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| Traveler Title | SNS PPU Thermal Shield Inspection Traveler |
| Traveler Abstract | Traveler defines inspection process for the SNS PPU Thermal Shield |
| Traveler ID | SNSPPU-CM-INSP-THRM |
| Traveler Revision  | - |
| Traveler Author | Matt Marchlik |
| Traveler Date | 15-Apr-20 |
| NCR Informative Emails | Marchlik, kwilson, edaly |
| NCR Dispositioners | marchlik, kwilson, edaly |
| D3 Emails |  |
| Approval Names | M. Marchlik | K. M. Wilson | A. DeKerlegand | E.F. Daly |
| Approval Signatures |  |  |  |  |
| Approval Dates |  |  |  |  |
| Approval Title | Author | Reviewer | Reviewer | Project Manager |

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| References | List and Hyperlink all documents related to this traveler. This includes, but is not limited to: safety (THAs, SOPs, etc), drawings, procedures, and facility related documents. |
| 104211100-M8U-8200-A002-RevA (THERMAL SHIELD ASSEMBLY) | 104211100-M8U-8200-A003-RevA (50K SHIELD SUBASSY) | 104211100-M8U-8200-A025 (SUPPLY END THERMAL SHIELD ASSY) |
| 104211100-M8U-8200-A014 (RETURN END THERMAL SHIELD ASSY) | 104211100-M8U-8200-A042 (SHIELD BELLOWS ASSEMBLY) | 104211100-M8U-8200-A040 (SUPPORT ASSY) |

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| Revision Note |  |
| - | Initial release of this Traveler. |

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| Step No. | Instructions | Data Input |
| **General handling guidelines:** When moving the assembly alone and not installed in a spaceframe, it should be supported/lifted at three points: At the center and approximately four feet from each end. The thermal shields shall be handled according to standard cleaning and handling practices. |
| 1 | **Initial Inspection:** |
| Technician NameDate of InspectionSerial Number of part | [[TechName]] <<SRF>>[[InspectionDate]] <<TIMESTAMP>>[[THRMSN]] << THRMSN>> |
| Is the assembly clean, free from dust, oil, finger prints or other contaminants? | [[PartCleanOk]] <<YESNO>> |
| Inspect all of the sheet metal panels of the assembly and verify that there are no ding/dents that exceed ¼” in depth. | [[PanelsOk]]<<YESNO>> |
| Bellows:* The access panels above the bellows should be removed to provide access to the bellows and replaced after inspection.
* Visually inspect the three bellows assemblies in the helium line and verify that they are free from dings/dents greater than .02” in depth and are free from gouges in the convolutions.
* Verify that the bellows are straight, not squirmed.
 | [[BellowsOk]]<<YESNO>> |
| Heat Stations:* Verify the thermal heat stations are installed on both ends of the shield assemblies and that the thermal strapping braze joints look to be in good condition.
* The shipping restraint may be removed for the inspection and shall be replaced afterwards.
 | [[heatstationOk]]<<YESNO>> |
| Space Frame Mounts:Verify that all 32 of the G11 space frame mounts are accounted for and installed correctly and securely. | [[MountsOk]]<<YESNO>> |
| End Supports:Verify that both end shield supports assemblies are installed securely and correctly. | [[SupportOk]]<<YESNO>> |
| Field Probe Cable Intercepts:Verify that all four of the field probe cable thermal intercept blocks are accounted for and installed securely. | [[InterceptOk]]<<YESNO>> |
| He line braze:* Verify that the helium lines is brazed properly to the thermal contraction fingers.
* Verify that there is not exidation around the braze region from remnant flux as shown in the image below.

 | [[BrazeOk]]<<YESNO>> |
| Nitronic Rod Thermal Intercept:* Verify that all 32 nitronic rod thermal intercepts are brazed to the shield adequately.
* Verify that there is not exidation around the braze region from remnant flux.
 | [[RodinterceptOk]]<<YESNO>> |
| Comments:Upload photos of any damage. | [[VisualInspComment]] <<COMMENT>>[[VisualInspPhoto]] <<FILEUPLOAD>> |
| 2 | **Dimensional Inspection:** |
| Dimensionally inspect the thermal shield assemblies with serial numbers ending in 001, 003 and 006. | [[DimcheckOk]] <<YESNO>>[[DimcheckComment]] <<COMMENT>> |
| **Drawing Number** | **Description** | **Drawing Value** | **Measured Value** | **Within Tolerance** |
| N/A | Overall Length: From outer face of end extensions | 228.61” +/- .25” | [[MeasLength]] <<FLOAT>> <<YESNO>> |
| N/A | Outer diameter of the shield  | 27.97” +/- .25”Or28.19” +/- .25” | [[MeasOD]] <<FLOAT>> <<YESNO>> |
| N/A | FPC penetration local center to center distance, 2 places.  | 15.80” +/- .25” | [[MeasFPC1]] <<FLOAT>> <<YESNO>> |
| N/A | FPC penetration pair to pair. Measure distance between centers of the two center FPC penetrations. | 93.04” +/- .25” | [[MeasFPC2]] <<FLOAT>> <<YESNO>> |
| 3 | **Storage:** |
| Replace all components that have been removed for inspection and ensure the bellows covers are replaced. | [[StorageTech]] <<SRF>>[[StorageDate]] <<TIMESTAMP>> |