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

SUBJECT: Submittal of Changes to the AmerGen Report on 1999 Outage 13R Eddy Current Examinations of the TMI Unit 1 Once-Through Steam Generator (OTSG) Tubing

THREE MILE ISLAND, UNIT 1 (TMI UNIT 1)
OPERATING LICENSE NO. DPR-50
DOCKET NO. 50-289

References: 1. AmerGen Letter. J. B. Cotton to NRC, "Cycle 13 Refueling (13R) Inservice Inspection (ISI) – ASME NIS-1&2 Owner's Data Report Forms with Reports of the Once Through Steam Generator (OTSG) Tube Inspections, Pressure Tests and ASME Section XI Subsection IWE & IWL Containment Inspections," dated January 14, 2000.

AmerGen submitted its "Report on the 1999 Outage 13R Eddy Current Examinations of the TMI-1 OTSG Tubing," Topical Report (TR) No. 135, Revision 0 as part of Reference 1. Recently it was discovered that 35 tubes in the "B" OTSG were identified incorrectly by row-tube identification numbers during some of the Outage 13R eddy current examinations. Although it was intended that all steam generator tubes be examined with a bobbin coil eddy current probe during that outage, use of the incorrect identification numbers resulted in 14 of the 35 tubes not being examined. Two (2) of the 35 tubes were examined with their correct row-tube identification numbers during examination with other calibration groups, and 19 of the 35 tubes were examined, but with an incorrect row-tube identification.

As required by the TMI Unit 1 eddy current analysis guidelines, the ISI database of examination results has been updated to correct for the tubes that were affected. Additionally, TR No. 135 has been revised. The purpose of this letter is to submit the pages from TR No. 135, Revision 1 that changed since our submittal of TR No. 135, Revision 0 in Reference 1. No other results were affected and the conclusions drawn from the 13R Outage tube examination results remain valid. Examination of 100% of the tubes was not required by the TMI Unit 1 Technical Specifications during the 13R Outage because the ECT inspection results were not in the "C-3" category. Neither the Technical Specification inspection sampling requirements nor the tube repair requirements were violated.

A001

The 35 tubes affected by incorrect identification numbers during the 13R Outage were examined during the recent T1R14 Outage with no indications of through-wall degradation identified.

Very truly yours,

A handwritten signature in black ink, appearing to read "George B. Roubel" followed by a stylized flourish.

Michael P. Gallagher
Director – Licensing and Regulatory Affairs
Mid-Atlantic Regional Operating Group

Attachment

cc: H. J. Miller, USNRC Regional Administrator, Region I
J. D. Orr, USNRC TMI Unit 1 Resident Inspector
T. G. Colburn, USNRC TMI Unit 1 Senior Project Manager
File No. 98192

ATTACHMENT

Changed Pages affected by Topical Report (TR) No. 135, Revision 1, "Report on the 1999 Outage 13R Eddy Current Examinations of the TMI-1 OTSG Tubing"

Revised Pages:

| | |
|---------------------------|-------------------------------------|
| Report Pages: | 1, 2, 5, 19, 29, 43 and 45 |
| Appendix I Pages: | 2, and 3 |
| Appendix II Pages: | 127 through 132, 151 and 163 |
| Appendix III: | (No Changes) |

Report on the 1999 Outage 13R Eddy Current Examinations of the TMI-1 OTSG Tubing

Topical Report Number: 135
(Rev 1)

Gene Navratil Gene Navratil 2-11-02
Author Date

Richard Freeman Richard Freeman 2-14-02
Reviewer Date

Design Verification Required?
N/A

☐ YES ☒ NO
N/A

If yes - DV#: N/A

Design Verification Engineer

Date

Richard Barley Richard Barley 2/14/02
Section Manager Date

Summary of Change

- 0 Original report issued to document Outage 13R eddy current examination results reported to the NRC.
- 1 Revised to address Outage 13R tube mis-encode conditions identified during Outage T1R14 and documented in Framatome ANP NCR 01-6011343 (Reference 20) and AmerGen Energy Condition Report 79252 (Reference 21).
- Page 2 was changed to address summary of change.
 - Page 5 was changed to address the correct number of tube examinations and the correct number of tubes examined. (35 mis-encoded tube examinations that were edited to reflect a non-examined status of "RNC" reduced the number of examinations by 35. 22 of the 35 tubes that were mis-encoded were examined with MRPC techniques during the outage so 13 fewer tubes were examined (35-22=13).
 - Page 19 was changed to reflect the correct number of tubes examined with bobbin techniques. There were 35 mis-encoded tubes. Acceptable examinations were identified to exist for two tubes based on data from calibration groups that were correctly encoded so the number of tubes examined was reduced by 33 (35-2=33).
 - Page 29 was changed to add reference to Note 1 on page 19.
 - Page 43 was changed to reflect a percentage of tubes examined rather than stating all in service tubes were examined.
 - Added References 20 and 21 to page 45.
 - Added "RNC" to Appendix I, page 2 which changed pagination for pages 2 and 3.
 - Deleted the appropriate data entries for the affected tubes on Appendix II, pages 127 through 132, 151, and 163 (No other entries required editing).

I.**INTRODUCTION**

On September 10, 1999, TMI-1 was shut down for Refueling Outage 13R. During this refueling outage, TMI-1 performed Eddy Current (ECT) examinations of the Once Through Steam Generators (OTSGs). The scope of the examinations included tubing and sleeves. The examinations were required by TMI-1 Technical Specification 4.19 (Reference 1), Technical Specification License Amendment #209 (Reference 2), and TMI-1 engineering requirements.

During Outage 13R in service tubes were examined with a bobbin coil probe and approximately 40% of the upper tubesheet kinetic expansions were examined with a rotating probe. In OTSG-A, 21,801 examinations were performed on 14,231 tubes and 170 examinations were performed on 85 sleeves. In OTSG-B, 22,260 examinations were performed on 15,123 tubes and 170 examinations were performed on 85 sleeves. As a result of eddy current indications evaluated during these examinations thirty-six (36) tubes in OTSG-A and nine (9) tubes in OTSG-B were plugged. These tubes are listed in Table I-1 below:

Table I-1
Tubes Removed From Service¹

| S/G | Row | Tube | Hot Leg | Cold Leg | Reason For Plugging | | | | | | Tube Qty |
|-----|-----|------|-----------|-----------|---------------------------------|---|-----|---|-------|--|----------|
| A | 2 | 6 | Roll Plug | Roll Plug | SVI | @ | 15S | + | 36.43 | | 1 |
| A | 18 | 84 | Roll Plug | Roll Plug | SVI | @ | UTS | - | 8.56 | | 2 |
| | | | | | SVI | @ | UTS | - | 15.56 | | |
| | | | | | SVI | @ | UTS | - | 16.89 | | |
| | | | | | SVI | @ | UTS | - | 14.96 | | |
| A | 20 | 85 | Roll Plug | Roll Plug | SVI | @ | 15S | + | 5.45 | | 3 |
| A | 29 | 3 | Roll Plug | Roll Plug | Kinetic Expansion Indication(s) | | | | | | 4 |
| A | 31 | 41 | Roll Plug | Roll Plug | Kinetic Expansion Indication(s) | | | | | | 5 |
| A | 38 | 74 | Roll Plug | Roll Plug | OD SVI | @ | LTS | + | 2.01 | | 6 |
| A | 41 | 110 | Roll Plug | Roll Plug | Kinetic Expansion Indication(s) | | | | | | 7 |
| A | 46 | 117 | Roll Plug | Roll Plug | SVI | @ | ETL | - | 0.67 | | 8 |
| A | 48 | 120 | Roll Plug | Roll Plug | Kinetic Expansion Indication(s) | | | | | | 9 |
| A | 50 | 116 | Roll Plug | Roll Plug | SCI | @ | ETL | - | 0.04 | | 10 |
| A | 66 | 31 | Roll Plug | Roll Plug | SCI | @ | ETL | - | 0.09 | | 11 |
| A | 71 | 36 | Roll Plug | Roll Plug | SAI | @ | 15S | + | 8.65 | | 12 |
| A | 75 | 65 | Roll Plug | Roll Plug | SCI | @ | UTS | + | 0.36 | | 13 |
| A | 76 | 94 | Roll Plug | Roll Plug | 43% ID IGA | @ | UTS | + | 2.86 | | 14 |
| A | 78 | 49 | Roll Plug | Roll Plug | Kinetic Expansion Indication(s) | | | | | | 15 |

¹ See Appendix I for indication three letter code definitions and Figure II-2 for location codes.

III.

OUTAGE 13R EXAMINATION CATEGORIES AND RESULTS

All tubes that were in service during Cycle 12 were examined with a bobbin coil probe. The kinetic expansion transition and the required length of the kinetically expanded tube above the transition were examined in approximately 40% of the tubes. The examinations were performed in three major groups, based on the examination requirements:

- A. Examinations required by Technical Specification 4.19
- B. NRC Commitments
- C. TMI-1 elective examinations

These groups were further divided into specific categories. This section defines the examination scope, purpose, selection criteria, and examination results by category.

A. SCOPE SELECTION

During Outage 13R TMI-1 chose to initially perform bobbin coil examinations on 100% of the in service tubes in each OTSG. In addition to the bobbin coil examinations, approximately 40% of the tubes in each OTSG were scheduled for MRPC examination of the kinetic expansion transition and kinetically expanded region. In order to define an examination results classification, TMI-1 assigned tubes to groups prior to the Outage. Sample expansion, for the kinetic expansion examinations, was then based on the results of each examination using Technical Specification 4.19 Interpretation (Reference 1). No sample expansion was possible for the bobbin coil examinations since all of the in service tubes were examined.

Tables III-1 through III-3 provide the examination categories, quantities, and reasons for examination. Figures III-1 through III-6 provide tubesheet plots of the kinetic expansion, lower tubesheet crevice/sludge pile, and sleeve examination locations.

TABLE III-1

BOBBIN COIL TUBE EXAMINATION SCOPE

| DATA SET | OTSG-A TUBES EXAMINED | OTSG-B TUBES EXAMINED | REASONS FOR SELECTION |
|-----------|-----------------------------|-----------------------------|--|
| 540-MIZ30 | 330 | 105 | These tubes were examined with a 0.540" HF bobbin probe to more accurately evaluate ID-initiated indications observed with bobbin coil probes during Outage 12R. During Outage 13R tubes with recorded ID indications during a scheduled 0.510" bobbin examination were also subsequently examined with a 0.540" bobbin probe. |
| 510-MIZ30 | 13935 | 15018 | These are the remaining in service tubes that were not initially examined with the 0.540" diameter bobbin coil probe. See Note 1 below. |
| 480-MIZ30 | 2 | 0 | These are tubes that would not pass a 0.510" bobbin coil probe through the lower tube end. |

Note 1- During Outage T1R14 35 tubes in OTSG-B were discovered to have been examined with tube identification numbers that were incorrect (mis-encoded). Data reviews identified that 2 tubes were examined in other cal groups and concluded that the remaining 33 of these 35 tubes in OTSG-B were not examined with the correct tube identification (19 tubes were examined but with an incorrect identification). The final result then is 14 tubes that were actually not examined with the bobbin coil probe during Outage 13R. The database has been updated to indicate an "RNC" code for the effected tubes as required by the analysis guidelines. There were no degraded or defective conditions identified in these tubes during Outage T1R14 therefore no Tech Spec or Licensing Basis requirements were violated. Because the ECT inspection results were not in the "C-3" category, 100% of the tubes were not required by Tech Spec to be examined in Outage 13R. Neither the Tech Spec inspection sampling requirements nor the tube repair requirements were violated as a result of these tube mis-encodes.

B. EXAMINATION RESULTS

B.1 Tube Examinations (unexpanded Region)

Appendix II of this report provides a listing of all indications of tube wall degradation located between the lower tube ends and the upper tubesheet kinetic expansions. The examination results were reviewed to determine Technical Specification classification requirements per Technical Specification 4.19 and to determine whether other conditions were present which could be indicators of other damage. No secondary side miscellaneous damage such as missing support plates was observed. Since the bobbin inspection sample included 100% of the in-service tubes in each generator, the category classification is for documentation and notification purposes only and could not affect further bobbin coil inspection sample escalation criteria (See Note 1 on Page 19). The three categories are as follows:

- C-1 Less than 5% of tubes inspected are degraded and none are defective
- C-2 One or more but not greater than 1% of tubes inspected are defective or between 5-10% are degraded
- C-3 More than 10% of tubes inspected are degraded or more than 1% are defective

The results of the 13R bobbin inspection at TMI-1 are classified as C-2 for each steam generator based on having one or more but not greater than 1% defective tubes. For purposes of this classification, the following limits applied:

A tube was classified as DEFECTIVE, DEGRADED, or IMPERFECTION in accordance with the TMI-1 Technical Specifications. Every tube with indications confirmed by MRPC was reviewed and assigned a classification. For tubes with multiple indications, the tube was classified based on the most limiting indication detected in that tube.

TRENDING OF ID INDICATIONS

The eddy current results from the Outage 13R inspection were compared to the results of previous inspections to assess whether ID degradation mechanisms are active. Two criteria were used in evaluating the growth of the indications (bobbin coil voltages and length/width measurements).

During Outage 13R, TMI-1 set the ASME calibration standard four 20% through wall hole response equivalent to 4 volts in the "BWO Mother Standard" using the 400 kHz differential channel and normalized that setting to all other channels. During Outage 11R TMI-1 set the ASME calibration standard four 20% through wall hole response to 10 volts using the 400 kHz differential channel and normalized that setting to all other channels. During Outage 12R TMI-1 set the ASME calibration standard four 20% through wall hole response equivalent to 10 volts in the "BWO Mother Standard" using the 400 kHz differential channel and normalized that setting to all other channels. For comparison purposes the Outage 11R and 12R bobbin coil voltages are multiplied by 0.4 to correct the value to the equivalent Outage 13R value.

When the Outage 13R bobbin coil voltages are compared to the Outage 11R and Outage 12R voltage responses at the same location, a +0.037 volt and +0.005 volt average increase respectively, is observed. The Outage 12R to Outage 13R indication voltage change standard deviation was 0.07 volts. The Outage 11R to Outage 13R indication voltage change standard deviation was 0.10 volts. These voltage changes are comparable with voltage variations from eight previous outages where the mean change ranged from -0.3 volts to +0.2 volts (corrected voltage value for change from 10 volt normalization to 4 volt normalization is -0.12 volts to +0.08 volts). The eight previous outage standard deviation ranged from 0.2 volts to 0.4 volts (Outage 13R corrected equivalent is 0.08 volts to 0.16 volts). A comparison of Outage 11R and 12R to Outage 13R bobbin coil measured through wall depth also substantiates a no growth conclusion. Table III-4 provides a summary of the bobbin coil voltage and percent through wall changes. Figure III-7 provides a scatter plot of voltage comparisons for ID-initiated bobbin coil indications.

IV. CONDITION ASSESSMENTS

A. CONDITION MONITORING

The primary-to-secondary leakrate from the TMI-1 steam generators during the cycle preceding the 13R Outage was very low. During the last week of the operating cycle the calculated leakrate was less than 0.01 gallons per hour.

During the outage 99.9% of the in service tubes were inspected using eddy current probes.

In-situ pressure testing was conducted during the 13R outage to assess the ability of the most limiting flaws found during the eddy current inspections to withstand a postulated Main Steam Line Break (MSLB) event on the last day of the just-completed operating cycle. As described in Section II.D and Table III-11 the tubing was subjected to pressure loads corresponding to Normal Operating, Main Steam Line Break, and Regulatory Guide 1.121-prescribed differential pressures. (The eddy current test results were reviewed to select the most limiting flaws from a leakage and structural integrity perspective. The intent was to select flaws that would bound in severity the remaining population of untested flaws. Successful testing of the limiting flaws would then assure that the remaining flaws would maintain structural and leakage integrity during a postulated MSLB.) Section II.D.2 and Table III-11 of this document provide detailed information on the eddy current results for the tubes selected for in-situ pressure testing. Since the remaining tubes in the steam generators were bounded by tubes that were successfully in-situ tested, all in-service tubes would have maintained structural and leakage integrity during a postulated MSLB accident on the last day of the cycle preceding the outage.

As discussed in Section II.C.2, eddy current indications in the upper tubesheet kinetic expansions were *assumed to leak* during a postulated MSLB if their through wall extent (as estimated by a Plus-Point coil) was 67% TW or greater. Each of these potential "leakage contributor" indications was conservatively evaluated to determine the volume of primary-to-secondary leakage associated with that indication if an MSLB had occurred. These accident-induced leakage volumes were summed for each of the indications and, since approximately 40% of the expansions were examined, a factor was determined to predict the hypothetical leakage from all of the expansions. The resulting calculated leakage was considerably less than that allowed by the plant's FSAR. (See Tables III-8 through III-10.)

99.9% of the plant's steam generator tubes were inspected. In-situ pressure testing was a primary tool to demonstrate the ability of the freespan tubing to withstand accident-induced loads at the end of the just-completed operating cycle. The kinetically expanded tubing was examined with MRPC probes and an assessment of the postulated leakage was conservatively developed. The degradation observed during the 13R Outage was evaluated in a manner consistent with NEI 97-06 and the EPRI Guidelines. The evaluations indicate that the observed degradation did not present serious challenges to the structural margin requirements at the end of the last cycle of operation, or challenge the plant's leakage integrity limits. The results of these evaluations demonstrated that the plant's steam generator tubes would have been able to safely withstand the effects of postulated accidents on the day preceding the subject outage.

B. OPERATIONAL ASSESSMENT

ID-initiated indications were the predominant reason for which TMI-1 "A" steam generator tubes were plugged. In the "B" generator, more tubes were plugged for O.D.-initiated indications than were plugged due to I.D.-initiated indications. The I.D. indications are believed to be remnants of the thiosulfate damage that occurred to the ID surfaces of the tubes in 1981. As discussed in Section III.B.1, the growth rate for ID IGA indications/flaws is believed to be zero.

Including two preventively plugged tubes, kinetic expansion examinations accounted for sixteen plugged tubes in both OTSGs. TMI-1 has now examined approximately 60% of the kinetic expansions over the last 2 outages with MRPC probes. As reported in Section III.B.1, TMI-1 compared the kinetic expansion inspection results of these last two outages and has concluded that the indications within the kinetic expansions are not growing. TMI-1 will continue the kinetic expansion examinations during the next outage, and the results of those examinations will be compared to the Outage 12R and 13R results.

12. Framatome Technologies Report 51-5005946-00, "TMI-1 Fall 1999 Outage In-Situ Summary Report", October 1999.
13. Letter from J. Langenbach of GPU Nuclear, "Leakage Assessment Methodology for TMI-1 OTSG Kinetic Expansion Examination, Topical Report 116", 11/26/97.
14. Letter from J. Langenbach of GPU Nuclear, "NRC Notification on Completion of 13R Outage Steam Generator Examinations", 11/05/99.
15. FTI Calculation #32-1234876-00, Rev 0, "TMI-1 Tube Plugging RCS Flow Prediction", July 1995.
16. GPU Nuclear, EER JO# 00170801, "Outage 13R OTSG Degradation Assessment".
17. Framatome Technologies Report 51-5005406-00, W. E. Brooks-Crocker, "Qualified Eddy Current Examination Techniques for Three Mile Island Unit #1".
18. Letter from J. Langenbach of GPU Nuclear to USNRC, "GPU Nuclear Response to NRC Requests Regarding the OTSG Kinetic Expansion Region Inspection Acceptance Criteria for 12R Examinations", 07/30/99.
19. EPRI Report TR-107620-R1, "In-Situ Pressure Test Guidelines: Revision 1"
20. Framatome ANP Nonconformance Report 01-6011343, "SG-B Mis-encodes During TMI Outage T1R14".
21. AmerGen Energy Condition Report Number 0079252, "OTSG Tube Identifications Were Incorrect During 1999 Outage".

ANALYSIS CHARACTERIZATION AND REPORTING CODES

| <i>Code</i> | <i>Definition</i> |
|-------------|---|
| MAI | Multiple Axial Indication -- an MRPC call determined from indication morphology |
| MBM | Machine Burnish Mark (or Manufacturing Buff Mark) -- an indication believed to be produced from a condition resulting from the final hand polishing or grinding operations on the tubing during manufacture which is performed to remove imperfections on the tube's outer surface. An indication must have repeatable history to be considered an MBM. |
| MCI | Multiple Circumferential Indication -- an MRPC call determined from indication morphology |
| MMI | Mixed Mode Indication -- an MRPC call determined from indication morphology. This code shall only be used if the indication morphology reflects a situation which would lead the analyst to believe that an axial and circumferential indication have linked in some fashion (for example, a "T" or "L" shaped crack-like indication). |
| MSG | Message -- a code used in a report line entry to signify that the associated data in that entry relates to an informational note about the subject tube. Enter the comment in the Location Field. |
| MVI | Multiple Volumetric Indication -- an MRPC call determined from indication morphology |
| NDD | No Detectable Degradation -- designator used for an examination that indicates that the region inspected is free of detectable degradation. The actual entry of the code is not required. |
| NDF | No Degradation Found -- designator used for a rotating examination to disposition an area of interest that another technique has flagged as needing to be inspected, but when inspected with the rotating technique no degradation was identified. The actual entry of the code is required along with the location identified by the implementing examination and the actual extent from the rotating technique. |
| NEX | No Expansion -- no roll or expansion where one should be. |
| NQI | Non Quantifiable Indication -- a bobbin coil signal identified by the analyst as possibly containing an indication, however due to noise, lack of multi-frequency channel correlation, or other signal peculiarities, the analyst cannot sufficiently interpret the signal to draw any conclusion. This is an interim disposition. |
| OBS | Obstructed Tube -- used only if the acquisition operator has identified the tube as being unable to pass the probe due to a restriction |
| PBA | Prior Bobbin Analysis -- code assigned to a specific data record to provide a means of clearing the record through data management without re-reporting indications already reported during a previous scan of the same area. |
| PID | Positive Identification -- this designates that at least one confirming ET inspection has been performed on the area of interest with the results indicating that the initial and confirming analysis results are in concurrence. Analysts will use the exact location from the indication of interest when reporting the PID. |
| PLG | Plugged -- permanent plug installed in a tube. |
| PLP | Possible Loose Part -- shall be reported when ET provides evidence of a possible loose part adjacent to or in the vicinity of a tube. Adjacent tubes shall be checked to determine if there is a PLP signal or any indication of wall loss from the loose part. |
| PRA | Prior Rotating Analysis -- code assigned to a specific data record to provide a means of clearing the record through data management without re-reporting indications already reported during a previous scan of the same area. |
| PVN | Permeability -- shall be reported only if suspected of masking an indication or as otherwise required by a specific ETSS requirement |
| RNC | Retest -- Tube Number Check |
| SAI | Single Axial Indication -- an MRPC call determined from indication morphology |

ANALYSIS CHARACTERIZATION AND REPORTING CODES

| <i>Code</i> | <i>Definition</i> |
|-------------|--|
| SCI | Single Circumferential Indication -- an MRPC call determined from indication morphology |
| SLG | Sludge -- designator used to annotate sludge elevation |
| SLV | Sleeve Indication -- all indications observed in the sleeve material shall be identified with this code in UTIL1 field. |
| SSA | Secondary Side Anomaly -- an indication believed to be produced from foreign material on the secondary side, which is not a loose part. |
| SVI | Single Volumetric Indication -- an MRPC call determined from indication morphology |
| TSD | Tube Support Plate Damaged -- tube support plate appears to be significantly eroded/damaged. |
| TSM | Tube Support Plate Missing -- no tube support plate signal is present at the expected location. |
| TUB | Parent Tubing Indication -- any indication in the parent tube material in the sleeved region shall be identified with this code in UTIL1 field. |
| VOL | Volumetric Indication -- an MRPC indication that is not crack-like yet has some discernible volume to it and is deemed non-repairable. Example, an indication in the tube freespan that is dispositioned with axial and circumferential dimensions less than the repair limit. For TMI-1 primary and secondary analysts may use this code for all volumetric indications. Resolution analysts may only use this code for ID IGA indications (inside diameter initiating volumetric indications) which have a measured axial length of $\leq 0.25''$ and a measured circumferential length of $\leq 0.52''$ when measured in accordance with the applicable ETSS. |
| WAR | Wear Call -- used in UTIL1 Field for rotating examinations. Indications will be labeled WAR only after the criteria for disposition of indications at TSPs is met. |

THREE MILE ISLAND UNIT 1
OTSG-B
OUTAGE 13R
FREESPAN INDICATIONS

| Row | Tube | Reel | Probe | Volts/ Degrees | | Origin/ Percent | Location | | Data Set | Exam |
|-----|------|-------|-------|-------------------|-----|--------------------|----------|------|------------|------|
| | | 00014 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.2 | LTS-KIDNEY | 13R |
| | | 00360 | 510UL | 1.6 | 90 | INR | 06S+ | 22.9 | 510-MIZ30 | 13R |
| 54 | 73 | 00194 | 510UL | 42.9 | 174 | DNT | LTS+ | 0.2 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.2 | SPEC-INT | 13R |
| 54 | 74 | 00194 | 510UL | 50.7 | 173 | DNT | LTS+ | 0.2 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.2 | SPEC-INT | 13R |
| 54 | 75 | 00196 | 510UL | 55.7 | 167 | DNT | LTS+ | 0.2 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.2 | SPEC-INT | 13R |
| 54 | 76 | 00194 | 510UL | 39.3 | 173 | DNT | LTS+ | 0.1 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.1 | SPEC-INT | 13R |
| 54 | 77 | 00196 | 510UL | 21.9 | 168 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.0 | SPEC-INT | 13R |
| 54 | 78 | 00194 | 510UL | 5.6 | 169 | DNT | LTS- | 0.0 | 510-MIZ30 | 13R |
| 54 | 80 | 00301 | 540HF | 4.8 | 159 | DNT | LTS+ | 0.1 | 540-MIZ30 | 13R |
| 54 | 89 | 00196 | 510UL | 8.3 | 175 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 54 | 90 | 00194 | 510UL | 9.1 | 177 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 54 | 91 | 00196 | 510UL | 16.0 | 169 | DNT | LTS- | 0.0 | 510-MIZ30 | 13R |
| 54 | 92 | 00194 | 510UL | 14.7 | 174 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 54 | 93 | 00196 | 510UL | 11.1 | 170 | DNT | LTS- | 0.0 | 510-MIZ30 | 13R |
| 54 | 94 | 00194 | 510UL | 5.4 | 177 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 54 | 95 | 00196 | 510UL | 2.8 | 175 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 54 | 96 | 00254 | 510UL | 6.2 | 176 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 54 | 97 | 00256 | 510UL | 7.8 | 176 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 54 | 98 | 00254 | 510UL | 5.8 | 179 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| | | 00254 | 510UL | 0.1 | 57 | NQI | 08S+ | 1.0 | 510-MIZ30 | 13R |
| | | 00410 | 520HF | 0.0 | 0 | NDF | 08S+ | 1.0 | SPEC-INT | 13R |
| 54 | 99 | 00256 | 510UL | 3.9 | 183 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 54 | 101 | 00256 | 510UL | 5.3 | 177 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 55 | 1 | 00072 | 510UL | 0.3 | 93 | INR | LTE+ | 15.3 | 510-MIZ30 | 13R |
| 55 | 33 | 00319 | 520HF | 0.2 | 32 | VOL | 03S | -5.1 | SPEC-INT | 13R |
| | | 00319 | 520HF | Cr 0.17 | | Ax 0.18 | 03S | -5.1 | SPEC-INT | 13R |
| | | 00114 | 510UL | 1.4 | 89 | ADI | 02S+ | 35.1 | 510-MIZ30 | 13R |
| | | 00287 | 520HF | 0.0 | 0 | NDF | 03S | -3.9 | SPEC-INT | 13R |
| | | 00319 | 520HF | 0.0 | 0 | NDF | 03S | -3.9 | SPEC-INT | 13R |
| 55 | 51 | 00295 | 540HF | 0.6 | 6 | INR | 10S+ | 18.5 | 540-MIZ30 | 13R |
| | | 00319 | 520HF | 1.0 | 22 | VOL | 11S+ | 19.1 | SPEC-INT | 13R |
| | | 00319 | 520HF | Cr 0.20 | | Ax 0.24 | 11S+ | 19.1 | SPEC-INT | 13R |
| | | 00295 | 540HF | 0.5 | 10 | ID 33 | 11S+ | 19.5 | 540-MIZ30 | 13R |
| 55 | 59 | 00118 | 510UL | 3.9 | 161 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 55 | 60 | 00120 | 510UL | 5.8 | 164 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 55 | 61 | 00118 | 510UL | 6.4 | 168 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 55 | 62 | 00120 | 510UL | 5.6 | 167 | DNT | LTS- | 0.0 | 510-MIZ30 | 13R |
| 55 | 63 | 00118 | 510UL | 2.8 | 164 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 55 | 66 | 00362 | 510UL | 5.8 | 172 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 55 | 67 | 00360 | 510UL | 4.1 | 179 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 55 | 69 | 00362 | 510UL | 10.1 | 163 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 55 | 70 | 00014 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.0 | LTS-KIDNEY | 13R |
| 55 | 71 | 00012 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.2 | LTS-KIDNEY | 13R |

THREE MILE ISLAND UNIT 1
OTSG-B
OUTAGE 13R
FREESPAN INDICATIONS

| Row | Tube | Reel | Probe | Volts/ Degrees | | Origin/ Percent | Location | | Data Set | Exam |
|-----|------|-------|-------|-------------------|-----|--------------------|----------|-------|------------|------|
| 55 | 72 | 00014 | 520HF | 0.0 | 0 | NDF | LTS- | 0.1 | LTS-KIDNEY | 13R |
| 55 | 73 | 00194 | 510UL | 70.4 | 172 | DNT | LTS+ | 0.2 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.2 | SPEC-INT | 13R |
| 55 | 74 | 00196 | 510UL | 62.5 | 165 | DNT | LTS+ | 0.3 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.3 | SPEC-INT | 13R |
| 55 | 75 | 00194 | 510UL | 54.3 | 172 | DNT | LTS+ | 0.3 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.3 | SPEC-INT | 13R |
| 55 | 76 | 00196 | 510UL | 35.6 | 169 | DNT | LTS+ | 0.2 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.2 | SPEC-INT | 13R |
| 55 | 77 | 00194 | 510UL | 11.8 | 171 | DNT | LTS+ | 0.1 | 510-MIZ30 | 13R |
| 55 | 78 | 00196 | 510UL | 9.4 | 167 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 55 | 79 | 00194 | 510UL | 5.6 | 167 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 55 | 80 | 00196 | 510UL | 3.7 | 158 | DNT | LTS- | 0.0 | 510-MIZ30 | 13R |
| 55 | 81 | 00194 | 510UL | 4.9 | 167 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 55 | 89 | 00194 | 510UL | 7.5 | 177 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 55 | 90 | 00196 | 510UL | 10.6 | 168 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 55 | 91 | 00194 | 510UL | 10.0 | 176 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 55 | 92 | 00196 | 510UL | 23.4 | 171 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.0 | SPEC-INT | 13R |
| 55 | 93 | 00194 | 510UL | 21.5 | 176 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS- | 0.1 | SPEC-INT | 13R |
| 55 | 94 | 00196 | 510UL | 3.9 | 181 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 55 | 95 | 00194 | 510UL | 6.6 | 176 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 55 | 96 | 00256 | 510UL | 8.1 | 172 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 55 | 97 | 00254 | 510UL | 7.5 | 176 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 55 | 98 | 00256 | 510UL | 5.7 | 181 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 55 | 99 | 00254 | 510UL | 6.7 | 176 | DNT | LTS+ | 0.1 | 510-MIZ30 | 13R |
| 55 | 100 | 00256 | 510UL | 4.2 | 180 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 55 | 101 | 00254 | 510UL | 4.2 | 178 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 55 | 117 | 00256 | 510UL | 1.5 | 1 | INR | 09S+ | 22.8 | 510-MIZ30 | 13R |
| | | 00301 | 540HF | 1.3 | 1 | INR | 09S+ | 22.8 | 540-MIZ30 | 13R |
| | | 00301 | 540HF | 1.2 | 3 | INR | 09S+ | 31.5 | 540-MIZ30 | 13R |
| | | 00256 | 510UL | 0.8 | 9 | INR | 09S+ | 31.5 | 510-MIZ30 | 13R |
| 55 | 121 | 00262 | 510UL | 0.2 | 67 | NQI | 09S+ | 0.3 | 510-MIZ30 | 13R |
| | | 00353 | 520HF | 0.0 | 0 | NDF | 09S+ | 0.3 | SPEC-INT | 13R |
| 56 | 1 | 00319 | 520HF | 1.4 | 0 | WAR 17 | 12S- | 0.8 | SPEC-INT | 13R |
| | | 00072 | 510UL | 0.3 | 95 | NQI | 12S- | 0.8 | 510-MIZ30 | 13R |
| | | 00287 | 520HF | 0.5 | 0 | WAR 6 | 12S- | 0.7 | SPEC-INT | 13R |
| 56 | 3 | 00287 | 520HF | 0.4 | 0 | WAR 4 | 09S+ | 0.3 | SPEC-INT | 13R |
| | | 00072 | 510UL | 0.2 | 89 | NQI | 09S+ | 0.3 | 510-MIZ30 | 13R |
| | | 00319 | 520HF | 1.2 | 0 | WAR 15 | 09S+ | 0.4 | SPEC-INT | 13R |
| 56 | 5 | 00072 | 510UL | 0.1 | 43 | INR | 09S- | 0.3 | 510-MIZ30 | 13R |
| 56 | 25 | 00072 | 510UL | 0.3 | 77 | NQI | LTE+ | 9.7 | 510-MIZ30 | 13R |
| | | 00319 | 520HF | 0.0 | 0 | NDF | LTS | -14.3 | SPEC-INT | 13R |
| 56 | 56 | 00120 | 510UL | 2.5 | 177 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 56 | 57 | 00118 | 510UL | 0.4 | 58 | NQI | LTS+ | 1.6 | 510-MIZ30 | 13R |
| | | 00319 | 520HF | 0.0 | 0 | NDF | LTS+ | 1.6 | SPEC-INT | 13R |
| 56 | 59 | 00118 | 510UL | 8.5 | 170 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 56 | 60 | 00120 | 510UL | 18.1 | 168 | DNT | LTS- | 0.0 | 510-MIZ30 | 13R |

THREE MILE ISLAND UNIT 1
OTSG-B
OUTAGE 13R
FREESPAN INDICATIONS

| Row | Tube | Reel | Probe | Volts/ Degrees | | Origin/ Percent | Location | | Data Set | Exam |
|-----|------|-------|-------|-------------------|-----|--------------------|----------|------|------------|------|
| | | 00287 | 520HF | 0.0 | 0 | NDF | LTS- | 0.0 | SPEC-INT | 13R |
| 56 | 61 | 00118 | 510UL | 6.2 | 170 | DNT | LTS- | 0.0 | 510-MIZ30 | 13R |
| 56 | 62 | 00120 | 510UL | 3.6 | 164 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 56 | 63 | 00118 | 510UL | 2.8 | 169 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 56 | 66 | 00362 | 510UL | 7.7 | 172 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 56 | 67 | 00362 | 510UL | 16.0 | 171 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 56 | 69 | 00355 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.0 | SPEC-INT | 13R |
| 56 | 70 | 00018 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.2 | LTS-KIDNEY | 13R |
| 56 | 71 | 00016 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.3 | LTS-KIDNEY | 13R |
| | | 00392 | 510UL | 26.2 | 174 | DNT | LTS+ | 0.3 | 510-MIZ30 | 13R |
| | | 00073 | 520HF | 0.2 | 5 | VOL | ETL- | 0.7 | KET12 | 13R |
| | | 00073 | 520HF | Cr 0.15 | | Ax 0.17 | ETL- | 0.7 | KET12 | 13R |
| 56 | 72 | 00018 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.0 | LTS-KIDNEY | 13R |
| 56 | 73 | 00194 | 510UL | 57.9 | 174 | DNT | LTS+ | 0.3 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.3 | SPEC-INT | 13R |
| 56 | 74 | 00194 | 510UL | 67.1 | 172 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| | | 00394 | 400PP | 0.0 | 0 | NDF | LTS+ | 0.0 | LTS-KIDNEY | 13R |
| 56 | 75 | 00194 | 510UL | 67.8 | 172 | DNT | LTS+ | 0.3 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.3 | SPEC-INT | 13R |
| 56 | 76 | 00194 | 510UL | 53.0 | 173 | DNT | LTS+ | 0.3 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.3 | SPEC-INT | 13R |
| 56 | 77 | 00016 | 520HF | 0.0 | 0 | NDF | LTS+ | 0.2 | LTS-KIDNEY | 13R |
| | | 00398 | 510UL | 32.2 | 171 | DNT | LTS+ | 0.2 | 510-MIZ30 | 13R |
| | | 00299 | 540HF | 0.9 | 4 | INR | 15S+ | 26.2 | 540-MIZ30 | 13R |
| | | 00398 | 510UL | 0.9 | 193 | INR | 15S+ | 26.3 | 510-MIZ30 | 13R |
| 56 | 79 | 00194 | 510UL | 9.2 | 168 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 56 | 81 | 00194 | 510UL | 6.8 | 167 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 56 | 82 | 00194 | 510UL | 6.8 | 169 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| 56 | 91 | 00194 | 510UL | 10.2 | 174 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 56 | 92 | 00196 | 510UL | 22.5 | 170 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS- | 0.1 | SPEC-INT | 13R |
| 56 | 93 | 00194 | 510UL | 19.1 | 175 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 | 0 | NDF | LTS- | 0.1 | SPEC-INT | 13R |
| 56 | 96 | 00196 | 510UL | 5.1 | 176 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 56 | 97 | 00262 | 510UL | 4.8 | 179 | DNT | LTS- | 0.2 | 510-MIZ30 | 13R |
| 56 | 98 | 00264 | 510UL | 2.5 | 186 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 56 | 99 | 00262 | 510UL | 3.1 | 180 | INR | LTS+ | 14.1 | 510-MIZ30 | 13R |
| | | 00262 | 510UL | 10.0 | 178 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |
| | | 00262 | 510UL | 1.0 | 82 | ADI | 07S+ | 12.6 | 510-MIZ30 | 13R |
| | | 00410 | 520HF | 0.0 | 0 | NDF | 07S+ | 12.6 | SPEC-INT | 13R |
| 56 | 100 | 00264 | 510UL | 10.8 | 172 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| | | 00264 | 510UL | 0.6 | 81 | ADI | 01S+ | 21.1 | 510-MIZ30 | 13R |
| | | 00410 | 520HF | 0.0 | 0 | NDF | 01S+ | 21.1 | SPEC-INT | 13R |
| 56 | 102 | 00264 | 510UL | 7.6 | 176 | DNT | LTS- | 0.1 | 510-MIZ30 | 13R |
| 56 | 103 | 00262 | 510UL | 11.3 | 176 | DNT | LTS+ | 0.0 | 510-MIZ30 | 13R |

THREE MILE ISLAND UNIT 1
OTSG-B
OUTAGE 13R
FREESPAN INDICATIONS

| Row | Tube | Reel | Probe | Volts/ Degrees | Origin/ Percent | Location | Data Set | Exam |
|-----|------|-------|-------|-------------------|--------------------|-----------|------------|------|
| 56 | 125 | 00410 | 520HF | 1.0 0 | WAR 17 | 05S+ 0.7 | SPEC-INT | 13R |
| | | 00301 | 540HF | 0.2 94 | NQI | 05S+ 0.7 | 540-MIZ30 | 13R |
| 57 | 18 | 00072 | 510UL | 0.7 80 | INR | 05S+ 5.9 | 510-MIZ30 | 13R |
| 57 | 36 | 00295 | 540HF | 0.3 13 | INR | 11S+ 15.0 | 540-MIZ30 | 13R |
| 57 | 57 | 00120 | 510UL | 4.1 178 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 57 | 60 | 00118 | 510UL | 13.5 168 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 57 | 61 | 00120 | 510UL | 10.9 168 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 57 | 65 | 00120 | 510UL | 2.6 175 | DNT | LTS- 0.2 | 510-MIZ30 | 13R |
| 57 | 66 | 00360 | 510UL | 6.6 176 | DNT | LTS- 0.2 | 510-MIZ30 | 13R |
| 57 | 70 | 00355 | 520HF | 0.0 0 | NDF | LTS- 0.1 | SPEC-INT | 13R |
| 57 | 71 | 00018 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| 57 | 72 | 00360 | 510UL | 0.1 121 | INR | LTS -1.1 | 510-MIZ30 | 13R |
| | | 00016 | 520HF | 0.0 0 | NDF | LTS+ 0.1 | LTS-KIDNEY | 13R |
| 57 | 73 | 00018 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| | | 00362 | 510UL | 41.1 169 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 57 | 74 | 00016 | 520HF | 0.0 0 | NDF | LTS+ 0.3 | LTS-KIDNEY | 13R |
| | | 00194 | 510UL | 39.2 173 | DNT | LTS+ 0.3 | 510-MIZ30 | 13R |
| 57 | 75 | 00194 | 510UL | 57.7 172 | DNT | LTS+ 0.3 | 510-MIZ30 | 13R |
| | | 00394 | 400PP | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| 57 | 76 | 00194 | 510UL | 66.8 172 | DNT | LTS+ 0.2 | 510-MIZ30 | 13R |
| | | 00404 | 400PP | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| 57 | 77 | 00018 | 520HF | 0.0 0 | NDF | LTS+ 0.2 | LTS-KIDNEY | 13R |
| | | 00194 | 510UL | 52.2 173 | DNT | LTS+ 0.2 | 510-MIZ30 | 13R |
| | | 00394 | 400PP | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| 57 | 78 | 00194 | 510UL | 24.4 172 | DNT | LTS+ 0.1 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 0 | NDF | LTS+ 0.1 | SPEC-INT | 13R |
| 57 | 79 | 00194 | 510UL | 12.8 170 | DNT | LTS+ 0.1 | 510-MIZ30 | 13R |
| 57 | 80 | 00194 | 510UL | 3.2 167 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 57 | 82 | 00194 | 510UL | 2.8 164 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 57 | 83 | 00194 | 510UL | 4.9 167 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 57 | 91 | 00194 | 510UL | 11.6 174 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 57 | 92 | 00194 | 510UL | 29.1 175 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 0 | NDF | LTS- 0.0 | SPEC-INT | 13R |
| 57 | 93 | 00194 | 510UL | 23.6 174 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| | | 00325 | 520HF | 0.0 0 | NDF | LTS- 0.1 | SPEC-INT | 13R |
| 57 | 94 | 00194 | 510UL | 10.7 176 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 57 | 96 | 00200 | 510UL | 5.3 178 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 57 | 97 | 00262 | 510UL | 9.2 176 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 57 | 98 | 00264 | 510UL | 5.8 175 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 57 | 99 | 00262 | 510UL | 13.0 177 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 57 | 100 | 00016 | 520HF | 0.0 0 | NDF | LTS- 0.1 | LTS-KIDNEY | 13R |
| | | 00264 | 510UL | 21.5 172 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 57 | 101 | 00262 | 510UL | 13.7 175 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 57 | 102 | 00264 | 510UL | 13.3 173 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |

THREE MILE ISLAND UNIT 1
OTSG-B
OUTAGE 13R
FREESPAN INDICATIONS

| Row | Tube | Reel | Probe | Volts/ Degrees | Origin/ Percent | Location | Data Set | Exam |
|-----|------|-------|-------|-------------------|--------------------|-----------|------------|------|
| 57 | 103 | 00016 | 520HF | 0.0 0 | NDF | LTS- 0.1 | LTS-KIDNEY | 13R |
| | | 00262 | 510UL | 30.2 173 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| | | 00262 | 510UL | 3.7 184 | DNT | 14S+ 11.8 | 510-MIZ30 | 13R |
| 57 | 104 | 00264 | 510UL | 14.8 172 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 58 | 56 | 00120 | 510UL | 3.6 178 | DNT | LTS- 0.2 | 510-MIZ30 | 13R |
| 58 | 60 | 00120 | 510UL | 3.8 167 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 58 | 61 | 00118 | 510UL | 6.2 171 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 58 | 62 | 00120 | 510UL | 2.7 176 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 58 | 64 | 00120 | 510UL | 3.1 175 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 58 | 65 | 00120 | 510UL | 3.0 176 | DNT | LTS- 0.2 | 510-MIZ30 | 13R |
| | | | | | | | | |
| 58 | 74 | 00200 | 510UL | 15.4 176 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 58 | 75 | 00200 | 510UL | 26.8 172 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | SPEC-INT | 13R |
| 58 | 76 | 00394 | 400PP | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| | | 00202 | 510UL | 37.3 169 | DNT | LTS+ 0.3 | 510-MIZ30 | 13R |
| 58 | 77 | 00200 | 510UL | 64.0 172 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| | | 00394 | 400PP | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | SPEC-INT | 13R |
| 58 | 78 | 00202 | 510UL | 55.3 168 | DNT | LTS+ 0.2 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS+ 0.2 | SPEC-INT | 13R |
| 58 | 90 | 00202 | 510UL | 2.9 181 | DNT | LTS- 0.2 | 510-MIZ30 | 13R |
| 58 | 91 | 00200 | 510UL | 12.8 175 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 58 | 92 | 00202 | 510UL | 29.0 172 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | SPEC-INT | 13R |
| 58 | 93 | 00200 | 510UL | 28.9 173 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | SPEC-INT | 13R |
| 58 | 94 | 00202 | 510UL | 12.0 172 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 58 | 97 | 00262 | 510UL | 11.6 173 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 58 | 98 | 00018 | 520HF | 0.0 0 | NDF | LTS- 0.0 | LTS-KIDNEY | 13R |
| | | 00262 | 510UL | 18.8 174 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 58 | 99 | 00016 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| | | 00264 | 510UL | 25.9 172 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 58 | 100 | 00018 | 520HF | 0.0 0 | NDF | LTS- 0.0 | LTS-KIDNEY | 13R |
| | | 00262 | 510UL | 34.3 173 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 58 | 101 | 00016 | 520HF | 0.0 0 | NDF | LTS+ 0.2 | LTS-KIDNEY | 13R |
| | | 00264 | 510UL | 40.5 172 | DNT | LTS+ 0.2 | 510-MIZ30 | 13R |
| 58 | 102 | 00018 | 520HF | 0.0 0 | NDF | LTS- 0.0 | LTS-KIDNEY | 13R |
| | | 00262 | 510UL | 37.8 173 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 58 | 103 | 00016 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| | | 00264 | 510UL | 23.1 173 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 58 | 104 | 00262 | 510UL | 15.8 174 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 59 | 21 | 00319 | 520HF | 0.4 28 | VOL | 03S -13.9 | SPEC-INT | 13R |

THREE MILE ISLAND UNIT 1
OTSG-B
OUTAGE 13R
FREESPAN INDICATIONS

| Row | Tube | Reel | Probe | Volts/ Degrees | Origin/ Percent | Location | Data Set | Exam |
|-----|------|-------|-------|-------------------|--------------------|-----------|------------|------|
| | | 00319 | 520HF | Cr 0.15 | Ax 0.21 | 03S -13.9 | SPEC-INT | 13R |
| | | 00064 | 510UL | 0.4 31 | NQI | 02S+ 25.6 | 510-MIZ30 | 13R |
| 59 | 54 | 00009 | 510UL | 3.2 174 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 58 | 00009 | 510UL | 2.6 159 | DNT | LTS- 0.2 | 510-MIZ30 | 13R |
| 59 | 59 | 00011 | 510UL | 2.7 177 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 60 | 00009 | 510UL | 3.0 172 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 59 | 61 | 00011 | 510UL | 3.8 174 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 62 | 00009 | 510UL | 3.5 169 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 63 | 00011 | 510UL | 4.2 175 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 59 | 64 | 00009 | 510UL | 6.1 171 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 59 | 65 | 00011 | 510UL | 11.2 172 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 59 | 66 | 00009 | 510UL | 9.0 169 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 67 | 00011 | 510UL | 15.2 171 | DNT | LTS -1.0 | 510-MIZ30 | 13R |
| | | 00024 | 520HF | 1.0 78 | MBM | 03S+ 36.1 | SPEC-INT | 13R |
| | | 00011 | 510UL | 0.5 116 | NQI | 03S+ 36.5 | 510-MIZ30 | 13R |
| 59 | 68 | 00009 | 510UL | 9.4 169 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 59 | 72 | 00200 | 510UL | 3.2 179 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 73 | 00202 | 510UL | 16.6 171 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS- 0.0 | SPEC-INT | 13R |
| 59 | 74 | 00200 | 510UL | 23.3 172 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | SPEC-INT | 13R |
| 59 | 75 | 00202 | 510UL | 35.5 169 | DNT | LTS+ 0.2 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS+ 0.2 | SPEC-INT | 13R |
| 59 | 76 | 00200 | 510UL | 34.3 172 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | SPEC-INT | 13R |
| 59 | 77 | 00202 | 510UL | 14.7 167 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 78 | 00200 | 510UL | 1.1 190 | INR | 13S+ 23.1 | 510-MIZ30 | 13R |
| 59 | 84 | 00200 | 510UL | 0.2 90 | NQI | 10S+ 18.1 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | 11S -17.9 | SPEC-INT | 13R |
| | | 00200 | 510UL | 0.1 85 | NQI | 10S+ 21.0 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | 11S -15.0 | SPEC-INT | 13R |
| | | 00200 | 510UL | 2.9 183 | DNT | 12S+ 1.2 | 510-MIZ30 | 13R |
| 59 | 87 | 00202 | 510UL | 4.1 178 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 59 | 88 | 00200 | 510UL | 23.1 176 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | SPEC-INT | 13R |
| 59 | 89 | 00202 | 510UL | 27.1 171 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| | | 00323 | 520HF | 0.0 0 | NDF | LTS- 0.0 | SPEC-INT | 13R |
| 59 | 90 | 00200 | 510UL | 12.7 176 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 94 | 00262 | 510UL | 7.8 176 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 59 | 95 | 00018 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| | | 00264 | 510UL | 28.9 172 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 96 | 00016 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| | | 00262 | 510UL | 48.1 174 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 97 | 00018 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | LTS-KIDNEY | 13R |
| | | 00264 | 510UL | 35.0 171 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 59 | 98 | 00016 | 520HF | 0.0 0 | NDF | LTS- 0.1 | LTS-KIDNEY | 13R |
| | | 00262 | 510UL | 21.7 174 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 59 | 99 | 00264 | 510UL | 6.1 171 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 60 | 2 | 00066 | 510UL | 0.2 57 | NQI | 15S+ 0.3 | 510-MIZ30 | 13R |

THREE MILE ISLAND UNIT 1
OTSG-B
OUTAGE 13R
FREESPAN INDICATIONS

| Row | Tube | Reel | Probe | Volts/ Degrees | Origin/ Percent | Location | Data Set | Exam |
|-----|------|-------|-------|-------------------|--------------------|-----------|-----------|------|
| | | 00305 | 520HF | 0.0 0 | NDF | LTE+ 7.6 | SPEC-INT | 13R |
| 81 | 128 | 00078 | 510UL | 0.2 88 | NQI | LTE+ 16.9 | 510-MIZ30 | 13R |
| | | 00305 | 520HF | 0.0 0 | NDF | LTE+ 16.9 | SPEC-INT | 13R |
| 81 | 131 | 00076 | 510UL | 0.1 76 | NQI | 11S+ 0.2 | 510-MIZ30 | 13R |
| | | 00313 | 520HF | 0.0 0 | NDF | 11S+ 0.2 | SPEC-INT | 13R |
| 82 | 7 | 00100 | 510UL | 5.9 176 | DNT | LTE+ 10.6 | 510-MIZ30 | 13R |
| 82 | 14 | 00408 | 520HF | 1.5 0 | WAR 23 | 06S+ 0.8 | SPEC-INT | 13R |
| | | 00307 | 540HF | 0.6 81 | NQI | 06S+ 0.8 | 540-MIZ30 | 13R |
| 82 | 21 | 00306 | 510UL | 6.5 174 | DNT | LTE+ 11.0 | 510-MIZ30 | 13R |
| 82 | 22 | 00304 | 510UL | 6.3 177 | DNT | LTE+ 10.9 | 510-MIZ30 | 13R |
| 82 | 30 | 00304 | 510UL | 1.6 92 | INR | 15S+ 29.4 | 510-MIZ30 | 13R |
| 82 | 37 | 00168 | 510UL | 0.3 46 | NQI | 04S+ 0.7 | 510-MIZ30 | 13R |
| | | 00315 | 520HF | 0.4 0 | WAR 9 | 04S+ 0.7 | SPEC-INT | 13R |
| 82 | 43 | 00168 | 510UL | 0.3 84 | NQI | 08S- 0.8 | 510-MIZ30 | 13R |
| | | 00315 | 520HF | 0.0 0 | NDF | 08S- 0.8 | SPEC-INT | 13R |
| 82 | 44 | 00166 | 510UL | 0.4 147 | INR | 08S+ 37.5 | 510-MIZ30 | 13R |
| 82 | 47 | 00168 | 510UL | 0.5 66 | NQI | 08S- 0.8 | 510-MIZ30 | 13R |
| | | 00315 | 520HF | 0.4 0 | WAR 8 | 08S- 0.6 | SPEC-INT | 13R |
| 82 | 48 | 00328 | 510UL | 0.4 39 | NQI | 04S+ 0.7 | 510-MIZ30 | 13R |
| | | 00408 | 520HF | 0.5 0 | WAR 10 | 04S+ 0.8 | SPEC-INT | 13R |
| 82 | 74 | 00003 | 510UL | 3.0 164 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 82 | 75 | 00005 | 510UL | 4.0 178 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 82 | 76 | 00104 | 510UL | 8.9 173 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 82 | 77 | 00102 | 510UL | 12.4 175 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 82 | 78 | 00104 | 510UL | 13.7 174 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 82 | 79 | 00102 | 510UL | 5.3 177 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 82 | 80 | 00104 | 510UL | 3.2 177 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 82 | 83 | 00102 | 510UL | 3.3 156 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 82 | 84 | 00104 | 510UL | 4.3 165 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 82 | 85 | 00102 | 510UL | 3.1 151 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 82 | 86 | 00104 | 510UL | 5.7 167 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 82 | 87 | 00102 | 510UL | 4.6 156 | DNT | LTS- 0.0 | 510-MIZ30 | 13R |
| 82 | 119 | 00062 | 510UL | 0.4 91 | NQI | LTE+ 12.9 | 510-MIZ30 | 13R |
| | | 00305 | 520HF | 0.0 0 | NDF | LTE+ 12.9 | SPEC-INT | 13R |
| 82 | 120 | 00060 | 510UL | 0.1 75 | NQI | 06S+ 17.3 | 510-MIZ30 | 13R |
| | | 00305 | 520HF | 0.0 0 | NDF | 06S+ 17.3 | SPEC-INT | 13R |
| 83 | 6 | 00100 | 510UL | 5.9 176 | DNT | LTE+ 10.8 | 510-MIZ30 | 13R |
| 83 | 7 | 00098 | 510UL | 6.0 174 | DNT | LTE+ 11.1 | 510-MIZ30 | 13R |
| | | 00098 | 510UL | 3.9 182 | DNT | LTS+ 20.4 | 510-MIZ30 | 13R |
| 83 | 21 | 00306 | 510UL | 1.7 85 | INR | 06S+ 2.7 | 510-MIZ30 | 13R |
| 83 | 25 | 00306 | 510UL | 0.6 94 | INR | 02S+ 35.0 | 510-MIZ30 | 13R |
| 83 | 32 | 00304 | 510UL | 0.1 107 | INR | UTS+ 3.0 | 510-MIZ30 | 13R |
| 83 | 35 | 00304 | 510UL | 0.4 115 | INR | 07S+ 25.6 | 510-MIZ30 | 13R |
| 83 | 39 | 00168 | 510UL | 0.3 80 | NQI | 04S+ 0.7 | 510-MIZ30 | 13R |
| | | 00315 | 520HF | 0.6 0 | WAR 12 | 04S+ 0.7 | SPEC-INT | 13R |
| 83 | 47 | 00168 | 510UL | 0.3 65 | NQI | 08S- 0.8 | 510-MIZ30 | 13R |
| | | 00315 | 520HF | 0.0 0 | NDF | 08S- 0.8 | SPEC-INT | 13R |
| 83 | 72 | 00023 | 510UL | 3.2 165 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 83 | 73 | 00021 | 510UL | 4.0 162 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |

THREE MILE ISLAND UNIT 1
OTSG-B
OUTAGE 13R
FREESPAN INDICATIONS

| Row | Tube | Reel | Probe | Volts/ Degrees | Origin/ Percent | Location | Data Set | Exam |
|-----|------|-------|-------|-------------------|--------------------|-----------|------------|------|
| 100 | 1 | 00384 | 510UL | 10.0 176 | DNT | LTE+ 10.6 | 510-MIZ30 | 13R |
| 100 | 5 | 00384 | 510UL | 2.6 174 | DNT | LTE+ 9.7 | 510-MIZ30 | 13R |
| 100 | 7 | 00332 | 510UL | 6.2 177 | DNT | LTE+ 10.7 | 510-MIZ30 | 13R |
| 100 | 12 | 00330 | 510UL | 0.2 81 | INR | 09S+ 0.3 | 510-MIZ30 | 13R |
| 100 | 46 | 00315 | 520HF | 0.7 0 | WAR 13 | 07S- 0.7 | SPEC-INT | 13R |
| | | 00158 | 510UL | 0.2 74 | NQI | 07S+ 0.7 | 510-MIZ30 | 13R |
| | | 00315 | 520HF | 0.7 0 | WAR 13 | 07S+ 0.7 | SPEC-INT | 13R |
| 100 | 58 | 00158 | 510UL | 9.7 173 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| 100 | 59 | 00160 | 510UL | 6.6 171 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 100 | 64 | 00342 | 510UL | 0.4 94 | NQI | LTE+ 10.3 | 510-MIZ30 | 13R |
| | | 00349 | 520HF | 0.0 0 | NDF | LTS -13.7 | SPEC-INT | 13R |
| | | 00342 | 510UL | 2.8 179 | DNT | LTS- 0.2 | 510-MIZ30 | 13R |
| 100 | 70 | 00342 | 510UL | 4.4 174 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 100 | 71 | 00340 | 510UL | 12.8 176 | DNT | LTS- 0.4 | 510-MIZ30 | 13R |
| 100 | 72 | 00340 | 510UL | 6.4 178 | DNT | LTS- 0.3 | 510-MIZ30 | 13R |
| | | 00378 | 520HF | 0.0 0 | NDF | LTS- 0.3 | LTS-KIDNEY | 13R |
| 100 | 77 | 00136 | 510UL | 0.8 40 | INR | 12S+ 31.6 | 510-MIZ30 | 13R |
| 100 | 95 | 00086 | 510UL | 4.4 181 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 100 | 96 | 00084 | 510UL | 7.0 174 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 100 | 97 | 00086 | 510UL | 10.3 175 | DNT | LTS- 0.3 | 510-MIZ30 | 13R |
| 100 | 98 | 00030 | 520HF | 0.0 0 | NDF | LTS- 0.3 | LTS-KIDNEY | 13R |
| | | 00084 | 510UL | 17.9 173 | DNT | LTS- 0.3 | 510-MIZ30 | 13R |
| 100 | 99 | 00086 | 510UL | 23.8 172 | DNT | LTS+ 0.0 | 510-MIZ30 | 13R |
| | | 00285 | 520HF | 0.0 0 | NDF | LTS+ 0.0 | SPEC-INT | 13R |
| 100 | 100 | 00084 | 510UL | 10.9 172 | DNT | LTS- 0.3 | 510-MIZ30 | 13R |
| 100 | 102 | 00084 | 510UL | 0.2 100 | NQI | 07S- 0.5 | 510-MIZ30 | 13R |
| | | 00285 | 520HF | 0.0 0 | NDF | 07S- 0.5 | SPEC-INT | 13R |
| 100 | 119 | 00086 | 510UL | 2.6 183 | DNT | 13S+ 16.7 | 510-MIZ30 | 13R |
| 101 | 3 | 00330 | 510UL | 8.7 178 | DNT | LTE+ 10.4 | 510-MIZ30 | 13R |
| 101 | 4 | 00332 | 510UL | 6.6 175 | DNT | LTE+ 10.7 | 510-MIZ30 | 13R |
| 101 | 5 | 00332 | 510UL | 7.6 176 | DNT | LTE+ 10.9 | 510-MIZ30 | 13R |
| 101 | 7 | 00330 | 510UL | 6.5 177 | DNT | LTE+ 10.7 | 510-MIZ30 | 13R |
| 101 | 9 | 00330 | 510UL | 5.8 176 | DNT | LTE+ 11.1 | 510-MIZ30 | 13R |
| 101 | 10 | 00332 | 510UL | 6.8 175 | DNT | LTE+ 10.9 | 510-MIZ30 | 13R |
| 101 | 12 | 00332 | 510UL | 0.3 53 | INR | 09S+ 0.4 | 510-MIZ30 | 13R |
| 101 | 49 | 00160 | 510UL | 0.3 48 | NQI | 07S+ 0.7 | 510-MIZ30 | 13R |
| | | 00315 | 520HF | 0.4 0 | WAR 8 | 07S+ 0.7 | SPEC-INT | 13R |
| 101 | 53 | 00160 | 510UL | 0.2 80 | NQI | UTS+ 1.8 | 510-MIZ30 | 13R |
| | | 00315 | 520HF | 0.0 0 | NDF | UTS+ 1.8 | SPEC-INT | 13R |
| 101 | 62 | 00158 | 510UL | 2.7 197 | DNT | LTS- 0.2 | 510-MIZ30 | 13R |
| 101 | 63 | 00160 | 510UL | 8.4 170 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 101 | 64 | 00342 | 510UL | 3.0 175 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 101 | 70 | 00342 | 510UL | 2.8 174 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 101 | 91 | 00136 | 510UL | 4.6 170 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 101 | 92 | 00134 | 510UL | 3.2 176 | DNT | LTS- 0.1 | 510-MIZ30 | 13R |
| 101 | 98 | 00084 | 510UL | 7.9 176 | DNT | LTS- 0.3 | 510-MIZ30 | 13R |
| 101 | 99 | 00086 | 510UL | 4.4 169 | DNT | LTS- 0.2 | 510-MIZ30 | 13R |
| 101 | 118 | 00285 | 520HF | 0.5 0 | WAR 6 | 08S- 0.5 | SPEC-INT | 13R |
| | | 00084 | 510UL | 0.2 84 | NQI | 08S- 0.5 | 510-MIZ30 | 13R |