



Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601
Tel 914 272 3200
Fax 914 272 3205

Michael R. Kansler
President

May 25, 2004
NL-04-065

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Indian Point Nuclear Generating Unit No. 3
Docket 50-286
**Request for Additional Information Regarding Steam
Generator Tube Inspection Reports for the 2003 Outage, Indian
Indian Point Nuclear Generating Unit No. 3 (TAC NO. MC1912)**

- References:
1. USNRC letter from Patrick D. Milano to Michael Kansler, "Request for Additional Information Regarding Steam Generator Tube Inspection Reports for the 2003 Outage, Indian Point Nuclear Generating Unit No. 3 (TAC NO. MC1912)", dated April 6, 2004.
 2. Entergy letter to NRC, NL-03-182, regarding "Steam Generator Tube Inservice Examination Results for Refueling Outage 12 (R12)", dated December 8, 2003.
 3. Entergy letter to NRC, IPN-99-129, regarding "Steam Generator Inservice Inspection Results", dated December 17, 1999.

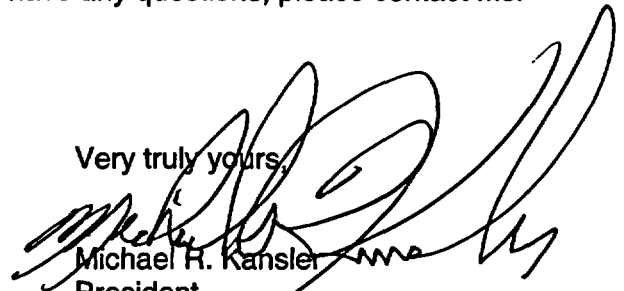
Dear Sir:

Reference 1 transmitted to Entergy Nuclear Operations, Inc. (ENO), a request for additional information (RAI) regarding the Indian Point 3 steam generator (SG) tube inspection reports for the 2003 outage. Attachment 1 to this letter provides ENO's response to Reference 1. Attachment 2 of this submittal provides a copy of Attachment 2 to ENO's December 17, 1999 letter (Reference 3), as requested by question 10. Attachment 2 of this submittal includes Revision 1 to the original Westinghouse Proprietary 2 document. Revision 1 has been reclassified as Westinghouse Proprietary 3, which permits unrestricted distribution of this document. No information was removed from the original report for reclassification.

A047

There are no new commitments made in this letter. If you have any questions, please contact Ms. Charlene Faison at 914-272-3378.

Very truly yours,



Michael R. Kansler
President
Entergy Nuclear Operations, Inc.

Attachments:

- I. Response to Request for Additional Information Regarding Steam Generator Tube Inspection Reports for the 2003 Outage, Indian Point Nuclear Generating Unit No. 3 (TAC No. MC1912).
- II. Resubmittal of Attachment 2 to Entergy's December 19, 1999 letter to the NRC (IPN-99-129).

cc: Mr. Patrick D. Milano, Senior Project Manager
Project Directorate I,
Division of Licensing Project Management
U.S. Nuclear Regulatory Commission
Mail Stop O-8-C2
Washington, DC 20555

Mr. Hubert J. Miller
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Resident Inspector's Office
Indian Point Unit 3
U.S. Nuclear Regulatory Commission
P.O. Box 337
Buchanan, NY 10511-0337

Mr. Peter R. Smith
President
NYSERDA
17 Columbia Circle
Albany, NY 12203

Mr. Paul Eddy
New York State Dept. of Public Service
3 Empire Plaza
Albany, NY 12223

ATTACHMENT 1

**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING
STEAM GENERATOR TUBE INSPECTION REPORTS FOR THE 2003 OUTAGE,
INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 (TAC NO. MC1912)**

**Entergy Nuclear Operations, Inc.
Indian Point Nuclear Generating Unit No. 3
Docket No. 50-286**

- 1) *The SGs at IP3 were replaced in 1989 with Westinghouse Model No. 44F SGs. In several locations, the reports reference tube support structures (e.g., 1C) and tube locations (e.g., Row 29, Column 17). In order for the NRC staff to better understand the location of the indications, provide a sketch of the IP3 SGs that depicts the tube and support naming conventions. In addition, provide the following general design information: (a) tube manufacturer and (b) tube support (including anti-vibration bar) thickness. Discuss reference datum for the measurements from a tube support such that it is clear whether the measurements are from the middle of the support of the edge or the support (e.g., does AV2 minus 0.6 inch specify an indication 0.6 inch from the bottom edge of the second anti vibration bar?).*

Response: Sketches of the tube locations and support structures are provided in Figures 1 and 2 respectively. (a) The manufacturer of the steam generator (SG) tubing is Sandvik. (b) The dimensions of the support structures are as follows: the flow distribution baffle is 0.75" thick, tube support plates are 1.125" thick and AVBs are 0.690" wide on the side contacting the tubes. It is important to note that the AVBs are not perpendicular to the tubing such that the contact length varies from 0.697 through >1.50 inches. All indication locations are reported relative to the centerline of the nearest support structure except for indications within and near the tubesheet. For indications within and near the tubesheet the locations are reported relative to either the tube end (TEC or TEH) or the secondary face of the tubesheet (TSC or TSH). In the example from the question, AV2 minus 0.6 inch specifies an indication 0.6 inch from the centerline of the second anti-vibration bar in the direction of AV1.

- 2) *Provide the completion date for RFO 11 and state whether any SG tube inspections were performed during that RFO. The staff notes that the August 19 report implies that inspections were performed (i.e., "...wear scars were not identified during Refueling Outage 11 because sludge lancing occurred after the ISI."). However, the December 8 report indicates that no eddy current inspections were performed.*

Response: RFO 11 was completed on May 24, 2001. No SG eddy current inspections were performed during RFO 11. The August 19, 2003 report inadvertently implied that an ISI eddy current examination was performed in RFO 11.

- 3) *Provide the completion date for your SG tube inspections in 1999.*

Response: The completion date for the IP3 SG tube inspections in 1999 was October 2, 1999.

- 4) *Three tubes were reported as having restrictions such that a 0.700-inch bobbin probe could not pass through the U-bend region. Discuss: (a) the largest size probe that passed through these tubes during RFO 12, (b) the largest size probe that ever passed through these tubes, and (c) the source of these restrictions. Also, provide the bend radii of the first three rows of tubes.*

Response: (a) The largest size probe that passed through the three restricted tubes in SG34 (Row 3, Column 49; Row 3, Column 50; and Row 3, Column 57) during RFO 12 was 0.680". (b) Records from the pre-service inspection performed in 1988 indicate that a 0.740" bobbin probe was passed through those tubes. (c) When the restriction to the bobbin probe was identified, the U-bends were retested with a 0.680" motorized rotating pancake probe (MRPC). The data from the MRPC indicated no detectable degradation. Based on that information the source of the restriction is assumed to be a combination of slightly higher ovality of the tubing in the U-bend region than in other tubes and use of different bobbin probe designs. The bend radii of the first 3 rows of tubes are: 2.187", 3.421" and 4.656" for rows 1 through 3 respectively. Additional radii can be determined by adding an additional 1.2344 inches for each row.

- 5) *All hot leg dents in the straight section of the tubes were inspected with a rotating probe if the dent voltage was greater than 5 volts. Discuss whether the calibration procedure (for measuring dent size) is consistent with the guidance described in Generic Letter (GL) 95-05, "Voltage-Based Repair Criteria for Westinghouse Steam Generator Tubes Affected by Outside Diameter Stress Corrosion Cracking," or is consistent with industry guidelines. Also, discuss whether the dents and dings found during the RFO 12 inspection were traceable back to the baseline inspection and discuss any changes in magnitude. If the dents or dings are not traceable to your baseline inspection and/or have changed in magnitude, discuss the reason for any change.*

Response: The calibration of the eddy current techniques used to monitor dents and dings is consistent with industry guidelines. The techniques are qualified in accordance with Appendix H of the EPRI (Electric Power Research Institute) SG Examination Guidelines. Bobbin coil voltage is used to monitor the size of the dents and a sampling of dents greater than 5 volts with rotating pancake coil probes confirms the absence of stress corrosion cracking in the dents. Of the 65 dent and ding indications identified in RFO 12, thirty-two could be traced to indications reported in the baseline inspection. Dents and dings as low as 1.91 volts were recorded in RFO 12 compared to 3.0 volts in the pre-service baseline inspection. This would explain why 31 of the RFO 12 indications between 1.91 and 2.88 volts did not have comparable indications recorded in the baseline inspection. One indication was recorded as 3.03 volts. The one remaining indication not traceable to the baseline inspection was a 6.02 volt ding identified in SG33 at 6H+4.10". The raw data from the baseline inspection is not readily available for reanalysis to determine if the indication was missed during the baseline inspection or present below the threshold voltage of 3.0, however it was previously identified in RFO 9 in 1997 and measured 5.38 volts. This represents only a 12 percent change which is within the variability of the inspection technique. Therefore there is no need to reevaluate this

indication at this time. There are no indications that would lead us to believe that the dents/dings are changing in magnitude. All dent and ding indications found during RFO 12 were screened to determine if a history review and/or additional diagnostic testing was required. All history reviews were performed by two resolution analysts.

- 6) *One tube was classified as having a "trackable anomaly." Define this classification.*

Response: A trackable anomaly (TRA) is defined as a "signal from Bobbin or RPC that is not believed to be flawlike but is flagged for tracking in subsequent inspections." The TRA code is considered a category VII indication that requires an indication review, history review, diagnostic sampling or engineering evaluation. Any TRA indications are added to the sample population at the next inspection of that steam generator.

- 7) *Clarify whether the tubes with possible loose parts signals were visually inspected to confirm the nature of any potential loose parts. Provide the location of these indications. If visual inspections were not performed and/or the part was not removed, discuss the analyses performed to ensure these potential parts do not compromise tube integrity for the period of time between inspections.*

Response: Four possible loose part (PLP) indications were identified in RFO 12. In all four cases, the surrounding tubes were inspected with eddy current and there were no additional PLP indications. Visual inspections were performed on the two tubes (Row 29, Column 28 and Row 30, Column 28) with PLP indications in SG31 and there was no evidence of any foreign objects.

The other two PLP indications were in locations inaccessible to visual examinations. One of the two PLP indications was identified in SG31 at 0.09" above the tubesheet on the hot leg at Row 24, Column 46. The second PLP indication was identified in SG34 at 0.49" above the tubesheet on the hot leg at Row 4, Column 45. Because these two PLP indications were in locations inaccessible to visual examinations, were limited to single tubes and no wear was detected, the PLP indications were assumed to be from sludge deposits on the tubes. No further evaluation was required.

- 8) *In 1997, a free span bobbin indication was identified in one tube in SG 34 (Row 8, Column 21). During that outage, a rotating probe inspection was performed at this location which revealed the presence of a small ding. Discuss whether any indications were identified in this region of the tube during your 2003 outage, and discuss whether the bobbin signal has continued to change.*

Response: This tube was not inspected during the 2003 outage or in the refueling outages between 1997 and 2003. Reinspection of this tube was not required or

considered necessary until its regularly scheduled inspection expected to take place during RFO 14.

- 9) *During the 1997 outage, possible indications of erosion-corrosion were identified in two J-tube joints (refer to page 11 of 31 of the December 19, 1997, report). The report further indicated that these J-tubes would be reinspected at a later outage to determine if the erosion-corrosion is progressing. Have these additional inspections been performed? If so, describe the results of these inspections.*

Response: A follow-up inspection of those J-tube welds in SG34 has not yet been performed because the inspection rotation for secondary side steam drum inspections has not been completed. The 1997 inspection was performed in SG34. In 1999 and 2001, steam generators 33 and 32 were inspected respectively and there were no indications of erosion corrosion of J-tube welds to the feed ring. The next planned steam drum inspection of SG34 is in RFO 14 which is scheduled for 2007. Based on the fact that the last visual inspection was inconclusive and the fact that there is no evidence of wear at the J-tube nozzle for any other SG's there was no justification for accelerating the inspection of the steam drum in SG34.

- 10) *The staff's review of the 2003 inspection results included referring back to the previous inspection results which were provided by letter dated December 17, 1999. In reviewing this document (ML003670350), it appears that portions of Attachment 2 were not incorporated into the NRC's document management system. Provide a copy of Attachment 2 to the December 17, 1999, letter.*

Response: A copy of Attachment 2 to the December 17, 1999 letter has been included as Attachment 2 of this letter. Attachment 2 to the December 17, 1999 letter included a copy of Revision 0 of the Condition Monitoring and Operational Assessment for the steam generator inspections performed at Indian Point 3 during RFO 10. Attachment 2 of this submittal includes Revision 1 to the original document prepared in 1999. Revision 1 has been reclassified as Westinghouse Proprietary Class 3, which permits unrestricted distribution of this document. No information was removed from the original report for reclassification.

Figure 1
Tubesheet Map for Westinghouse Model 44F Steam Generator

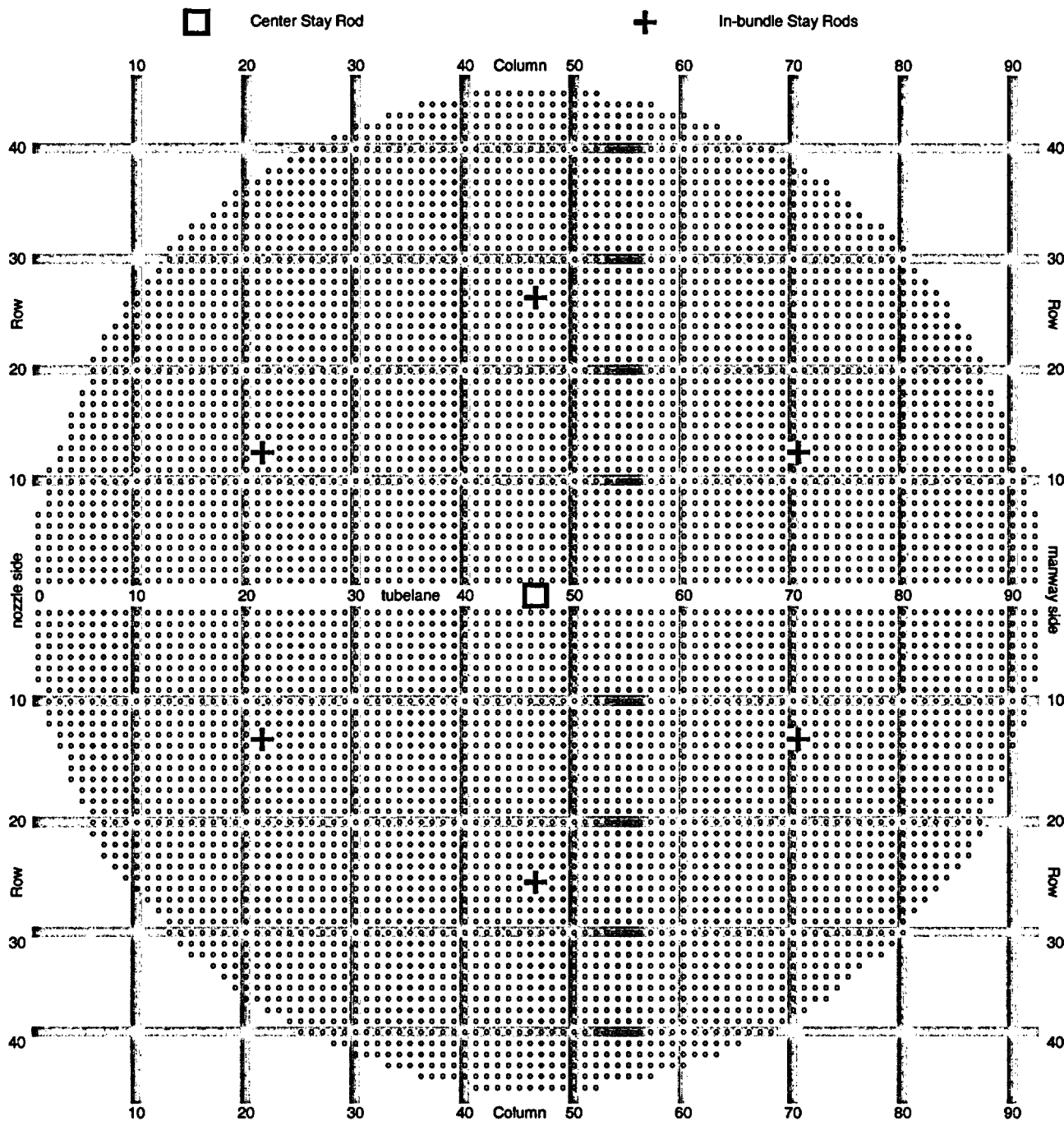


Figure 2

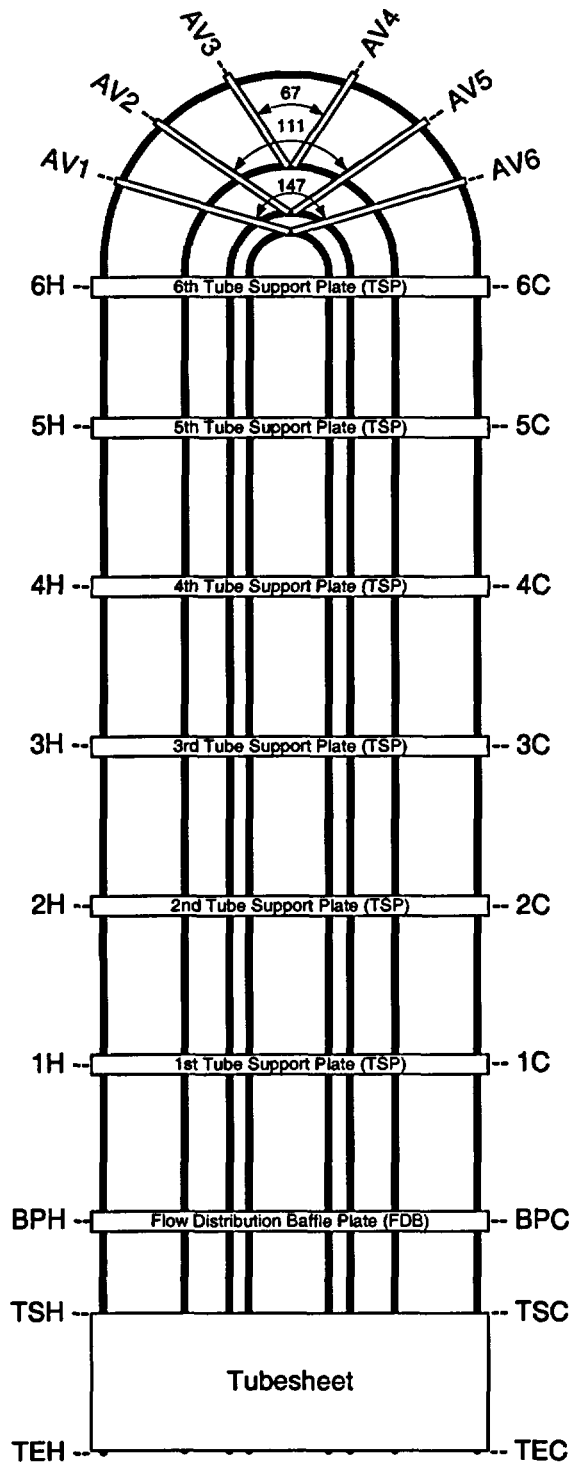


Illustration of Support Structures in the IP3 Replacement Steam Generators

Structural Data

Anti-Vibration Bars (3 sets) are 0.690" wide on the side contacting the tubes. Sets 1, 2 & 3 supports rows 9+, 14+ & 25+ respectively.

Tube support plates (6) are 1.125" thick with quatrefoil broach holes

Flow distribution baffle (1) is 0.75" thick with center cutout approximately 35" in diameter and octafoil broach holes.

Tubesheet is 21.96" thick inclusive of 0.150" thick cladding on the primary side.

Tubing is Inconel 690TT made by Sandvik (Sweden); 0.875" OD; 0.050" wall thickness

Number of tubes is 3214 arranged in a square pitch pattern 1.2344" on center. There are 45 rows and 92 columns.

Tube length ranges from 56.53' for row 1 to 71.35' for row 45.

U-bend radius for row 1 is 2.187".

TSC - Tubesheet Cold
 TSH - Tubesheet Hold

TEC - Tube End Cold
 TEH - Tube End Hot

ATTACHMENT 2

**RESUBMITTAL OF ATTACHMENT 2 TO ENTERGY'S
DECEMBER 17, 1999 LETTER TO THE NRC (IPN-99-129).**

**Entergy Nuclear Operations, Inc.
Indian Point Nuclear Generating Unit No. 3
Docket No. 50-286**



Westinghouse Electric Company
Nuclear Services
Waltz Mill Service Center
P.O. Box 158
Madison, Pennsylvania 15663
USA

Mr. Curt Ingram
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

Direct tel: 724-722-5658
Direct fax: 724-722-5166
e-mail: irasm@westinghouse.com

Our ref: INT-04-124

April 23, 2004

Entergy Nuclear Northeast
Indian Point Unit 3
CMOA Report SG-99-10-003 Revision 1

Dear Mr. Ingram:

Enclosed with this transmittal letter is a copy of the Condition Monitoring and Operational Assessment for the steam generator inspections performed at IP3 during 3R10. The report is being issued as Revision 1 to the original document prepared in 1999. Revision 1 has been reclassified as Westinghouse Proprietary Class 3, which permits unrestricted distribution of this document. No information was removed from the original report for reclassification.

If you have any questions, please contact Herm Lagally at (724) 722-5082 or me. Thank you!

Sincerely,

Steve Ira
Customer Projects Manager

/krs

Enclosure

cc: Bob Cullen
Bob Penny

Our ref: INT-04-124

Bcc: Herm Lagally
Carl Schwartz

DOCUMENTUM REFERENCE: SG-99-10-003, Revision 1


Indian Point 3, RF10
Condition Monitoring Assessment
and
Operational Assessment

October 1999

Prepared: No Logally 4/21/04

Reviewed: D. Curt Ingram 4/21/04

Approved: J. M. Hull 4-21-04

	ENTERGY NUCLEAR NORTHEAST ENN-DC-149
VENDOR DOCUMENT REVIEW STATUS	
<input checked="" type="checkbox"/> IPEC <input type="checkbox"/> JAF <input type="checkbox"/> PNPS <input type="checkbox"/> VY	
Document No: <u>SG-99-10-003</u>	Rev. No.: <u>1</u>
Document Title: <u>IP3 RF10 COMA</u>	
ER No: _____	Purchase Order No.: <u>4500001356</u>
STATUS NO:	
1 <input checked="" type="checkbox"/> ACCEPTED	
2 <input type="checkbox"/> ACCEPTED AS NOTED RESUBMITTAL NOT REQUIRED	
3 <input type="checkbox"/> ACCEPTED AS NOTED RESUBMITTAL REQUIRED	
4 <input type="checkbox"/> NOT ACCEPTED	
5 <input type="checkbox"/> FOR INFORMATION	
Acceptance does not constitute approval of design details, calculations, analysis, test methods or materials developed or selected by the supplier and does not relieve supplier from full compliance with contractual negotiations.	
Responsible Engineer: <u>D. Curt Ingram</u>	<u>D. Curt Ingram</u> 4/29/04
Print Name	Signature Date

Revision Record

Revision	Changes	Signatures
0	Original Issue - October 1999	See cover page
1	Removed Proprietary Class 2C Designation	Author: <i>NOL 4/21/04</i> Reviewer: <i>ATK 4/21/04</i> Approved: <i>JH 4/21/04</i>

1.0 Introduction and Background

NEI 97-06 (Reference 1) requires that a Condition Monitoring (CM) evaluation be performed following each inspection to assess the structural integrity of the steam generators (SG) based on the results of the eddy current inspections. Based on the appropriate EC signal parameters, the CM evaluation is "backward looking" and assesses the structural integrity of the degraded tubes against structural and leakage integrity limits that are included in the Degradation Assessment (Reference 2) prepared prior to the inspection. Additionally, a "forward looking" evaluation, or Operational Assessment (OA), is required to project the inspection results and trends to the next inspection to provide reasonable assurance that the structural and leakage requirements will continue to be met until that time.

This report documents the condition monitoring and preliminary operational assessments for Indian Point 3 for the inspections performed at the RF10 (4th refueling outage after SG replacement) inspection. The Indian Point 3 SGs are Westinghouse Model 44F SGs with thermally treated Alloy 690 tubing, full depth hydraulically expanded tube to tubesheet joints, and stainless steel tube support plates with quatrefoil tube holes.

2.0 Summary and Conclusions

The results of the RF10 inspection confirm that the Indian Point 3 SGs currently meet all industry and regulatory structural and leakage integrity operational requirements.

The only degradation mechanism observed during RF10 was tube wear near the top of the tubesheet (TTS), attributed to the prior presence of loose parts. No loose parts were observed currently at the location of the observed wear.

Based on the results of the current inspection, satisfactory operation of SGs 31 and 32, which were inspected during RF10, is expected through end of cycle 12 (EOC12), when they will be next inspected. Similarly, satisfactory operation of SGs 33 and 34, which were not inspected during RF10, is expected through EOC11, when they will be next inspected.

3.0 Inspection

3.1 Indian Point 3 RF10 Inspections Performed

The inspection included 2 SGs, 31 and 32. The actual inspection performed at RF10 exceeded both the technical specification minimum requirements and the requirements of Reference 3. The RF10 inspection of SGs 31 and 32 included:

- 1) Full length inspection of 100% of the tubes (except Row 1 U-bends) using the bobbin probe.
- 2) Inspection of 40% of the Row 1 and Row 2 U-bends using the RPC (+Point) probe.
- 3) Top of tubesheet inspection, $\pm 3''$, of 40% of the tubes using the RPC (+Point) probe.
- 4) All Dings and Dents >5 volts in the straight leg of the hot leg, using the RPC (+Point) probe.
- 5) All bobbin indications that were new or not resolved after history review, using the RPC (+Point) probe.
- 6) Thirty tubes at the TTS to bound possible loose parts indications, using the RPC (+Point) probe.

3.2 Indications

The following table is a summary of the indications found during RF10. None of these indications represents a continuing tube degradation mechanism. All indications were dispositioned in accordance with the guidelines of the Degradation Assessment, Reference 2, and the Indian Point 3 Eddy Current Data Analysis Procedure, Reference 5.

Summary of RF10 Inspection Results		
Indications/Signals	SG 31	SG 32
Possible Loose Parts (PLP)	0	2
Support Plate Indications (DSI/DSS)	2	0
Loose Parts Wear (VOL)	0	3
Freespan signals (FSD/MBM)	51/49	27/38
Dings and Dents (DNG, DNT) [Total/ $\geq 5V$]	70/15	47/5
Permeability Variations	0	1
Trackable Anomaly (TRA)	0	1

The degradation observed at Indian Point 3 during the RF10 inspection was limited to loose parts wear observed at the top of the tubesheet (TTS). No tube corrosion mechanisms were observed.

Two distorted support plate bobbin signals (DSI) were reported in SG31. The indications were re-tested using the RPC (+Point) probe; both were confirmed without degradation.

Dings and dents were reported as noted in the table above. Dings and dents $\geq 5V$ located in the straight legs of the hot leg were tested with RPC and confirmed to be free from degradation.

Freespan signals (Freespan Differential and Manufacturing Buff Marks) were reported as noted above. The number of indications noted in the table above is the number that showed no change compared to prior data for the same indications. Additional freespan bobbin signals were reported for which no prior data were available or for which the current signal reflected a change from the previously reported signals. All of these "new" and "changed" signals were tested with the RPC and were shown free from degradation.

A permeability variation (PVN) was reported in SG 32 in the straight section of the cold leg between the 5th and 6th TSPs. Since no other degradation was found in the freespan region of the tube, no additional testing was required. The tube with this indication was kept in service, consistent with the guidelines of Reference 2.

A trackable anomaly (TRA) was reported in SG 32. This non-flaw-like indication was resolved by a history review, consistent with Reference 5.

3.3 Plugging Summary

No tubes required repair (plugging) during the RF10 inspection.

4.0 Condition Monitoring

4.1 Pre-Outage Degradation Assessment

A pre-outage degradation assessment was performed for Indian Point 3 (Reference 2). This degradation assessment identified the degradation modes that could potentially occur at Indian Point 3 and evaluated the eddy current techniques applied for detection and sizing of these mechanisms. The degradation assessment (Ref 2) concluded that there are currently no active degradation mechanisms in the Indian Point 3 SGs. Wear due to loose parts was categorized as a relevant degradation mechanism due to the prior confirmation of loose parts at Indian Point 3. Potential degradation mechanisms were identified with a very low likelihood of occurrence at Indian Point. These were AVB wear, OD Pitting, transition zone ODSCC, U-bend cracking, ODSCC at dings and ODSCC in the sludge pile or freespan.

Another category was identified in the degradation assessment as "Resolution of Unclassified Signals". This category is a class of signals that require a process to be applied to assess signals not readily assigned to a degradation mechanism to resolve them with respect to tube repair disposition. These include precursor signals such as Manufacturing Burnish Marks, Dings/Dents and Permeability Variations, and Tubesheet Anomalous Signals.

4.2 Degradation Structural Limits

The Indian Point 3 pre-outage degradation assessment, Reference 2, identifies structural limits for the relevant and potential degradation mechanisms. For tube wear (such as occurring due to loose parts), the structural limit is based on a bounding assumption of uniform thinning of the tube. Reference 2 provides a conservative lower bound estimate for a 1.5" long uniform thinned region of the tube of 60% TW. Thus, any wear indication with a measured depth less than 60% throughwall (after applying the applicable NDE measurement uncertainty) satisfies all structural integrity recommendations.

Structural limits for other degradation mechanisms are provided in Reference 2; however, no degradation other than wear due to loose parts was observed during the RF10 inspection.

4.3 Active Degradation Mechanisms

There are currently no active degradation mechanisms in the Indian Point 3 steam generators.

4.4 Relevant Degradation Mechanisms

The relevant degradation mechanism identified in Reference 2 for Indian Point 3 is wear due to loose parts resulting from the confirmation of confirmation of loose parts in prior inspections of the Indian Point 3 steam generators (Reference 4). During the RF09 inspection, several possible loose part (PLP) indications were associated with a loose part (wire) that was removed from the SG. During RF10, several foreign objects were removed from the SGs. In SG 32, three tubes (see following table) were reported during the TTS ($\pm 3''$) 3-coil +Point RPC program with small volumetric, wear-like indications at the top of the tubesheet hot leg. Although no loose parts were identified at this location, the probable cause of the degradation is wear due to a previously existing loose part. These tubes are located at the periphery of the bundle, typically where loose parts would be expected to be located. Thus, the location of these tubes supports the interpretation of the volumetric indications as wear due to loose parts.

These indications were sized by constructing a volts versus percent depth curve with the 0.115 Pancake and the +Point probes using the 20% and 41% flat-bottomed holes on the ASME calibration standard and also the 20% and 43% notches on the AVB wear standard. Sizing was performed using both the 300kHz and 300/100 kHz mix channels. This approach is based on application of ETSS# 96910 for +Point and ETSS 96911 for the Pancake coil, qualified for straight-length tube section wear, with a POD of 0.92 and a sizing RMSE of 7.6% for the +Point coil and 12.5% for the pancake coil.

The table below summarizes the depth sizing using these methods. The greatest depth obtained for these tubes was 23% based on the 0.115 Pancake coil, 300kHz channel, set up using the ASME 20% flat bottomed holes. The largest estimate of wear depth based on the +Point probe was 18% TW for all of the indications.

SG	Row	Col	Location	0.115 Pancake Coil		+Point Coil			
				ASME Std.		ASME Std.		AVB Wear Std.	
				300 kHz	300/ 100 kHz	300 kHz	300/ 100 kHz	300 kHz	300/ 100 kHz
32	40	29	TSH -0.08 to +0.18	21	15	15	15	14	15
32	41	29	TSH -0.07 to +0.04	13	NA	10		10	11
32	41	28	TSH -0.07 to +0.11	23	NA	17	18	15	18

The tubes surrounding these locations were tested using the RPC probe to confirm the presence or absence of a loose part. No loose parts were identified at the location of these tubes, although loose parts were removed from other locations of the SG tube bundle. Since no loose parts were identified, and the maximum wear associated

with these signals is only 23%, well below the Technical Specification plugging limit of 40%, these tubes were kept in service and will be monitored in future inspections. The wear indications do not represent a challenge to structural integrity since the potential throughwall depth of 35.5% [measured depth (23%) plus the applicable measurement uncertainty (12.5% RMSE) for ETSS 96911] is well below the conservative lower bound structural limit of 60% TW.

4.5 Potential Degradation Mechanisms

No pitting or corrosion related degradation was reported in the Indian Point 3 SGs during RF10. No AVB wear or anomalous signals in the TS region were reported.

4.6 Resolution for Classification of Indications

The data from prior inspections were examined for current freespan indications for signal changes that might indicate onset of degradation. Bobbin indications that could not be detected in the baseline data or exhibited a change of signal from the prior inspection data were tested with the RPC probe. There were no confirmed indications for any freespan indication, from either bobbin or RPC testing.

4.7 Condition Monitoring Conclusion

All indications found during RF10 satisfy the condition monitoring requirements of Reference 1 for structural and leakage integrity. No indications were found to exceed any applicable repair or structural limits. These conclusions are based on the evaluations included in this report and summarized below:

1. No indications of degradation, other than the result of wear due to the prior presence of loose parts, were reported during RF10.
3. Wear due to loose parts was sized at approximately 23%, well below the Technical Specification plugging limit of 40%.
4. Application of the NDE uncertainty of 7.6% RMSE for ETSS 96910, the technique utilized to size the wear indications results in a potential wear depth of less than 31% TW, which is less than the applicable structural limit of 60% TW. Thus, the "relevant" degradation mechanism identified for Indian Point 3 meets the structural integrity requirements of draft Reg. Guide 1.121.
4. No pitting or corrosion related degradation mechanisms were observed.
5. No degradation indications were observed related to precursor signals such as dents, dings, permeability variations, etc.

5.0 Operational Assessment

NEI 97-06 requires that an Operational Assessment be performed to assess if degradation mechanisms observed in a plant will continue to meet tube structural and leakage integrity requirements at the end of the upcoming cycle. The observed wear due to the prior presence of loose parts is arrested at its current condition since no loose parts were detected adjacent to the tubes with indications. Other foreign materials that were detected in the SG were removed during the outage. Therefore, no growth in the observed wear is anticipated during the upcoming operating cycle. Since the current condition of the tubes is well within the structural limits applicable to the tubes and no growth of the wear is expected, and since there are no other identified degradation mechanisms in the Indian Point 3 SGs, it is concluded that the Indian Point 3 SGs will continue to meet applicable structural and leakage criteria until the next inspection (SGs 33 and 34) at EOC11. Based on the current inspection data, it is also concluded that SGs 31 and 32 will continue to meet applicable structural and leakage criteria until their next inspection at EOC12, subject to confirmation by the EOC11 inspection results.

6.0 References

1. NEI 97-06 (Rev 1, Draft 3); Steam Generator Program Guidelines; October 1999
2. Westinghouse SG-99-04-004, Rev. 2; SG Degradation Assessment for Indian Point 3, RF10 Refueling Outage; April 1999
3. EPRI TR-107569-V1, Rev. 5; PWR Steam Generator Examination Guidelines.
4. Westinghouse NSD-SGP-97-INT-031; "ATS's Generated for Steam Generator Loose Parts"; July 2, 1997.
5. Westinghouse Procedure NSD-FP-1997-7971, Rev.5; Indian Point 3 Steam Generator Eddy Current Data Analysis Techniques.



Appendix B
INDIAN POINT 3
ALLOWABLE ACRONYMS

Category I - No Further Action Required

Acronym	Description	Location Required	Extent Required	Code Used For	
				Bobbin	RPC
NDD	No Detectable Degradation (A blank may also be used)	N	Y	X	X
CUD	Copper	Y	Y	Y	
DEP	Deposit	Y	Y	X	X
PID	Positive Identification	Y	Y	X	X
PLG	Tube is plugged	N	N	X	X
SLG	Sludge	Y	Y	X	

Category II - Retest Required

Acronym	Description	Location Required	Extent Required	Code Used For	
				Bobbin	RPC
RAD	Retest Analyst Discretion	N	Y	X	X
RAV	Retest with AVB STD	N	Y	X	
RBD	Retest Bad Data	N	Y	X	X
RFX	Retest Fixture	N	Y	X	X
RID	Retest ID	N	Y	X	X
RND	Retest No Data	N	N	X	X
RST	Restricted Tube	N	Y	X	X

Category III - Diagnostic Testing Required After Resolutions

Acronym	Description	Location Required	Extent Required	Code Used For	
				Bobbin	RPC
DNI	Dent or Ding with Indication	Y	Y	X	
DRI	Distorted Roll Transition Indication	Y	Y	X	
DSI	Distorted Support Plate Indication	Y	Y	X	
DTI	Distorted Tubesheet Indication	Y	Y	X	
LPI	Loose Part Indication	Y	Y	X	
NQI	Non-Quantifiable Indication	Y	Y	X	



Appendix B (Continued)

Category IV - Post Diagnostic Test Result or Result of Historical Review

Acronym	Description	Location Required	Extent Required	Code Used For	
				Bobbin	RPC
DNH	Ding or Dent Signal - Reviewed in History	Y	Y	X	
DNS	Ding or Dent Signal - Non-Confirming w/RPC	Y	Y	X	
DRS	Distorted Roll Signal - Non-Confirming w/RPC	Y	Y	X	
DSS	Distorted Support Signal - Non-Confirming w/RPC	Y	Y	X	
DTS	Distorted Tubesheet Signal - Non-Confirming w/RPC	Y	Y	X	
FSS	Free Span Signal - Non Confirming w/RPC	Y	Y		Y
LPS	Loose Part Degradation Signal - Non-Confirming w/RPC	Y	Y	X	
NQS	Non-Quantifiable Signal - Non-Confirming w/RPC	Y	Y	X	

Category V - Repair or Engineering Evaluation Required

Acronym	Description	Location Required	Extent Required	Code Used For	
				Bobbin	RPC
LCI	Support Ligament Cracking Indication	Y	Y	X	X
MMI	Mixed Mode Indication	Y	Y		X
MAI	Multiple Axial Indication	Y	Y		X
MCI	Multiple Circumferential Indication	Y	Y		X
MVI	Multiple Volumetric Indication	Y	Y		X
SAI	Single Axial Indication	Y	Y		X
SCI	Single Circumferential Indication	Y	Y		X
SVI	Single Volumetric Indication No Qualified Sizing Technique	Y	Y		X



Appendix B (Continued)

Category VI - Review Indication, Review History, Diagnostic Sampling, or Engineering Evaluation Required					
				Code Used For	
Acronym	Description	Location Required	Extent Required	Bobbin	RPC
BLG	Bulge	Y	Y	X	X
DNG	Ding	Y	Y	X	X
DNT	Dent	Y	Y	X	X
FSD	Free Span Differential	Y	Y	X	
INF	Indication Not Found	Y	Y	X	X
INR	Indication Not Reportable	Y	Y	X	X
LAR	Lead Analyst Review	Y	Y	X	X
MBM	Manufacturing Buff Mark	Y	Y	X	
NDF	No Degradation Found	Y	Y		X
NTE	No Tube Expansion	Y	Y	X	
OXF	Over Expansion	Y	Y	X	
PTE	Partial Tube Expansion	Y	Y	X	
PVN	Permeability Variation	Y	Y	X	X
PLP	Possible Loose Part	Y	Y	X	X
TRA	Trackable Anomaly	Y	Y	X	X
TSM	Tube Support Missing	Y	Y	X	X
VOL	Volumetric Indication Qualified Sizing Technique	Y	Y		X

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
11	2	5.61	182	DNG		1	3C	26.71					TEH	TEC	.720	MBARH	20
11	2			NDD									TSH	TSH	.720	ZPS3C	49
3	5			RBD									6C	TEC	.720	MBARH	4
3	5	1.52	62	INR		6	1H	4.65	7.80				6H	TEH	.720	MBARH	5
3	5			NDD									6C	TEC	.720	MBARH	6
3	5			NDD									6C	5H	.700	MBARH	23
3	5			NDD									TSH	TSH	.720	ZPS3C	49
2	6			NDD									6H	TEH	.720	MBARH	1
2	6	2.06	184	DNG		1	4C	48.76					6C	TEC	.720	MBARH	2
2	6			NDD									6C	6H	.680	ZPUNH	35
2	6			NDD									TSH	TSH	.720	ZPS3C	49
3	6			RBD									6C	TEC	.720	MBARH	4
3	6			NDD									6H	TEH	.720	MBARH	5
3	6	2.28	184	DNG		1	3C	42.89					6C	TEC	.720	MBARH	6
3	6			NDD									6C	5H	.700	MBARH	23
3	6			NDD									TSH	TSH	.720	ZPS3C	49
8	6	3.03	185	DNG		1	6H	32.66					TEH	TEC	.720	MBARH	20
8	6			NDD									TSH	TSH	.720	ZPS3C	49
11	6	2.20	186	DNG		1	5C	24.60					TEH	TEC	.720	MBARH	20
11	6			NDD									TSH	TSH	.720	ZPS3C	49
19	6	.34	92	FSD		3	1H	9.55					TEH	TEC	.720	MBARH	22
19	6			NDD									TSH	TSH	.720	ZPS3C	49
14	7	.48	272	INR		6	4H	4.71					TEH	TEC	.720	MBARH	22
21	7	1.22	87	INR		6	5C	49.60					TEH	TEC	.720	MBARH	22
21	7			NDD									TSH	TSH	.720	ZPS3C	49
12	8	4.12	38	MBM		6	4C	9.86					TEH	TEC	.720	MBARH	22
3	11			RBD									6C	TEC	.720	MBARH	4
3	11			NDD									6H	TEH	.720	MBARH	5
3	11	2.30	77	MBM		6	2C	11.41					6C	TEC	.720	MBARH	6
3	11			NDD									6C	5H	.700	MBARH	23
26	11	4.58	36	MBM		6	3C	47.29					TEH	TEC	.720	MBARH	22
8	12	2.98	187	DNG		1	4H	13.77					TEH	TEC	.720	MBARH	20
20	12	.23	59	FSD		3	TSH	19.38					TEH	TEC	.720	MBARH	22
3	13			RBD									6C	TEC	.720	MBARH	4
3	13			NDD									6H	TEH	.720	MBARH	5
3	13	.28	74	FSD		3	2C	19.32					6C	TEC	.720	MBARH	6
3	13			NDD									6C	5H	.700	MBARH	23
23	13	.52	74	INR		6	BPC	6.40					TEH	TEC	.720	MBARH	12
17	15	2.18	118	MBM		6	BPH	2.84					TEH	TEC	.720	MBARH	12
27	15	.22	97	FSD		3	BPH	17.38					TEH	TEC	.720	MBARH	10
27	15	2.47	77	MBM		6	1H	4.95					TEH	TEC	.720	MBARH	10
27	15	2.50	253	MBM		6	1H	24.06					TEH	TEC	.720	MBARH	10
27	15	2.20	245	MBM		6	2H	1.93					TEH	TEC	.720	MBARH	10
3	16			RBD									6C	TEC	.720	MBARH	4
3	16	2.29	109	MBM		6	6H	-1.37					6H	TEH	.720	MBARH	5
3	16			NDD									6C	TEC	.720	MBARH	6
3	16	2.01	96	MBM		6	5H	46.27					6C	5H	.700	MBARH	23
20	16	2.40	78	MBM		6	AV2	16.64					TSH	TEC	.720	MBARH	14
20	16	2.28	82	MBM		6	AV2	15.72	16.35				TEH	TEC	.720	MBARH	34
29	16	2.35	184	DNG		1	3C	31.84					TEH	TEC	.720	MBARH	10
27	17	.86	257	INR		6	5C	18.28					TEH	TEC	.720	MBARH	10
27	17			NDD									TSH	TSH	.720	ZPS3C	53
31	17	2.04	71	MBM		6	AV6	2.22					TEH	TEC	.720	MBARH	10
31	17			NDD									TSH	TSH	.720	ZPS3C	55

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
3	18			RBD									6C	TEC	.720	MBARH	41
3	18			NDD									6H	TEH	.720	MBARH	51
3	18	2.09	74	MBM		6	BPC	15.75					6C	TEC	.720	MBARH	61
3	18			NDD									6C	5H	.700	MBARH	231
3	18			NDD									TSH	TSH	.720	ZPS3C	51
21	18	.32	55	FSD		3	3C	44.41					TEH	TEC	.720	MBARH	141
21	18			NDD									TSH	TSH	.720	ZPS3C	55
31	18			INF		6	AV6	2.96					TSH	TEC	.720	MBARH	141
31	18			INF		6	AV6	2.98					TEH	TEC	.720	MBARH	341
31	18			NDD									TSH	TSH	.720	ZPS3C	53
34	18	3.61	89	MBM		6	4H	41.11					TEH	TEC	.720	MBARH	141
34	18			NDD									TSH	TSH	.720	ZPS3C	53
12	19	1.21	243	INR		6	BPC	27.22					TEH	TEC	.720	MBARH	181
31	19	2.20	183	DNG		1	3H	49.08					TSH	TEC	.720	MBARH	141
31	19	2.04	187	DNG		1	3H	48.18					TEH	TEC	.720	MBARH	341
12	20	1.32	83	INR		6	1C	46.91					TEH	TEC	.720	MBARH	181
23	20	2.24	183	DNG		1	AV5	8.70					TEH	TEC	.720	MBARH	181
35	22	3.26	185	DNG		1	4H	7.77					TEH	TEC	.720	MBARH	121
35	22			NDD									TSH	TSH	.720	ZPS3C	53
23	23	2.07	181	DNG		1	1C	10.43					TEH	TEC	.720	MBARH	161
10	24	5.56	90	MBM		6	4H	1.31					TEH	TEC	.720	MBARH	261
10	24	.30	80	FSD		3	5H	40.28					TEH	TEC	.720	MBARH	261
35	25	5.25	187	INR		M1	5H	11.20					TEH	TEC	.720	MBARH	141
35	25	4.20	183	DNG		1	5H	11.92					TEH	TEC	.720	MBARH	141
35	25			NDD									TSH	TSH	.720	ZPS3C	55
15	26	2.06	188	DNG		1	5H	3.17					TEH	TEC	.720	MBARH	281
15	26			NDD									TSH	TSH	.720	ZPS3C	53
16	26	1.29	67	INR		6	3H	16.53					TEH	TEC	.720	MBARH	281
16	26			NDD									TSH	TSH	.720	ZPS3C	53
22	26	3.22	78	MBM		6	3H	26.89					TEH	TEC	.720	MBARH	181
22	26			NDD									TSH	TSH	.720	ZPS3C	53
27	27	2.10	181	DNG		1	AV6	1.68					TEH	TEC	.720	MBARH	141
4	28			NDD									6C	TEC	.720	MBARH	66
4	28	1.75	262	INR		6	2H	13.72					6H	TEH	.720	MBARH	71
4	28			NDD									6C	5H	.700	MBARH	79
9	28	1.53	179	INR		1	2C	18.03					TEH	TEC	.720	MBARH	30
9	28	1.60	68	INR		6	2C	18.37					TEH	TEC	.720	MBARH	30
41	28			NDD									TEH	TEC	.720	MBARH	20
41	28	.38	120	VOL		3	TSH	.11		0	.290	61	TSH	TSH	.720	ZPS3C	49
41	28	.81	0	PCT	23	2	TSH	.11					TSH	TSH	.720	ZPS3C	67
4	29	1.91	94	INR		6	4C	19.62					6C	TEC	.720	MBARH	66
4	29			NDD									6H	TEH	.720	MBARH	71
4	29			NDD									6C	5H	.700	MBARH	79
12	29	1.49	263	INR		6	BPH	11.03					TEH	TEC	.720	MBARH	30
25	29	1.89	79	INR		6	3C	21.17					TEH	TEC	.720	MBARH	26
40	29			NDD									TEH	TEC	.720	MBARH	22
40	29	.48	72	VOL		2	TSH	.00		0	.306	79	TSH	TSH	.720	ZPS3C	63
40	29	.60	81	VOL		2	TSH	.00		0	.306	79	TSH	TSH	.720	ZPS3C	65
40	29	.71	0	PCT	21	2	TSH	.05					TSH	TSH	.720	ZPS3C	67
41	29			NDD									TEH	TEC	.720	MBARH	22
41	29	.23	120	VOL		3	TSH	.11		0	.251	56	TSH	TSH	.720	ZPS3C	49
41	29	.38	0	PCT	13	2	TSH	.04					TSH	TSH	.720	ZPS3C	67
16	30	.31	85	FSD		3	5H	31.83					TEH	TEC	.720	MBARH	28

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
20	30	.27	59	FSD		3	BPC	8.22					TEH	TEC	.720	MBARH	28
24	30	.80	40	FSD		3	3C	49.00					TEH	TEC	.720	MBARH	28
25	30	.40	87	INR		6	4C	15.40					TEH	TEC	.720	MBARH	28
28	30	3.95	16	PVN		1	5C	38.80					TEH	TEC	.720	MBARH	28
31	30	.26	50	FSD		3	2H	4.19					TEH	TEC	.720	MBARH	28
31	30	.27	55	FSD		3	2H	7.45					TEH	TEC	.720	MBARH	28
31	30	1.98	13	INR		1	3C	44.60					TEH	TEC	.720	MBARH	28
36	30	2.95	187	DNG		1	4H	3.89					TEH	TEC	.720	MBARH	28
36	30	3.58	187	INR		M1	4H	4.60					TEH	TEC	.720	MBARH	28
16	31	2.38	66	MBM		6	4C	24.13					TEH	TEC	.720	MBARH	26
29	31	.52	81	INR		6	2H	21.95					TEH	TEC	.720	MRARH	26
31	31			NDD									TEH	TEC	.720	MBARH	26
41	31	7.01	4	DNT		2	TSH	.15					TSH	TSH	.720	ZPS3C	65
19	32	.36	55	FSD		3	1H	33.93					TEH	TEC	.720	MBARH	26
28	33	1.42	72	INR		6	1C	25.17					TEH	TEC	.720	MBARH	28
28	33			NDD									TSH	TSH	.720	ZPS3C	55
27	34	2.05	185	DNG		1	AV5	7.17					TEH	TEC	.720	MBARH	26
27	34			NDD									TSH	TSH	.720	ZPS3C	53
28	34	2.81	80	MBM		6	4H	19.15					TEH	TEC	.720	MBARH	26
28	34			NDD									TSH	TSH	.720	ZPS3C	53
22	35	1.04	12	INR		1	2C	44.11					TEH	TEC	.720	MBARH	28
8	36			NDD									TEH	TSC	.720	MBARH	32
8	36	2.94	181	DNG		1	6H	32.75					TEH	TEC	.720	MBARH	66
5	37	.31	247	TRA		2	TSH	.17					TSH	TSH	.720	ZPS3C	49
5	37			NDD									6H	TEH	.720	MBARH	71
5	37			NDD									6C	TEC	.720	MBARH	72
5	37			NDD									6C	5H	.700	MBARH	79
14	37	.31	75	FSD		3	BPC	24.91					TEH	TEC	.720	MBARH	28
14	37			NDD									TSH	TSH	.720	ZPS3C	49
29	37	4.52	85	MBM		6	1H	2.52					TEH	TEC	.720	MBARH	30
29	37	3.05	173	DNG		1	1H	2.92					TEH	TEC	.720	MBARH	30
29	37	2.34	172	DNG		1	2H	20.84					TEH	TEC	.720	MBARH	30
29	37	4.32	85	MBM		6	2H	21.53					TEH	TEC	.720	MBARH	30
29	37	1.58	72	INR		6	3H	39.52					TEH	TEC	.720	MBARH	30
29	37	.65	101	MBM		6	5H	6.19					TEH	TEC	.720	MBARH	30
29	37	9.52	183	DNG		1	AV1	1.81					TEH	TEC	.720	MBARH	30
29	37	4.48	187	DNG		1	AV5	12.73					TEH	TEC	.720	MBARH	30
29	37			NDD									TSH	TSH	.720	ZPS3C	55
32	37	2.21	81	MBM		6	5C	43.89					TEH	TEC	.720	MBARH	30
32	37			NDD									TSH	TSH	.720	ZPS3C	55
15	38	2.27	183	DNG		1	2H	19.00					TEH	TEC	.720	MBARH	32
15	38			NDD									TSH	TSH	.720	ZPS3C	51
2	39	1.74	95	INR		6	1H	50.21					6H	TEH	.720	MBARH	7
2	39			NDD									6C	TEC	.720	MBARH	74
7	39	3.22	34	MBM		6	6H	34.49					6H	TEC	.720	MBARH	72
7	39			NDD									TEH	TEC	.720	MBARH	78
32	39	4.91	187	DNG		1	1H	48.81					TEH	TEC	.720	MBARH	30
32	39	4.91	187	DNG		1	1H	48.87					TEH	TEC	.720	MBARH	30
40	39	1.64	79	INR		6	2C	31.62					TEH	TEC	.720	MBARH	32
17	40	.40	99	FSD		3	3H	39.20					TEH	TEC	.720	MBARH	36
29	40	2.53	183	DNT		M1	5H	.68					TEH	TEC	.720	MBARH	36

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
8	42			NDD									6H	TEH	.720	MBARH	51
8	42			NDD									TSH	TSH	.720	ZPS3C	51
8	42	2.73	183	DNG		1	6H	31.01					6H	TEC	.720	MBARH	72
16	42	1.92	94	INR		6	4H	17.21					TEH	TEC	.720	MBARH	36
16	42			NDD									TSH	TSH	.720	ZPS3C	51
32	42	.48	85	FSD		3	3H	24.71					TEH	TEC	.720	MBARH	36
32	42	2.04	80	MBM		6	5H	19.69					TEH	TEC	.720	MBARH	36
32	42			NDD									TSH	TSH	.720	ZPS3C	55
39	43			INF		1	AV2	14.29					TEH	TEC	.720	MBARH	62
45	43			NDD									TSH	TSH	.720	ZPS3C	59
45	43	2.10	81	MBM		6	3H	19.22					TEH	TEC	.720	MBARH	60
2	44	3.37	183	DNG		1	4H	33.13					6H	TEH	.720	MBARH	71
2	44	2.96	184	DNG		1	4H	49.41					6H	TEH	.720	MBARH	71
2	44			NDD									6C	6H	.680	ZPUNM	37
2	44			NDD									6C	TEC	.720	MBARH	74
10	44			NDD									6H	TEH	.720	MBARH	51
10	44	.23	98	FSD		3	4C	48.30					6H	TEC	.720	MBARH	72
43	44	2.28	180	DNG		1	4C	34.69					TEH	TEC	.720	MBARH	60
12	45			NDD									6H	TEH	.720	MBARH	51
12	45			NDD									TSH	TSH	.720	ZPS3C	49
12	45	1.53	82	INR		6	2C	46.53					6H	TEC	.720	MBARH	72
27	45	1.70	79	INR		6	4H	38.10					TEH	TEC	.720	MBARH	34
27	45	1.95	80	INR		6	4H	38.76					TEH	TEC	.720	MBARH	34
27	45			NDD									TSH	TSH	.720	ZPS3C	55
40	46			NDD									TSH	TSH	.720	ZPS3C	59
40	46	1.77	268	INR		6	4C	16.40					TEH	TEC	.720	MBARH	60
7	47	.99	69	NQS		5	TSH	.82					6H	TEH	.720	MBARH	19
7	47			NDF			TSH	.82					TSH	1H	.720	ZPS3C	57
7	47			NDD									6H	TEC	.720	MBARH	70
9	47	.52	100	NQS		3	TSH	1.09					6H	TEH	.720	MBARH	19
9	47	.20	170	NDF		3	TSH	1.09					TSH	1H	.720	ZPS3C	55
9	47			NDD									6H	TEC	.720	MBARH	70
9	48			NDD									6H	TEH	.720	MBARH	19
9	48	2.23	181	DNG		1	6H	17.17					6H	TEC	.720	MBARH	70
34	48	2.11	70	MBM		6	AV6	9.19					TEH	TEC	.720	MBARH	60
39	48	2.23	41	MBM		6	4C	27.93					TEH	TEC	.720	MBARH	60
5	49			INF		6	3H	35.02					6H	TEH	.720	MBARH	19
5	49	2.65	78	MBM		6	3H	36.47					6H	TEH	.720	MBARH	19
5	49			NDD									6C	TEC	.720	MBARH	72
5	49			NDD									6H	5C	.700	MBARH	84
8	50	.99	84	INR		6	2H	24.21					6H	TEH	.720	MBARH	17
8	50			NDD									6H	TEC	.720	MBARH	72
38	50	1.63	113	INR		6	4C	27.30					TEH	TEC	.720	MBARH	60
6	51			NDD									6H	TEH	.720	MBARH	19
6	51	2.08	125	NQS		6	6H	6.18					6H	TEC	.720	MBARH	72
6	51	2.65	129	NQS		6	6H	6.68					5C	TEH	.700	MBARH	81
6	51			NDF			6H	6.18					6H	6C	.680	ZPANM	82
7	51	.30	89	NQS		3	TSH	.95					6H	TEH	.720	MBARH	19
7	51			NDF			TSH	.95					TSH	1H	.720	ZPS3C	57
7	51			NDD									6H	TEC	.720	MBARH	70
18	52	2.47	186	DNG		1	3H	12.41					TEH	TEC	.720	MBARH	40
9	54	2.16	76	MBM		6	3H	39.75					6H	TEH	.720	MBARH	17
9	54			NDD									TSH	TSH	.720	ZPS3C	43
9	54			NDD									6H	TEC	.720	MBARH	70

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
38	54			NDD									TSH	TSH	.720	ZPS3C	41
38	54	.30	71	FSD		3	2C	2.11					TEH	TEC	.720	MBARH	60
11	55	.66	93	FSD		3	TSH	9.72					6H	TEH	.720	MBARH	11
11	55			NDD									6H	TEC	.720	MBARH	70
12	55			NDD									6H	TEH	.720	MBARH	9
12	55	2.63	185	DNG		1	1C	20.37					6H	TEC	.720	MBARH	70
42	55	1.36	83	INR		6	2H	13.08					TEH	TEC	.720	MBARH	38
25	56	2.94	82	MBM		6	3H	43.05					TEH	TEC	.720	MBARH	38
11	57	.20	84	PLP		10	TSH	.17					TSH	TSH	.720	ZPS3C	41
11	57			NDD									TEH	TEC	.720	MBARH	68
12	57	.26	90	PLP		10	TSH	.21					TSH	TSH	.720	ZPS3C	41
12	57			NDD									TEH	TEC	.720	MBARH	68
13	58			NDD									TSH	TSH	.720	ZPS3C	43
13	58	1.66	76	INR		6	2H	16.22					TEH	TEC	.720	MBARH	44
6	59	2.02	185	DNG		1	4H	3.59					TEH	TEC	.720	MBARH	44
6	59	.60	49	FSD		3	4H	3.85					TEH	TEC	.720	MBARH	44
6	59	1.57	95	INR		6	4H	3.91					TEH	TEC	.720	MBARH	44
40	59	.31	69	FSD		3	4C	15.83					TEH	TEC	.720	MBARH	68
6	60	1.22	85	INR		6	2C	18.67					TEH	TEC	.720	MBARH	44
21	60	2.09	186	DNG		1	3C	24.90					TEH	TEC	.720	MBARH	68
35	60	.60	72	FSD		3	2H	16.33					TEH	TEC	.720	MBARH	44
42	60			NDD									TSH	TSH	.720	ZPS3C	41
42	60	1.61	66	INR		6	1C	27.87					TEH	TEC	.720	MBARH	44
24	61			NDD									TSH	TSH	.720	ZPS3C	41
24	61	2.48	183	DNG		1	1C	40.96					TEH	TEC	.720	MBARH	44
39	61			NDD									TSH	TSH	.720	ZPS3C	43
39	61	.26	50	FSD		3	4C	9.56					TEH	TEC	.720	MBARH	44
39	64	.30	62	FSD		3	1C	6.38					TEH	TEC	.720	MBARH	50
3	65			NDD									6H	TEH	.720	MBARH	19
3	65			NDD									6C	5H	.700	MBARH	31
3	65	1.44	92	INR		6	1C	20.51					6C	TEC	.720	MBARH	60
35	65	.47	104	FSD		3	3C	37.04					TEH	TEC	.720	MBARH	48
41	65			NDD									TSH	TSH	.720	ZPS3C	43
41	65	.42	74	FSD		3	2C	33.51					TEH	TEC	.720	MBARH	48
3	67	.26	102	NQS		3	2H	42.95					6H	TEH	.720	MBARH	19
3	67			NDD									6C	5H	.700	MBARH	31
3	67			NDD									1H	2H	.720	ZPS3C	57
3	67			NDD									3H	4H	.720	ZPS3C	59
3	67			NDF			2H	42.95					2H	3H	.720	ZPS3C	59
3	67			NDD									6C	TEC	.720	MBARH	60
5	68			NDD									6C	TEC	.720	MBARH	60
5	68			NDD									6H	TEH	.720	MBARH	69
5	68	4.87	180	DNG		1	6H	11.56					6C	5H	.700	MBARH	79
11	68	4.20	183	DNG		1	3C	4.12					TEH	TEC	.720	MBARH	50
23	68	2.72	185	DNG		1	3H	15.00					TEH	TEC	.720	MBARH	50
31	69			NDD									TSH	TSH	.720	ZPS3C	43
31	69	2.05	87	MBM		6	5C	45.49					TEH	TEC	.720	MBARH	56
31	69	1.55	77	INR		6	4C	14.52					TEH	TEC	.720	MBARH	56
23	70			NDD									TSH	TSH	.720	ZPS3C	43
23	70	.31	90	FSD		3	4H	16.36					TEH	TEC	.720	MBARH	54

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
1	71	1.05	114	INR		6	5H	40.06					6H	TEH	.720	MBARH	19
1	71			NDD									6C	6H	.680	ZPUNM	33
1	71			NDD									6C	TEC	.720	MBARH	66
26	72	2.65	90	MBM		6	BPC	3.15					TEH	TEC	.720	MBARH	58
35	72	1.79	73	INR		6	2C	15.03					TEH	TEC	.720	MBARH	58
7	73			NDD									TSH	TSH	.720	ZPS3C	41
7	73	2.83	177	DNG		1	6H	14.04					TEH	TEC	.720	MBARH	60
13	74			NDD									TSH	TSH	.720	ZPS3C	43
13	74	1.27	82	INR		6	5H	28.77					TEH	TEC	.720	MBARH	58
13	74	.58	286	INR		6	4C	28.35					TEH	TEC	.720	MBARH	58
19	74			NDD									TSH	TSH	.720	ZPS3C	43
19	74	2.08	79	MBM		6	TSH	18.06					TEH	TEC	.720	MBARH	58
28	74			NDD									TSH	TSH	.720	ZPS3C	43
28	74	1.23	264	INR		6	BPC	18.63					TEH	TEC	.720	MBARH	58
31	74			NDD									TSH	TSH	.720	ZPS3C	41
31	74	2.18	292	MBM		6	1C	21.94					TEH	TEC	.720	MBARH	58
6	76	8.17	78	FSD		6	5H	11.10					TEH	TEC	.720	MBARH	62
11	76	2.15	102	MBM		6	AV1	5.28					TEH	TEC	.720	MBARH	58
23	76	2.41	185	DNG		1	TSC	17.72					TEH	TEC	.720	MBARH	58
23	77			NDD									TSH	TSH	.720	ZPS3C	41
23	77	2.70	185	DNG		1	4C	41.44					TEH	TEC	.720	MBARH	56
8	78			NDD									TSH	TSH	.720	ZPS3C	43
8	78	2.16	186	DNG		1	2C	6.65					TEH	TEC	.720	MBARH	62
20	78			NDD									TSH	TSH	.720	ZPS3C	43
20	78	2.16	186	DNG		1	1C	13.12					TEH	TEC	.720	MBARH	58
7	80	2.49	78	MBM		6	5C	27.00					TEH	TEC	.720	MBARH	60
7	80	.50	113	INR		6	5C	29.11					TEH	TEC	.720	MBARH	60
12	81	2.34	76	MBM		6	1H	3.90					TEH	TEC	.720	MBARH	56
16	81	2.81	92	INR		6	AV1	2.72					TEH	TEC	.720	MBARH	56
28	81			NDD									TSH	TSH	.720	ZPS3C	41
28	81	2.90	71	MBM		6	AV4	13.97					TEH	TEC	.720	MBARH	56
25	83	2.66	183	DNG		1	AV5	8.96					TEH	TEC	.720	MBARH	56
16	84	2.25	184	DNG		1	2C	38.69					TEH	TEC	.720	MBARH	58
14	85			NDD									TSH	TSH	.720	ZPS3C	41
14	85	1.11	66	INR		6	1H	44.28					TEH	TEC	.720	MBARH	56
14	85			INF		M1	2H	44.62					TEH	TEC	.720	MBARH	56
9	86			NDD									TSH	TSH	.720	ZPS3C	43
9	86	1.77	276	INR		6	4C	19.63					TEH	TEC	.720	MBARH	58

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
4	1			NDD									TSH	TSH	.720	ZPS3C	25
4	1	1.64	85	INR		6	3H	23.59					6H	TEH	.720	MBARH	47
4	1			NDD									6C	SH	.700	MBARH	57
4	1			NDD									6C	TEC	.720	MBARH	60
7	1	.25	96	NQS		3	TSC	4.09					TEH	TEC	.720	MBARH	2
7	1			NDD									TSH	TSH	.720	ZPS3C	25
7	1			NDF			TSC	4.09					TSC	BPC	.720	ZPS3C	76
9	2	.60	109	NQS		3	TSC	5.03					TEH	TEC	.720	MBARH	2
9	2			NDD									TSH	TSH	.720	ZPS3C	25
9	2			NDF			TSC	5.03					TSC	BPC	.720	ZPS3C	76
11	2	.22	97	NQS		3	TSC	6.80					TEH	TEC	.720	MBARH	2
11	2			NDD									TSH	TSH	.720	ZPS3C	25
11	2			NDF			TSC	6.80					TSC	BPC	.720	ZPS3C	76
12	3	.48	80	NQS		3	TSC	4.16					TEH	TEC	.720	MBARH	2
12	3			NDD									TSH	TSH	.720	ZPS3C	25
12	3			NDF			TSC	4.16					TSC	BPC	.720	ZPS3C	76
8	4	3.80	79	MBM		6	4H	-1.91					TEH	TEC	.720	MBARH	2
8	4	.29	72	FSD		3	4H	-1.45					TEH	TEC	.720	MBARH	2
8	4	2.41	92	MBM		6	4H	2.46					TEH	TEC	.720	MBARH	2
16	5	.40	259	INR		6	5C	42.87					TEH	TEC	.720	MBARH	2
16	5			NDD									TSH	TSH	.720	ZPS3C	25
6	6	2.61	189	DNG		1	3C	7.69					TEH	TEC	.720	MBARH	6
6	6	2.53	188	DNG		1	3C	16.07					TEH	TEC	.720	MBARH	6
6	6	2.56	189	DNG		1	3C	24.46					TEH	TEC	.720	MBARH	6
6	6	2.23	189	DNG		1	3C	41.23					TEH	TEC	.720	MBARH	6
6	6	2.16	188	DNG		1	3C	49.65					TEH	TEC	.720	MBARH	6
6	6	2.00	191	DNG		1	2C	.89					TEH	TEC	.720	MBARH	6
6	6	2.87	187	DNG		1	2C	17.98					TEH	TEC	.720	MBARH	6
6	6			NDD									TSH	TSH	.720	ZPS3C	23
14	6	.34	255	INR		6	TSH	11.69					TEH	TEC	.720	MBARH	2
9	7	.41	63	FSD		3	3C	35.29					TEH	TEC	.720	MBARH	6
17	7	.33	65	FSD		3	1C	29.99					TEH	TEC	.720	MBARH	66
17	7	1.67	104	INR		6	1C	33.19					TEH	TEC	.720	MBARH	66
19	7	.32	118	INR		6	3C	15.50					TEH	TEC	.720	MBARH	6
9	9	.55	96	INR		6	1C	39.74					TEH	TEC	.720	MBARH	6
9	9			NDD									TSH	TSH	.720	ZPS3C	25
24	10	2.25	105	MBM		6	5H	9.02					TEH	TEC	.720	MBARH	6
24	10			NDD									TSH	TSH	.720	ZPS3C	25
27	10	2.33	11	DNG		1	1C	32.38					TEH	TEC	.720	MBARH	6
27	10	.46	74	NQS		3	TSC	5.91					TEH	TEC	.720	MBARH	6
27	10			NDD									TSH	TSH	.720	ZPS3C	25
27	10			NDF			TSC	5.91					TSC	BPC	.720	ZPS3C	76
8	11	2.28	78	MBM		6	1H	50.34					TEH	TEC	.720	MBARH	10
8	11	2.45	182	DNG		1	6H	7.70					TEH	TEC	.720	MBARH	10
9	12	.53	78	INR		6	BPH	14.80					TEH	TEC	.720	MBARH	6
9	12	2.12	87	MBM		6	4C	18.47					TEH	TEC	.720	MBARH	6
29	12	2.17	210	MBM		6	TSC	8.17					TEH	TEC	.720	MBARH	6
29	12			NDD									TSH	TSH	.720	ZPS3C	25
22	13	.42	100	INR		6	1H	43.41					TEH	TEC	.720	MBARH	10
22	13	.31	263	INR		6	TSC	18.98					TEH	TEC	.720	MBARH	10
8	14	.38	85	INR		6	TSC	9.48					TEH	TEC	.720	MBARH	10
30	14	.48	262	INR		6	AV6	9.87					TEH	TEC	.720	MBARH	6
30	14			NDD									TSH	TSH	.720	ZPS3C	23
8	15	.38	82	INR		6	BPC	12.06					TEH	TEC	.720	MBARH	12
8	15	.82	68	INR		6	BPC	12.05					TEH	TEC	.720	MBARH	60

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
16	15	.45	69	INR		6	2C	24.49					TEH	TEC	.720	MBARH	12
22	15	3.31	74	MBM		6	AV2	3.50					TEH	TEC	.720	MBARH	12
29	16	.59	256	INR		6	4C	27.30					TEH	TEC	.720	MBARH	12
20	17	1.05	62	INR		6	1H	10.45					TEH	TEC	.720	MBARH	16
20	17			NDD									TSH	TSH	.720	ZPS3C	25
29	17	2.43	183	DNG		1	1C	27.99					TEH	TEC	.720	MBARH	14
29	17			NDD									TSH	TSH	.720	ZPS3C	23
6	18			NDD									TSH	TSH	.720	ZPS3C	23
6	18	.88	80	INR		6	BPC	26.10					6C	TEC	.720	MBARH	60
6	18	1.18	94	INR		6	BPC	26.23					TEH	TEC	.720	MBARH	64
7	18			NDD									TSH	TSH	.720	ZPS3C	23
7	18	.95	84	INR		6	1C	22.28					TEH	TEC	.720	MBARH	60
16	19	2.12	85	MBM		6	5C	21.48					TEH	TEC	.720	MBARH	16
21	19	.54	84	FSD		3	1C	47.37					TEH	TEC	.720	MBARH	16
22	19	.76	96	INR		6	1C	22.51					TEH	TEC	.720	MBARH	16
23	19	5.28	180	DNT		M1	6C	.49					TEH	TEC	.720	MBARH	16
29	19	.61	131	INR		6	5H	28.55					TEH	TEC	.720	MBARH	16
33	19	3.44	81	MBM		6	2H	19.12					TEH	TEC	.720	MBARH	18
33	19	.62	334	INR		6	2H	33.00					TEH	TEC	.720	MBARH	18
33	20	.55	100	INR		6	1H	25.75					TEH	TEC	.720	MBARH	16
24	21	1.44	262	INR		6	1H	20.76					TEH	TEC	.720	MBARH	18
24	21			NDD									TSH	TSH	.720	ZPS3C	25
8	22			NDD									TSH	TSH	.720	ZPS3C	23
8	22	1.88	76	INR		6	1H	20.80					TEH	TEC	.720	MBARH	62
31	22	3.11	181	DNG		1	3C	37.94					TEH	TEC	.720	MBARH	16
31	22			NDD									TSH	TSH	.720	ZPS3C	25
29	23	.39	75	FSD		3	3H	17.67					TEH	TEC	.720	MBARH	18
29	23	2.49	184	DNG		1	AV2	-1.35					TEH	TEC	.720	MBARH	18
17	24	1.50	92	INR		6	4C	26.81	32.53				TEH	TEC	.720	MBARH	16
22	24	.93	80	INR		6	2H	11.10					TEH	TEC	.720	MBARH	16
35	25	.41	40	FSD		3	1H	24.84					TSH	TEC	.720	MBARH	22
35	25			NDD									TSH	TSH	.720	ZPS3C	23
35	25			NDD									TEH	TEC	.720	MBARH	60
39	26	2.64	182	DNT		M1	AV2	.61					TEH	TEC	.720	MBARH	20
39	26			NDD									TSH	TSH	.720	ZPS3C	25
4	27			NDD									6H	TEH	.720	MBARH	47
4	27			NDD									6C	4H	.700	MBARH	59
4	27			RBD									6C	TSC	.720	MBARH	62
4	27	1.11	74	INR		6	2C	7.15					6C	TEC	.720	MBARH	74
5	27	2.49	94	MBM		6	3H	13.08					6H	TEH	.720	MBARH	47
5	27			NDD									6C	5H	.700	MBARH	59
5	27			NDD									6C	TEC	.720	MBARH	60
10	27	.35	37	FSD		3	5C	45.20					TEH	TEC	.720	MBARH	22
10	27	2.76	187	DNG		1	2C	41.39					TEH	TEC	.720	MBARH	22
15	27	3.30	80	MBM		6	TSH	4.38					TEH	TEC	.720	MBARH	22
26	27	1.19	79	MBM		6	3C	2.71	12.95				TEH	TEC	.720	MBARH	22
5	28	.34	35	FSD		3	4H	44.25					6H	TEH	.720	MBARH	47
5	28			NDD									6C	5H	.700	MBARH	59
5	28			NDD									6C	TEC	.720	MBARH	60

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
13	28	.34	71	FSD		3	1C	12.09					TEH	TEC	.720	MBARH	20
15	28	1.00	70	INR		6	BPC	23.30					TEH	TEC	.720	MBARH	20
15	28	.28	36	FSD		3	TSC	7.89					TEH	TEC	.720	MBARH	20
17	28	1.12	51	INR		6	3C	16.27					TEH	TEC	.720	MBARH	20
27	29	2.35	35	MBM		6	AV1	7.88					TEH	TEC	.720	MBARH	22
31	29	.40	59	FSD		3	1H	32.44					TEH	TEC	.720	MBARH	22
32	29	.26	82	FSD		3	2H	20.69					TEH	TEC	.720	MBARH	22
13	30	.48	68	FSD		3	4C	35.60					TEH	TEC	.720	MBARH	20
23	30	.53	23	FSD		3	2C	35.20					TEH	TEC	.720	MBARH	20
31	30	.37	40	FSD		3	1C	2.61					TEH	TEC	.720	MBARH	20
42	31	.29	74	FSD		3	1C	43.87					TEH	TEC	.720	MBARH	22
42	31			NDD									TSH	TSH	.720	ZPS3C	25
13	32	.37	195	INR		6	1C	21.27					TEH	TEC	.720	MBARH	20
32	32	1.37	78	INR		6	2H	11.26					TEH	TEC	.720	MBARH	20
42	33	.93	81	INR		6	TSH	16.16					TEH	TEC	.720	MBARH	22
42	33			NDD									TSH	TSH	.720	ZPS3C	23
3	34	4.49	90	MBM		6	4H	48.62					6H	TEH	.720	MBARH	1
3	34			NDD									6C	5H	.700	MBARH	11
3	34			NDD									TSH	TSH	.720	ZPS3C	27
3	34			NDD									6C	TEC	.720	MBARH	62
4	34			NDD									TSH	TSH	.720	ZPS3C	27
4	34			NDD									6H	TEH	.720	MBARH	47
4	34			NDD									6C	5H	.700	MBARH	59
4	34	1.74	104	INR		6	5C	45.11					6C	TEC	.720	MBARH	60
4	34	1.83	107	INR		6	5C	45.91					6C	TEC	.720	MBARH	62
19	34	2.39	187	DNG		1	6H	22.03					TEH	TEC	.720	MBARH	24
19	34	2.21	185	DNG		1	AV5	6.53					TEH	TEC	.720	MBARH	24
19	34			NDD									TSH	TSH	.720	ZPS3C	25
22	34	.28	70	FSD		3	3C	44.47					TEH	TEC	.720	MBARH	24
22	34	.26	84	FSD		3	2C	29.69					TEH	TEC	.720	MBARH	24
22	34	.18	52	FSD		3	TSC	8.07					TEH	TEC	.720	MBARH	24
22	34			NDD									TSH	TSH	.720	ZPS3C	25
34	34	2.08	187	DNG		1	6H	25.75					TEH	TEC	.720	MBARH	24
34	34			NDD									TSH	TSH	.720	ZPS3C	25
38	34	3.25	187	DNG		1	3C	27.44					TEH	TEC	.720	MBARH	24
38	34			NDD									TSH	TSH	.720	ZPS3C	25
4	35			RBD									6H	TEH	.720	MBARH	47
4	35	.75	70	INR		6	2H	9.84					6H	TEH	.720	MBARH	53
4	35			NDD									6C	5H	.700	MBARH	59
4	35			NDD									6C	TEC	.720	MBARH	60
20	35	2.15	185	DNG		1	5C	6.02					TEH	TEC	.720	MBARH	26
36	35	3.70	94	MBM		6	4H	.70					TEH	TEC	.720	MBARH	26
27	36	.36	79	INR		6	3C	30.80					TEH	TEC	.720	MBARH	24
4	37			NDD									TSH	TSH	.720	ZPS3C	29
4	37	1.53	250	INR		6	4H	51.07					6H	TEH	.720	MBARH	47
4	37			NDD									6C	5H	.700	MBARH	59
4	37			NDD									6C	TEC	.720	MBARH	60
19	37	2.06	181	DNT		M1	AV5	.40					TEH	TEC	.720	MBARH	24
19	37			NDD									TSH	TSH	.720	ZPS3C	27
21	37	.25	57	FSD		3	2H	32.58					TEH	TEC	.720	MBARH	24
21	37			NDD									TSH	TSH	.720	ZPS3C	27

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
-----	-----	-------	-----	-----	-----	-----	------	-------	-------	---	-------	-----	------	------	------	-------	-----

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
33	37			NDD									TSH	TSH	.720	ZPS3C	27
33	37	2.05	185	DNG		1	1C	9.34					TEH	TEC	.720	MBARH	34
41	37			NDD									TSH	TSH	.720	ZPS3C	27
41	37	1.66	75	INR		6	2H	48.94					TEH	TEC	.720	MBARH	34
44	37			NDD									TSH	TSH	.720	ZPS3C	27
44	37	.65	90	FSD		3	BPH	13.67					TEH	TEC	.720	MBARH	30
44	37	.47	89	FSD		3	4H	25.56					TEH	TEC	.720	MBARH	30
44	37	.30	43	FSD		3	1C	8.90					TEH	TEC	.720	MBARH	30
10	38			NDD									TSH	TSH	.720	ZPS3C	25
10	38	3.39	183	DNG		1	6H	12.08					TEH	TEC	.720	MBARH	26
10	38			INF		M1	6H	13.52					TEH	TEC	.720	MBARH	26
10	38	3.59	179	DNT		M1	AV1	.00					TEH	TEC	.720	MBARH	26
10	38	4.06	179	DNT		M1	AV6	.00					TEH	TEC	.720	MBARH	26
10	38	3.26	181	DNG		1	AV6	7.42					TEH	TEC	.720	MBARH	26
10	38			INF		M1	AV6	8.39					TEH	TEC	.720	MBARH	26
19	38	2.54	181	DNG		1	6H	18.53					TEH	TEC	.720	MBARH	26
19	38			NDD									TSH	TSH	.720	ZPS3C	29
20	38	.48	56	FSD		3	BPC	22.76					TEH	TEC	.720	MBARH	26
20	38			NDD									TSH	TSH	.720	ZPS3C	29
27	38	1.18	86	INR		6	4C	35.31					TEH	TEC	.720	MBARH	26
27	38			NDD									TSH	TSH	.720	ZPS3C	29
29	38	.35	93	NQS		3	1C	6.07					TEH	TEC	.720	MBARH	26
29	38			NDD									TSH	TSH	.720	ZPS3C	29
29	38			NDF			1C	6.07					1C	2C	.720	ZPS3C	76
30	38			INF		3	BPH	5.20					TEH	TEC	.720	MBARH	26
30	38			NDD									TSH	TSH	.720	ZPS3C	29
6	39	.40	247	INR		6	TSC	47.67					TEH	TEC	.720	MBARH	24
19	39	2.72	185	DNG		1	6H	18.57					TEH	TEC	.720	MBARH	24
24	39	4.09	188	DNG		1	5H	42.47					TEH	TEC	.720	MBARH	24
32	39	2.10	138	MBH		6	3C	3.81					TEH	TEC	.720	MBARH	34
33	39	3.07	141	MBH		6	3C	3.87					TEH	TEC	.720	MBARH	34
8	40	.40	85	DSS		M1	5H	-.66					6H	TEH	.720	MBARH	31
8	40	6.15	181	INR		M1	6C	4.41					5H	TEC	.720	MBARH	26
8	40			NDF			5H	-.66					5H	5H	.720	ZPS3C	41
17	41			NDD									TSH	TSH	.720	ZPS3C	27
17	41	1.48	259	INR		6	4H	3.83					TEH	TEC	.720	MBARH	30
42	41			NDD									TSH	TSH	.720	ZPS3C	45
42	41	1.34	77	INR		6	3H	24.14					TEH	TEC	.720	MBARH	58
4	42			NDD									6H	TEH	.720	MBARH	31
4	42			NDD									TSH	TSH	.720	ZPS3C	27
4	42	1.45	270	INR		6	1C	43.98					6H	TEC	.720	MBARH	72
7	42	.38	61	DSS		M1	6H	-.49					6H	TEH	.720	MBARH	31
7	42			NDD									TSH	TSH	.720	ZPS3C	27
7	42			NDF			6H	-.49					6H	6H	.720	ZPS3C	41
7	42			NDD									6H	TEC	.720	MBARH	70
7	42			NDD									6H	TEC	.720	MBARH	72
9	42			NDD									6H	TEH	.720	MBARH	31
9	42			NDD									TSH	TSH	.720	ZPS3C	27
9	42	1.24	82	INR		6	3C	44.51					6C	TEC	.720	MBARH	68
9	42	.62	79	INR		6	3C	44.53					6H	TEC	.720	MBARH	72
11	42	.28	52	NQS		3	TSH	2.09					6H	TEH	.720	MBARH	31
11	42			NDD									TSH	TSH	.720	ZPS3C	27
11	42			NDF			TSH	2.09					TSH	1H	.720	ZPS3C	41
11	42			NDD									6H	TEC	.720	MBARH	70
25	42	.92	36	INR		6	3C	21.05					TEH	TEC	.720	MBARH	28
25	42			NDD									TSH	TSH	.720	ZPS3C	29

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
41	42			NDD									TSH	TSH	.720	ZPS3C	45
41	42	.50	59	FSD		3	1C	14.74					TEH	TEC	.720	MBARH	56
19	43	2.51	185	DNG		1	5C	43.07					TEH	TEC	.720	MBARH	30
29	43	2.40	181	DNT		M1	AV4	.05					TEH	TEC	.720	MBARH	30
29	43	2.61	184	DNG		1	AV4	7.77					TEH	TEC	.720	MBARH	30
29	43	2.84	182	DNT		M1	AV5	.00					TEH	TEC	.720	MBARH	30
29	43	2.34	185	DNG		1	AV5	8.39					TEH	TEC	.720	MBARH	30
29	43	3.61	185	DNG		1	AV6	2.42					TEH	TEC	.720	MBARH	30
31	43	3.54	186	DNG		1	6H	2.38					TEH	TEC	.720	MBARH	30
32	43	1.72	82	INR		6	1C	19.11					TEH	TEC	.720	MBARH	30
22	44	4.70	187	DNG		1	4C	44.35					TEH	TEC	.720	MBARH	28
30	44	.98	109	INR		6	2C	42.98					TEH	TEC	.720	MBARH	28
39	44	3.47	76	MBM		6	4H	17.86					TEH	TEC	.720	MBARH	56
5	45	.76	85	INR		6	TSH	.00	310.00				6H	TEH	.720	MBARH	3
5	45			NDD									TSH	TSH	.720	ZPS3C	33
5	45	3.92	44	MBM		6	4C	6.49					6H	TEC	.720	MBARH	68
7	45	2.90	188	DNG		1	4H	12.76					6H	TEH	.720	MBARH	3
7	45	5.44	91	MBM		6	4H	13.58					6H	TEH	.720	MBARH	3
7	45			NDD									TSH	TSH	.720	ZPS3C	33
7	45			NDD									6C	TEC	.720	MBARH	68
7	45			NDD									6H	TEC	.720	MBARH	72
8	45			NDD									6H	TEH	.720	MBARH	3
8	45			NDD									TSH	TSH	.720	ZPS3C	33
8	45	6.31	184	INR		1	6H	35.76					6H	TEC	.720	MBARH	70
9	45	1.28	108	NQS		3	TSH	2.39					6H	TEH	.720	MBARH	3
9	45			NDD									TSH	TSH	.720	ZPS3C	33
9	45			NDF			TSH	2.39					TSH	1H	.720	ZPS3C	41
9	45			NDD									6C	TEC	.720	MBARH	68
9	45			NDD									6H	TEC	.720	MBARH	72
22	45	1.31	116	INR		6	5H	36.09					TSH	TEC	.720	MBARH	28
22	45			NDD									TSH	TSH	.720	ZPS3C	31
22	45	1.36	116	INR		6	5H	36.78					TEH	TEC	.720	MBARH	60
3	46	2.18	187	DNG		1	3H	45.90					6H	TEH	.720	MBARH	3
3	46			NDD									6C	4H	.700	MBARH	11
3	46			NDD									TSH	TSH	.720	ZPS3C	31
3	46			NDD									6C	TEC	.720	MBARH	72
19	46	2.79	183	DNG		1	AV5	6.74					TEH	TEC	.720	MBARH	30
19	46			NDD									TSH	TSH	.720	ZPS3C	33
35	46			NDD									TSH	TSH	.720	ZPS3C	45
35	46	.69	69	FSD		3	5C	22.75					TEH	TEC	.720	MBARH	52
38	46			NDD									TSH	TSH	.720	ZPS3C	45
38	46	3.97	190	INR		1	AV6	13.03					TEH	TEC	.720	MBARH	52
38	46	4.06	191	INR		1	AV6	21.30					TEH	TEC	.720	MBARH	52
38	46	2.89	181	INR		M1	6C	.05					TEH	TEC	.720	MBARH	52
38	46	2.03	179	INR		M1	4C	.00					TEH	TEC	.720	MBARH	52
7	47			NDD									6H	TEH	.720	MBARH	3
7	47	1.27	273	INR		6	5C	44.09					6C	TEC	.720	MBARH	68
7	47	1.29	270	INR		6	5C	43.98					6H	TEC	.720	MBARH	72
8	47	.31	73	NQS		3	TSH	3.23					6H	TEH	.720	MBARH	3
8	47			NDF			TSH	3.23					TSH	1H	.720	ZPS3C	41
8	47			NDD									6H	TEC	.720	MBARH	70
9	47	.43	94	NQS		3	TSH	4.34					6H	TEH	.720	MBARH	3
9	47			NDF			TSH	4.34					TSH	1H	.720	ZPS3C	39
9	47			NDF			TSH	4.34					TSH	TSH	.720	ZPS3C	41
9	47			NDD									6C	TEC	.720	MBARH	68
9	47			NDD									6H	TEC	.720	MBARH	72

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
28	47	1.51	80	INR		6	3H	8.09					TEH	TEC	.720	MBARH	30
28	47	1.33	256	INR		6	3C	4.73					TEH	TEC	.720	MBARH	30
2	48	2.80	265	MBM		6	1H	30.62					6H	TEH	.720	MBARH	31
2	48	2.10	8	BLG		1	1H	32.61					6H	TEH	.720	MBARH	31
2	48	.38	58	FSD		3	1H	34.43					6H	TEH	.720	MBARH	31
2	48			NDD									6C	6H	.680	ZPUNM	17
2	48			NDD									6H	TEC	.720	MBARH	72
26	48	1.22	75	INR		6	3C	10.17					TEH	TEC	.720	MBARH	28
36	48	1.66	268	INR		6	3H	38.91					TEH	TEC	.720	MBARH	52
36	48	1.89	283	INR		6	4H	24.97					TEH	TEC	.720	MBARH	52
36	48	.49	70	FSD		3	5H	11.94					TEH	TEC	.720	MBARH	52
36	48	1.36	82	INR		6	5C	43.33					TEH	TEC	.720	MBARH	52
6	49	1.42	88	INR		6	5H	16.03					6H	TEH	.720	MBARH	31
6	49	.37	82	FSD		3	4C	4.42					6H	TEC	.720	MBARH	70
6	49	.94	69	FSD		3	4C	43.74					6H	TEC	.720	MBARH	70
6	49	1.94	76	INR		6	2C	37.66					6H	TEC	.720	MBARH	70
10	49	.41	108	NQS		3	TSH	4.08					6H	TEH	.720	MBARH	31
10	49			NDF			TSH	4.08					TSH	1H	.720	ZPS3C	39
10	49			NDD									6H	TEC	.720	MBARH	68
24	49	.93	113	INR		6	4C	48.10					TEH	TEC	.720	MBARH	30
44	49	3.43	182	DNG		1	3C	1.98					TEH	TEC	.720	MBARH	54
4	50			NDD									6H	TEH	.720	MBARH	31
4	50	1.09	80	INR		6	TSC	6.52	12.15				6H	TEC	.720	MBARH	72
10	50	.19	61	NQS		3	TSH	3.27					6H	TEH	.720	MBARH	31
10	50			NDF			TSH	3.27					TSH	1H	.720	ZPS3C	39
10	50			NDD									6H	TEC	.720	MBARH	68
11	50	.31	69	NQS		3	TSH	3.26					6H	TEH	.720	MBARH	31
11	50			NDF			TSH	3.26					TSH	1H	.720	ZPS3C	39
11	50			NDD									6H	TEC	.720	MBARH	70
18	50	2.28	183	DNT		M1	BPH	.00					TEH	TEC	.720	MBARH	28
29	50	2.08	183	DNT		M1	AV6	.19					TEH	TEC	.720	MBARH	28
44	50	2.96	72	MBM		6	2C	49.24					TEH	TEC	.720	MBARH	52
17	51	.66	6	INR		1	AV5	9.15					TEH	TEC	.720	MBARH	30
9	52			NDD									6H	TEH	.720	MBARH	51
9	52	.46	58	FSD		3	2C	43.98					6H	TEC	.720	MBARH	68
9	52	.46	55	FSD		3	2C	44.00					6H	TEC	.720	MBARH	72
11	52			NDD									6H	TEH	.720	MBARH	51
11	52	.26	84	FSD		3	2C	22.02					6H	TEC	.720	MBARH	70
20	52	6.66	188	DNG		1	4H	2.95					TEH	TEC	.720	MBARH	28
20	52			NDF			4H	2.95					4H	5H	.720	ZPS3C	41
24	52	.40	81	FSD		3	5C	31.34					TEH	TEC	.720	MBARH	30
24	52	1.23	80	INR		6	5C	34.33					TEH	TEC	.720	MBARH	30
40	52	2.00	186	DNG		1	4H	47.31					TEH	TEC	.720	MBARH	32
42	52	2.22	184	DNG		1	AV6	22.17					TEH	TEC	.720	MBARH	32
17	53	1.96	182	INR		1	AV5	8.95					TEH	TEC	.720	MBARH	26
17	53			NDD									TSH	TSH	.720	ZPS3C	31
24	53	1.75	116	INR		6	5H	6.26					TEH	TEC	.720	MBARH	30
24	53			NDD									TSH	TSH	.720	ZPS3C	31
31	53	2.95	145	MBM		6	3C	4.33					TEH	TEC	.720	MBARH	30
31	53			NDD									TSH	TSH	.720	ZPS3C	31
33	53	.39	44	FSD		3	3H	17.93					TEH	TEC	.720	MBARH	28
33	53			NDD									TSH	TSH	.720	ZPS3C	31

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
36	53			NDD									TSH	TSH	.720	ZPS3C	31
36	53	.23	88	FSD		3	1H	16.39					TEH	TEC	.720	MBARH	34
36	54			RBD									TSH	TEC	.720	MBARH	32
36	54			NDD									TSH	TSH	.720	ZPS3C	33
36	54	2.40	190	DNG		1	AV4	11.77					TEH	TEC	.720	MBARH	56
29	55	2.92	185	DNG		1	AV3	4.98					TEH	TEC	.720	MBARH	30
29	55	3.07	180	DNG		1	AV4	.75					TEH	TEC	.720	MBARH	30
29	55	3.00	184	DNG		1	AV4	8.98					TEH	TEC	.720	MBARH	30
29	55	2.59	185	DNG		1	AV5	1.03					TEH	TEC	.720	MBARH	30
29	55	2.47	185	DNG		1	AV5	9.34					TEH	TEC	.720	MBARH	30
38	55	.48	74	FSD		3	1H	21.92					TEH	TEC	.720	MBARH	34
43	55	.67	87	INR		6	2C	46.69					TEH	TEC	.720	MBARH	34
24	56	2.67	186	DNG		1	4C	22.50					TEH	TEC	.720	MBARH	42
24	56	10.63	43	MBM		6	4C	22.50					TEH	TEC	.720	MBARH	42
26	56	1.78	270	INR		6	1C	44.79					TEH	TEC	.720	MBARH	42
8	58			NDD									TSH	TSH	.720	ZPS3C	31
8	58	2.37	261	MBM		6	2C	3.89					TEH	TEC	.720	MBARH	48
8	58	1.38	82	INR		6	2C	5.82					TEH	TEC	.720	MBARH	48
7	59	2.09	80	MBM		6	4H	9.46					TEH	TEC	.720	MBARH	52
17	59	3.13	77	MBM		6	2C	20.27					TEH	TEC	.720	MBARH	42
32	59			RID									2H	3H	.720	ZPS3C	41
32	59			NDD									1H	2H	.720	ZPS3C	41
32	59	22.21	178	DNG		1	2H	42.24					TEH	TEC	.720	MBARH	42
32	59	19.37	179	DNG		1	2H	42.39					TEH	TEC	.720	MBARH	42
32	59			NDF				42.20					2H	3H	.720	ZPS3C	43
32	59			NDF				42.40					2H	3H	.720	ZPS3C	43
34	59	3.82	178	DNG		1	2C	13.04					TEH	TEC	.720	MBARH	42
34	59	4.39	177	DNG		1	2C	13.15					TEH	TEC	.720	MBARH	42
36	60	1.78	276	INR		6	1C	27.58					TEH	TEC	.720	MBARH	42
36	60	.89	74	INR		6	1C	28.72					TEH	TEC	.720	MBARH	42
23	61			NDD									TSH	TSH	.720	ZPS3C	31
23	61	2.10	106	MBM		6	BPH	2.64					TEH	TEC	.720	MBARH	40
23	61	.48	64	FSD		3	BPH	5.34					TEH	TEC	.720	MBARH	40
23	61	2.16	68	MBM		6	BPH	11.05					TEH	TEC	.720	MBARH	40
31	61			NDD									TSH	TSH	.720	ZPS3C	31
31	61	.97	262	INR		6	2H	42.75					TEH	TEC	.720	MBARH	40
12	62			NDD									TSH	TSH	.720	ZPS3C	31
12	62	.19	112	FSD		3	TSC	9.68					TEH	TEC	.720	MBARH	48
4	63			NDD									6H	TEH	.720	MBARH	47
4	63			RST									6H	TEC	.720	MBARH	52
4	63	.82	74	INR		6	4C	13.38					6H	TEC	.720	MBARH	52
4	63			NDD									6C	5H	.700	MBARH	59
23	63	2.65	80	MBM		6	2C	42.60					TEH	TEC	.720	MBARH	42
8	64	.33	57	FSD		3	2H	37.52					TEH	TEC	.720	MBARH	48
9	64	2.04	182	DNT		M1	AV6	.24					TEH	TEC	.720	MBARH	50
9	64	2.27	183	DNG		1	AV6	5.71					TEH	TEC	.720	MBARH	50
9	64	2.35	182	DNG		1	AV6	15.08					TEH	TEC	.720	MBARH	50
12	64	2.71	184	DNT		M1	6H	.99					TEH	TEC	.720	MBARH	48
17	65	1.86	92	INR		6	5H	42.07					TEH	TEC	.720	MBARH	44
13	68	.27	41	FSD		3	3H	21.00					TEH	TEC	.720	MBARH	46
17	68	.51	88	FSD		3	TSH	13.98					TEH	TEC	.720	MBARH	46
2	69	1.47	86	INR		6	BPH	20.00	24.63				6H	TEH	.720	MBARH	9
2	69			NDD									TSH	TSH	.720	ZPS3C	33

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
2	69			NDD									6C	TEC	.720	MBARH	54
37	69			NDD									TSH	TSH	.720	ZPS3C	31
37	69	1.18	74	INR		6	2H	42.58					TEH	TEC	.720	MBARH	44
19	70			NDD									TSH	TSH	.720	ZPS3C	33
19	70	.38	56	FSD		3	1H	40.37					TEH	TEC	.720	MBARH	46
24	70			NDD									TSH	TSH	.720	ZPS3C	33
24	70	3.07	69	MBM		6	4C	-1.57					TEH	TEC	.720	MBARH	46
33	70			NDD									TSH	TSH	.720	ZPS3C	33
33	70	2.68	78	MBM		6	2C	30.33					TEH	TEC	.720	MBARH	46
1	71	.42	63	FSD		3	TSH	16.95					6H	TEH	.720	MBARH	9
1	71			NDD									6C	6H	.680	ZPUNM	19
1	71			NDD									6C	TEC	.720	MBARH	52
31	72	.43	66	FSD		3	AV3	.83					TEH	TEC	.720	MBARH	46
31	72	1.63	263	INR		6	AV3	2.10					TEH	TEC	.720	MBARH	46
34	72	.30	70	INR		6	3C	4.34					TEH	TEC	.720	MBARH	46
3	74	.23	71	FSD		3	3H	3.33					6H	TEH	.720	MBARH	7
3	74			NDD									6C	5H	.700	MBARH	11
3	74			NDD									TSH	TSH	.720	ZPS3C	35
3	74			NDD									6C	TEC	.720	MBARH	54
7	74			NDD									TSH	TSH	.720	ZPS3C	35
7	74	1.76	78	INR		6	TSH	17.63					TEH	TEC	.720	MBARH	50
36	74			NDD									TSH	TSH	.720	ZPS3C	33
36	74	1.35	85	INR		6	2H	39.95	46.87				TEH	TEC	.720	MBARH	46
5	75	.28	44	FSD		3	4H	19.50					6H	TEH	.720	MBARH	47
5	75			NDD									6C	TEC	.720	MBARH	54
5	75			NDD									6C	5H	.700	MBARH	59
8	75	1.06	72	INR		6	3H	24.14					TEH	TEC	.720	MBARH	48
12	75	1.15	84	INR		6	1C	35.76					TEH	TEC	.720	MBARH	44
22	75	1.75	106	INR		6	5H	30.56					TEH	TEC	.720	MBARH	44
22	75	2.03	281	MBM		6	5H	32.08					TEH	TEC	.720	MBARH	44
23	76	.69	97	FSD		3	TSC	20.71					TEH	TEC	.720	MBARH	50
23	76	1.39	99	INR		6	TSC	21.03					TEH	TEC	.720	MBARH	50
20	77			NDD									TSH	TSH	.720	ZPS3C	35
20	77	2.07	184	DNT		M1	AV1	.51					TEH	TEC	.720	MBARH	48
31	77			NDD									TSH	TSH	.720	ZPS3C	35
31	77	.37	51	FSD		3	TSH	11.57					TEH	TEC	.720	MBARH	48
5	78			NDD									TSH	TSH	.720	ZPS3C	35
5	78	1.17	71	INR		6	8PH	8.70					6H	TEH	.720	MBARH	47
5	78			NDD									6C	TEC	.720	MBARH	54
5	78			NDD									6C	5H	.700	MBARH	59
19	81	.29	100	FSD		3	2H	47.44					TEH	TEC	.720	MBARH	48
11	83	4.17	188	DNG		1	2C	7.66					TEH	TEC	.720	MBARH	48
11	83	.71	188	INR		1	1C	23.33					TEH	TEC	.720	MBARH	48
11	83	2.13	187	DNG		1	1C	25.70					TEH	TEC	.720	MBARH	48
11	83	.47	189	INR		1	1C	39.11					TEH	TEC	.720	MBARH	48
11	83	3.87	187	DNG		1	1C	43.04					TEH	TEC	.720	MBARH	48
11	83	.51	190	INR		1	1C	46.81					TEH	TEC	.720	MBARH	48
12	83	2.09	103	MBM		6	3C	16.19					TEH	TEC	.720	MBARH	48
27	83			NDD									TSH	TSH	.720	ZPS3C	37
27	83	1.28	107	INR		6	AV6	5.31					TEH	TEC	.720	MBARH	48
11	85			NDD									TSH	TSH	.720	ZPS3C	37
11	85	1.23	65	INR		6	5H	-1.87					TEH	TEC	.720	MBARH	48
5	86			NDD									TSH	TSH	.720	ZPS3C	35

ROW	COL	VOLTS	DEG	IND	PER	CHN	LOCN	INCH1	INCH2	I	CRLEN	CEG	BEGT	ENDT	PDIA	PTYPE	CAL
5	86			NDD									6H	TEH	.720	MBARH	47
5	86	2.39	189	DNG		1	4C	-1.00					6C	TEC	.720	MBARH	54
5	86			NDD									6C	5H	.700	MBARH	59
5	87	3.01	132	MBM		6	4H	10.31	97.23				6H	TEH	.720	MBARH	47
5	87	2.26	123	MBM		6	6H	6.40					6H	TEC	.720	MBARH	54
5	87	2.46	118	MBM		6	6H	14.42					6H	TEC	.720	MBARH	54
5	87	2.52	123	MBM		6	6H	23.43					6H	TEC	.720	MBARH	54
5	87	2.22	77	MBM		6	2C	3.59					6H	TEC	.720	MBARH	54
5	87	.47	89	FSD		3	2C	36.76					6H	TEC	.720	MBARH	54
5	87	34.66	329	INR		6	TSC	.00					6H	TEC	.720	MBARH	54
5	87	2.05	266	MBM		6	5H	3.74					6C	5H	.700	MBARH	59
5	87	2.28	73	MBM		6	5H	17.54					6C	5H	.700	MBARH	59
5	87	2.28	80	MBM		6	5H	21.27					6C	5H	.700	MBARH	59
5	87	2.23	72	MBM		6	5H	24.26					6C	5H	.700	MBARH	59
5	87	2.24	79	MBM		6	5H	29.51					6C	5H	.700	MBARH	59
5	87	2.32	75	MBM		6	5H	31.30					6C	5H	.700	MBARH	59
5	87	2.34	82	MBM		6	5H	37.95					6C	5H	.700	MBARH	59
5	87	2.26	105	MBM		6	6H	6.40					6C	5H	.700	MBARH	59
5	87	3.08	113	MBM		6	6H	14.45					6C	5H	.700	MBARH	59
5	87	2.57	100	MBM		6	6H	22.67					6C	5H	.700	MBARH	59
4	88	3.54	182	DNG		1	5H	19.96					6H	TEH	.720	MBARH	47
4	88			NDD									6C	TEC	.720	MBARH	52
4	88	4.16	184	DNG		1	5H	20.37					6C	5H	.700	MBARH	59
2	89	1.08	109	INR		6	TSH	9.19					6H	TEH	.720	MBARH	9
2	89			NDD									6C	TEC	.720	MBARH	52
13	89			NDD									TSH	TSH	.720	ZPS3C	37
13	89	2.22	182	DNT		M1	AV6	.17					TEH	TEC	.720	MBARH	48
1	92	5.23	179	DNG		1	TSH	6.81					6H	TEH	.720	MBARH	9
1	92			NDD									TSH	TSH	.720	ZPS3C	37
1	92			NDF			TSH	6.81					TSH	BPH	.720	ZPS3C	41
1	92			NDD									6C	TEC	.720	MBARH	52