27.7911	0.4516	197.5126	169.2700		
S23R03	21.9183	0.3992	187.4017	165.0842		
S23R04	19.8809	0.3752	183.0270	162.7709		
S23R05	20.9821	0.3885	185.4627	164.0921		
S23R06	25.6093	0.4349	194.1016	168.0574		
S23R07	35.0610	0.4873	206.9702	171.4219		
S23R08	50.0197	0.4948	221.5724	171.0579		
S23R09	67.9335	0.4535	235.5754	167.1885		
S23R10	84.2658	0.4061	247.1165	162.4446		
S23R11	95.6286	0.3747	254.8694	158.8661		
S23R12	100.3041	0.3626	258.0289	157.3622		
S23R13	97.7194	0.3692	256.2836	158.1950		
S23R14	88.1824	0.3950	249.8047	161.2273		
S23R15	73.0275	0.4388	239.2512	165.7849		
S23R16	55.1185	0.4860	225.7951	170.1907		

	Cs-137	Ba-137m	Source 24	X Posit	Z Posit	Y Posit
	12.5419	11.8646		20.2228	48.7990	83.9044
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S24R01	17.4640	0.8090	197.2380	178.9650		
S24R02	8.5876	0.5462	177.9984	168.8645		
S24R03	5.7976	0.3948	163.8909	157.6985		

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S24R04	5.1128	0.3528	158.6428	153.1772
S24R05	5.7988	0.3949	163.8995	157.7058
S24R06	8.5916	0.5464	178.0132	168.8752
S24R07	17.4768	0.8092	197.2557	178.9697
S24R08	39.9551	0.7471	217.7773	177.0751
S24R09	68.1886	0.5319	236.5238	167.8033
S24R10	91.3664	0.4179	251.3225	159.5382
S24R11	105.9785	0.3665	260.7417	154.3967
S24R12	110.9365	0.3517	263.9676	152.6794
S24R13	105.9700	0.3665	260.7361	154.3995
S24R14	91.3500	0.4180	251.3120	159.5440
S24R15	68.1658	0.5320	236.5093	167.8115
S24R16	39.9311	0.7473	217.7601	177.0817

	Cs-137	Ba-137m	Source 25	X Posit	Z Posit	Y Posit
	19.7625	18.6953		21.3295	24.2720	101.2303
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S25R01	33.7744	0.4016	193.7616	159.5855		
S25R02	28.1830	0.3721	185.2409	156.6857		
S25R03	26.0817	0.3574	181.5064	155.0673		
S25R04	27.1341	0.3651	183.4210	155.9218		
S25R05	31.5204	0.3913	190.5356	158.6239		
S25R06	39.7338	0.4196	201.2990	161.1456		
S25R07	51.6437	0.4269	213.6670	161.5964		
S25R08	65.4271	0.4090	225.6530	159.8169		
S25R09	78.1239	0.3829	235.6200	157.1131		
S25R10	87.1581	0.3629	242.3761	154.8551		
S25R11	90.9862	0.3545	245.1853	153.8446		
S25R12	89.0344	0.3588	243.7563	154.3631		
S25R13	81.5895	0.3753	238.2362	156.2715		
S25R14	69.8584	0.4004	229.2140	158.9553		
S25R15	56.0974	0.4232	217.7311	161.2105		
S25R16	43.2852	0.4252	205.2830	161.5726		

	Cs-137	Ba-137m	Source 26	X Posit	Z Posit	Y Posit
	24.8512	23.5093		10.4368	41.1896	86.8515
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S26R01	37.6294	0.5164	205.2897	167.1439		
S26R02	24.9155	0.4673	189.3079	163.9251		
S26R03	18.2698	0.3952	176.5237	157.8587		
S26R04	15.7029	0.3563	169.7801	153.7208		

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S26R05	16.0724	0.3623	170.8421	154.4073
S26R06	19.5493	0.4122	179.4180	159.4565
S26R07	27.6143	0.4861	193.3373	165.2369
S26R08	42.0667	0.5160	209.6726	167.0899
S26R09	61.2055	0.4712	225.6954	164.0187
S26R10	79.7411	0.4116	239.2590	159.1062
S26R11	93.4292	0.3713	248.8408	155.0403
S26R12	100.1483	0.3534	253.4898	152.9881
S26R13	99.1137	0.3561	252.7751	153.3054
S26R14	90.4370	0.3797	246.7621	155.9454
S26R15	75.1904	0.4260	236.0150	160.3986
S26R16	55.9862	0.4871	221.6298	165.1564

	Cs-137	Ba-137m	Source 27	X Posit	Z Posit	Y Posit
	10.2138	9.6622		5.7653	-53.5980	35.4870
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S27R01	30.9578	0.8947	214.2630	182.4105		
S27R02	60.7273	0.6039	233.9558	172.6246		
S27R03	86.8102	0.4484	250.1760	162.9175		
S27R04	104.4309	0.3794	261.2877	156.4774		
S27R05	112.2757	0.3548	266.3076	153.6771		
S27R06	109.9612	0.3617	264.8214	154.4985		
S27R07	97.5916	0.4037	256.9499	158.9546		
S27R08	75.8639	0.5040	243.3591	166.9911		
S27R09	47.0631	0.7242	225.3147	177.5274		
S27R10	20.0110	0.9527	204.7928	183.8291		
S27R11	8.3242	0.6528	184.6277	175.6507		
S27R12	5.0491	0.4341	168.5353	163.0521		
S27R13	4.1272	0.3617	160.4856	155.9968		
S27R14	4.3760	0.3816	162.9265	158.1689		
S27R15	6.0746	0.5095	175.0777	168.4936		
S27R16	11.8590	0.8146	193.5246	180.8510		

	Cs-137	Ba-137m	Source 28	X Posit	Z Posit	Y Posit
	15.5133	14.6756		46.7749	-14.4208	16.4718
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S28R01	10.0134	0.3879	172.3838	161.9825		
S28R02	13.1756	0.4783	183.1432	169.4894		
S28R03	21.5587	0.6261	199.4608	177.2760		
S28R04	39.5570	0.6558	217.9339	177.7211		
S28R05	64.1268	0.5330	235.5829	170.9231		

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S28R06	86.4780	0.4324	250.1570	163.2466
S28R07	101.9038	0.3787	260.1057	157.8232
S28R08	108.6748	0.3586	264.4917	155.4583
S28R09	106.2635	0.3656	262.9274	156.2984
S28R10	94.8452	0.4018	255.5497	160.3026
S28R11	75.4562	0.4785	243.0278	167.0931
S28R12	51.0496	0.6019	226.6096	174.9580
S28R13	28.8227	0.6694	208.2011	178.7089
S28R14	16.2412	0.5471	190.4431	173.6547
S28R15	11.1033	0.4213	176.6129	165.0883
S28R16	9.4637	0.3703	169.9742	160.1402

	Cs-137	Ba-137m	Source 29	X Posit	Z Posit	Y Posit
	18.0653	17.0898		-0.2295	9.2524	97.3974
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S29R01	58.3641	0.3590	213.1384	154.4153		
S29R02	54.8203	0.3587	209.5921	154.4131		
S29R03	51.8700	0.3572	206.5024	154.2752		
S29R04	49.9100	0.3555	204.3693	154.1038		
S29R05	49.1751	0.3548	203.5511	154.0212		
S29R06	49.7465	0.3554	204.1882	154.0863		
S29R07	51.5613	0.3570	206.1710	154.2527		
S29R08	54.4052	0.3585	209.1654	154.4017		
S29R09	57.9011	0.3590	212.6842	154.4241		
S29R10	61.5318	0.3582	216.1799	154.2900		
S29R11	64.7151	0.3565	219.1333	154.0618		
S29R12	66.9173	0.3549	221.1239	153.8518		
S29R13	67.7621	0.3542	221.8772	153.7610		
S29R14	67.1043	0.3547	221.2912	153.8322		
S29R15	65.0571	0.3563	219.4451	154.0318		
S29R16	61.9705	0.3580	216.5928	154.2642		

	Cs-137	Ba-137m	Source 30	X Posit	Z Posit	Y Posit
	15.0401	14.2280		18.7276	-50.2548	31.4968
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S30R01	17.4011	0.9034	201.7239	183.4194		
S30R02	42.0284	0.7694	222.2520	179.4542		
S30R03	71.2331	0.5308	240.7811	169.0171		
S30R04	94.3471	0.4166	255.1964	160.4327		
S30R05	108.4158	0.3670	264.1144	155.3315		
S30R06	112.5541	0.3545	266.7662	153.8576		

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S30R07	106.5665	0.3729	262.9338	155.9945
S30R08	90.7436	0.4313	252.9336	161.7587
S30R09	66.1791	0.5634	237.6410	170.8986
S30R10	36.6448	0.8246	218.5634	181.0940
S30R11	14.6629	0.8577	197.9655	182.4450
S30R12	7.1139	0.5478	178.9991	171.3374
S30R13	4.8811	0.3966	165.5579	160.2801
S30R14	4.3978	0.3607	161.2503	156.4918
S30R15	5.1179	0.4139	167.4267	161.8949
S30R16	7.8911	0.5942	182.1825	173.6972

	Cs-137	Ba-137m	Source 31	X Posit	Z Posit	Y Posit
	22.3550	21.1478		14.1157	-45.1966	54.0394
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S31R01	29.9808	0.6040	202.1541	171.5693		
S31R02	50.6275	0.5591	220.4681	169.2815		
S31R03	73.4308	0.4594	236.7978	162.9076		
S31R04	91.8297	0.3920	249.2599	157.0382		
S31R05	102.7922	0.3588	256.6240	153.4730		
S31R06	105.1803	0.3522	258.2292	152.6968		
S31R07	98.7916	0.3703	253.9368	154.7748		
S31R08	84.2009	0.4181	244.1215	159.5025		
S31R09	63.2261	0.5030	229.6971	165.9680		
S31R10	40.3837	0.5968	212.1813	171.2008		
S31R11	23.2622	0.5704	193.7884	169.9558		
S31R12	14.6951	0.4496	177.4729	162.3282		
S31R13	11.2784	0.3703	166.6468	154.9981		
S31R14	10.6572	0.3539	164.1487	153.1376		
S31R15	12.4104	0.3986	170.7139	157.9048		
S31R16	17.7493	0.5048	184.4771	166.2230		

	Cs-137	Ba-137m	Source 32	X Posit	Z Posit	Y Posit
	21.6866	20.5156		-2.3294	45.6316	66.6580
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S32R01	49.3350	0.5399	217.8277	167.9528		
S32R02	30.3450	0.5615	200.0423	169.1358		
S32R03	19.0011	0.4736	183.2128	163.7381		
S32R04	13.8608	0.3863	170.5313	156.2842		
S32R05	12.2400	0.3515	165.0511	152.4596		
S32R06	13.1698	0.3719	168.3145	154.7729		
S32R07	17.2046	0.4470	179.3850	161.7335		

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S32R08	26.6264	0.5458	195.4571	168.2849
S32R09	43.8480	0.5565	213.2747	168.8701
S32R10	65.5162	0.4780	230.0394	164.0452
S32R11	84.9812	0.4066	243.6558	158.2680
S32R12	98.2196	0.3658	252.6937	154.1083
S32R13	103.5308	0.3512	256.3067	152.4247
S32R14	100.3977	0.3597	254.1757	153.4182
S32R15	89.1158	0.3932	246.4875	156.9785
S32R16	71.0029	0.4567	233.9478	162.4881

	Cs-137	Ba-137m	Source 33	X Posit	Z Posit	Y Posit
	17.8281	16.8653		-7.0965	-56.3420	75.7547
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S33R01	44.8664	0.8404	225.0641	179.3573		
S33R02	76.7569	0.5170	243.9478	166.6738		
S33R03	99.6370	0.4028	257.9992	157.9594		
S33R04	112.2535	0.3588	265.9688	153.3565		
S33R05	114.1986	0.3528	267.2117	152.6603		
S33R06	105.4187	0.3814	261.6314	155.8313		
S33R07	86.1738	0.4632	249.6702	163.0332		
S33R08	57.2802	0.6781	232.3485	174.3903		
S33R09	22.2007	1.3890	211.3623	187.7726		
S33R10	3.9663	1.0868	189.2550	184.2018		
S33R11	1.7148	0.5272	169.6006	167.3587		
S33R12	1.2013	0.3748	156.8074	155.2313		
S33R13	1.1409	0.3565	154.6796	153.1823		
S33R14	1.4489	0.4491	163.9420	162.0439		
S33R15	2.6866	0.7931	181.6391	178.1594		
S33R16	11.6768	1.6739	203.3276	189.9770		

	Cs-137	Ba-137m	Source 34	X Posit	Z Posit	Y Posit
	14.6776	13.8850		-35.9173	43.1022	13.8403
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S34R01	89.9755	0.4598	256.0978	165.6625		
S34R02	62.0605	0.6490	239.7597	177.0501		
S34R03	27.9573	1.1743	219.8018	190.6702		
S34R04	6.8654	1.0922	198.6626	190.7049		
S34R05	2.9930	0.5665	179.7037	176.1441		
S34R06	2.0719	0.4017	166.9872	164.5136		
S34R07	1.9257	0.3745	164.0484	161.7483		
S34R08	2.3569	0.4540	171.8227	169.0118		

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S34R09	4.0549	0.7396	187.9377	183.1432
S34R10	13.0806	1.3952	208.3795	193.9038
S34R11	43.9152	0.8681	229.3336	184.5503
S34R12	76.0516	0.5391	247.8708	171.2801
S34R13	99.6798	0.4166	261.9413	161.8449
S34R14	113.1704	0.3680	270.2259	156.6874
S34R15	116.0515	0.3590	272.0200	155.6094
S34R16	108.2421	0.3844	267.1773	158.5507

	Cs-137	Ba-137m	Source 35	X Posit	Z Posit	Y Posit
	28.0146	26.5018		44.7881	32.5999	76.4934
Line	Shield 1	Shield 2	Total Dist	Air Gap		
S35R01	3.6137	0.4918	169.2623	165.1568		
S35R02	2.6454	0.3684	157.5753	154.5615		
S35R03	2.5727	0.3588	156.4115	153.4801		
S35R04	3.3051	0.4534	166.1599	162.4014		
S35R05	6.0175	0.7538	183.8067	177.0353		
S35R06	18.6062	1.1636	205.0653	185.2955		
S35R07	49.0677	0.7343	226.1662	176.3642		
S35R08	78.6772	0.4931	244.3311	165.1607		
S35R09	100.0142	0.3954	257.6630	157.2534		
S35R10	111.4662	0.3569	264.9717	153.1487		
S35R11	112.5359	0.3537	265.6604	152.7709		
S35R12	103.1840	0.3839	259.6746	156.1066		
S35R13	83.7934	0.4657	247.4975	163.2384		
S35R14	55.6161	0.6650	230.1917	173.9106		
S35R15	23.9150	1.1054	209.4968	184.4763		
S35R16	7.2387	0.8597	187.9956	179.8972		

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**THIS ATTACHMENT CALCULATES THE GEOMETRIC ERRORS FOR MEASURING HN-200
GROUT CONTAINERS (BOTH GROUTED AND UNGROUTED) AT 5 FEET FROM THE
SURFACE OF THE CONTAINER USING THE OUTPUT OF THE MICROSHIELD DATA
SHEETS CALCULATED IN ATTACHMENT 3.**

**TABLE 1
DATA FOR HN-200 GROUT CONTAINER LINER
DRAWING NUMBER H-3-49415**

Outer Height	54.0000	in	137.1600	cm
Inner Height (note 1)	53.5000	in	135.8900	cm
Outer Radius	22.9375	in	58.2613	cm
Inner Radius	22.7993	in	57.9102	cm
Wall Thickness	0.1382	in	0.3510	cm
Volume (inner)	87366.8507	in ³	1431686.17	cm ³
	50.5595201	ft ³	1.43168617	m ³

Note 1 - The top and bottom closure plates for the container are constructed of 0.125" steel. A bottom stiffening plate, constructed of 0.25" steel, is inserted into the container. This yields an internal height of 53.5" for the container.

Note 2 - For purposes of the coordinates and calculations presented in this attachment, the cylinder of interest is placed in an X,Z,Y coordinate frame to match the coordinate frame use in Microshield version 5.03. The circular portion of the cylinder is centered at X=0, Z=0. The bottom of the inner height of the cylinder is placed at Y=0. This placement matches the orientation used in Microshield for a cylindrical source.

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OF HN-200 GROUT CONTAINERS.**

TABLE 2
Coordinates and source strengths for random sources.

Source	X	Z	Y	Validity	Strength
S01	19.3677	0.5818	25.9034	Valid	29.4975
S02	-10.6176	-19.5689	18.8660	Valid	13.8502
S03	1.7704	-7.2590	41.8874	Valid	23.5916
S04	5.5262	-19.2179	28.6756	Valid	20.6982
S05	-12.5171	2.4304	36.3581	Valid	10.9510
S06	10.1481	-6.8169	29.6428	Valid	16.3182
S07	-3.0040	-18.4824	1.5181	Valid	25.9358
S08	-1.4468	-9.3997	20.8621	Valid	25.1678
S09	-11.3240	-1.2877	45.4810	Valid	24.9347
S10	-8.1594	10.5475	46.4380	Valid	26.8139
S11	13.0540	6.4320	29.1917	Valid	12.5933
S12	17.0889	8.7507	21.2880	Valid	17.5307
S13	3.5123	8.3040	41.4473	Valid	17.9331
S14	-18.2417	6.1323	39.9213	Valid	26.2138
S15	21.0026	5.4076	10.7056	Valid	22.7469
S16	12.7799	10.3319	39.3081	Valid	27.6556
S17	-14.4903	3.0983	8.6941	Valid	28.5227
S18	18.7646	-12.0033	10.5209	Valid	23.2528
S19	-18.2584	0.2785	21.1001	Valid	15.3416
S20	2.8644	9.2261	44.4497	Valid	16.4988
S21	3.0621	-7.9137	19.8848	Valid	28.6466
S22	-17.9782	12.8570	50.0431	Valid	20.3724
S23	5.0992	14.6169	52.0038	Valid	13.0146
S24	7.9617	19.2122	33.0332	Valid	12.5419
S25	8.3975	9.5559	39.8544	Valid	19.7625
S26	4.1090	16.2164	34.1935	Valid	24.8512
S27	2.2698	-21.1016	13.9713	Valid	10.2138
S28	18.4153	-5.6775	6.4850	Valid	15.5133
S29	-0.0904	3.6427	38.3454	Valid	18.0653
S30	7.3731	-19.7854	12.4003	Valid	15.0401
S31	5.5574	-17.7939	21.2754	Valid	22.3550
S32	-0.9171	17.9652	26.2433	Valid	21.6866
S33	-2.7939	-22.1819	29.8247	Valid	17.8281
S34	-14.1407	16.9694	5.4489	Valid	14.6776
S35	17.6331	12.8346	30.1155	Valid	28.0146

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**TABLE 3 - CALCULATION OF CONVERSION FACTORS FOR A GROUTED HN-200 GROUT
CONTAINER ASSUMING A HOMOGENEOUS MIXTURE OF ACTIVITY AND GROUT.**

POINT	R/hr			
R01	1.479E-02			
R02	1.479E-02			
R03	1.479E-02			
R04	1.479E-02			
R05	1.479E-02			
R06	1.479E-02			
R07	1.479E-02	AVERAGE 5 FOOT READING =	1.479E-02	R/hr
R08	1.479E-02	TOTAL Cs-137 =	1	Ci
R09	1.479E-02	GROUTED 5 FOOT CONV FACTOR =	1.479E-02	R/hr/Ci
R10	1.479E-02			
R11	1.479E-02	5 FOOT readings are taken with the RO-7 probe 5 feet from the surface of the container. These readings are taken every 22.5 degrees around the container and averaged to produce the most accurate representation of the Cs-137 curie content of the container.		
R12	1.479E-02			
R13	1.479E-02			
R14	1.479E-02			
R15	1.479E-02			
R16	1.479E-02			

TABLE 4 - MICROSIELD CALCULATION FOR EACH SOURCE TO EACH MEASUREMENT

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

POINT FROM A GROUTED HN-200 GROUT CONTAINER.

POINT	SOURCE						
	S01	S02	S03	S04	S05	S06	S07
R01	2.553E+00	1.347E-03	3.172E-02	2.968E-01	2.513E-04	2.202E-01	1.783E-02
R02	2.302E+00	1.094E-04	1.422E-02	3.042E-02	4.677E-04	1.098E-01	1.596E-03
R03	1.555E+00	2.552E-05	6.372E-03	2.209E-03	1.467E-03	3.714E-02	2.351E-04
R04	6.205E-01	1.927E-05	3.306E-03	2.587E-04	6.172E-03	9.669E-03	8.070E-05
R05	9.630E-02	4.804E-05	2.253E-03	7.340E-05	2.538E-02	2.471E-03	7.376E-05
R06	8.002E-03	3.697E-04	2.166E-03	5.852E-05	7.836E-02	8.317E-04	1.813E-04
R07	8.145E-04	7.046E-03	2.960E-03	1.341E-04	1.601E-01	4.519E-04	1.076E-03
R08	1.735E-04	1.604E-01	5.426E-03	8.084E-04	2.245E-01	4.609E-04	1.147E-02
R09	9.628E-05	8.615E-01	1.188E-02	9.821E-03	2.253E-01	8.409E-04	1.173E-01
R10	1.486E-04	1.349E-01	2.681E-02	1.261E-01	1.621E-01	2.511E-03	5.546E-01
R11	6.081E-04	1.647E-01	5.473E-02	6.701E-01	8.005E-02	9.840E-03	1.169E+00
R12	5.468E-03	1.713E-01	9.219E-02	1.389E+00	2.616E-02	3.773E-02	1.582E+00
R13	6.691E-02	1.514E-01	1.221E-02	1.865E+00	6.388E-03	1.110E-01	1.619E+00
R14	4.992E-02	1.123E-01	1.255E-02	1.956E+00	1.514E-03	2.216E-01	1.265E+00
R15	1.413E+00	4.470E-01	1.001E-02	1.631E+00	4.778E-04	3.074E-01	6.651E-01
R16	2.215E+00	3.232E-02	6.249E-02	9.896E-01	2.532E-04	3.068E-01	1.664E-01

POINT	SOURCE						
	S08	S09	S10	S11	S12	S13	S14
R01	1.683E-02	6.825E-04	2.233E-03	3.366E-01	1.216E+00	4.085E-02	1.122E-04
R02	5.960E-03	7.704E-04	1.002E-02	4.188E-01	1.454E+00	8.284E-02	4.176E-04
R03	2.539E-03	1.499E-03	4.616E-02	3.758E-01	1.351E+00	1.269E-01	3.497E-03
R04	1.542E-03	4.466E-03	1.612E-01	2.372E-01	9.474E-01	1.456E-01	4.246E-02
R05	1.464E-03	1.627E-02	3.615E-01	9.635E-02	4.101E-01	1.255E-01	3.455E-01
R06	2.194E-03	5.554E-02	5.410E-01	2.374E-02	7.301E-02	8.104E-02	1.077E+00
R07	4.819E-03	1.452E-01	5.733E-01	4.380E-03	6.449E-03	3.958E-02	1.772E+00
R08	1.329E-02	2.642E-01	4.349E-01	8.781E-04	6.329E-04	1.570E-02	2.098E+00
R09	3.761E-02	3.407E-01	2.256E-01	2.767E-04	1.227E-04	5.770E-03	1.937E+00
R10	9.177E-02	3.185E-01	7.508E-02	1.693E-04	6.024E-05	2.357E-03	1.347E+00
R11	1.720E-01	2.143E-01	1.744E-02	2.171E-04	8.129E-05	1.280E-03	5.698E-01
R12	2.386E-01	1.008E-01	3.698E-03	5.618E-04	2.917E-04	1.036E-03	9.685E-02
R13	2.465E-01	3.379E-02	1.011E-03	2.495E-03	2.357E-03	1.301E-03	8.288E-03
R14	1.898E-01	9.350E-03	4.662E-04	1.376E-02	2.793E-02	2.429E-03	8.099E-04
R15	1.082E-01	2.703E-03	4.132E-04	6.382E-02	2.284E-01	5.989E-03	1.595E-04
R16	4.668E-02	1.064E-03	7.180E-04	1.857E-01	7.278E-01	1.630E-02	8.043E-05

POINT	SOURCE						
	S15	S16	S17	S18	S19	S20	S21

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R01	2.438E+00	8.027E-01	3.195E-04	2.330E+00	6.794E-05	3.130E-02	6.191E-02
R02	2.500E+00	1.203E+00	6.930E-04	1.663E+00	1.138E-04	7.106E-02	2.588E-02
R03	2.148E+00	1.291E+00	2.802E-03	5.023E-01	4.661E-04	1.202E-01	1.019E-02
R04	1.484E+00	1.015E+00	1.601E-02	2.739E-02	3.773E-03	1.496E-01	4.469E-03
R05	4.696E-01	5.391E-01	8.551E-02	1.189E-03	3.712E-02	1.382E-01	2.565E-03
R06	3.221E-02	1.621E-01	2.995E-01	1.137E-04	2.256E-01	9.440E-02	2.143E-03
R07	1.570E-03	2.672E-02	6.248E-01	3.252E-05	6.078E-01	4.744E-02	2.692E-03
R08	1.500E-04	3.624E-03	8.631E-01	3.058E-05	9.541E-01	1.842E-02	4.877E-03
R09	4.027E-05	6.718E-04	8.531E-01	9.501E-05	1.083E+00	6.278E-03	1.137E-02
R10	3.412E-05	2.423E-04	6.014E-01	8.962E-04	9.333E-01	2.267E-03	2.890E-02
R11	9.235E-05	1.987E-04	2.785E-01	1.957E-02	5.763E-01	1.066E-03	6.801E-02
R12	7.361E-04	3.809E-04	7.649E-02	4.010E-01	2.021E-01	7.556E-04	1.314E-01
R13	1.334E-02	1.555E-03	1.407E-02	1.573E+00	3.132E-02	8.578E-04	1.952E-01
R14	2.517E-01	1.054E-02	2.490E-03	2.273E+00	3.158E-03	1.526E-03	2.203E-01
R15	1.221E+00	7.448E-02	6.399E-04	2.677E+00	4.060E-04	3.823E-03	1.889E-01
R16	1.991E+00	3.353E-01	3.107E-04	2.699E+00	1.057E-04	1.121E-02	1.230E-01

POINT	SOURCE						
	S22	S23	S24	S25	S26	S27	S28
R01	9.206E-05	6.154E-02	3.600E-01	1.822E-01	1.381E-01	8.056E-02	1.087E+00
R02	9.849E-04	1.884E-01	8.563E-01	3.284E-01	4.926E-01	4.640E-03	7.738E-01
R03	2.275E-02	3.416E-01	1.197E+00	4.043E-01	9.664E-01	2.991E-04	3.406E-01
R04	4.058E-01	4.212E-01	1.324E+00	3.622E-01	1.267E+00	4.337E-05	6.043E-02
R05	1.338E+00	3.760E-01	1.197E+00	2.299E-01	1.218E+00	1.809E-05	5.116E-03
R06	1.880E+00	2.348E-01	8.559E-01	9.826E-02	8.471E-01	2.343E-05	4.742E-04
R07	2.176E+00	9.061E-02	3.596E-01	2.830E-02	3.760E-01	9.231E-05	8.727E-05
R08	2.149E+00	1.964E-02	4.535E-02	6.609E-03	8.805E-02	9.656E-04	4.108E-05
R09	1.808E+00	3.034E-03	2.724E-03	1.672E-03	1.230E-02	1.785E-02	5.376E-05
R10	1.216E+00	5.211E-04	2.283E-04	6.200E-04	1.699E-03	2.132E-01	1.902E-04
R11	2.815E-01	1.496E-04	4.556E-05	4.061E-04	3.793E-04	6.399E-01	1.553E-03
R12	1.338E-02	8.905E-05	2.619E-05	5.040E-04	1.800E-04	9.433E-01	1.933E-02
R13	6.287E-04	1.186E-04	4.560E-05	1.144E-03	2.020E-04	1.092E+00	1.702E-01
R14	6.920E-05	3.395E-04	2.287E-04	4.105E-03	5.277E-04	1.046E+00	5.692E-01
R15	2.315E-05	1.760E-03	2.731E-03	1.775E-02	2.781E-03	8.243E-01	9.630E-01
R16	2.551E-05	1.161E-02	4.564E-02	6.782E-02	2.115E-02	4.490E-01	1.158E+00

POINT	SOURCE						
	S29	S30	S31	S32	S33	S34	S35
R01	1.397E-02	4.014E-01	2.420E-01	3.544E-02	3.655E-02	2.919E-04	2.683E+00

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R02	2.041E-02	4.262E-02	3.124E-02	2.364E-01	1.520E-03	5.444E-03	3.274E+00
R03	2.797E-02	2.311E-03	2.933E-03	7.228E-01	1.285E-04	1.274E-01	3.337E+00
R04	3.447E-02	1.935E-04	3.989E-04	1.227E+00	3.166E-05	7.686E-01	2.835E+00
R05	3.728E-02	4.090E-05	1.186E-04	1.468E+00	2.546E-05	1.260E+00	1.949E+00
R06	3.508E-02	2.565E-05	9.090E-05	1.323E+00	6.781E-05	1.550E+00	6.030E-01
R07	2.890E-02	5.025E-05	1.850E-04	8.662E-01	5.565E-04	1.616E+00	3.995E-02
R08	2.134E-02	2.868E-04	9.182E-04	3.405E-01	1.115E-02	1.437E+00	1.972E-03
R09	1.469E-02	3.909E-03	8.610E-03	6.175E-02	2.497E-01	1.071E+00	1.951E-04
R10	9.947E-03	7.079E-02	8.732E-02	6.696E-03	1.199E+00	4.258E-01	5.466E-05
R11	7.054E-03	5.155E-01	4.643E-01	8.286E-04	1.810E+00	3.132E-02	4.849E-05
R12	5.555E-03	1.096E+00	1.084E+00	1.932E-04	2.182E+00	1.290E-03	1.374E-04
R13	5.067E-03	1.459E+00	1.565E+00	1.070E-04	2.249E+00	1.014E-04	1.141E-03
R14	5.443E-03	1.577E+00	1.681E+00	1.517E-04	1.970E+00	2.274E-05	2.114E-02
R15	6.797E-03	1.409E+00	1.380E+00	5.272E-04	1.456E+00	1.648E-05	3.864E-01
R16	9.488E-03	1.005E+00	7.965E-01	3.745E-03	5.478E-01	3.939E-05	1.705E+00

**TABLE 5 - TOTAL RADIATION LEVEL AT EACH MEASUREMENT POINT FROM A
GROUTED HN-200 GROUT CONTAINER FOR EACH SET OF SOURCES TO BE ANALYZED.**

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OF HN-200 GROUT CONTAINERS.**

POINT	SOURCE SET						
	S01-S35	S01-S30	S06-S35	S01-S25	S11-S35	S01-S20	S16-S35
R01	1.572E+01	1.272E+01	1.284E+01	1.100E+01	1.258E+01	1.034E+01	8.548E+00
R02	1.615E+01	1.260E+01	1.380E+01	1.127E+01	1.368E+01	9.869E+00	9.221E+00
R03	1.508E+01	1.089E+01	1.351E+01	9.550E+00	1.343E+01	7.575E+00	9.420E+00
R04	1.359E+01	8.755E+00	1.296E+01	7.393E+00	1.278E+01	4.876E+00	9.923E+00
R05	1.184E+01	7.158E+00	1.171E+01	5.897E+00	1.133E+01	2.754E+00	9.882E+00
R06	1.019E+01	6.711E+00	1.010E+01	5.829E+00	9.499E+00	2.757E+00	8.212E+00
R07	9.612E+00	7.089E+00	9.441E+00	6.684E+00	8.716E+00	4.027E+00	6.892E+00
R08	9.198E+00	7.406E+00	8.807E+00	7.296E+00	8.082E+00	5.070E+00	5.967E+00
R09	8.984E+00	7.593E+00	7.875E+00	7.544E+00	7.153E+00	5.717E+00	5.210E+00
R10	7.641E+00	5.922E+00	7.191E+00	5.627E+00	6.149E+00	4.380E+00	4.799E+00
R11	7.821E+00	5.514E+00	6.851E+00	4.350E+00	5.268E+00	4.000E+00	4.697E+00
R12	9.905E+00	6.637E+00	8.220E+00	4.573E+00	6.258E+00	4.427E+00	6.158E+00
R13	1.250E+01	8.685E+00	1.040E+01	5.959E+00	8.388E+00	5.762E+00	8.360E+00
R14	1.350E+01	9.829E+00	1.137E+01	6.631E+00	9.683E+00	6.406E+00	9.386E+00
R15	1.550E+01	1.228E+01	1.200E+01	9.072E+00	1.092E+01	8.861E+00	9.396E+00
R16	1.573E+01	1.268E+01	1.243E+01	1.004E+01	1.191E+01	9.788E+00	8.990E+00

POINT	SOURCE SET						
	S01-S18	S19-S35	S01-S12	S13-S24	S25-S35	S01-S10	S13-S22
R01	1.031E+01	5.415E+00	4.693E+00	6.127E+00	4.901E+00	3.141E+00	5.705E+00
R02	9.798E+00	6.354E+00	4.348E+00	6.593E+00	5.211E+00	2.475E+00	5.548E+00
R03	7.454E+00	7.624E+00	3.379E+00	5.767E+00	5.932E+00	1.653E+00	4.228E+00
R04	4.722E+00	8.864E+00	1.992E+00	5.039E+00	6.555E+00	8.072E-01	3.294E+00
R05	2.579E+00	9.256E+00	1.012E+00	4.655E+00	6.167E+00	5.058E-01	3.082E+00
R06	2.437E+00	7.750E+00	7.855E-01	4.945E+00	4.457E+00	6.887E-01	3.854E+00
R07	3.371E+00	6.240E+00	9.067E-01	5.749E+00	2.956E+00	8.959E-01	5.299E+00
R08	4.098E+00	5.100E+00	1.117E+00	6.172E+00	1.909E+00	1.116E+00	6.107E+00
R09	4.628E+00	4.356E+00	1.831E+00	5.711E+00	1.442E+00	1.831E+00	5.705E+00
R10	3.445E+00	4.197E+00	1.493E+00	4.133E+00	2.015E+00	1.493E+00	4.132E+00
R11	3.423E+00	4.398E+00	2.553E+00	1.797E+00	3.471E+00	2.553E+00	1.796E+00
R12	4.224E+00	5.680E+00	3.648E+00	9.242E-01	5.332E+00	3.647E+00	9.241E-01
R13	5.730E+00	6.771E+00	4.118E+00	1.840E+00	6.543E+00	4.113E+00	1.840E+00
R14	6.401E+00	7.100E+00	3.860E+00	2.767E+00	6.875E+00	3.819E+00	2.766E+00
R15	8.857E+00	6.644E+00	4.878E+00	4.177E+00	6.447E+00	4.585E+00	4.172E+00
R16	9.777E+00	5.955E+00	4.735E+00	5.234E+00	5.764E+00	3.821E+00	5.176E+00

POINT	SOURCE SET					
	S23-S32	S01-S07	S08-S14	S15-S21	S22-S28	S29-S35
R01	2.602E+00	3.121E+00	1.613E+00	5.664E+00	1.909E+00	3.413E+00
R02	2.975E+00	2.459E+00	1.973E+00	5.464E+00	2.645E+00	3.612E+00

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R03	4.006E+00	1.602E+00	1.907E+00	4.075E+00	3.273E+00	4.221E+00
R04	4.697E+00	6.400E-01	1.540E+00	2.700E+00	3.841E+00	4.866E+00
R05	4.531E+00	1.266E-01	1.357E+00	1.273E+00	4.364E+00	4.714E+00
R06	3.395E+00	8.997E-02	1.854E+00	8.161E-01	3.917E+00	3.511E+00
R07	1.750E+00	1.726E-01	2.546E+00	1.311E+00	3.031E+00	2.552E+00
R08	5.237E-01	4.032E-01	2.828E+00	1.844E+00	2.310E+00	1.813E+00
R09	1.266E-01	1.227E+00	2.547E+00	1.955E+00	1.846E+00	1.410E+00
R10	3.912E-01	1.007E+00	1.835E+00	1.567E+00	1.432E+00	1.800E+00
R11	1.630E+00	2.149E+00	9.751E-01	9.437E-01	9.239E-01	2.829E+00
R12	3.149E+00	3.304E+00	4.418E-01	8.129E-01	9.768E-01	4.369E+00
R13	4.293E+00	3.832E+00	2.957E-01	1.829E+00	1.264E+00	5.279E+00
R14	4.884E+00	3.619E+00	2.445E-01	2.763E+00	1.620E+00	5.255E+00
R15	4.609E+00	4.474E+00	4.097E-01	4.166E+00	1.812E+00	4.639E+00
R16	3.568E+00	3.773E+00	9.783E-01	5.160E+00	1.753E+00	4.068E+00

	SOURCE SET						
POINT	S01-S05	S06-S10	S11-S15	S16-S20	S21-S25	S26-S30	S31-S35
R01	2.883E+00	2.578E-01	4.032E+00	3.164E+00	6.657E-01	1.721E+00	2.997E+00
R02	2.347E+00	1.281E-01	4.456E+00	2.938E+00	1.400E+00	1.334E+00	3.549E+00
R03	1.565E+00	8.757E-02	4.005E+00	1.917E+00	1.976E+00	1.338E+00	4.190E+00
R04	6.303E-01	1.770E-01	2.857E+00	1.212E+00	2.518E+00	1.362E+00	4.831E+00
R05	1.241E-01	3.818E-01	1.447E+00	8.011E-01	3.143E+00	1.260E+00	4.677E+00
R06	8.896E-02	5.997E-01	1.287E+00	7.817E-01	3.071E+00	8.827E-01	3.476E+00
R07	1.711E-01	7.248E-01	1.824E+00	1.307E+00	2.657E+00	4.051E-01	2.523E+00
R08	3.913E-01	7.243E-01	2.115E+00	1.839E+00	2.225E+00	1.107E-01	1.792E+00
R09	1.109E+00	7.221E-01	1.943E+00	1.943E+00	1.827E+00	4.880E-02	1.391E+00
R10	4.501E-01	1.042E+00	1.350E+00	1.538E+00	1.246E+00	2.958E-01	1.719E+00
R11	9.702E-01	1.583E+00	5.715E-01	8.756E-01	3.501E-01	1.164E+00	2.306E+00
R12	1.684E+00	1.963E+00	9.948E-02	6.807E-01	1.454E-01	2.064E+00	3.268E+00
R13	2.102E+00	2.011E+00	2.778E-02	1.621E+00	1.971E-01	2.726E+00	3.815E+00
R14	2.132E+00	1.686E+00	2.966E-01	2.291E+00	2.250E-01	3.198E+00	3.672E+00
R15	3.501E+00	1.084E+00	1.519E+00	2.756E+00	2.112E-01	3.206E+00	3.223E+00
R16	3.300E+00	5.217E-01	2.921E+00	3.046E+00	2.481E-01	2.643E+00	3.053E+00

POINT	SOURCE SET						
	S01-S03	S04-S06	S07-S09	S10-S12	S13-S15	S16-S18	S19-S21
R01	2.586E+00	5.173E-01	3.534E-02	1.555E+00	2.479E+00	3.133E+00	9.328E-02
R02	2.316E+00	1.407E-01	8.326E-03	1.883E+00	2.583E+00	2.867E+00	9.705E-02
R03	1.561E+00	4.082E-02	4.273E-03	1.773E+00	2.278E+00	1.796E+00	1.309E-01

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R04	6.238E-01	1.610E-02	6.089E-03	1.346E+00	1.672E+00	1.058E+00	1.578E-01
R05	9.860E-02	2.792E-02	1.781E-02	8.680E-01	9.406E-01	6.258E-01	1.779E-01
R06	1.054E-02	7.925E-02	5.792E-02	6.378E-01	1.190E+00	4.617E-01	3.221E-01
R07	1.082E-02	1.607E-01	1.511E-01	5.841E-01	1.813E+00	6.516E-01	6.579E-01
R08	1.660E-01	2.258E-01	2.890E-01	4.364E-01	2.114E+00	8.668E-01	9.774E-01
R09	8.735E-01	2.360E-01	4.956E-01	2.260E-01	1.943E+00	8.539E-01	1.101E+00
R10	1.619E-01	2.907E-01	9.649E-01	7.531E-02	1.349E+00	6.025E-01	9.645E-01
R11	2.200E-01	7.600E-01	1.555E+00	1.774E-02	5.712E-01	2.983E-01	6.454E-01
R12	2.690E-01	1.453E+00	1.921E+00	4.552E-03	9.862E-02	4.779E-01	3.343E-01
R13	2.305E-01	1.982E+00	1.899E+00	5.863E-03	2.293E-02	1.589E+00	2.274E-01
R14	1.748E-01	2.179E+00	1.464E+00	4.216E-02	2.549E-01	2.286E+00	2.250E-01
R15	1.870E+00	1.939E+00	7.760E-01	2.926E-01	1.227E+00	2.752E+00	1.931E-01
R16	2.310E+00	1.297E+00	2.141E-01	9.142E-01	2.007E+00	3.035E+00	1.343E-01

POINT	SOURCE SET				
	S22-S24	S25-S27	S28-S30	S31-S33	S34-S35
R01	4.216E-01	4.009E-01	1.502E+00	3.140E-01	2.683E+00
R02	1.046E+00	8.256E-01	8.368E-01	2.692E-01	3.279E+00
R03	1.561E+00	1.371E+00	3.709E-01	7.259E-01	3.464E+00
R04	2.151E+00	1.629E+00	9.509E-02	1.227E+00	3.604E+00
R05	2.911E+00	1.448E+00	4.244E-02	1.468E+00	3.209E+00
R06	2.971E+00	9.454E-01	3.558E-02	1.323E+00	2.153E+00
R07	2.626E+00	4.044E-01	2.904E-02	8.669E-01	1.656E+00
R08	2.214E+00	9.562E-02	2.167E-02	3.526E-01	1.439E+00
R09	1.814E+00	3.182E-02	1.865E-02	3.201E-01	1.071E+00
R10	1.217E+00	2.155E-01	8.093E-02	1.293E+00	4.259E-01
R11	2.817E-01	6.407E-01	5.241E-01	2.275E+00	3.137E-02
R12	1.350E-02	9.440E-01	1.121E+00	3.266E+00	1.427E-03
R13	7.929E-04	1.093E+00	1.634E+00	3.814E+00	1.242E-03
R14	6.374E-04	1.051E+00	2.152E+00	3.651E+00	2.116E-02
R15	4.514E-03	8.448E-01	2.379E+00	2.837E+00	3.864E-01
R16	5.728E-02	5.380E-01	2.172E+00	1.348E+00	1.705E+00

**TABLE 6 - ESTIMATES OF CURIE CONTENT FOR VARIOUS SOURCE SETS COMPARED TO
ACTUAL CURIE CONTENT FOR A GROUTED CONTAINER.
MULTIPLE SOURCE SET ESTIMATE AND ERROR - 5 FOOT MEASUREMENT**

SOURCE SET	AVG	CONV	EST	ACTUAL	ERROR	%
	5 FOOT R/hr	5 FOOT FACT R/hr/Ci	Cs-137 CURIES	Cs-137 CURIES		
S01-S35	1.206E+01	1.479E-02	815.3966	708.6318	106.7648	15.0663

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S01-S30	8.905E+00	1.479E-02	602.0648	604.0700	-2.0052	-0.3320
S06-S35	1.059E+01	1.479E-02	716.3037	610.0433	106.2604	17.4185
S01-S25	7.420E+00	1.479E-02	501.6577	520.3863	-18.7285	-3.5990
S11-S35	9.738E+00	1.479E-02	658.4350	490.8729	167.5621	34.1355
S01-S20	6.038E+00	1.479E-02	408.2395	426.0483	-17.8087	-4.1800
S16-S35	7.816E+00	1.479E-02	528.4853	393.8550	134.6302	34.1827
S01-S18	5.703E+00	1.479E-02	385.6012	394.2079	-8.6067	-2.1833
S19-S35	6.357E+00	1.479E-02	429.7954	314.4239	115.3715	36.6930
S01-S12	2.834E+00	1.479E-02	191.6404	247.8830	-56.2426	-22.6892
S13-S24	4.477E+00	1.479E-02	302.6889	252.7408	49.9481	19.7626
S25-S35	4.749E+00	1.479E-02	321.0673	208.0080	113.0592	54.3533
S01-S10	2.321E+00	1.479E-02	156.9616	217.7589	-60.7973	-27.9195
S13-S22	3.977E+00	1.479E-02	268.8898	227.1843	41.7055	18.3575
S23-S32	2.946E+00	1.479E-02	199.1662	173.0444	26.1219	15.0955
S01-S07	2.000E+00	1.479E-02	135.2224	140.8425	-5.6201	-3.9904
S08-S14	1.459E+00	1.479E-02	98.6486	151.1873	-52.5387	-34.7508
S15-S21	2.647E+00	1.479E-02	178.9401	162.6650	16.2751	10.0053
S22-S28	2.307E+00	1.479E-02	156.0109	116.2697	39.7412	34.1802
S29-S35	3.647E+00	1.479E-02	246.5747	137.6673	108.9074	79.1091
S01-S05	1.466E+00	1.479E-02	99.0929	98.5885	0.5044	0.5116
S06-S10	8.559E-01	1.479E-02	57.8688	119.1704	-61.3016	-51.4403
S11-S15	1.922E+00	1.479E-02	129.9497	97.0179	32.9318	33.9441
S16-S20	1.794E+00	1.479E-02	121.3282	111.2715	10.0567	9.0380
S21-S25	1.382E+00	1.479E-02	93.4182	94.3380	-0.9198	-0.9750
S26-S30	1.485E+00	1.479E-02	100.4071	83.6838	16.7233	19.9839
S31-S35	3.155E+00	1.479E-02	213.3318	104.5618	108.7700	104.0246
S01-S03	8.427E-01	1.479E-02	56.9769	66.9394	-9.9624	-14.8828
S04-S06	7.091E-01	1.479E-02	47.9423	47.9673	-0.0250	-0.0522
S07-S09	6.163E-01	1.479E-02	41.6691	76.0383	-34.3692	-45.1999
S10-S12	6.663E-01	1.479E-02	45.0521	56.9379	-11.8859	-20.8751
S13-S15	1.409E+00	1.479E-02	95.2710	66.8938	28.3771	42.4211
S16-S18	1.460E+00	1.479E-02	98.6898	79.4311	19.2587	24.2458
S19-S21	4.024E-01	1.479E-02	27.2099	60.4869	-33.2771	-55.0153
S22-S24	1.206E+00	1.479E-02	81.5183	45.9289	35.5894	77.4879
S25-S27	7.799E-01	1.479E-02	52.7335	54.8275	-2.0940	-3.8192
S28-S30	8.135E-01	1.479E-02	55.0020	48.6188	6.3832	13.1290
S31-S33	1.584E+00	1.479E-02	107.1310	61.8697	45.2613	73.1559
S34-S35	1.571E+00	1.479E-02	106.2008	42.6921	63.5087	148.7598

Average % Error = 15.9784

INDIVIDUAL SOURCE ESTIMATE AND ERROR - 5 FOOT MEASUREMENT

SOURCE	5 FOOT					
	AVG 5 FOOT R/hr	CONV FACT R/hr/Ci	EST Cs-137 CURIES	ACTUAL Cs-137 CURIES	ERROR	% ERROR
S01	6.804E-01	1.479E-02	46.0063	29.4975	16.5088	55.9668
S02	1.403E-01	1.479E-02	9.4861	13.8502	-4.3641	-31.5095
S03	2.196E-02	1.479E-02	1.4845	23.5916	-22.1071	-93.7075
S04	5.605E-01	1.479E-02	37.8946	20.6982	17.1965	83.0820

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S05	6.243E-02	1.479E-02	4.2214	10.9510	-6.7296	-61.4523
S06	8.617E-02	1.479E-02	5.8263	16.3182	-10.4918	-64.2954
S07	4.482E-01	1.479E-02	30.3032	25.9358	4.3673	16.8390
S08	7.374E-02	1.479E-02	4.9856	25.1678	-20.1822	-80.1905
S09	9.436E-02	1.479E-02	6.3803	24.9347	-18.5544	-74.4119
S10	1.534E-01	1.479E-02	10.3733	26.8139	-16.4406	-61.3137
S11	1.100E-01	1.479E-02	7.4406	12.5933	-5.1527	-40.9162
S12	4.029E-01	1.479E-02	27.2381	17.5307	9.7074	55.3739
S13	4.340E-02	1.479E-02	2.9347	17.9331	-14.9984	-83.6352
S14	5.812E-01	1.479E-02	39.2959	26.2138	13.0821	49.9052
S15	7.845E-01	1.479E-02	53.0404	22.7469	30.2934	133.1759
S16	3.417E-01	1.479E-02	23.1010	27.6556	-4.5546	-16.4691
S17	2.325E-01	1.479E-02	15.7190	28.5227	-12.8038	-44.8897
S18	8.855E-01	1.479E-02	59.8699	23.2528	36.6171	157.4737
S19	2.912E-01	1.479E-02	19.6870	15.3416	4.3454	28.3245
S20	4.365E-02	1.479E-02	2.9513	16.4988	-13.5474	-82.1118
S21	6.761E-02	1.479E-02	4.5715	28.6466	-24.0751	-84.0416
S22	7.058E-01	1.479E-02	47.7191	20.3724	27.3467	134.2341
S23	1.095E-01	1.479E-02	7.4012	13.0146	-5.6135	-43.1319
S24	3.904E-01	1.479E-02	26.3980	12.5419	13.8561	110.4786
S25	1.084E-01	1.479E-02	7.3284	19.7625	-12.4341	-62.9176
S26	3.395E-01	1.479E-02	22.9567	24.8512	-1.8946	-7.6236
S27	3.320E-01	1.479E-02	22.4484	10.2138	12.2347	119.7861
S28	3.218E-01	1.479E-02	21.7591	15.5133	6.2458	40.2609
S29	1.772E-02	1.479E-02	1.1979	18.0653	-16.8675	-93.3693
S30	4.739E-01	1.479E-02	32.0450	15.0401	17.0049	113.0632
S31	4.590E-01	1.479E-02	31.0371	22.3550	8.6821	38.8375
S32	3.933E-01	1.479E-02	26.5946	21.6866	4.9079	22.6311
S33	7.321E-01	1.479E-02	49.4994	17.8281	31.6713	177.6486
S34	5.184E-01	1.479E-02	35.0504	14.6776	20.3728	138.8024
S35	1.052E+00	1.479E-02	71.1504	28.0146	43.1359	153.9767
Average % Error =						17.2535

**TABLE 7 - CALCULATION OF CONVERSION FACTORS FOR AN UNGROUTED HN-200
GROUT CONTAINER ASSUMING A HOMOGENEOUS MIXTURE OF ACTIVITY AND A
MATERIAL WITH LITTLE OR NO SHIELDING VALUE (e.g., PAPER).**

POINT	R/hr
R01	6.751E-02
R02	6.751E-02

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R03	6.751E-02			
R04	6.751E-02			
R05	6.751E-02			
R06	6.751E-02			
R07	6.751E-02	AVERAGE 5 FOOT READING =	6.751E-02	R/hr
R08	6.751E-02	TOTAL Cs-137 =	1	Ci
R09	6.751E-02	GROUTED 5 FOOT CONV FACTOR =	6.751E-02	R/hr/Ci
R10	6.751E-02			
R11	6.751E-02	5 FOOT readings are taken with the RO-7 probe 5 feet from the surface of the container. These readings are taken every 22.5 degrees around the container and averaged to produce the most accurate representation of the Cs-137 curie content of the container.		
R12	6.751E-02			
R13	6.751E-02			
R14	6.751E-02			
R15	6.751E-02			
R16	6.751E-02			

**TABLE 8 - MICROSHIELD CALCULATION FOR EACH SOURCE TO EACH MEASUREMENT
POINT FROM AN UNGROUTED HN-200 GROUT CONTAINER.**

POINT	SOURCE						
	S01	S02	S03	S04	S05	S06	S07
R01	3.439E+00	6.903E-01	1.610E+00	1.449E+00	5.591E-01	1.431E+00	1.414E+00
R02	3.257E+00	6.267E-01	1.505E+00	1.223E+00	5.777E-01	1.290E+00	1.264E+00
R03	2.773E+00	5.923E-01	1.418E+00	1.076E+00	6.161E-01	1.145E+00	1.166E+00
R04	2.245E+00	5.859E-01	1.358E+00	9.793E-01	6.758E-01	1.024E+00	1.117E+00
R05	1.862E+00	6.070E-01	1.325E+00	9.286E-01	7.577E-01	9.355E-01	1.113E+00

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R06	1.616E+00	6.570E-01	1.322E+00	9.198E-01	8.570E-01	8.782E-01	1.154E+00
R07	1.454E+00	7.341E-01	1.348E+00	9.524E-01	9.548E-01	8.502E-01	1.242E+00
R08	1.359E+00	7.800E-01	1.403E+00	1.029E+00	1.018E+00	8.504E-01	1.383E+00
R09	1.325E+00	1.008E+00	1.484E+00	1.154E+00	1.019E+00	8.787E-01	1.589E+00
R10	1.350E+00	1.389E+00	1.586E+00	1.339E+00	9.569E-01	9.364E-01	1.894E+00
R11	1.435E+00	1.668E+00	1.698E+00	1.643E+00	8.594E-01	1.026E+00	2.249E+00
R12	1.587E+00	1.733E+00	1.799E+00	2.045E+00	7.598E-01	1.147E+00	2.510E+00
R13	1.817E+00	1.537E+00	1.862E+00	2.376E+00	6.774E-01	1.292E+00	2.534E+00
R14	2.175E+00	1.203E+00	1.869E+00	2.446E+00	6.172E-01	1.433E+00	2.308E+00
R15	2.689E+00	8.065E-01	1.816E+00	2.206E+00	5.784E-01	1.523E+00	1.957E+00
R16	3.196E+00	7.722E-01	1.722E+00	1.811E+00	5.593E-01	1.522E+00	1.635E+00

POINT	SOURCE						
	S08	S09	S10	S11	S12	S13	S14
R01	1.627E+00	1.268E+00	1.425E+00	1.199E+00	1.846E+00	1.274E+00	1.178E+00
R02	1.509E+00	1.276E+00	1.555E+00	1.266E+00	2.013E+00	1.377E+00	1.245E+00
R03	1.429E+00	1.323E+00	1.738E+00	1.231E+00	1.939E+00	1.456E+00	1.369E+00
R04	1.387E+00	1.409E+00	1.966E+00	1.115E+00	1.675E+00	1.485E+00	1.557E+00
R05	1.383E+00	1.536E+00	2.202E+00	9.703E-01	1.365E+00	1.454E+00	1.843E+00
R06	1.416E+00	1.701E+00	2.372E+00	8.415E-01	1.128E+00	1.374E+00	2.260E+00
R07	1.488E+00	1.886E+00	2.401E+00	7.446E-01	9.754E-01	1.270E+00	2.685E+00
R08	1.598E+00	2.050E+00	2.274E+00	6.782E-01	8.738E-01	1.168E+00	2.912E+00
R09	1.743E+00	2.139E+00	2.052E+00	6.385E-01	8.129E-01	1.083E+00	2.797E+00
R10	1.908E+00	2.114E+00	1.814E+00	6.231E-01	7.886E-01	1.021E+00	2.417E+00
R11	2.064E+00	1.987E+00	1.614E+00	6.308E-01	7.987E-01	9.843E-01	1.977E+00
R12	2.166E+00	1.807E+00	1.465E+00	6.622E-01	8.442E-01	9.723E-01	1.642E+00
R13	2.177E+00	1.627E+00	1.366E+00	7.194E-01	9.284E-01	9.853E-01	1.426E+00
R14	2.093E+00	1.477E+00	1.315E+00	8.057E-01	1.058E+00	1.023E+00	1.282E+00
R15	1.945E+00	1.368E+00	1.307E+00	9.245E-01	1.255E+00	1.086E+00	1.195E+00
R16	1.778E+00	1.298E+00	1.343E+00	1.067E+00	1.545E+00	1.172E+00	1.161E+00

POINT	SOURCE						
	S15	S16	S17	S18	S19	S20	S21
R01	2.589E+00	2.486E+00	1.363E+00	2.374E+00	7.022E-01	1.133E+00	2.070E+00
R02	2.644E+00	2.770E+00	1.414E+00	1.827E+00	7.183E-01	1.235E+00	1.910E+00
R03	2.340E+00	2.832E+00	1.518E+00	1.263E+00	7.655E-01	1.321E+00	1.776E+00
R04	1.859E+00	2.637E+00	1.681E+00	1.240E+00	8.476E-01	1.364E+00	1.679E+00
R05	1.391E+00	2.293E+00	1.909E+00	1.111E+00	9.722E-01	1.348E+00	1.621E+00
R06	1.245E+00	1.947E+00	2.197E+00	1.018E+00	1.158E+00	1.279E+00	1.603E+00
R07	1.109E+00	1.680E+00	2.489E+00	9.706E-01	1.402E+00	1.181E+00	1.626E+00
R08	1.013E+00	1.494E+00	2.677E+00	9.683E-01	1.626E+00	1.081E+00	1.688E+00
R09	9.627E-01	1.373E+00	2.670E+00	1.011E+00	1.715E+00	9.950E-01	1.790E+00

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R10	9.566E-01	1.309E+00	2.470E+00	1.099E+00	1.612E+00	9.309E-01	1.928E+00
R11	9.940E-01	1.298E+00	2.175E+00	1.226E+00	1.383E+00	8.902E-01	2.090E+00
R12	1.077E+00	1.337E+00	1.890E+00	1.260E+00	1.141E+00	8.731E-01	2.251E+00
R13	1.204E+00	1.430E+00	1.667E+00	1.756E+00	9.606E-01	8.793E-01	2.371E+00
R14	1.335E+00	1.585E+00	1.509E+00	2.324E+00	8.398E-01	9.090E-01	2.413E+00
R15	1.713E+00	1.812E+00	1.409E+00	2.709E+00	7.607E-01	9.622E-01	2.360E+00
R16	2.213E+00	2.126E+00	1.361E+00	2.730E+00	7.159E-01	1.038E+00	2.233E+00

POINT	SOURCE						
	S22	S23	S24	S25	S26	S27	S28
R01	8.724E-01	8.679E-01	9.156E-01	1.587E+00	1.748E+00	6.209E-01	1.578E+00
R02	9.504E-01	9.987E-01	1.169E+00	1.745E+00	2.071E+00	5.457E-01	1.380E+00
R03	1.057E+00	1.118E+00	1.411E+00	1.821E+00	2.408E+00	4.881E-01	1.138E+00
R04	1.106E+00	1.177E+00	1.515E+00	1.782E+00	2.619E+00	4.519E-01	9.483E-01
R05	1.542E+00	1.144E+00	1.411E+00	1.644E+00	2.584E+00	4.366E-01	8.260E-01
R06	1.960E+00	1.037E+00	1.169E+00	1.467E+00	2.325E+00	4.410E-01	7.433E-01
R07	2.225E+00	9.045E-01	9.145E-01	1.300E+00	1.980E+00	4.657E-01	6.928E-01
R08	2.199E+00	7.881E-01	7.575E-01	1.168E+00	1.676E+00	5.117E-01	6.719E-01
R09	1.899E+00	7.012E-01	6.626E-01	1.075E+00	1.455E+00	5.781E-01	6.793E-01
R10	1.456E+00	6.415E-01	5.966E-01	1.019E+00	1.306E+00	6.711E-01	7.153E-01
R11	1.092E+00	6.057E-01	5.584E-01	9.971E-01	1.214E+00	8.710E-01	7.823E-01
R12	1.039E+00	5.920E-01	5.459E-01	1.008E+00	1.173E+00	1.080E+00	8.839E-01
R13	9.352E-01	5.995E-01	5.584E-01	1.053E+00	1.179E+00	1.204E+00	1.037E+00
R14	8.633E-01	6.288E-01	5.966E-01	1.134E+00	1.233E+00	1.165E+00	1.263E+00
R15	8.294E-01	6.812E-01	6.627E-01	1.252E+00	1.339E+00	9.895E-01	1.496E+00
R16	8.323E-01	5.798E-01	7.576E-01	1.409E+00	1.506E+00	7.739E-01	1.628E+00

POINT	SOURCE						
	S29	S30	S31	S32	S33	S34	S35
R01	1.206E+00	1.030E+00	1.601E+00	1.350E+00	9.940E-01	6.681E-01	2.912E+00
R02	1.248E+00	8.692E-01	1.354E+00	1.596E+00	8.871E-01	7.416E-01	3.422E+00
R03	1.286E+00	7.667E-01	1.191E+00	1.928E+00	8.063E-01	7.955E-01	3.479E+00
R04	1.313E+00	6.939E-01	1.085E+00	2.255E+00	7.635E-01	9.931E-01	3.039E+00
R05	1.324E+00	6.525E-01	1.029E+00	2.420E+00	7.571E-01	1.338E+00	2.375E+00
R06	1.315E+00	6.407E-01	1.017E+00	2.320E+00	7.865E-01	1.588E+00	1.750E+00
R07	1.290E+00	6.578E-01	1.049E+00	2.020E+00	8.536E-01	1.653E+00	1.571E+00
R08	1.253E+00	7.049E-01	1.127E+00	1.676E+00	9.553E-01	1.489E+00	1.395E+00
R09	1.211E+00	7.834E-01	1.258E+00	1.405E+00	9.938E-01	1.193E+00	1.272E+00
R10	1.173E+00	8.916E-01	1.454E+00	1.221E+00	1.331E+00	8.407E-01	1.209E+00

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R11	1.141E+00	1.081E+00	1.751E+00	1.100E+00	1.836E+00	7.832E-01	1.204E+00
R12	1.121E+00	1.386E+00	2.126E+00	1.028E+00	2.197E+00	7.051E-01	1.254E+00
R13	1.114E+00	1.657E+00	2.441E+00	1.002E+00	2.264E+00	6.427E-01	1.365E+00
R14	1.120E+00	1.756E+00	2.522E+00	1.017E+00	1.988E+00	6.081E-01	1.532E+00
R15	1.138E+00	1.616E+00	2.316E+00	1.076E+00	1.539E+00	6.008E-01	1.699E+00
R16	1.168E+00	1.329E+00	1.952E+00	1.184E+00	1.001E+00	6.206E-01	2.232E+00

**TABLE 9 - TOTAL RADIATION LEVEL AT EACH MEASUREMENT POINT FROM AN
UNGROUTED HN-200 GROUT CONTAINER FOR EACH SET OF SOURCES TO BE
ANALYZED.**

POINT	SOURCE SET						
	S01-S35	S01-S30	S06-S35	S01-S25	S11-S35	S01-S20	S16-S35
R01	5.108E+01	4.355E+01	4.333E+01	3.737E+01	3.617E+01	3.106E+01	2.808E+01
R02	5.148E+01	4.348E+01	4.429E+01	3.737E+01	3.740E+01	3.059E+01	2.885E+01
R03	5.078E+01	4.258E+01	4.431E+01	3.649E+01	3.750E+01	2.931E+01	2.917E+01
R04	4.963E+01	4.149E+01	4.378E+01	3.547E+01	3.688E+01	2.821E+01	2.919E+01
R05	4.841E+01	4.049E+01	4.293E+01	3.467E+01	3.576E+01	2.731E+01	2.874E+01
R06	4.750E+01	4.004E+01	4.213E+01	3.458E+01	3.461E+01	2.734E+01	2.776E+01

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R07	4.702E+01	3.987E+01	4.158E+01	3.479E+01	3.371E+01	2.782E+01	2.693E+01
R08	4.630E+01	3.965E+01	4.071E+01	3.484E+01	3.255E+01	2.824E+01	2.591E+01
R09	4.541E+01	3.928E+01	3.942E+01	3.458E+01	3.101E+01	2.845E+01	2.472E+01
R10	4.497E+01	3.891E+01	3.835E+01	3.416E+01	2.968E+01	2.851E+01	2.387E+01
R11	4.571E+01	3.903E+01	3.840E+01	3.394E+01	2.946E+01	2.860E+01	2.408E+01
R12	4.711E+01	3.980E+01	3.918E+01	3.415E+01	3.009E+01	2.872E+01	2.489E+01
R13	4.864E+01	4.093E+01	4.037E+01	3.474E+01	3.138E+01	2.922E+01	2.612E+01
R14	4.945E+01	4.178E+01	4.114E+01	3.524E+01	3.251E+01	2.961E+01	2.701E+01
R15	4.962E+01	4.239E+01	4.152E+01	3.581E+01	3.342E+01	3.002E+01	2.725E+01
R16	4.997E+01	4.298E+01	4.191E+01	3.658E+01	3.434E+01	3.077E+01	2.718E+01

POINT	SOURCE SET						
	S01-S18	S19-S35	S01-S12	S13-S24	S25-S35	S01-S10	S13-S22
R01	2.922E+01	2.186E+01	1.796E+01	1.783E+01	1.530E+01	1.491E+01	1.604E+01
R02	2.864E+01	2.284E+01	1.736E+01	1.826E+01	1.586E+01	1.408E+01	1.609E+01
R03	2.722E+01	2.356E+01	1.645E+01	1.823E+01	1.611E+01	1.328E+01	1.570E+01
R04	2.600E+01	2.363E+01	1.554E+01	1.815E+01	1.594E+01	1.275E+01	1.546E+01
R05	2.499E+01	2.342E+01	1.499E+01	1.804E+01	1.539E+01	1.265E+01	1.548E+01
R06	2.490E+01	2.260E+01	1.486E+01	1.825E+01	1.439E+01	1.289E+01	1.604E+01
R07	2.523E+01	2.179E+01	1.503E+01	1.846E+01	1.353E+01	1.331E+01	1.664E+01
R08	2.553E+01	2.077E+01	1.530E+01	1.837E+01	1.263E+01	1.374E+01	1.683E+01
R09	2.574E+01	1.967E+01	1.584E+01	1.766E+01	1.190E+01	1.439E+01	1.630E+01
R10	2.597E+01	1.900E+01	1.670E+01	1.644E+01	1.183E+01	1.529E+01	1.520E+01
R11	2.633E+01	1.938E+01	1.767E+01	1.527E+01	1.276E+01	1.624E+01	1.411E+01
R12	2.670E+01	2.040E+01	1.853E+01	1.462E+01	1.396E+01	1.702E+01	1.348E+01
R13	2.738E+01	2.126E+01	1.891E+01	1.477E+01	1.496E+01	1.727E+01	1.361E+01
R14	2.786E+01	2.159E+01	1.880E+01	1.531E+01	1.534E+01	1.694E+01	1.408E+01
R15	2.830E+01	2.132E+01	1.838E+01	1.618E+01	1.506E+01	1.620E+01	1.484E+01
R16	2.901E+01	2.096E+01	1.825E+01	1.692E+01	1.480E+01	1.564E+01	1.558E+01

POINT	SOURCE SET					
	S23-S32	S01-S07	S08-S14	S15-S21	S22-S28	S29-S35
R01	1.250E+01	1.059E+01	9.817E+00	1.272E+01	8.190E+00	9.761E+00
R02	1.298E+01	9.743E+00	1.024E+01	1.252E+01	8.860E+00	1.012E+01
R03	1.356E+01	8.786E+00	1.049E+01	1.182E+01	9.441E+00	1.025E+01
R04	1.384E+01	7.985E+00	1.059E+01	1.131E+01	9.599E+00	1.014E+01
R05	1.347E+01	7.529E+00	1.075E+01	1.065E+01	9.588E+00	9.896E+00
R06	1.248E+01	7.404E+00	1.109E+01	1.045E+01	9.142E+00	9.417E+00
R07	1.127E+01	7.536E+00	1.145E+01	1.046E+01	8.483E+00	9.094E+00
R08	1.033E+01	7.822E+00	1.155E+01	1.055E+01	7.772E+00	8.600E+00
R09	9.809E+00	8.458E+00	1.127E+01	1.052E+01	7.050E+00	8.116E+00
R10	9.689E+00	9.451E+00	1.069E+01	1.031E+01	6.406E+00	8.120E+00
R11	1.010E+01	1.058E+01	1.006E+01	1.006E+01	6.121E+00	8.896E+00

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R12	1.094E+01	1.158E+01	9.559E+00	9.829E+00	6.322E+00	9.817E+00
R13	1.184E+01	1.210E+01	9.229E+00	1.027E+01	6.566E+00	1.049E+01
R14	1.244E+01	1.205E+01	9.054E+00	1.091E+01	6.884E+00	1.054E+01
R15	1.257E+01	1.158E+01	9.081E+00	1.173E+01	7.250E+00	9.985E+00
R16	1.229E+01	1.122E+01	9.364E+00	1.242E+01	7.487E+00	9.487E+00

POINT	SOURCE SET						
	S01-S05	S06-S10	S11-S15	S16-S20	S21-S25	S26-S30	S31-S35
R01	7.747E+00	7.165E+00	8.086E+00	8.058E+00	6.313E+00	6.183E+00	7.525E+00
R02	7.189E+00	6.894E+00	8.545E+00	7.964E+00	6.773E+00	6.114E+00	8.001E+00
R03	6.475E+00	6.801E+00	8.335E+00	7.700E+00	7.183E+00	6.087E+00	8.200E+00
R04	5.844E+00	6.903E+00	7.691E+00	7.770E+00	7.259E+00	6.026E+00	8.136E+00
R05	5.480E+00	7.170E+00	7.023E+00	7.633E+00	7.362E+00	5.823E+00	7.919E+00
R06	5.372E+00	7.521E+00	6.849E+00	7.599E+00	7.236E+00	5.465E+00	7.462E+00
R07	5.443E+00	7.867E+00	6.784E+00	7.723E+00	6.970E+00	5.086E+00	7.147E+00
R08	5.589E+00	8.155E+00	6.645E+00	7.846E+00	6.601E+00	4.818E+00	6.642E+00
R09	5.990E+00	8.402E+00	6.294E+00	7.764E+00	6.128E+00	4.707E+00	6.122E+00
R10	6.621E+00	8.666E+00	5.806E+00	7.421E+00	5.641E+00	4.757E+00	6.056E+00
R11	7.303E+00	8.940E+00	5.385E+00	6.972E+00	5.343E+00	5.089E+00	6.674E+00
R12	7.924E+00	9.095E+00	5.198E+00	6.501E+00	5.436E+00	5.644E+00	7.310E+00
R13	8.269E+00	8.996E+00	5.263E+00	6.693E+00	5.517E+00	6.191E+00	7.715E+00
R14	8.310E+00	8.626E+00	5.504E+00	7.167E+00	5.636E+00	6.537E+00	7.667E+00
R15	8.096E+00	8.100E+00	6.174E+00	7.653E+00	5.785E+00	6.579E+00	7.231E+00
R16	8.061E+00	7.576E+00	7.158E+00	7.971E+00	5.812E+00	6.405E+00	6.990E+00

POINT	SOURCE SET						
	S01-S03	S04-S06	S07-S09	S10-S12	S13-S15	S16-S18	S19-S21
R01	5.739E+00	3.439E+00	4.309E+00	4.470E+00	5.041E+00	6.223E+00	3.905E+00
R02	5.389E+00	3.091E+00	4.049E+00	4.834E+00	5.266E+00	6.011E+00	3.863E+00
R03	4.783E+00	2.837E+00	3.918E+00	4.908E+00	5.165E+00	5.613E+00	3.863E+00
R04	4.189E+00	2.679E+00	3.913E+00	4.756E+00	4.901E+00	5.558E+00	3.891E+00
R05	3.794E+00	2.622E+00	4.032E+00	4.537E+00	4.688E+00	5.313E+00	3.941E+00
R06	3.595E+00	2.655E+00	4.271E+00	4.342E+00	4.879E+00	5.162E+00	4.040E+00
R07	3.536E+00	2.757E+00	4.616E+00	4.121E+00	5.064E+00	5.140E+00	4.209E+00
R08	3.542E+00	2.897E+00	5.031E+00	3.826E+00	5.093E+00	5.139E+00	4.395E+00
R09	3.817E+00	3.052E+00	5.471E+00	3.503E+00	4.843E+00	5.054E+00	4.500E+00
R10	4.325E+00	3.232E+00	5.916E+00	3.226E+00	4.395E+00	4.878E+00	4.471E+00
R11	4.801E+00	3.528E+00	6.300E+00	3.044E+00	3.955E+00	4.699E+00	4.363E+00
R12	5.119E+00	3.952E+00	6.483E+00	2.971E+00	3.691E+00	4.487E+00	4.265E+00

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R13	5.216E+00	4.345E+00	6.338E+00	3.014E+00	3.615E+00	4.853E+00	4.211E+00
R14	5.247E+00	4.496E+00	5.878E+00	3.179E+00	3.640E+00	5.418E+00	4.162E+00
R15	5.312E+00	4.307E+00	5.270E+00	3.487E+00	3.994E+00	5.930E+00	4.083E+00
R16	5.690E+00	3.892E+00	4.711E+00	3.955E+00	4.546E+00	6.217E+00	3.987E+00

POINT	SOURCE SET				
	S22-S24	S25-S27	S28-S30	S31-S33	S34-S35
R01	2.656E+00	3.956E+00	3.814E+00	3.945E+00	3.580E+00
R02	3.118E+00	4.362E+00	3.497E+00	3.837E+00	4.164E+00
R03	3.586E+00	4.717E+00	3.191E+00	3.925E+00	4.275E+00
R04	3.798E+00	4.853E+00	2.955E+00	4.104E+00	4.032E+00
R05	4.097E+00	4.665E+00	2.803E+00	4.206E+00	3.713E+00
R06	4.166E+00	4.233E+00	2.699E+00	4.124E+00	3.338E+00
R07	4.044E+00	3.746E+00	2.641E+00	3.923E+00	3.224E+00
R08	3.745E+00	3.356E+00	2.630E+00	3.758E+00	2.884E+00
R09	3.263E+00	3.108E+00	2.674E+00	3.657E+00	2.465E+00
R10	2.694E+00	2.996E+00	2.780E+00	4.006E+00	2.050E+00
R11	2.256E+00	3.082E+00	3.004E+00	4.687E+00	1.987E+00
R12	2.177E+00	3.261E+00	3.391E+00	5.351E+00	1.959E+00
R13	2.093E+00	3.436E+00	3.808E+00	5.707E+00	2.008E+00
R14	2.089E+00	3.532E+00	4.139E+00	5.527E+00	2.140E+00
R15	2.173E+00	3.581E+00	4.250E+00	4.931E+00	2.300E+00
R16	2.170E+00	3.689E+00	4.125E+00	4.137E+00	2.853E+00

**TABLE 10 - ESTIMATES OF CURIE CONTENT FOR VARIOUS SOURCE SETS COMPARED
TO ACTUAL CURIE CONTENT FOR AN UNGROUTED CONTAINER.
MULTIPLE SOURCE SET ESTIMATE AND ERROR - 5 FOOT MEASUREMENT**

SOURCE SET	5 FOOT		EST Cs-137 CURIES	ACTUAL Cs-137 CURIES	ERROR	% ERROR
	AVG 5 FOOT R/hr	CONV FACT R/hr/Ci				
S01-S35	4.832E+01	6.751E-02	715.6945	708.6318	7.0627	0.9967
S01-S30	4.102E+01	6.751E-02	607.5673	604.0700	3.4973	0.5790
S06-S35	4.146E+01	6.751E-02	614.1219	610.0433	4.0786	0.6686
S01-S25	3.530E+01	6.751E-02	522.8484	520.3863	2.4621	0.4731
S11-S35	3.353E+01	6.751E-02	496.6602	490.8729	5.7873	1.1790
S01-S20	2.899E+01	6.751E-02	429.3489	426.0483	3.3006	0.7747
S16-S35	2.686E+01	6.751E-02	397.8424	393.8550	3.9874	1.0124
S01-S18	2.681E+01	6.751E-02	397.1875	394.2079	2.9795	0.7558
S19-S35	2.150E+01	6.751E-02	318.5071	314.4239	4.0832	1.2986
S01-S12	1.691E+01	6.751E-02	250.4767	247.8830	2.5937	1.0463

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S13-S24	1.705E+01	6.751E-02	252.5032	252.7408	-0.2376	-0.0940
S25-S35	1.436E+01	6.751E-02	212.7146	208.0080	4.7066	2.2627
S01-S10	1.479E+01	6.751E-02	219.0343	217.7589	1.2754	0.5857
S13-S22	1.534E+01	6.751E-02	227.2604	227.1843	0.0761	0.0335
S23-S32	1.188E+01	6.751E-02	176.0002	173.0444	2.9559	1.7082
S01-S07	9.650E+00	6.751E-02	142.9474	140.8425	2.1049	1.4945
S08-S14	1.027E+01	6.751E-02	152.0883	151.1873	0.9010	0.5959
S15-S21	1.103E+01	6.751E-02	163.3913	162.6650	0.7263	0.4465
S22-S28	7.822E+00	6.751E-02	115.8705	116.2697	-0.3992	-0.3433
S29-S35	9.546E+00	6.751E-02	141.3970	137.6673	3.7297	2.7092
S01-S05	6.857E+00	6.751E-02	101.5726	98.5885	2.9841	3.0268
S06-S10	7.930E+00	6.751E-02	117.4617	119.1704	-1.7087	-1.4339
S11-S15	6.671E+00	6.751E-02	98.8178	97.0179	1.7999	1.8552
S16-S20	7.527E+00	6.751E-02	111.4968	111.2715	0.2253	0.2025
S21-S25	6.312E+00	6.751E-02	93.4995	94.3380	-0.8385	-0.8888
S26-S30	5.719E+00	6.751E-02	84.7189	83.6838	1.0352	1.2370
S31-S35	7.300E+00	6.751E-02	108.1272	104.5618	3.5654	3.4099
S01-S03	4.631E+00	6.751E-02	68.5954	66.9394	1.6560	2.4739
S04-S06	3.361E+00	6.751E-02	49.7918	47.9673	1.8244	3.8035
S07-S09	5.032E+00	6.751E-02	74.5316	76.0383	-1.5068	-1.9816
S10-S12	3.886E+00	6.751E-02	57.5580	56.9379	0.6200	1.0889
S13-S15	4.549E+00	6.751E-02	67.3754	66.8938	0.4816	0.7199
S16-S18	5.356E+00	6.751E-02	79.3354	79.4311	-0.0958	-0.1206
S19-S21	4.134E+00	6.751E-02	61.2395	60.4869	0.7526	1.2442
S22-S24	3.008E+00	6.751E-02	44.5529	45.9289	-1.3760	-2.9959
S25-S27	3.786E+00	6.751E-02	56.0762	54.8275	1.2488	2.2777
S28-S30	3.275E+00	6.751E-02	48.5111	48.6188	-0.1076	-0.2214
S31-S33	4.364E+00	6.751E-02	64.6425	61.8697	2.7728	4.4817
S34-S35	2.936E+00	6.751E-02	43.4848	42.6921	0.7926	1.8566

Average % Error = 0.9800

INDIVIDUAL SOURCE ESTIMATE AND ERROR - 5 FOOT MEASUREMENT

SOURCE	5 FOOT					
	AVG 5 FOOT R/hr	CONV FACT R/hr/Ci	EST Cs-137 CURIES	ACTUAL Cs-137 CURIES	ERROR	% ERROR
S01	2.099E+00	6.751E-02	31.0871	29.4975	1.5895	5.3887
S02	9.619E-01	6.751E-02	14.2479	13.8502	0.3977	2.8712
S03	1.570E+00	6.751E-02	23.2604	23.5916	-0.3312	-1.4038
S04	1.474E+00	6.751E-02	21.8274	20.6982	1.1292	5.4558
S05	7.527E-01	6.751E-02	11.1498	10.9510	0.1988	1.8158
S06	1.135E+00	6.751E-02	16.8145	16.3182	0.4964	3.0417
S07	1.658E+00	6.751E-02	24.5603	25.9358	-1.3756	-5.3038
S08	1.732E+00	6.751E-02	25.6545	25.1678	0.4867	1.9339
S09	1.642E+00	6.751E-02	24.3168	24.9347	-0.6179	-2.4781
S10	1.763E+00	6.751E-02	26.1156	26.8139	-0.6983	-2.6043
S11	8.823E-01	6.751E-02	13.0692	12.5933	0.4758	3.7785
S12	1.240E+00	6.751E-02	18.3732	17.5307	0.8425	4.8058
S13	1.199E+00	6.751E-02	17.7612	17.9331	-0.1719	-0.9587

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S14	1.809E+00	6.751E-02	26.7979	26.2138	0.5841	2.2281
S15	1.540E+00	6.751E-02	22.8163	22.7469	0.0694	0.3051
S16	1.901E+00	6.751E-02	28.1523	27.6556	0.4967	1.7961
S17	1.900E+00	6.751E-02	28.1431	28.5227	-0.3797	-1.3311
S18	1.555E+00	6.751E-02	23.0400	23.2528	-0.2128	-0.9152
S19	1.082E+00	6.751E-02	16.0345	15.3416	0.6929	4.5165
S20	1.089E+00	6.751E-02	16.1270	16.4988	-0.3718	-2.2536
S21	1.963E+00	6.751E-02	29.0781	28.6466	0.4315	1.5063
S22	1.304E+00	6.751E-02	19.3101	20.3724	-1.0623	-5.2144
S23	8.166E-01	6.751E-02	12.0953	13.0146	-0.9193	-7.0635
S24	8.876E-01	6.751E-02	13.1475	12.5419	0.6056	4.8287
S25	1.341E+00	6.751E-02	19.8684	19.7625	0.1060	0.5363
S26	1.739E+00	6.751E-02	25.7517	24.8512	0.9005	3.6236
S27	7.059E-01	6.751E-02	10.4560	10.2138	0.2423	2.3722
S28	1.029E+00	6.751E-02	15.2414	15.5133	-0.2720	-1.7530
S29	1.214E+00	6.751E-02	17.9797	18.0653	-0.0856	-0.4738
S30	1.032E+00	6.751E-02	15.2900	15.0401	0.2499	1.6617
S31	1.580E+00	6.751E-02	23.3975	22.3550	1.0425	4.6633
S32	1.537E+00	6.751E-02	22.7726	21.6866	1.0859	5.0073
S33	1.247E+00	6.751E-02	18.4724	17.8281	0.6444	3.6144
S34	9.538E-01	6.751E-02	14.1280	14.6776	-0.5496	-3.7443
S35	1.982E+00	6.751E-02	29.3568	28.0146	1.3422	4.7911
Average % Error =						1.0013

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

**TABLE 1 - ESTIMATED VERSUS ACTUAL Cs-137 FOR EACH MULTIPLE SOURCE
COMBINATION ANALYZED USING EACH METHOD OF DETERMINATION.**

Source	Grouted				Ungouted		
Set	Actual	Contact	5 Feet	10 Feet	Contact	5 Feet	10 Feet
S01-S35	708.6318	193.7780	815.3966	833.9262	760.4690	715.6945	709.9558
S01-S30	604.0700	133.3947	602.0648	629.7304	621.7013	607.5673	605.4053
S06-S35	610.0433	155.6608	716.3037	709.7623	635.4184	614.1219	610.6073
S01-S25	520.3863	97.5422	501.6577	530.2328	517.3990	522.8484	521.3715
S11-S36	490.8729	142.8967	658.4350	647.2612	525.9006	496.6602	491.3635
S01-S20	426.0483	92.2078	408.2395	435.1891	442.1841	429.3489	427.2965
S16-S35	393.8550	119.1554	528.4853	519.7471	424.1038	397.8424	393.8557
S01-S18	394.2079	80.7628	385.6012	412.9800	402.3437	397.1875	395.2253
S19-S35	314.4239	113.0152	429.7954	420.9462	358.1253	318.5071	314.7306
S01-S12	247.8830	53.5439	191.6404	219.9637	263.7183	250.4767	249.2176
S13-S24	252.7408	43.5015	302.6889	302.6797	237.2968	252.5032	252.2295
S25-S35	208.0080	96.7326	321.0673	311.2829	259.4539	212.7146	208.5087
S01-S10	217.7589	50.8813	156.9616	186.6650	234.5684	219.0343	218.5924
S13-S22	227.1843	39.9291	268.8898	269.1267	214.7626	227.2604	226.7596
S23-S32	173.0444	57.8887	199.1662	195.8188	205.3553	176.0002	174.1685
S01-S07	140.8425	48.0388	135.2224	163.1298	166.7874	142.9474	141.4250
S08-S14	151.1873	12.9566	98.6486	98.7850	140.8031	152.0883	152.1983
S15-S21	162.6650	31.8070	178.9401	177.9648	159.4727	163.3913	162.6982
S22-S28	116.2697	36.3937	156.0109	157.1532	124.9411	115.8705	115.8784
S29-S35	137.6673	64.5819	246.5747	236.8935	168.4647	141.3970	137.7559
S01-S05	98.5885	38.1173	99.0929	124.1640	125.0506	101.5726	99.3485
S06-S10	119.1704	12.7641	57.8688	62.5010	109.5178	117.4617	119.2439
S11-S15	97.0179	23.7412	129.9497	127.5142	101.7968	98.8178	97.5077
S16-S20	111.2715	17.5853	121.3282	121.0099	105.8189	111.4968	111.1964
S21-S25	94.3380	5.3344	93.4182	95.0437	75.2149	93.4995	94.0749
S26-S30	83.6838	35.8524	100.4071	99.4976	104.3023	84.7189	84.0338
S31-S35	104.5618	60.3834	213.3318	204.1959	138.7677	108.1272	104.5506
S01-S03	66.9394	29.2131	56.9769	84.0272	86.9014	68.5954	67.2825
S04-S06	47.9673	9.3949	47.9423	45.9077	52.9336	49.7918	48.6537
S07-S09	76.0383	11.5861	41.6691	45.3252	70.4577	74.5316	75.9157
S10-S12	56.9379	3.3499	45.0521	44.7035	53.4256	57.5580	57.3658
S13-S15	66.8938	21.0786	95.2710	94.2155	72.6469	67.3754	66.8825
S16-S18	79.4311	6.1402	98.6898	98.8008	65.9785	79.3354	79.1252
S19-S21	60.4869	12.0397	27.2099	26.8996	64.7196	61.2395	61.0962
S22-S24	45.9289	4.2430	81.5183	82.7637	33.9519	44.5529	45.1256
S25-S27	54.8275	27.8024	52.7335	51.8058	74.8399	56.0762	55.3393
S28-S30	48.6188	8.5468	55.0020	55.2812	45.8462	48.5111	48.6189
S31-S33	61.8697	58.8015	107.1310	101.6609	108.7065	64.6425	62.3065
S34-S35	42.6921	1.5819	106.2008	102.5350	30.0612	43.4848	42.2441
Average	202.9501	52.6212	229.0406	234.0280	214.9797	204.7398	203.3117

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

**TABLE 2 - ESTIMATED VERSUS ACTUAL Cs-137 FOR EACH INDIVIDUAL SOURCE
ANALYZED USING EACH METHOD OF DETERMINATION.**

Source	Actual	Contact	Grouted		Contact	Ungouted	
			5 Feet	10 Feet		5 Feet	10 Feet
S01	29.4975	27.4247	46.0063	45.4521	57.5491	31.0871	29.9470
S02	13.8502	1.3879	9.4861	35.4894	10.7202	14.2479	13.6592
S03	23.5916	0.4005	1.4845	3.0858	18.6320	23.2604	23.6763
S04	20.6982	8.0173	37.8946	35.8599	27.3229	21.8274	20.9797
S05	10.9510	0.8869	4.2214	4.2769	10.8263	11.1498	11.0863
S06	16.3182	0.4907	5.8263	5.7709	14.7844	16.8145	16.5876
S07	25.9358	9.4308	30.3032	33.1948	26.9524	24.5603	25.4889
S08	25.1678	0.8206	4.9856	5.0626	22.8160	25.6545	25.5259
S09	24.9347	1.3347	6.3803	7.0678	20.6893	24.3168	24.9009
S10	26.8139	0.6873	10.3733	11.4049	24.2757	26.1156	26.7406
S11	12.5933	0.7885	7.4406	7.2655	12.2127	13.0692	12.8108
S12	17.5307	1.8741	27.2381	26.0331	16.9373	18.3732	17.8144
S13	17.9331	0.3894	2.9347	3.1761	14.5112	17.7612	18.0317
S14	26.2138	7.0621	39.2959	38.7750	29.3609	26.7979	26.3740
S15	22.7469	13.6272	53.0404	52.2644	28.7747	22.8163	22.4768
S16	27.6556	0.9474	23.1010	23.2134	22.9273	28.1523	27.9367
S17	28.5227	3.8457	15.7190	16.7470	27.4687	28.1431	28.5396
S18	23.2528	1.3471	59.8699	58.8404	15.5824	23.0400	22.6488
S19	15.3416	10.9540	19.6870	18.9295	26.8814	16.0345	15.5723
S20	16.4988	0.4911	2.9513	3.2795	12.9590	16.1270	16.4990
S21	28.6466	0.5946	4.5715	4.6906	24.8791	29.0781	29.0250
S22	20.3724	0.6706	47.7191	49.2107	11.4177	19.3101	19.6558
S23	13.0146	0.9994	7.4012	8.4840	9.5389	12.0953	12.8172
S24	12.5419	2.5730	26.3980	25.0690	12.9953	13.1475	12.6527
S25	19.7625	0.4968	7.3284	7.5894	16.3839	19.8684	19.9244
S26	24.8512	5.4794	22.9567	22.4148	29.6715	25.7517	25.2145
S27	10.2138	21.8262	22.4484	21.8015	28.7845	10.4560	10.2004
S28	15.5133	4.3483	21.7591	22.5837	16.1492	15.2414	15.4135
S29	18.0653	0.1467	1.1979	1.3031	14.3100	17.9797	18.2006
S30	15.0401	4.0519	32.0450	31.3945	15.3870	15.2900	15.0047
S31	22.3550	6.0887	31.0371	29.7613	27.3595	23.3975	22.6850
S32	21.6866	11.8783	26.5946	25.4175	34.7754	22.7726	22.0555
S33	17.8281	40.8344	49.4994	46.4821	46.5716	18.4724	17.5660
S34	14.6776	0.3584	35.0504	35.6104	8.4524	14.1280	14.2414
S35	28.0146	1.2235	71.1504	66.9246	21.6089	29.3568	28.0027
Average	20.2466	5.5365	23.2970	23.8265	21.7277	20.4484	20.2845

FIGURE 1

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 2

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 3

FIGURE 4

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 5

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 6

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 7

FIGURE 8

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

FIGURE 9

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 10

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

**Mostly Heterogeneous Case -
2 to 5 Sources per Case -
Remote Measurement at 5 Feet -
Ungroued Container**

◆ Ungroued - 5 Feet - - - 95% Bounding Value
— Linear (Ungroued - 5 Feet)

REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 11

FIGURE 12

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

FIGURE 13

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 14

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

**Slightly Homogeneous Case -
7 to 10 Sources per Case -
Contact Measurement -
Ungroued Container**

◆ Ungroued - Contact - - - 95% Bounding Value
— Linear (Ungroued - Contact)

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.****FIGURE 15** **FIGURE 16**

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 17

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 18

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 19

FIGURE 20

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.

FIGURE 21

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

FIGURE 22

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

FIGURE 23

FIGURE 24

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

FIGURE 25

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

FIGURE 26

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT
OF HN-200 GROUT CONTAINERS.**

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

**TABLE 1 - MODEL FOR HN-200 GROUT CONTAINER FILLED WITH B CELL
EQUIPMENT DUNNAGE AND SIFTED DEBRIS.**

UNGROUTED CONTAINER WITH 2500 LBS NET WEIGHT IN WASTE

Shield	R-O (in)	R-I (in)	A-O (cm2)	A-I (cm2)	Vol (cm3)	Weight(lb)
1	22	21.75	47712.5838	47170.3954	30125.3459	519.56268
2	19.5	19.25	42290.6993	41748.5109	26682.4492	460.18409
3	17	16.75	36868.8148	36326.6263	23239.5526	400.8055
4	14.5	14.25	31446.9303	30904.7418	19796.6559	341.42691
5	12	11.75	26025.0457	25482.8573	16353.7592	282.04831
6	9.5	9.25	20603.1612	20060.9728	12910.8625	222.66972
7	7	6.75	15181.2767	14639.0882	9467.96586	163.29113
8	4.75	4.5	10301.5806	9759.39215	6369.35885	109.8504
Totals			230430.092	226092.585	144945.95	2499.8387
			Total Surface Area =		456522.677	

	Surface Radius	Source Thickness	Distance to outer wall	Air Gap to inner wall	Total Steel Thickness	Cesium	Barium
25-01	22	0.0001	0.9375	0.7992	0.1382	0.1045	0.0989
25-02	21.75	0.0001	1.1875	0.7992	0.3882	0.1033	0.0978
25-03	19.5	0.0001	3.4375	3.0492	0.3882	0.0926	0.0876
25-04	19.25	0.0001	3.6875	3.0492	0.6382	0.0914	0.0865
25-05	17	0.0001	5.9375	5.2992	0.6382	0.0808	0.0764
25-06	16.75	0.0001	6.1875	5.2992	0.8882	0.0796	0.0753
25-07	14.5	0.0001	8.4375	7.5492	0.8882	0.0689	0.0652
25-08	14.25	0.0001	8.6875	7.5492	1.1382	0.0677	0.0640
25-09	12	0.0001	10.9375	9.7992	1.1382	0.0570	0.0539
25-10	11.75	0.0001	11.1875	9.7992	1.3882	0.0558	0.0528
25-11	9.5	0.0001	13.4375	12.0492	1.3882	0.0451	0.0427
25-12	9.25	0.0001	13.6875	12.0492	1.6382	0.0439	0.0416
25-13	7	0.0001	15.9375	14.2992	1.6382	0.0333	0.0315
25-14	6.75	0.0001	16.1875	14.2992	1.8882	0.0321	0.0303
25-15	4.75	0.0001	18.1875	16.2992	1.8882	0.0226	0.0213
25-16	4.5	0.0001	18.4375	16.2992	2.1382	0.0214	0.0202
Total						1.0000	0.9461

Average Activity per 100 square cm = 219.04717 Cs-137
207.23396 Ba-137m

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

**TABLE 2 - CALCULATE CONVERSION FACTORS FOR CONTACT, 5 FEET, AND 10 FEET
FOR AN UNGROUTED HN-200 GROUT CONTAINER WITH 2500 LBS (NET) OF WASTE.**

Surface	Contact	5 feet	10 feet	
25-01	1.130E-01	7.080E-03	2.328E-03	
25-02	7.130E-02	5.551E-03	1.831E-03	
25-03	6.502E-02	5.328E-03	1.770E-03	
25-04	4.570E-02	4.185E-03	1.396E-03	
25-05	4.074E-02	3.876E-03	1.300E-03	
25-06	2.947E-02	3.017E-03	1.016E-03	
25-07	2.591E-02	2.724E-03	9.223E-04	
25-08	1.896E-02	2.103E-03	7.146E-04	
25-09	1.628E-02	1.840E-03	6.278E-04	
25-10	1.199E-02	1.414E-03	4.840E-04	
25-11	9.894E-03	1.182E-03	4.061E-04	
25-12	7.284E-03	9.031E-04	3.112E-04	
25-13	5.626E-03	7.036E-04	2.430E-04	
25-14	4.106E-03	5.309E-04	1.840E-04	
25-15	2.936E-03	3.815E-04	1.324E-04	
25-16	2.100E-03	2.813E-04	9.794E-05	
CONVERSION FACTOR	4.703E-01	4.110E-02	1.376E-02	R/hr/Ci

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

**TABLE 3 - MODEL FOR HN-200 GROUT CONTAINER FILLED WITH B CELL
EQUIPMENT DUNNAGE AND SIFTED DEBRIS.**

UNGROUTED CONTAINER WITH 2200 LBS NET WEIGHT IN WASTE

Shield	R-O (in)	R-I (in)	A-O (cm2)	A-I (cm2)	Vol (cm3)	Weight(lb)
1	22	21.77	47712.5838	47213.7705	27727.9881	478.21618
2	19.5	19.28	42290.6993	41813.5735	23498.7338	405.27552
3	17	16.78	36868.8148	36391.6889	20468.9847	353.02236
4	14.5	14.28	31446.9303	30969.8044	17439.2357	300.7692
5	12	11.78	26025.0457	25547.9199	14409.4866	248.51604
6	9.5	9.28	20603.1612	20126.0354	11379.7375	196.26287
7	7	6.78	15181.2767	14704.1508	8349.98845	144.00971
8	4.75	4.58	10301.5806	9932.89245	4368.62273	75.344308
Totals			230430.092	226699.836	127642.778	2201.4162
			Total Surface Area =		457129.928	

	Surface Radius	Source Thickness	Distance to outer wall	Air Gap to inner wall	Total Steel Thickness	Cesium	Barium
22-01	22	0.0001	0.9375	0.7992	0.1382	0.1044	0.0987
22-02	21.77	0.0001	1.1675	0.7992	0.3682	0.1033	0.0977
22-03	19.5	0.0001	3.4375	3.0692	0.3682	0.0925	0.0875
22-04	19.28	0.0001	3.6575	3.0692	0.5882	0.0915	0.0865
22-05	17	0.0001	5.9375	5.3492	0.5882	0.0807	0.0763
22-06	16.78	0.0001	6.1575	5.3492	0.8082	0.0796	0.0753
22-07	14.5	0.0001	8.4375	7.6292	0.8082	0.0688	0.0651
22-08	14.28	0.0001	8.6575	7.6292	1.0282	0.0677	0.0641
22-09	12	0.0001	10.9375	9.9092	1.0282	0.0569	0.0539
22-10	11.78	0.0001	11.1575	9.9092	1.2482	0.0559	0.0529
22-11	9.5	0.0001	13.4375	12.1892	1.2482	0.0451	0.0426
22-12	9.28	0.0001	13.6575	12.1892	1.4682	0.0440	0.0417
22-13	7	0.0001	15.9375	14.4692	1.4682	0.0332	0.0314
22-14	6.78	0.0001	16.1575	14.4692	1.6882	0.0322	0.0304
22-15	4.75	0.0001	18.1875	16.4992	1.6882	0.0225	0.0213
22-16	4.58	0.0001	18.3575	16.4992	1.8582	0.0217	0.0206
Total						1.0000	0.9461

Average Activity per 100 square cm = 218.75619 Cs-137
206.95867 Ba-137m

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

**TABLE 4 - CALCULATE CONVERSION FACTORS FOR CONTACT, 5 FEET, AND 10 FEET
FOR AN UNGROUTED HN-200 GROUT CONTAINER WITH 2200 LBS (NET) OF WASTE.**

	Surface	Contact	5 feet	10 feet	
	22-01	1.130E-01	7.080E-03	2.328E-03	
	22-02	7.388E-02	5.669E-03	1.870E-03	
	22-03	6.672E-02	5.420E-03	1.800E-03	
	22-04	4.899E-02	4.396E-03	1.465E-03	
	22-05	4.322E-02	4.049E-03	1.358E-03	
	22-06	3.260E-02	3.267E-03	1.099E-03	
	22-07	2.839E-02	2.934E-03	9.923E-04	
	22-08	2.163E-02	2.347E-03	7.962E-04	
	22-09	1.842E-02	2.043E-03	6.962E-04	
	22-10	1.408E-02	1.624E-03	5.549E-04	
	22-11	1.154E-02	1.352E-03	4.637E-04	
	22-12	8.826E-03	1.068E-03	3.673E-04	
	22-13	6.776E-03	8.287E-04	2.857E-04	
	22-14	5.140E-03	6.476E-04	2.239E-04	
	22-15	3.661E-03	4.639E-04	1.606E-04	
	22-16	2.879E-03	3.728E-04	1.293E-04	
CONVERSION FACTOR		4.998E-01	4.356E-02	1.459E-02	R/hr/Ci

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

TABLE 5 - MODEL FOR HN-200 GROUT CONTAINER FILLED WITH B CELL EQUIPMENT DUNNAGE AND SIFTED DEBRIS.

UNGROUTED CONTAINER WITH 1900 LBS NET WEIGHT IN WASTE

Shield	R-O (in)	R-I (in)	A-O (cm ²)	A-I (cm ²)	Vol (cm ³)	Weight(lb)
1	22	21.8	47712.5838	47278.8331	24127.8199	416.12518
2	19.5	19.31	42290.6993	41878.6361	20310.0606	350.28144
3	17	16.81	36868.8148	36456.7516	17693.4592	305.15371
4	14.5	14.31	31446.9303	31034.867	15076.8577	260.02598
5	12	11.81	26025.0457	25612.9825	12460.2562	214.89825
6	9.5	9.31	20603.1612	20191.098	9843.65474	169.77052
7	7	6.81	15181.2767	14769.2135	7227.05327	124.64279
8	4.75	4.61	10301.5806	9997.95507	3609.25744	62.247766
Totals			230430.092	227220.337	110348.419	1903.1456
			Total Surface Area =	457650.429		

	Surface Radius	Source Thickness	Distance to outer wall	Air Gap to inner wall	Total Steel Thickness	Cesium	Barium
19-01	22	0.0001	0.9375	0.7992	0.1382	0.1043	0.0986
19-02	21.8	0.0001	1.1375	0.7992	0.3382	0.1033	0.0977
19-03	19.5	0.0001	3.4375	3.0992	0.3382	0.0924	0.0874
19-04	19.31	0.0001	3.6275	3.0992	0.5282	0.0915	0.0866
19-05	17	0.0001	5.9375	5.4092	0.5282	0.0806	0.0762
19-06	16.81	0.0001	6.1275	5.4092	0.7182	0.0797	0.0754
19-07	14.5	0.0001	8.4375	7.7192	0.7182	0.0687	0.0650
19-08	14.31	0.0001	8.6275	7.7192	0.9082	0.0678	0.0642
19-09	12	0.0001	10.9375	10.0292	0.9082	0.0569	0.0538
19-10	11.81	0.0001	11.1275	10.0292	1.0982	0.0560	0.0529
19-11	9.5	0.0001	13.4375	12.3392	1.0982	0.0450	0.0426
19-12	9.31	0.0001	13.6275	12.3392	1.2882	0.0441	0.0417
19-13	7	0.0001	15.9375	14.6492	1.2882	0.0332	0.0314
19-14	6.81	0.0001	16.1275	14.6492	1.4782	0.0323	0.0305
19-15	4.75	0.0001	18.1875	16.7092	1.4782	0.0225	0.0213
19-16	4.61	0.0001	18.3275	16.7092	1.6182	0.0218	0.0207
Total						1.0000	0.9461

Average Activity per 100 square cm = 218.50739 Cs-137
206.72328 Ba-137m

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

**TABLE 6 - CALCULATE CONVERSION FACTORS FOR CONTACT, 5 FEET, AND 10 FEET
FOR AN UNGROUTED HN-200 GROUT CONTAINER WITH 1900 LBS (NET) OF WASTE.**

	Surface	Contact	5 feet	10 feet	
	19-01	1.130E-01	7.080E-03	2.328E-03	
	19-02	7.797E-02	5.850E-03	1.928E-03	
	19-03	6.931E-02	5.557E-03	1.845E-03	
	19-04	5.320E-02	4.654E-03	1.550E-03	
	19-05	4.630E-02	4.258E-03	1.427E-03	
	19-06	3.644E-02	3.560E-03	1.196E-03	
	19-07	3.138E-02	3.177E-03	1.073E-03	
	19-08	2.489E-02	2.635E-03	8.925E-04	
	19-09	2.099E-02	2.280E-03	7.761E-04	
	19-10	1.669E-02	1.877E-03	6.403E-04	
	19-11	1.357E-02	1.555E-03	5.325E-04	
	19-12	1.077E-02	1.270E-03	4.358E-04	
	19-13	8.214E-03	9.813E-04	3.377E-04	
	19-14	6.469E-03	7.928E-04	2.734E-04	
	19-15	4.587E-03	5.662E-04	1.956E-04	
	19-16	3.744E-03	4.704E-04	1.626E-04	
CONVERSION FACTOR		5.375E-01	4.656E-02	1.559E-02	R/hr/Ci

UNGROUTED CONVERSION FACTOR SUMMARY

Net Weight				
lbs	Contact	5 Feet	10 Feet	
2500	4.703E-01	4.110E-02	1.376E-02	
2200	4.998E-01	4.356E-02	1.459E-02	
1900	5.375E-01	4.656E-02	1.559E-02	

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.****FIGURE 1**

REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.

FIGURE 2

REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.

FIGURE 3

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

**TABLE 7 - MODEL FOR HN-200 GROUT CONTAINER FILLED WITH B CELL
EQUIPMENT DUNNAGE AND SIFTED DEBRIS.**

GROUTED CONTAINER WITH 2500 LBS NET WEIGHT IN WASTE

Shield	R-O (in)	R-I (in)	A-O (cm2)	A-I (cm2)	Vol (cm3)	Weight(lb)
1	22	21.75	47712.5838	47170.3954	30125.3459	519.56268
2	19.5	19.25	42290.6993	41748.5109	26682.4492	460.18409
3	17	16.75	36868.8148	36326.6263	23239.5526	400.8055
4	14.5	14.25	31446.9303	30904.7418	19796.6559	341.42691
5	12	11.75	26025.0457	25482.8573	16353.7592	282.04831
6	9.5	9.25	20603.1612	20060.9728	12910.8625	222.66972
7	7	6.75	15181.2767	14639.0882	9467.96586	163.29113
8	4.75	4.5	10301.5806	9759.39215	6369.35885	109.8504
Totals			230430.092	226092.585	144945.95	2499.8387
			Total Surface Area =		456522.677	

	Surface Radius	Source Thickness	Distance to outer wall	Total Grout Thickness	Total Steel Thickness	Cesium	Barium
25-01	22	0.0001	0.9375	0.7992	0.1382	0.1045	0.0989
25-02	21.75	0.0001	1.1875	0.7992	0.3882	0.1033	0.0978
25-03	19.5	0.0001	3.4375	3.0492	0.3882	0.0926	0.0876
25-04	19.25	0.0001	3.6875	3.0492	0.6382	0.0914	0.0865
25-05	17	0.0001	5.9375	5.2992	0.6382	0.0808	0.0764
25-06	16.75	0.0001	6.1875	5.2992	0.8882	0.0796	0.0753
25-07	14.5	0.0001	8.4375	7.5492	0.8882	0.0689	0.0652
25-08	14.25	0.0001	8.6875	7.5492	1.1382	0.0677	0.0640
25-09	12	0.0001	10.9375	9.7992	1.1382	0.0570	0.0539
25-10	11.75	0.0001	11.1875	9.7992	1.3882	0.0558	0.0528
25-11	9.5	0.0001	13.4375	12.0492	1.3882	0.0451	0.0427
25-12	9.25	0.0001	13.6875	12.0492	1.6382	0.0439	0.0416
25-13	7	0.0001	15.9375	14.2992	1.6382	0.0333	0.0315
25-14	6.75	0.0001	16.1875	14.2992	1.8882	0.0321	0.0303
25-15	4.75	0.0001	18.1875	16.2992	1.8882	0.0226	0.0213
25-16	4.5	0.0001	18.4375	16.2992	2.1382	0.0214	0.0202
Total						1.0000	0.9461

Average Activity per 100 square cm = 219.04717 Cs-137
207.23396 Ba-137m

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

**TABLE 8 - CALCULATE CONVERSION FACTORS FOR CONTACT, 5 FEET, AND 10 FEET
FOR A GROUTED HN-200 GROUT CONTAINER WITH 2500 LBS (NET) OF WASTE.**

Surface	Contact	5 feet	10 feet	
25-01	8.694E-02	6.322E-03	2.085E-03	
25-02	5.858E-02	5.023E-03	1.663E-03	
25-03	2.776E-02	2.964E-03	9.952E-04	
25-04	1.994E-02	2.276E-03	7.675E-04	
25-05	9.860E-03	1.255E-03	4.284E-04	
25-06	7.146E-03	9.463E-04	3.244E-04	
25-07	3.529E-03	5.003E-04	1.734E-04	
25-08	2.553E-03	3.725E-04	1.296E-04	
25-09	1.237E-03	1.899E-04	6.674E-05	
25-10	8.909E-04	1.398E-04	4.932E-05	
25-11	4.196E-04	6.843E-05	2.436E-05	
25-12	3.007E-04	4.999E-05	1.786E-05	
25-13	1.351E-04	2.323E-05	8.371E-06	
25-14	9.599E-05	1.680E-05	6.074E-06	
25-15	4.327E-05	7.786E-06	2.834E-06	
25-16	3.023E-05	5.523E-06	2.017E-06	
CONVERSION FACTOR	2.195E-01	2.016E-02	6.744E-03	R/hr/Ci

REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

TABLE 9 - MODEL FOR HN-200 GROUT CONTAINER FILLED WITH B CELL
EQUIPMENT DUNNAGE AND SIFTED DEBRIS.

GROUTED CONTAINER WITH 2200 LBS NET WEIGHT IN WASTE

Shield	R-O (in)	R-I (in)	A-O (cm2)	A-I (cm2)	Vol (cm3)	Weight(lb)
1	22	21.77	47712.5838	47213.7705	27727.9881	478.21618
2	19.5	19.28	42290.6993	41813.5735	23498.7338	405.27552
3	17	16.78	36868.8148	36391.6889	20468.9847	353.02236
4	14.5	14.28	31446.9303	30969.8044	17439.2357	300.7692
5	12	11.78	26025.0457	25547.9199	14409.4866	248.51604
6	9.5	9.28	20603.1612	20126.0354	11379.7375	196.26287
7	7	6.78	15181.2767	14704.1508	8349.98845	144.00971
8	4.75	4.58	10301.5806	9932.89245	4368.62273	75.344308
Totals			230430.092	226699.836	127642.778	2201.4162
			Total Surface Area =		457129.928	

	Surface Radius	Source Thickness	Distance to outer wall	Total Grout Thickness	Total Steel Thickness	Cesium	Barium
22-01	22	0.0001	0.9375	0.7992	0.1382	0.1044	0.0987
22-02	21.77	0.0001	1.1675	0.7992	0.3682	0.1033	0.0977
22-03	19.5	0.0001	3.4375	3.0692	0.3682	0.0925	0.0875
22-04	19.28	0.0001	3.6575	3.0692	0.5882	0.0915	0.0865
22-05	17	0.0001	5.9375	5.3492	0.5882	0.0807	0.0763
22-06	16.78	0.0001	6.1575	5.3492	0.8082	0.0796	0.0753
22-07	14.5	0.0001	8.4375	7.6292	0.8082	0.0688	0.0651
22-08	14.28	0.0001	8.6575	7.6292	1.0282	0.0677	0.0641
22-09	12	0.0001	10.9375	9.9092	1.0282	0.0569	0.0539
22-10	11.78	0.0001	11.1575	9.9092	1.2482	0.0559	0.0529
22-11	9.5	0.0001	13.4375	12.1892	1.2482	0.0451	0.0426
22-12	9.28	0.0001	13.6575	12.1892	1.4682	0.0440	0.0417
22-13	7	0.0001	15.9375	14.4692	1.4682	0.0332	0.0314
22-14	6.78	0.0001	16.1575	14.4692	1.6882	0.0322	0.0304
22-15	4.75	0.0001	18.1875	16.4992	1.6882	0.0225	0.0213
22-16	4.58	0.0001	18.3575	16.4992	1.8582	0.0217	0.0206
Total						1.0000	0.9461

Average Activity per 100 square cm = 218.75619 Cs-137
206.95867 Ba-137m

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

**TABLE 10 - CALCULATE CONVERSION FACTORS FOR CONTACT, 5 FEET, AND 10
FEET FOR A GROUTED HN-200 GROUT CONTAINER WITH 2200 LBS (NET) OF WASTE.**

	Surface	Contact	5 feet	10 feet	
	22-01	8.694E-02	6.322E-03	2.085E-03	
	22-02	6.035E-02	5.116E-03	1.693E-03	
	22-03	2.831E-02	3.010E-03	1.011E-03	
	22-04	2.114E-02	2.385E-03	8.039E-04	
	22-05	1.035E-02	1.308E-03	4.464E-04	
	22-06	7.788E-03	1.021E-03	3.495E-04	
	22-07	3.814E-03	5.367E-04	1.859E-04	
	22-08	2.865E-03	4.137E-04	1.438E-04	
	22-09	1.378E-03	2.098E-04	7.364E-05	
	22-10	1.031E-03	1.601E-05	5.639E-05	
	22-11	4.816E-04	7.788E-05	2.768E-05	
	22-12	3.583E-04	5.894E-05	2.102E-05	
	22-13	1.598E-04	2.722E-05	9.791E-06	
	22-14	1.179E-04	2.040E-05	7.360E-06	
	22-15	5.282E-05	9.408E-06	3.417E-06	
	22-16	4.071E-05	7.331E-06	2.669E-06	
CONVERSION FACTOR		2.252E-01	2.054E-02	6.920E-03	R/hr/Ci

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

**TABLE 11 - MODEL FOR HN-200 GROUT CONTAINER FILLED WITH B CELL
EQUIPMENT DUNNAGE AND SIFTED DEBRIS.**

GROUTED CONTAINER WITH 1900 LBS NET WEIGHT IN WASTE

Shield	R-O (in)	R-I (in)	A-O (cm2)	A-I (cm2)	Vol (cm3)	Weight(lb)
1	22	21.8	47712.5838	47278.8331	24127.8199	416.12518
2	19.5	19.31	42290.6993	41878.6361	20310.0606	350.28144
3	17	16.81	36868.8148	36456.7516	17693.4592	305.15371
4	14.5	14.31	31446.9303	31034.867	15076.8577	260.02598
5	12	11.81	26025.0457	25612.9825	12460.2562	214.89825
6	9.5	9.31	20603.1612	20191.098	9843.65474	169.77052
7	7	6.81	15181.2767	14769.2135	7227.05327	124.64279
8	4.75	4.61	10301.5806	9997.95507	3609.25744	62.247766
Totals			230430.092	227220.337	110348.419	1903.1456
			Total Surface Area =		457650.429	

	Surface Radius	Source Thickness	Distance to outer wall	Total Grout Thickness	Total Steel Thickness	Cesium	Barium
19-01	22	0.0001	0.9375	0.7992	0.1382	0.1043	0.0986
19-02	21.8	0.0001	1.1375	0.7992	0.3382	0.1033	0.0977
19-03	19.5	0.0001	3.4375	3.0992	0.3382	0.0924	0.0874
19-04	19.31	0.0001	3.6275	3.0992	0.5282	0.0915	0.0866
19-05	17	0.0001	5.9375	5.4092	0.5282	0.0806	0.0762
19-06	16.81	0.0001	6.1275	5.4092	0.7182	0.0797	0.0754
19-07	14.5	0.0001	8.4375	7.7192	0.7182	0.0687	0.0650
19-08	14.31	0.0001	8.6275	7.7192	0.9082	0.0678	0.0642
19-09	12	0.0001	10.9375	10.0292	0.9082	0.0569	0.0538
19-10	11.81	0.0001	11.1275	10.0292	1.0982	0.0560	0.0529
19-11	9.5	0.0001	13.4375	12.3392	1.0982	0.0450	0.0426
19-12	9.31	0.0001	13.6275	12.3392	1.2882	0.0441	0.0417
19-13	7	0.0001	15.9375	14.6492	1.2882	0.0332	0.0314
19-14	6.81	0.0001	16.1275	14.6492	1.4782	0.0323	0.0305
19-15	4.75	0.0001	18.1875	16.7092	1.4782	0.0225	0.0213
19-16	4.61	0.0001	18.3275	16.7092	1.6182	0.0218	0.0207
					Total	1.0000	0.9461

Average Activity per 100 square cm = 218.50739 Cs-137
206.72328 Ba-137m

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

**TABLE 12 - CALCULATE CONVERSION FACTORS FOR CONTACT, 5 FEET, AND 10
FEET FOR A GROUTED HN-200 GROUT CONTAINER WITH 1900 LBS (NET) OF WASTE.**

Surface	Contact	5 feet	10 feet	
19-01	8.694E-02	6.322E-03	2.085E-03	
19-02	6.313E-02	5.256E-03	1.738E-03	
19-03	2.917E-02	3.080E-03	1.034E-03	
19-04	2.263E-02	2.520E-03	8.484E-04	
19-05	1.097E-02	1.375E-03	4.689E-04	
19-06	8.568E-03	1.109E-03	3.794E-04	
19-07	4.161E-03	5.805E-04	2.008E-04	
19-08	3.245E-03	4.632E-04	1.608E-04	
19-09	1.550E-03	2.337E-04	8.193E-05	
19-10	1.203E-03	1.848E-04	6.497E-05	
19-11	5.581E-04	8.939E-05	3.172E-05	
19-12	4.309E-04	7.008E-05	2.494E-05	
19-13	1.908E-04	3.216E-05	1.155E-05	
19-14	1.461E-04	2.498E-05	8.991E-06	
19-15	6.505E-05	1.146E-05	4.153E-06	
19-16	5.205E-05	9.254E-06	3.360E-06	
CONVERSION FACTOR	2.330E-01	2.136E-02	7.147E-03	R/hr/Ci

GROUTED CONVERSION FACTOR SUMMARY

Net Weight lbs	Contact	5 Feet	10 Feet
2500	2.195E-01	2.016E-02	6.744E-03
2200	2.252E-01	2.054E-02	6.920E-03
1900	2.330E-01	2.136E-02	7.147E-03

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

FIGURE 4

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**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.****FIGURE 5**

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

FIGURE 6

THIS ATTACHMENT PROVIDES DATA CORRELATION ANALYSIS TO SUPPORT CONCLUSIONS DRAWN IN THIS TECHNICAL DOCUMENT AND PROVIDES SPREADSHEETS FOR USE IN CALCULATING THE CURIE CONTENT OF HN-200 GROUT CONTAINERS UNDER VARIOUS CONDITIONS.

Data Correlation Analysis for Heterogeneous Case

		Actual
Grouted	Contact	0.02369829
Grouted	5 Feet	0.26495009
Grouted	10 Feet	0.22996767
UngROUTED	Contact	0.51803993
UngROUTED	5 Feet	0.99283017
UngROUTED	10 Feet	0.99877489

		Actual
Grouted	Contact	0.31679408
Grouted	5 Feet	0.47940461
Grouted	10 Feet	0.53018367
UngROUTED	Contact	0.80807004
UngROUTED	5 Feet	0.99803202
UngROUTED	10 Feet	0.99984409

		Actual
Grouted	Contact	0.0895362
Grouted	5 Feet	0.3904012
Grouted	10 Feet	0.50336033
UngROUTED	Contact	0.88823486
UngROUTED	5 Feet	0.99934768
UngROUTED	10 Feet	0.99987656

		Actual
Grouted	Contact	0.82629227
Grouted	5 Feet	0.91482892
Grouted	10 Feet	0.94825606
UngROUTED	Contact	0.99214922
UngROUTED	5 Feet	0.99995345
UngROUTED	10 Feet	0.99999453

		Actual
Grouted	Contact	0.93447177
Ungouted	Contact	0.99611592

ATTACHMENT 7

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

Heterogeneous Case				Background =			R/hr
Measure	Raw Data Readings			Background Corrected Readings			
Point	1	2	3	1	2	3	
0				0	0	0	
22.5				0	0	0	
45				0	0	0	
67.5				0	0	0	
90				0	0	0	
112.5				0	0	0	
135				0	0	0	
157.5				0	0	0	
180				0	0	0	
202.5				0	0	0	
225				0	0	0	
247.5				0	0	0	
270				0	0	0	
292.5				0	0	0	
315				0	0	0	
337.5				0	0	0	
Average	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	
				Overall Average =			0
Error Correction = 1.1007				Corrected Overall Average =			0
Conversion Factor =				Measured Cs-137 =			#DIV/0!
				Predicted Cs-137 =			#DIV/0!
							Std Error
							#DIV/0!
				95% Bounding Value Cs-137 =			#DIV/0!

Regression Statistics from Attachment 5 Figure 6

	Value	Std Error
Intercept	0.1731	0.1798
Slope	0.9896	0.0085
Regression	N/A	0.2867
Residual	33.0000	N/A
X Bar	20.2845	N/A

**TABLE 3 - CALCULATION DATA SHEET FOR AN UNGROUTED CONTAINER
REMOTELY MEASURED AT 5 FEET FROM THE SURFACE OF THE CONTAINER.**

RO-7 Source Ck Correction =			Net Weight =			lbs.
Heterogeneous Case			Background =			R/hr
Measure	Raw Data Readings			Background Corrected Readings		
Point	1	2	3	1	2	3

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

0	0	0	0
22.5	0	0	0
45	0	0	0
67.5	0	0	0
90	0	0	0
112.5	0	0	0
135	0	0	0
157.5	0	0	0
180	0	0	0
202.5	0	0	0
225	0	0	0
247.5	0	0	0
270	0	0	0
292.5	0	0	0
315	0	0	0
337.5	0	0	0
Average	#DIV/0!	#DIV/0!	#DIV/0!

Error Correction = 1.1647 Overall Average = 0
 Conversion Factor = Corrected Overall Average = 0
 Measured Cs-137 = #DIV/0!
 Predicted Cs-137 = #DIV/0! Std Error
 #DIV/0!
 95% Bounding Value Cs-137 = #DIV/0!

Regression Statistics from Attachment 5 Figure 4

	Value	Std Error
Intercept	0.3397	0.4333
Slope	0.9735	0.0204
Regression	N/A	0.6925
Residual	33.0000	N/A
X Bar	20.4484	N/A

**TABLE 4 - CALCULATION DATA SHEET FOR AN UNGROUTED CONTAINER
MEASURED ON CONTACT WITH THE SURFACE OF THE CONTAINER.**

RO-7 Source Ck Correction =				Net Weight =			lbs.
All Data Case				Background =			R/hr
Measure	Raw Data Readings			Background Corrected Readings			
Point	1	2	3	1	2	3	
0-1				0	0	0	
0-2				0	0	0	
0-3				0	0	0	

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

0-4	0	0	0
0-5	0	0	0
0-6	0	0	0
90-1	0	0	0
90-2	0	0	0
90-3	0	0	0
90-4	0	0	0
90-5	0	0	0
90-6	0	0	0
180-1	0	0	0
180-2	0	0	0
180-3	0	0	0
180-4	0	0	0
180-5	0	0	0
180-6	0	0	0
270-1	0	0	0
270-2	0	0	0
270-3	0	0	0
270-4	0	0	0
270-5	0	0	0
270-6	0	0	0
Average	#DIV/0!	#DIV/0!	#DIV/0!
			Overall Average = 0
Error Correction = 1.21			Corrected Overall Average = 0
Conversion Factor =			Measured Cs-137 = #DIV/0!
			Std Error
			Predicted Cs-137 = #DIV/0! #DIV/0!
			95% Bounding Value Cs-137 = #DIV/0!

Regression Statistics from Attachment 5 Figure 26

	Value	Std Error
Intercept	-0.6488	2.0513
Slope	0.9483	0.0099
Regression	N/A	14.1807
Residual	72.0000	N/A
X Bar	123.5767	N/A

**TABLE 5 - CALCULATION DATA SHEET FOR A GROUTED CONTAINER REMOTELY
MEASURED AT 10 FEET FROM THE SURFACE OF THE CONTAINER.**

RO-7 Source Ck Correction =				Net Weight =			lbs.
Homogeneous Case				Background =			R/hr
Measure	Raw Data Readings			Background Corrected Readings			
Point	1	2	3	1	2	3	
0				0	0	0	
22.5				0	0	0	
45				0	0	0	
67.5				0	0	0	
90				0	0	0	
112.5				0	0	0	

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

135				0	0	0
157.5				0	0	0
180				0	0	0
202.5				0	0	0
225				0	0	0
247.5				0	0	0
270				0	0	0
292.5				0	0	0
315				0	0	0
337.5				0	0	0
Average	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0
				Overall Average =	0	
Error Correction = 1.1007				Corrected Overall Average =	0	
Conversion Factor =				Measured Cs-137 =	#DIV/0!	
				Predicted Cs-137 =	#DIV/0!	Std Error #DIV/0!
				95 % Bounding Value Cs-137 =	#DIV/0!	

Regression Statistics from Attachment 5 Figure 23

	Value	Std Error
Intercept	16.6912	46.4837
Slope	0.8321	0.0881
Regression	N/A	53.3227
Residual	10.0000	N/A
X Bar	497.8085	N/A

**TABLE 6 - CALCULATION DATA SHEET FOR A GROUTED CONTAINER REMOTELY
MEASURED AT 5 FEET FROM THE SURFACE OF THE CONTAINER.**

RO-7 Source Ck Correction =				Net Weight =			lbs.
Homogeneous Case				Background =			R/hr
Measure	Raw Data Readings			Background Corrected Readings			
Point	1	2	3	1	2	3	
0				0	0	0	
22.5				0	0	0	
45				0	0	0	
67.5				0	0	0	
90				0	0	0	
112.5				0	0	0	
135				0	0	0	
157.5				0	0	0	
180				0	0	0	

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REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200 GROUT CONTAINERS.

202.5				0	0	0	
225				0	0	0	
247.5				0	0	0	
270				0	0	0	
292.5				0	0	0	
315				0	0	0	
337.5				0	0	0	
Average	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	
				Overall Average =	0		
Error Correction =	1.1647			Corrected Overall Average =	0		
Conversion Factor =				Measured Cs-137 =	#DIV/0!		
				Predicted Cs-137 =	#DIV/0!		
					Std Error #DIV/0!		
				95% Bounding Value Cs-137 =	#DIV/0!		

Regression Statistics from Attachment 5 Figure 21

	Value	Std Error
Intercept	42.6078	57.6354
Slope	0.7950	0.1110
Regression	N/A	67.8220
Residual	10.0000	N/A
X Bar	488.4480	N/A

TABLE 7 - CALCULATION DATA SHEET FOR A GROUTED CONTAINER MEASURED
ON CONTACT WITH THE SURFACE OF THE CONTAINER.

RO-7 Source Ck Correction =			Net Weight =			lbs.
All Data Case			Background =			R/hr
Measure	Raw Data Readings			Background Corrected Readings		
Point	1	2	3	1	2	3
0-1				0	0	0
0-2				0	0	0
0-3				0	0	0
0-4				0	0	0
0-5				0	0	0
0-6				0	0	0
90-1				0	0	0
90-2				0	0	0
90-3				0	0	0
90-4				0	0	0
90-5				0	0	0
90-6				0	0	0

**REVISED METHODOLOGY FOR DETERMINING CESIUM-137 CONTENT OF HN-200
GROUT CONTAINERS.**

180-1				0	0	0
180-2				0	0	0
180-3				0	0	0
180-4				0	0	0
180-5				0	0	0
180-6				0	0	0
270-1				0	0	0
270-2				0	0	0
270-3				0	0	0
270-4				0	0	0
270-5				0	0	0
270-6				0	0	0
Average	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0
Overall Average =						0
Error Correction =	1.21	Corrected Overall Average =				0
Conversion Factor =		Measured Cs-137 =				#DIV/0!
						Std Error
Predicted Cs-137 =						#DIV/0!
95% Bounding Value Cs-137 =						#DIV/0!
						#DIV/0!

Regression Statistics from Attachment 5 Figure 25

	Value	Std Error
Intercept	9.5071	8.2174
Slope	3.5263	0.1583
Regression	N/A	57.3399
Residual	72.0000	N/A
X Bar	30.3514	N/A