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Seabrook Station

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Docket No. 50-443
SBK-L-05172

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Seabrook Station
Facility Operating License NPF-86
Response to Request for Additional Information Regarding
Seabrook Station, Unit No. 1, Steam Generator Tube Inspection Summary
For The Fall 2003 Outage

References:

1. FPL Energy Seabrook, LLC letter (NYN-03089) to NRC, "Steam Generator Tubes Plugged During The Ninth Inservice Inspection," dated November 3, 2003.

2. FPL Energy Seabrook, LLC letter (SBK-L-04040) to NRC, "Steam Generator Inservice Inspection," dated October 12, 2004.

3. NRC letter to FPL Energy Seabrook, LLC, "Request for Additional Information Regarding Seabrook Station, Unit No. 1, Steam Generator Tube Inspection Summary For The Fall 2003 Outage (TAC No. MC4907)," dated March 21, 2005.

By letters dated November 3, 2003 (Reference 1) and October 12, 2004 (Reference 2), FPL Energy Seabrook, LLC (FPL Energy Seabrook) submitted the fall 2003 refueling outage steam generator tube plugging and inspection summary reports for Seabrook Station, Unit No. 1, in accordance with the requirements of Technical Specifications 4.4.5.5a and 4.4.5.5b, respectively.

In Reference 3, the NRC requested additional information in order to complete its evaluation. Enclosed herein is FPL Energy Seabrook's response to the requested additional information.

Should you have any questions regarding this information, please contact Mr. James Peschel, Regulatory Programs Manager, at (603) 773-7194.

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Very truly yours,

FPL Energy Seabrook, LLC

Gene F. St. Pierre
Site Vice President

Enclosure

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Enclosure to Letter SBK-L-05172

Response To Request For Additional Information
Regarding Seabrook Station, Unit No. 1,
Steam Generator Tube Inspection Summary
For The Fall 2003 Outage

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION
REGARDING SEABROOK STATION, UNIT NO. 1,
STEAM GENERATOR TUBE INSPECTION SUMMARY
FOR THE FALL 2003 OUTAGE

RAI 1.

The technical Specifications for Seabrook Station, Unit No. 1 require that you provide the location and percentage of wall thickness for each indication of an imperfection. Your October 12, 2004 submittal does not appear to provide this information for all indications of imperfections (e.g., wear at antivibration bars (AVBs)). If you have not supplied the location and through-wall percent of all imperfections, please provide this information.

FPLE Response:

The listing of locations and percentage of wall thickness for each indication of an imperfection is attached in Table 1. The list of imperfections is sorted by SG, Row, Column and nominal location such as AVB1 (anti-vibration bar 1).

RAI 2.

On page 4 of your inservice inspection report, submitted October 12, 2004, you stated that based on inspection data from refueling outage 8 (RF08), AVB wear was an active degradation mechanism in steam generators (SGs) A, B, and D. Subsequently, on page 8 on the report you stated that prior to RF09, AVB wear was classified as an active degradation mechanism in SG D and as on ongoing degradation mechanism in SGs A, B and C. Please clarify which SG's currently have "active" wear.

FPLE Response:

Based on the OR09 inspection, AVB wear does not meet the definition of an active degradation mechanism contained in the EPRI PWR SG Examination Guidelines, Revision 6, in any of the four Seabrook SGs.

The statement on page 4 of the report is in error and should read "prior to OR08, AVB wear was an active damage mechanism in steam generators (SGs) A, B, and D." There was no "active" AVB wear post OR08.

However, the definition of "active" changed between the OR08 and OR09 inspections due to a revision of the EPRI PWR Steam Generator Examination Guidelines. Inspections performed in OR08 were in accordance with Revision 5 of the EPRI guidelines and inspections in OR09 were

in accordance with Revision 6 of the EPRI guidelines. When the Revision 6 definition of "Active" was applied to OR08 data for the OR09 Degradation Assessment, only the D Steam Generator was classified active by the new Revision 6 definition.

RAI 3.

On page 7 of your inservice inspection report, you indicated that among the tubes in the critical area (tubes with absolute drift signals), seven indications were detected in three tubes. Subsequently, on page 8 of the same report, you indicated that nine indications were confirmed at seven support plate intersections in three of the six tubes in the defined critical area. Please clarify how many indications of outside tube diameter stress corrosion cracking at tube support plates were identified in your last inspection.

FPLE Response:

The bobbin probe indicated seven Distorted Support Indications (DSI) were present in three tubes. Bobbin probe data, however, is not qualified to determine if more than one indication is present at the same elevation but at a different azimuthal orientation. Rotating pancake coil (RPC) +Point™ examination of the seven DSI locations revealed that two locations had two indications each rather than a single indication. In both of these cases, the indications were located at different broach land contacts around the tube circumference. Therefore, the bobbin probe detected seven indications at seven support plate locations and the RPC +Point™ probe detected nine indications at these support plate locations.

RAI 4.

In Table 2 of your inservice inspection report, you indicated the number of possible loose parts (PLP) identified in the SG's. Subsequently, in Table 7 of the same report, you provided more detailed analysis of PLP indications. There seems to be a difference between the number of PLPs listed in Table 2 and the number of PLPs in Table 7. Please clarify the difference.

FPLE Response:

Table 7 of the in-service report accurately reflects the final data from the OR09 inspection. However, note that Table 7 also provides historical data from OR08 and that only PLP's at OR09 should be counted to arrive at the number of PLP's in the corrected Table 2 following this response

After further review, the original Table 2 provided in the October 2003 Inservice Inspection Report was found to include several errors which are corrected in the revised Table 2 below. Specifically the following changes have been made to Table 2:

- The number of AVB wear indications has been corrected in all four SGs.
- The number of PLP indications has been corrected for SGs B, C and D.
- The number of volumetric (VOL) indications has been corrected for SGs A and D. Further discussion of this change is provided in the response to RAI 5.

The errors in this table were the result of a transcription error from one report to another.

Table 2 (Revised)
Summary of OR09 Inspection Results [1]

Indication	Description	SG A	SG-B	SG-C	SG D
SAI/MAI	OD Axial Cracks (SAI/MAI)	0	0	0	5/2
PCT [2]	AVB % Wear (Bobbin Sizing)(Total/≥40%)	320/1	195/1	221/2	567/5
DNG/DNS	Freespan Ding (Total / >5V)	166/31	205/38	152/31	128/36
DNT[3]	Dents at Structures (Total / >5V)	181/27	982/366	560/143	169/32
PLP	Possible Loose Parts (Number of Tubes)	5	17	3	14
PVN	Permeability Variation (>2V, >1V @ AVBs)	1	0	0	0
VOL	Volumetric Indications - RPC +Point	4	2	6	1
WAR	Wear (non-crack-like) at FDB and TSP	1	0	0	1
BLG	Bulge				2[4]
OXP	Overexpansion				1[4]

1. Numbers are by location and may differ from eddy current (EC) database due to duplicate entries in database.
2. PCT calls at non-AVB locations included in other categories.
3. The dent reporting criteria were set at 2 Volts compared to 3Volts at OR08. As a result, the number of reported DNT signals is greater at OR09 than it was at OR08.
4. These indications were also reported at OR08, but were not included in the condition monitoring (CM) assessment.

RAI 5.

In Table 2 of your inservice inspection report, you provided the number of volumetric (VOL) indications identified in the SGs. Subsequently, on Table 6 of the same report, you provided a more detailed listing of the VOL indications. Not all the VOL indications reported in table 2 appear to be listed in Table 6. For Example, for SG A, you reported five VOL indications while in table 6 you only listed four. Please clarify the discrepancy between the two tables. If there are more VOL indications that identified and discussed in

Section 6.4 of your report, please discuss the nature and cause of the "additional" indications.

FPLE Response:

Table 6 of the in-service report accurately reflects the final data for VOL indications from the OR09 inspection. The larger number of VOL indications reported in the original Table reflects a transcription error in transferring data from Table 6 to Table 2. Table 2 was corrected and provided in response to RAI 4.

RAI 6.

In Table 6 of your inservice inspection report, you indicated that for SG C, three new VOL indications were attributed to non-resident foreign objects. Please discuss how these new VOL indications were attributed to foreign objects.

FPLE Response:

The locations of the indications are a significant factor in the attribution of the wear due to foreign objects. Two of the tubes, SG C hot leg R43C26 and R44C26, in addition to being adjacent tubes, are located near the periphery of the bundle, the typical location of where the majority of foreign objects would be expected to be found. The elevation, approximately 0.15" above the tubesheet, is also a typical location of where small objects that fall onto the tubesheet and would be expected to migrate. RPC +Point™ inspections were performed in all tubes surrounding the subject tubes and no indications of possible foreign objects were detected. Visual inspection of the periphery also did not identify any resident foreign objects in the area of these tubes.

Tube SG C cold leg R3C113 is also located near the periphery, e.g., three rows removed from the tube lane. The indication was reported at 05C-0.56", or just below the bottom of the tube support plate (TSP). Tube vibration induced wear at the TSPs has not been observed in the Seabrook steam generators, and would also not be expected at this location in the bundle. The quatrefoil TSP holes have sufficient clearance in the lobes to permit a foreign object to enter by means of feedwater flow entrainment, temporarily stay resident and then migrate. The absence of any PLP signal in this or surrounding tubes indicates that the foreign object is no longer resident.

RAI 7.

On page 14 of the report, you indicate that the performance criterion for tube burst is 3774 pounds per square inch (psi). You then indicate that the predicted 90/50 burst pressure at 1022 effective full power days (EFPD) is 3778 psi. Presumably, the calculation was

performed for 1022 EFPD since no tube inspections are planned for your next RFO. If no tube inspections are planned for your next RFO, please discuss the following. Given that your predicted burst pressure is close to the performance criterion, please provide a discussion of how this calculation was performed (e.g., growth rates, threshold of detection, material property distributions, etc) and the basis for your assumptions in the analysis. Given that all tubes are required to meet the performance criterion, please discuss your basis for selecting the 90/50 burst pressure verses a more conservative projection such as 95/95. If a 95/95 burst pressure was used, would the most limiting tube still meet the performance criterion?

FPLE Response:

Performance Acceptance Standards

The industry guidelines for integrity assessment, EPRI TR-107621, "Steam Generator Integrity Assessment Guidelines: Revision 1" provide the basis for acceptable probability and confidence. Section 5.5.1 of these guidelines for Operational Assessment states that:

> *"The operational assessment, or repair, limit is obtained by adding growth to the variables and requiring that the measured flaw have a probability of 90% at a confidence level of 50% of satisfying the structural requirements at the end of the next operating interval."*

Also, Section 5.2 of the guidelines states that:

> *"The probabilistic criterion is satisfied if the conditional probability of burst at 3 times the Normal Operating Pressure Differential (NOPD), or 1.4 times the Limiting Accident Differential Pressure (LADP) across the tube wall, whichever is higher, including known and unknown degradation mechanisms, is:*
>
> *< 0.1 for the burst of one or more tubes."*

For these reasons, the analysis for operational assessment was performed to establish the 90/50 probability/confidence level. The detected mechanism of axial outside diameter stress cracking corrosion (ODSCC) at the tube support plates has been determined to be the single dominant mechanism affecting the steam generators. The other mechanisms involving tube wear have been determined to be not significant to tube integrity so their contribution to burst probability is negligible for the planned operation period. Therefore, meeting the structural and leakage performance criteria for axial ODSCC at the support plates also satisfies the industry guideline requirements for acceptance for each steam generator.

Discussion of Calculations

The operational assessment was performed for the planned two cycles of operation between tube examinations, which has a total run time of 2.8 effective full power years or 1022 effective full power days (EFPD). This planned period of operation includes allowances for plant coast down at the end of Cycles 10 and 11. Two operational assessment models were performed to obtain independent assessments of two-cycle operation. These models are known as Single Cycle and Multi Cycle analyses and used the Monte Carlo method to perform the probabilistic assessment. The Single Cycle analysis was the primary analysis for the OR09 operational assessment. The Multi Cycle analysis was performed as independent verification for OR09. Both methods are commonly used in the industry.

The results from the Single Cycle and Multi Cycle analyses show conservative benchmark analyses when comparing the projected OR09 and measured OR09 results. That both analyses reached the same conclusion with regard to satisfying the 90/50 performance standard for three (3) times the Normal Operating Pressure Differential (3NOPD) by separate methodology provide confidence in the results.

The Single Cycle analysis directly utilizes the measured crack distributions, including uncertainties, and applies non-destructive examination (NDE) uncertainties for all burst and leak calculations. The Single Cycle analysis used to justify operation for 1022 EFPD was a full probabilistic Monte Carlo approach as outlined in the EPRI "Steam Generator Integrity Assessment Guidelines: Revision 1." Multiple simulations (200,000) were performed, sampling from distributions and uncertainties of the following parameters:

- Probability of Detection (POD)
- Growth rate
- Material Properties
- Burst Correlation and Relational Uncertainties
- NDE Uncertainties

The necessary length and depth data for both Probability of Detection (POD) and growth rate were developed from phase and amplitude based sizing methods to develop depth vs. length profiles. Amplitude sizing was used as the basis for the analysis because it showed good correlation to the destructive examination data. Sizing uncertainties were developed for a data set of industry pulled-tube ODSCC flaws combined with the Seabrook ODSCC flaws.

Both Probability of Detection (POD) and flaw growth rates are based on the physical crack parameters of depth and length. A POD curve was established based on crack area, and growth rates for both depth and length of the flaws were developed using Seabrook-specific and other available industry operating data.

The Probability of Detection (POD) function was developed from the data from a site-specific performance demonstration test for axial ODSCC at tube supports. The data set included seventy-seven (77) pulled tube indications for which destructive examination maximum depth data were available and an additional fifty-nine (59) flaws with destructive examination depth profiles, analyzed by five separate analyst teams. A separate POD function was also developed using the database for ODSCC compiled under the current EPRI Tools-for Tube-Integrity Program by applying the Berens Model Log Linear Correlation. The Berens Model is also a component of the current EPRI Tools-for Tube-Integrity Program. The POD functions developed by these methods showed good agreement; the more conservative function was used in the operational assessment.

Flaw growth rate was originally developed in the Multi Cycle analysis performed for OR08 (the first observance of ODSCC cracks at Seabrook). To validate the use of this growth rate, based on Seabrook data only, a comparison was made between the Seabrook-specific growth rate and the growth rate of axial ODSCC developed for a plant with A600MA tubing with substantial operating experience. Since no successive RPC +Point data were available for Seabrook, the Seabrook bobbin voltage growth rate and average depth growth rate were compared to the bobbin voltage growth rate and average depth growth rate from the A600MA plant. It was determined that the Seabrook voltage and average depth growth rates exceeded those from the A600MA plant; therefore, the use of the growth rate distribution from OR08 was justified. An adjustment was made to the flaw growth rate from the midpoint of the planned 1022 EFPD operating cycle to the end of this cycle to account for a plant uprate planned at RF10. The predicted temperature increase under the uprated conditions was used to increase the growth rate based on the Arrhenius equation.

The Seabrook-specific material properties are known from a prior study of manufacturing records. Based on this study, the Seabrook-specific mean material properties and population uncertainties were developed for use in the operational analysis. This approach was conservative since the tubes in the critical area (the tubes identified with potentially elevated residual stress) are known to be higher strength tubes than the mean values of the material properties.

An undetected population of flaws was derived from the population of detected flaws using the Probability of Detection function. Since the POD is known for each of the detected flaws from the POD function (POD vs. crack area), the undetected flaw of the same size is 1/POD. For example, if a specific flaw has a POD value of 0.5, the POD function indicates that there are two (2) identical flaws in the bundle, only one of which was detected. Therefore, since the flaw that was detected was plugged, it is assumed that an identical, undetected flaw still remains in the bundle. This process is followed for all of the detected flaws using the POD applicable to each of the detected flaws. Fractional undetected flaws resulting from this process are appropriately carried along by the analysis code. For example, the POD for a large flaw may be 0.9; therefore, the process described would indicate that approximately 0.1 (1/0.9 – 1) of this flaw remains as an undetected flaw in the bundle. These fractional flaws are included in the burst probability calculation for the bundle.

A population of newly initiating flaws was developed by using the population of detected flaws reduced by the average growth over length of the prior cycle. This is conservative since at least some of these "newly initiating" flaws would have been of a size that would have been detected.

The industry burst correlation for axial ODSCC, and the uncertainties for this correlation, were used in the Single Cycle operational analysis.

The profiles of the population of undetected and newly initiating cracks as described above were simulated 200,000 times and the burst and tearing potential of each of the simulated profiles was calculated. After rank ordering in ascending order, the lower 90th percentile of the sorted burst pressures at 50% confidence was compared to the structural criteria, 3NOPD. The upper 90th percentile of the simulated total leak rates was compared to the performance criteria for leakage.

The Multi Cycle analysis follows a theoretical approach starting with initiation rates and tracking detection and growth through multiple cycles and inspections to calculate the probability of burst and leakage. The NDE results and available industry data were used to develop the input distributions in a similar manner as was done in the Single Cycle model. The parameters for the Weibull initiation model are iterated to obtain a good benchmark comparison between NDE data and calculated results for each cycle. Sizing uncertainty is included in the benchmarking process when comparisons are made between measured (observed) and predicted indication depths. The Multi Cycle analysis established the probability of burst at 3NOPD was 0.063. This computed probability at the end of Cycle 11 satisfies the industry standard of 0.10. The predicted leakage under design basis accidents was negligible. These results confirmed the Single Cycle analysis was conservative.

In summary, both the Single Cycle and Multi Cycle analyses show conservative benchmark analyses when comparing the projected OR09 and measured OR09 results. Both analyses reached the same conclusion, by separate methodologies, therefore providing confidence in the results of the operational assessment.

Use of More Conservative Acceptance Criteria

With regard to a 95/95 performance acceptance standard, historically the industry has never used a 95/95 probability/confidence level to be applied to a conservative pressure level of three times normal operating pressure differential in an operational assessment. Instead, the industry has adopted a 90/50 performance standard as the requirement for 3NOPD calculations for both condition monitoring and operational assessment. However, the analysis assumptions used in the Seabrook OR09 operational assessment were conservatively stacked to ensure that there were additional available margins against burst beyond the industry guidelines of 90/50. The conservative assumptions used in the operational assessment for both Single Cycle and Multi Cycle analyses were:

1) The entire tube bundle was conservatively assumed to be equally at-risk for axial ODSCC at the tube support plates and not just tubes in the critical area. The primary root cause of axial ODSCC in 600TT tubing has been established to be due to high residual stress from fabrication. Tubes exhibiting high residual stress have been identified by the Westinghouse screening procedures prior to inspection and have been tracked at each inspection. All identified tubes have now been removed from service by plugging. Therefore, to assume that axial ODSCC remains an active degradation mechanism affecting all the tubes in the bundle is a highly conservative analysis condition. It is more likely that only a small

number of potentially susceptible tubes that are just below the screening threshold still remain in service. Further, it would be expected that these tubes would not be as service-sensitive to ODSCC as the tubes already removed from service.

2) The distribution of tubing strengths was established from the mechanical properties of all tubes in the bundles instead of the significantly higher strength properties associated with the population of tubing screened for high residual stress. The higher tube strengths for tubes most affected by ODSCC would result in higher burst pressures and hence lower burst probability.

3) In general, conservative analyses were used to determine the input distributions for probability of detection's and growth rates.

4) Analysis benchmarking to the NDE results gave conservative comparisons for the number of and observed (measured) sizes for the detected population of indications. These conservative benchmarks will lead to conservative predictions for tube burst pressure and leakage over the two-cycle operation period.

In addition to the above, rather than using the fully probabilistic burst model, the Multi Cycle model conservatively used a deterministic burst model that is representative of a lower 5% tolerance bound to burst pressure correlation. This lower bound burst model has been used in the past to provide additional defense in depth when a new mechanism is detected or when limited data are available. It is known that when a fully probabilistic burst model is used, the probability of burst will be reduced by a dividing factor in the range of three (3) to eight (8).

Given the above analysis conditions, the Single Cycle burst model results can be considered very conservative, and the actual 90/50 burst pressure for the limiting tube will be higher than the reported value of 3778 psi. Further, the Multi Cycle analysis gave a probability of burst of 6.3 % at 50% confidence, which is well below the industry standard of 10% burst probability. Given the fact that the burst model used in the Multi Cycle model was effectively a lower 5% tolerance bound to the burst pressure correlation, it is expected that a more reasonable yet conservative estimate of probability of burst at end of Cycle 11 for the limiting tube would be significantly lower than 5%.

RAI 8.

On page 14 of the report, you indicated that wear is expected to continue in SG A due to the presence of a foreign object (presumably identified before OR09). In addition, you indicate that a boundary zone was established by plugging all of the tubes adjacent to the tube experiencing wear. This boundary zone is intended to provide adequate margin against potential damage propagation from the foreign object for continued life of the SG. Please discuss whether the tubes were stabilized and provide a summary of the analysis performed to reach the conclusion that this condition is acceptable for the life of the SG. For example, if continued tube wear is expected on the one tube next to the foreign object, it appears this tube could sever and then whip around unconstrained (if this tube is not

stabilized). This whipping action could impact the adjacent tubes, which are plugged. If these latter tubes are not stabilized, it is not apparent why these tubes could not eventually sever and whip around and cause degradation to their neighboring tubes, which may not be plugged.

FPLE Response:

At OR08, a wear indication was reported on tube R6C2, 1.39" above the 5th support plate on the hot leg. Examination with the RPC +Point probe also indicated the presence of a foreign object at this location. Bobbin probe and RPC +Point™ examinations of the adjacent tube (R7C2) at the same elevation (5H+1.39") also detected a possible foreign object (PLP). Both of these tubes were plugged. No indication of potential foreign object was found by RPC +Point™ examination of the surrounding tubes; however, all six (6) tubes surrounding R6C2 and R7C2 were also conservatively plugged to provide a buffer area, but none of the tubes was stabilized. The foreign object could not be visually observed nor removed due to limited access to this location.

The size of this foreign object is small since no PLP indications were reported in any of the surrounding tubes, except the adjacent tube (R7C2). Further, no other wear indications were present on any of the surrounding tubes or on the adjacent tube. While small foreign objects may have the potential to cause leakage due to throughwall wear, they do not have significant potential to cause tube severance because they do not have sufficient mass or size to affect the entire cross section of a given tube. If the foreign object is fixed in place, wear may be a result of tube vibration. Consequently, as the wear progresses, it is self-limiting since the postulated tube displacement is limited by the TSP clearance. Therefore, while this condition may lead to throughwall wear, the degree of wear on the tube will be insufficient to represent a risk of tube separation. (For example, wear of at least 40% through the tube cross-section at an AVB can be shown not to represent a risk of tube separation.) If the tube is assumed to be fixed, and the foreign object is oscillating due to the flow velocity, significant wear into the tube will alter the boundary conditions for the foreign object so that the flow will move the object. Note that the object was at 1.39" above the TSP; therefore a change in boundary conditions would be expected to result, as a minimum, in a change in the elevation of the foreign object. It is not credible that a small foreign object that is mobile can (1) continue to cause wear at the same location on a single tube without moving when a significant change in boundary conditions is postulated, and (2) has sufficient size to wear the entire cross section of a tube to a condition where the tube is at risk of severance.

RAI 9.

With respect to the bulge and overexpansion indications identified in SG D, please discuss whether these indications have changed and the reasons for any change.

FPLE Response:

Two bulge (BLG) indications were reported in tube R22C75 TSC+3.51" and TSC+2.11 in SG-D at OR09. Further examination with the RPC +Point probe showed no degradation at these bulges. The signals have been reported at prior inspection, and comparison of the prior and current signals showed that these indications have not changed.

An overexpansion (OXP) indication was reported in R34C42 at about 1" above the tubesheet. The indication is not associated with the tubesheet expansion. Comparison of the prior inspection data with the current inspection data confirmed that this indication has not changed since the prior inspection.

TABLE 1

SG- A Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
17	71	16	AV1
18	58	15	AV1
19	40	30	AV1
19	54	23	AV1
19	58	22	AV1
20	48	15	AV1
23	8	16	AV2
23	36	13	AV1
23	42	21	AV6
23	45	16	AV5
23	59	20	AV2
24	7	13	AV1
24	7	15	AV6
24	59	20	AV2
24	59	20	AV5
24	71	15	AV2
24	71	16	AV5
25	7	19	AV1
25	8	15	AV2
25	56	20	AV2
27	12	16	AV6
27	63	19	AV2
27	93	16	AV1
27	112	11	AV5
28	59	22	AV5
28	59	23	AV2
29	11	20	AV2
29	71	17	AV2
29	82	16	AV6
29	82	22	AV2
29	84	14	AV5
29	94	16	AV2
30	11	10	AV1
30	11	14	AV6
30	11	21	AV5
30	12	17	AV5
30	12	18	AV1
30	12	18	AV6
30	31	17	AV5
30	58	19	AV6
30	58	23	AV5
30	68	16	AV1
30	68	17	AV2
30	95	15	AV6

TABLE 1

SG- A Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
30	109	15	AV5
30	109	17	AV6
30	111	18	AV5
31	11	10	AV2
31	11	15	AV5
31	11	18	AV6
31	12	23	AV6
31	12	36	AV5
31	13	20	AV6
31	68	15	AV2
31	105	15	AV1
32	89	15	AV1
32	89	17	AV3
33	14	14	AV2
33	14	17	AV1
33	15	14	AV4
33	15	16	AV6
33	15	20	AV5
33	71	15	AV1
33	71	16	AV2
33	106	14	AV1
34	17	17	AV6
34	17	17	AV3
34	31	17	AV1
34	51	19	AV3
34	51	20	AV2
34	59	18	AV3
34	87	20	AV4
35	14	14	AV6
35	14	15	AV3
35	14	18	AV2
35	14	19	AV4
35	14	20	AV5
35	31	13	AV3
35	31	16	AV5
35	58	18	AV6
35	58	20	AV5
35	58	24	AV1
35	58	27	AV4
35	58	29	AV3
35	58	31	AV2
35	61	16	AV2
35	61	24	AV5
35	61	29	AV4

TABLE 1

SG- A Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
35	70	13	AV2
35	73	20	AV2
36	60	16	AV2
36	81	22	AV4
36	81	25	AV3
36	81	34	AV2
36	110	13	AV2
37	18	18	AV5
37	87	11	AV5
37	99	17	AV3
37	102	15	AV5
37	105	16	AV1
37	105	19	AV4
38	28	16	AV2
39	63	16	AV3
39	63	19	AV2
39	79	14	AV2
39	79	19	AV3
39	79	22	AV5
39	79	23	AV4
39	80	20	AV3
40	71	20	AV2
40	86	19	AV4
40	86	20	AV1
40	86	20	AV2
40	90	15	AV1
40	90	17	AV6
40	90	23	AV4
40	90	25	AV3
40	90	28	AV2
40	90	35	AV5
40	96	14	AV1
40	102	17	AV3
40	102	19	AV4
40	103	16	AV3
40	103	22	AV5
40	103	22	AV4
41	21	16	AV5
41	21	17	AV3
41	35	18	AV3
41	50	15	AV2
41	50	15	AV5
41	50	18	AV3
41	53	17	AV3

TABLE 1

SG- A Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
41	53	18	AV1
41	53	19	AV5
41	53	21	AV2
41	53	20	AV4
41	54	21	AV3
41	54	22	AV2
41	58	13	AV1
41	58	14	AV3
41	58	15	AV2
41	58	15	AV5
41	58	19	AV4
41	59	12	AV5
41	59	20	AV3
41	59	21	AV2
41	68	17	AV6
41	68	20	AV2
41	68	22	AV5
41	68	22	AV4
41	68	28	AV3
41	78	21	AV3
41	102	18	AV4
41	102	22	AV5
41	103	14	AV3
41	103	17	AV1
41	103	19	AV4
41	103	23	AV5
42	26	14	AV5
42	58	12	AV5
42	58	16	AV4
42	58	25	AV3
42	72	15	AV6
42	72	18	AV1
42	72	18	AV4
42	72	22	AV2
42	72	29	AV5
42	72	34	AV3
42	80	18	AV5
42	80	21	AV4
42	80	27	AV2
42	80	27	AV6
42	80	30	AV3
42	81	21	AV4
42	103	18	AV1
43	55	19	AV2

TABLE 1

SG- A Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
43	77	24	AV6
43	77	25	AV3
43	77	35	AV5
43	77	38	AV4
43	98	19	AV5
44	94	14	AV2
44	94	23	AV3
44	98	16	AV4
44	98	17	AV5
44	98	18	AV1
44	98	19	AV3
44	98	21	AV2
44	100	16	AV5
44	101	17	AV1
44	102	16	AV3
45	67	20	AV2
45	74	21	AV1
45	74	21	AV2
45	74	23	AV3
45	74	33	AV4
45	76	17	AV1
45	98	17	AV4
46	26	15	AV4
46	28	15	AV4
46	65	20	AV4
46	65	21	AV5
46	71	16	AV4
46	71	16	AV5
46	77	15	AV5
46	77	15	AV3
46	77	20	AV2
46	77	22	AV4
46	94	14	AV6
46	95	22	AV5
46	95	25	AV6
46	98	16	AV6
46	98	18	AV5
46	98	21	AV4
47	30	16	AV4
47	31	16	AV2
47	34	15	AV3
47	85	24	AV5
47	95	14	AV6
47	95	15	AV1

TABLE 1

SG- A Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
47	95	17	AV5
47	95	20	AV3
47	95	20	AV2
47	95	21	AV4
47	96	20	AV2
47	96	23	AV6
47	96	38	AV3
47	96	40	AV4
47	98	16	AV5
48	31	13	AV4
48	31	16	AV3
48	31	17	AV1
48	31	18	AV6
48	32	16	AV4
48	63	15	AV1
48	63	17	AV2
48	63	21	AV5
48	63	22	AV3
48	63	27	AV4
48	64	25	AV2
48	83	21	AV4
48	94	17	AV6
48	94	17	AV4
48	95	19	AV5
48	95	23	AV6
48	96	19	AV6
49	28	19	AV2
49	57	15	AV6
49	57	15	AV4
49	63	17	AV3
49	63	19	AV4
49	63	19	AV2
49	63	30	AV5
49	64	27	AV1
49	65	20	AV4
49	65	24	AV2
49	65	24	AV3
49	67	17	AV6
49	67	18	AV5
49	67	18	AV1
49	67	27	AV2
49	67	27	AV4
49	67	33	AV3
49	76	20	AV2

TABLE 1

SG- A Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
49	88	17	AV6
49	88	25	AV4
49	88	25	AV3
49	88	28	AV5
50	28	14	AV2
50	28	17	AV5
50	38	16	AV4
50	38	22	AV5
50	65	17	AV3
50	65	16	AV5
50	65	24	AV4
50	79	30	AV3
50	79	30	AV4
50	80	16	AV5
50	80	19	AV3
50	80	17	AV4
50	85	16	AV2
50	85	21	AV5
50	85	21	AV6
50	85	27	AV3
50	85	28	AV4
50	88	25	AV6
50	95	22	AV3
50	95	24	AV4
50	95	31	AV6
50	95	34	AV5
51	53	14	AV4
51	75	17	AV5
51	86	16	AV3
51	86	28	AV2
51	90	14	AV3
51	90	16	AV6
51	90	24	AV4
51	90	24	AV5
52	53	14	AV4
52	53	16	AV2
52	73	17	AV5
52	88	20	AV3
52	88	24	AV6
52	88	28	AV5
52	88	34	AV4
52	89	26	AV4
52	89	26	AV5
52	89	31	AV6

TABLE 1

SG- A Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
52	90	21	AV6
53	45	22	AV3
53	45	27	AV2
53	69	14	AV5
53	90	18	AV4
54	48	18	AV1
54	86	17	AV2
55	41	22	AV6
56	57	18	AV2
56	81	18	AV4
57	53	16	AV1
57	61	17	AV2

SG A Non AVB Imperfections		
Row	Col.	Percent Throughwall
49	29	18
50	29	8
1	36	19
1	87	22
1	91	16

TABLE 1

Seabrook OR09; SG-B Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
15	68	17	AV1
17	64	23	AV1
17	77	15	AV1
18	64	28	AV1
18	64	41	AV6
18	74	21	AV1
19	66	18	AV1
21	68	18	AV1
21	77	19	AV1
22	69	17	AV1
22	89	20	AV2
22	89	21	AV6
22	116	12	AV1
23	47	16	AV2
23	47	20	AV1
23	56	17	AV1
23	56	19	AV2
25	51	17	AV1
25	51	19	AV2
27	57	20	AV2
27	63	22	AV5
27	81	18	AV5
27	107	12	AV6
27	107	15	AV5
27	112	16	AV1
28	42	18	AV5
28	78	22	AV2
28	115	12	AV2
28	115	14	AV5
29	38	18	AV2
29	51	18	AV2
29	79	15	AV6
29	79	25	AV2
29	79	26	AV5
29	79	30	AV1
29	113	13	AV6
29	113	15	AV1
30	43	18	AV2
30	43	20	AV6
30	43	23	AV5
30	49	17	AV2
30	58	14	AV5
30	61	21	AV2
30	61	32	AV5

TABLE 1

Seabrook OR09; SG-B Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
30	62	18	AV2
30	66	16	AV6
30	66	19	AV1
30	66	19	AV2
30	66	24	AV5
30	73	17	AV5
30	75	25	AV5
30	75	30	AV2
30	80	14	AV1
30	80	21	AV5
30	80	24	AV2
30	81	28	AV2
30	81	31	AV5
30	87	24	AV2
30	87	31	AV5
30	106	19	AV6
30	111	19	AV2
30	111	19	AV5
30	112	21	AV5
30	112	23	AV2
31	52	19	AV5
31	66	16	AV6
31	111	14	AV5
31	112	22	AV2
32	82	14	AV6
32	82	15	AV5
32	82	24	AV2
32	83	22	AV5
32	86	17	AV3
32	86	19	AV4
32	88	20	AV3
32	88	21	AV2
32	109	15	AV6
32	109	20	AV5
33	107	18	AV5
33	109	20	AV4
33	109	31	AV5
34	14	19	AV5
34	14	19	AV6
34	70	18	AV3
34	70	20	AV2
34	72	23	AV2
34	94	20	AV5
34	98	17	AV3
34	103	17	AV5

TABLE 1

Seabrook OR09; SG-B Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
34	103	21	AV6
34	105	18	AV6
35	44	16	AV2
35	44	17	AV1
35	55	26	AV4
35	58	10	AV2
35	58	17	AV4
35	58	17	AV5
35	58	19	AV3
35	59	17	AV3
35	59	22	AV2
35	67	16	AV2
35	68	16	AV1
35	68	22	AV2
35	68	22	AV3
35	68	25	AV4
35	68	29	AV5
36	59	17	AV2
36	64	18	AV3
36	64	19	AV4
36	65	18	AV4
36	65	22	AV3
36	65	27	AV5
36	65	35	AV2
37	54	15	AV2
37	54	21	AV4
37	69	21	AV2
37	87	18	AV2
38	66	14	AV1
39	48	14	AV2
39	48	17	AV4
39	48	17	AV5
39	48	21	AV3
39	49	15	AV4
39	49	20	AV1
39	49	26	AV2
39	49	26	AV3
39	54	17	AV2
39	54	17	AV3
39	54	20	AV5
39	54	21	AV4
39	57	16	AV4
39	57	18	AV2
39	60	19	AV1
39	60	20	AV2

TABLE 1

Seabrook OR09; SG-B Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
39	60	26	AV3
40	48	10	AV1
40	48	22	AV6
40	48	27	AV5
40	48	29	AV4
40	48	30	AV2
40	48	34	AV3
40	74	19	AV2
41	61	16	AV5
41	61	17	AV2
41	61	25	AV4
41	75	20	AV2
41	75	25	AV3
42	64	13	AV2
42	81	21	AV2
43	69	20	AV3
43	69	21	AV2
43	69	22	AV4
43	69	23	AV5
43	70	15	AV3
43	75	19	AV3
43	75	23	AV2
43	75	27	AV5
43	75	31	AV4
44	62	13	AV4
45	41	19	AV3
45	41	21	AV2
45	41	21	AV4
45	86	22	AV1
46	50	12	AV6
46	50	19	AV2
46	50	23	AV3
46	50	24	AV4
46	50	30	AV5
46	66	14	AV3
47	71	18	AV1
47	71	18	AV4
47	71	20	AV2
47	71	27	AV3
48	25	21	AV5
49	96	19	AV4
50	36	14	AV6
50	68	17	AV3
50	95	22	AV6
51	70	22	AV6

TABLE 1

Seabrook OR09; SG-B Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
53	34	26	AV6
53	44	19	AV6
53	90	23	AV5
54	66	23	AV3
54	86	16	AV5
54	87	26	AV5
56	68	18	AV2
56	71	21	AV2
56	82	25	AV5
57	68	15	AV5
58	48	17	AV6
58	50	13	AV4
58	68	13	AV2
58	76	16	AV4
58	76	17	AV3
59	68	16	AV3

SG B Non AVB Imperfections		
Column	Row	Percent Throughwall
1	87	36
1	87	35

TABLE 1

Seabrook OR09; SG-C Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
10	64	11	AV1
11	67	14	AV1
11	72	14	AV1
15	67	19	AV1
22	5	15	AV6
22	34	13	AV2
24	7	14	AV1
24	98	12	AV1
24	98	12	AV6
26	8	15	AV1
28	8	11	AV6
28	66	16	AV2
30	11	15	AV1
30	11	17	AV5
30	113	24	AV2
30	113	16	AV6
30	114	14	AV2
30	114	12	AV5
31	111	18	AV5
32	17	11	AV1
33	106	21	AV4
33	111	16	AV2
33	111	19	AV5
34	28	13	AV4
34	28	10	AV5
35	13	23	AV2
35	13	15	AV4
35	13	20	AV5
35	13	18	AV6
35	39	25	AV2
35	39	22	AV3
35	39	21	AV4
35	39	19	AV5
35	73	13	AV2
37	23	15	AV5
37	40	15	AV3
37	40	14	AV6
37	56	17	AV2
37	85	16	AV2
37	85	14	AV3
37	85	17	AV4
37	85	17	AV5
37	85	18	AV6
38	79	16	AV2
38	101	17	AV6
38	102	17	AV5
39	42	19	AV2

TABLE 1

Seabrook OR09; SG-C Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
39	42	11	AV4
39	45	18	AV2
39	45	16	AV3
39	45	20	AV4
39	45	23	AV5
39	45	14	AV6
39	49	34	AV2
39	49	25	AV3
39	49	20	AV4
39	49	28	AV5
39	53	18	AV2
39	53	25	AV3
39	53	28	AV4
39	53	15	AV5
39	53	17	AV6
39	69	21	AV2
39	69	15	AV3
39	69	23	AV4
39	69	17	AV5
40	39	19	AV2
40	39	40	AV4
40	39	25	AV5
40	46	16	AV1
40	46	14	AV2
40	46	12	AV3
40	46	17	AV4
40	46	25	AV5
40	46	15	AV6
41	22	16	AV2
41	22	17	AV3
41	22	15	AV5
41	23	15	AV1
41	23	16	AV5
41	30	12	AV4
41	30	17	AV5
41	30	16	AV6
41	39	16	AV2
41	39	15	AV6
41	41	12	AV1
41	41	23	AV2
41	41	13	AV3
41	41	14	AV4
41	43	15	AV2
41	43	13	AV3
41	43	18	AV4
41	80	16	AV2
41	80	24	AV3
41	80	16	AV5

TABLE 1

Seabrook OR09; SG-C Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
41	93	11	AV1
41	93	16	AV4
41	93	17	AV5
41	100	11	AV1
41	100	18	AV3
41	100	15	AV4
41	100	23	AV5
41	100	13	AV6
42	23	19	AV4
42	23	26	AV5
42	25	15	AV4
42	25	17	AV5
42	25	15	AV6
42	31	11	AV1
42	31	21	AV2
42	31	13	AV3
42	66	24	AV1
42	66	32	AV2
42	66	29	AV3
42	66	22	AV4
42	66	17	AV6
42	71	17	AV2
42	71	18	AV5
42	72	20	AV1
42	72	32	AV2
42	72	28	AV3
42	72	40	AV4
42	72	39	AV5
42	92	17	AV2
42	92	13	AV3
42	92	11	AV4
42	92	15	AV5
42	102	14	AV1
42	102	30	AV3
42	102	30	AV4
42	102	15	AV5
42	102	22	AV6
43	23	21	AV3
43	23	19	AV4
43	68	13	AV3
43	100	14	AV2
43	100	29	AV4
43	100	16	AV5
43	102	19	AV3
43	102	29	AV4
43	102	30	AV5
43	102	15	AV6
44	75	17	AV1

TABLE 1

Seabrook OR09; SG-C Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
44	75	19	AV2
44	100	22	AV3
44	100	30	AV4
44	100	30	AV5
46	36	18	AV2
46	36	20	AV3
46	36	22	AV4
46	36	18	AV5
46	79	17	AV2
46	79	20	AV3
46	79	23	AV4
46	79	18	AV6
46	97	15	AV3
46	97	21	AV4
47	30	16	AV5
47	35	14	AV2
47	35	18	AV3
47	35	18	AV4
47	40	13	AV3
47	67	16	AV1
47	67	31	AV2
47	67	26	AV3
47	67	24	AV4
47	67	26	AV5
47	76	17	AV2
47	83	18	AV5
47	86	18	AV5
47	93	21	AV3
47	93	22	AV4
47	93	29	AV5
47	94	15	AV2
47	94	16	AV3
47	94	19	AV4
47	94	12	AV5
47	94	16	AV6
47	96	15	AV5
47	98	13	AV3
47	98	14	AV4
47	99	14	AV4
47	99	29	AV5
47	99	26	AV6
48	33	16	AV5
48	35	18	AV4
48	96	14	AV2
48	96	15	AV3
48	96	39	AV4
48	96	27	AV5
48	96	29	AV6

TABLE 1

Seabrook OR09; SG-C Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
48	97	15	AV3
48	97	14	AV4
49	95	28	AV5
51	45	28	AV2
51	45	28	AV3
51	45	18	AV5
51	51	15	AV3
51	51	16	AV4
51	51	25	AV5
51	69	32	AV4
51	69	39	AV5
51	69	23	AV6
51	84	32	AV2
53	33	14	AV3
53	35	13	AV2
53	67	27	AV2
53	67	30	AV3
53	67	25	AV4
53	70	16	AV1
53	70	21	AV2
53	70	16	AV3
54	35	17	AV4
54	68	16	AV2
54	87	17	AV3
54	87	17	AV4
54	87	25	AV5
55	39	16	AV1
56	65	19	AV3
57	50	15	AV2
57	77	14	AV5

SG C Non AVB Imperfections		
Row	Col.	Percent Throughwall
43	26	20
44	26	10
1	87	28
1	87	33
1	112	21
3	113	29

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
14	7	13	AV1
15	7	11	AV1
15	79	13	AV1
16	7	17	AV1
17	7	17	AV1
17	72	16	AV1
17	75	16	AV6
20	11	12	AV6
21	11	18	AV2
21	11	19	AV5
21	31	12	AV1
22	86	17	AV2
22	93	18	AV6
23	11	18	AV2
23	11	17	AV6
24	6	20	AV1
24	6	21	AV6
25	82	16	AV2
25	82	20	AV5
26	8	18	AV1
26	8	21	AV6
26	11	19	AV6
26	40	17	AV5
26	41	18	AV2
27	8	15	AV1
27	8	27	AV6
27	13	16	AV2
27	36	17	AV5
27	39	26	AV2
27	39	27	AV5
27	39	23	AV6
27	44	25	AV2
27	76	15	AV1
27	76	17	AV2
27	89	14	AV1
27	96	21	AV6
27	102	12	AV1
27	111	16	AV5
27	115	22	AV2
27	115	16	AV5
28	11	15	AV6
28	88	18	AV5
28	115	10	AV2
28	115	15	AV5

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
29	34	26	AV2
29	34	24	AV5
29	79	15	AV6
29	83	14	AV1
29	83	17	AV5
29	100	19	AV1
29	112	13	AV6
30	12	15	AV1
30	12	16	AV5
30	66	23	AV5
31	13	15	AV1
31	23	15	AV1
31	23	15	AV6
31	113	15	AV1
32	11	11	AV1
32	12	17	AV1
32	12	15	AV2
32	12	16	AV3
32	12	38	AV5
32	28	13	AV3
33	15	13	AV6
33	58	15	AV1
33	58	16	AV2
33	96	17	AV1
33	96	18	AV2
34	15	17	AV1
34	15	20	AV4
34	15	15	AV5
34	17	13	AV2
34	17	15	AV3
34	22	19	AV3
34	22	16	AV6
34	28	14	AV4
34	30	16	AV3
34	30	15	AV5
34	35	17	AV2
34	35	16	AV5
34	40	16	AV5
34	40	16	AV6
34	48	18	AV5
34	50	18	AV3
34	69	25	AV2
34	69	16	AV3
34	69	18	AV4
34	69	16	AV5
34	70	13	AV2

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
34	71	18	AV2
34	73	21	AV2
34	73	16	AV4
34	73	19	AV5
34	76	16	AV2
34	92	13	AV4
34	109	27	AV5
35	15	14	AV6
35	28	12	AV5
35	37	28	AV2
35	37	22	AV3
35	37	14	AV6
35	51	19	AV1
35	69	34	AV2
35	69	34	AV3
35	69	18	AV4
35	69	12	AV5
35	69	16	AV6
35	71	12	AV1
35	71	16	AV2
35	83	18	AV3
35	83	17	AV4
35	86	11	AV2
35	86	15	AV3
35	86	15	AV4
35	86	16	AV6
35	88	13	AV2
35	88	12	AV3
35	88	18	AV4
35	89	20	AV2
35	89	12	AV3
35	96	12	AV6
36	13	14	AV4
36	13	15	AV6
36	16	19	AV3
36	38	14	AV4
36	40	19	AV2
36	40	19	AV3
36	40	17	AV4
36	40	16	AV5
36	40	18	AV6
36	41	20	AV2
36	46	19	AV5
36	67	22	AV2
36	80	12	AV3
36	82	18	AV1

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
36	82	29	AV2
36	82	21	AV3
36	82	24	AV4
36	82	26	AV5
36	90	14	AV2
37	16	18	AV1
37	16	21	AV3
37	16	22	AV4
37	16	15	AV6
37	34	17	AV2
37	36	16	AV1
37	36	23	AV2
37	36	20	AV3
37	36	31	AV4
37	36	36	AV5
37	36	20	AV6
37	38	15	AV2
37	38	15	AV3
37	38	21	AV4
37	38	16	AV5
37	39	17	AV2
37	39	20	AV3
37	39	21	AV4
37	39	21	AV5
37	39	14	AV6
37	40	17	AV4
37	45	21	AV2
37	45	19	AV4
37	48	12	AV1
37	48	23	AV3
37	48	19	AV4
37	48	15	AV5
37	58	20	AV2
37	59	23	AV2
37	59	18	AV3
37	59	23	AV4
37	59	19	AV5
37	73	14	AV2
37	77	16	AV1
37	77	20	AV2
37	77	30	AV3
37	77	30	AV4
37	77	19	AV5
37	77	13	AV6
37	84	18	AV4
37	84	20	AV6

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
38	19	13	AV4
38	19	16	AV6
38	35	18	AV6
38	73	16	AV2
38	73	21	AV3
38	73	23	AV4
38	73	18	AV5
39	18	21	AV5
39	19	18	AV1
39	19	20	AV2
39	19	24	AV3
39	19	15	AV6
39	23	15	AV5
39	36	23	AV5
39	38	13	AV3
39	41	20	AV2
39	41	25	AV4
39	41	20	AV5
39	41	18	AV6
39	44	18	AV4
39	44	25	AV5
39	48	13	AV5
39	50	21	AV3
39	50	21	AV5
39	57	14	AV1
39	57	28	AV2
39	57	24	AV3
39	57	21	AV4
39	57	18	AV5
39	62	21	AV2
39	74	16	AV2
39	75	16	AV2
39	82	14	AV1
39	82	21	AV2
39	82	20	AV3
39	82	14	AV4
39	82	16	AV5
39	89	19	AV1
39	94	21	AV2
39	94	15	AV3
39	94	16	AV4
39	96	16	AV5
39	102	20	AV1
40	19	16	AV6
40	21	16	AV1
40	21	15	AV4

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
40	21	15	AV6
40	23	17	AV1
40	23	15	AV4
40	26	18	AV3
40	29	15	AV2
40	38	12	AV3
40	38	13	AV4
40	59	17	AV3
40	59	17	AV4
40	66	33	AV2
40	66	26	AV3
40	66	23	AV4
40	66	28	AV5
40	66	23	AV6
40	80	27	AV2
40	80	21	AV3
40	80	40	AV4
40	80	27	AV5
40	80	21	AV6
40	92	17	AV3
41	18	23	AV4
41	20	22	AV2
41	20	20	AV3
41	20	22	AV4
41	20	28	AV5
41	20	16	AV6
41	23	15	AV4
41	23	16	AV6
41	29	16	AV2
41	29	16	AV3
41	34	18	AV2
41	34	18	AV3
41	34	17	AV4
41	35	29	AV3
41	36	16	AV1
41	36	24	AV3
41	38	17	AV2
41	38	23	AV3
41	38	15	AV5
41	51	18	AV2
41	51	15	AV3
41	56	15	AV1
41	56	33	AV2
41	56	22	AV3
41	56	21	AV4
41	56	31	AV5

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
41	56	22	AV6
41	59	20	AV4
41	66	33	AV2
41	66	26	AV3
41	66	13	AV4
41	66	19	AV5
41	71	19	AV2
41	87	11	AV4
41	96	13	AV2
41	96	14	AV4
41	104	17	AV2
41	104	19	AV5
42	19	14	AV1
42	19	13	AV2
42	19	21	AV3
42	19	18	AV4
42	19	18	AV5
42	19	13	AV6
42	20	14	AV6
42	24	30	AV4
42	31	16	AV3
42	37	28	AV2
42	37	27	AV3
42	37	19	AV4
42	37	15	AV6
42	39	17	AV3
42	39	21	AV4
42	40	16	AV3
42	40	17	AV6
42	46	29	AV3
42	46	25	AV4
42	46	23	AV5
42	47	18	AV3
42	47	12	AV4
42	47	12	AV5
42	49	13	AV1
42	49	18	AV2
42	49	32	AV3
42	49	38	AV4
42	49	41	AV5
42	49	18	AV6
42	52	11	AV1
42	52	31	AV2
42	52	26	AV3
42	52	22	AV4
42	52	41	AV5

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
42	52	25	AV6
42	77	19	AV5
42	92	16	AV1
42	92	16	AV3
42	92	18	AV4
42	92	20	AV5
42	92	17	AV6
42	98	18	AV3
42	98	18	AV4
42	98	19	AV5
42	98	15	AV6
43	21	13	AV1
43	21	21	AV2
43	21	26	AV3
43	21	20	AV4
43	21	26	AV5
43	21	28	AV6
43	27	15	AV5
43	27	14	AV6
43	51	16	AV2
43	51	21	AV3
43	51	10	AV4
43	51	27	AV5
44	26	20	AV2
44	26	14	AV3
44	26	20	AV4
44	26	17	AV5
44	27	15	AV5
44	36	21	AV1
44	36	20	AV2
44	36	22	AV3
44	45	29	AV3
44	45	25	AV5
44	45	14	AV6
44	46	15	AV2
44	48	30	AV3
44	48	18	AV4
44	48	25	AV5
44	62	18	AV3
44	91	23	AV2
44	91	33	AV3
44	91	29	AV4
44	91	28	AV5
44	91	16	AV6
44	92	16	AV3
44	101	18	AV3

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
45	22	16	AV5
45	27	17	AV5
45	28	18	AV6
45	29	16	AV2
45	29	16	AV5
45	32	18	AV2
45	40	23	AV5
45	40	15	AV6
45	66	15	AV1
45	66	23	AV2
45	66	19	AV3
45	94	20	AV3
46	25	21	AV5
46	25	21	AV6
46	27	14	AV3
46	30	20	AV3
46	30	32	AV4
46	30	33	AV5
46	30	15	AV6
46	32	13	AV2
46	32	14	AV6
46	38	17	AV2
46	38	18	AV3
46	38	30	AV4
46	38	19	AV5
46	38	16	AV6
46	39	22	AV4
46	39	32	AV5
46	39	18	AV6
46	42	24	AV4
46	42	30	AV5
46	42	16	AV6
46	51	22	AV1
46	51	28	AV2
46	51	23	AV3
46	51	32	AV4
46	51	31	AV5
46	60	18	AV4
46	60	14	AV5
46	88	16	AV4
46	97	15	AV2
47	24	18	AV3
47	29	15	AV4
47	29	14	AV5
47	30	15	AV2
47	32	11	AV1

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
47	34	14	AV3
47	38	17	AV6
47	44	36	AV2
47	44	29	AV3
47	44	33	AV5
47	44	43	AV6
47	49	28	AV2
47	49	20	AV3
47	53	23	AV4
47	53	28	AV5
47	53	22	AV6
47	59	23	AV1
47	59	39	AV2
47	59	24	AV3
47	59	33	AV4
47	59	21	AV5
47	61	21	AV6
47	75	21	AV1
47	75	21	AV2
47	75	29	AV3
47	75	25	AV4
47	75	33	AV5
47	88	12	AV4
47	92	12	AV1
47	92	14	AV3
47	97	16	AV3
47	97	18	AV5
48	25	15	AV3
48	28	20	AV2
48	28	36	AV3
48	28	37	AV4
48	28	29	AV5
48	28	15	AV6
48	29	16	AV3
48	30	14	AV1
48	30	12	AV3
48	32	20	AV6
48	38	16	AV1
48	41	10	AV1
48	47	15	AV6
48	65	22	AV4
48	90	12	AV3
48	92	15	AV3
48	94	16	AV2
48	94	17	AV3
49	27	16	AV3

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
49	27	15	AV5
49	28	23	AV5
49	28	14	AV6
49	34	18	AV6
49	36	18	AV2
49	36	20	AV4
49	36	19	AV5
49	36	15	AV6
49	38	18	AV4
49	40	17	AV3
49	40	20	AV6
49	42	22	AV6
49	43	17	AV1
49	43	18	AV2
49	43	19	AV5
49	43	20	AV6
49	52	32	AV2
49	52	25	AV3
49	52	23	AV4
49	52	19	AV5
49	52	21	AV6
49	55	19	AV1
49	55	18	AV2
49	69	24	AV1
49	69	27	AV2
49	69	35	AV3
49	69	43	AV4
49	69	32	AV5
49	69	27	AV6
49	81	26	AV4
49	81	20	AV5
49	86	15	AV3
49	86	17	AV5
49	87	20	AV3
49	87	24	AV4
49	94	17	AV2
49	94	15	AV3
49	94	21	AV5
49	94	19	AV6
49	96	15	AV2
50	30	17	AV6
50	32	17	AV6
50	34	20	AV4
50	34	18	AV5
50	35	19	AV5
50	50	24	AV4

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
50	94	20	AV3
50	94	16	AV4
50	94	23	AV5
50	94	28	AV6
51	31	15	AV6
51	35	16	AV3
51	47	17	AV4
51	55	13	AV5
51	62	17	AV2
51	92	17	AV4
52	33	34	AV4
52	33	23	AV5
52	33	21	AV6
52	35	21	AV2
52	35	33	AV3
52	35	32	AV5
52	35	20	AV6
52	40	20	AV5
52	42	12	AV5
52	44	21	AV2
52	44	22	AV3
52	44	36	AV4
52	44	33	AV5
52	86	15	AV3
53	34	15	AV4
53	35	17	AV3
53	43	17	AV2
53	62	18	AV1
53	86	14	AV5
54	35	16	AV2
54	38	17	AV4
54	43	17	AV2
54	87	16	AV4
55	39	17	AV3
55	39	18	AV6
55	41	17	AV2
55	51	16	AV5
55	56	17	AV1
55	74	14	AV5
55	78	16	AV2
56	41	29	AV2
56	41	35	AV4
56	41	29	AV5
56	41	21	AV6
56	43	12	AV1
56	52	14	AV4

TABLE 1

Seabrook OR09; SG-D Listing of AVB Indications			
Row	Col.	Percent Throughwall	Nominal Location
56	69	21	AV4
56	69	26	AV5
56	69	23	AV6
56	80	19	AV2
56	81	20	AV5
56	81	21	AV6
56	82	15	AV2
56	82	15	AV5
57	49	13	AV5
57	65	15	AV1
58	49	17	AV1
58	49	14	AV4
58	75	18	AV5
58	75	18	AV6
59	56	17	AV1
59	63	18	AV1
59	66	24	AV1

SG D Non AVB Imperfections			
Row	Col.	Percent Throughwall	Nominal Location
13	4	23	01C
1	32	26	01H