

## NCSX Job/WP Matrix

| WP#  | Name of Work Activity  | Cog Engr      | RLM           | WP Status <sup>a</sup>        | WP Risk Type | Job# <sup>b</sup>      | Job Title  | Job Manager   | Comments                          | Next Action Needed By              |
|------|--|---------------|---------------|-------------------------------|--------------|------------------------|--|---------------|-----------------------------------|------------------------------------|
| 1105 | Vessel Weld Joint Design   | Viola         | Dudek         | Closed                        | Standard     | 1201                   | VV Prelim Dsn  | Viola         |                                   |                                    |
| 1074 | PVVS Fabrication   | Viola         | Heitzenroeder | Closed                        | Standard     | 1202                   | VV R&D   | Viola         |                                   |                                    |
| 1103 | Vacuum Vessel Final Design   | Goranson      | Nelson        | Closed                        | Serious      | 1203                   | VV Final Design  | Goranson      |                                   |                                    |
| 1191 | VVProcurements - Non-VVSA  | Dudek         | Reiersen      | Pending Installation Approval | Standard     | 1204                   | VV System Procurements (non VVSA)                      | Dudek         |                                   |                                    |
| 1225 | Vessel Weld Joint R&D  | Dudek         | Reiersen      | Closed                        | Standard     | 1206                   | VV Weld Joint R&D                                      | Dudek         |                                   |                                    |
| 1181 | VVSA Fabrication   | Viola         | Nelson        | Closed                        | Major        | 1250                   | VVSA Fabrication                                       | Viola         |                                   |                                    |
| 1190 | TF Coils   | Kalish        | Nelson        | Closed                        | Major        | 1301                   | TF Design  | Kalish        |                                   |                                    |
| 1250 | PF Coils   | Kalish        | Reiersen      | Pending Final Approval        | Major        | 1302                   | PF Design  | Kalish        |                                   |                                    |
| 1361 | CS Support Structure Design & Analysis                             | Dahlgren      | Reiersen      | Pending Initial Approval      | Serious      | 1303                   | CS Support Structure Design & Analysis                 | Dahlgren      |                                   | <b>WILLIAMS REVIEW AND APPROVE</b> |
| 1231 | TF Coil Fabrication Preparation                                    | Chrzanowski   | Dudek         | Closed                        | Standard     | 1350                   | TF Coil Fabrication Preparation                        | Chrzanowski   |                                   |                                    |
| 1295 | Procurement of NCSX TF Coils                                       | Kalish        | Reiersen      | Pending Initial Approval      | Major        | 1351, 1361             | TF Coil Supplies TF Coil Fabrication                   | Kalish        |                                   | <b>REIERSEN REVIEW AND APPROVE</b> |
|      | PF Coil Procurement  | Kalish        | Reiersen      |                               |              | 1352                   | PF Coil Procurement                                    | Kalish        | Prepare WP prior to start of work |                                    |
|      | CS Structure Procurement   | Dahlgren      | Reiersen      |                               |              | 1353                   | CS Structure Procurement                               | Dahlgren      | Prepare WP prior to start of work |                                    |
|      | Trim Coil Design & Fab   | Kalish        | Reiersen      |                               |              | 1354                   | Trim Coil Design & Fab                                 | Kalish        | Prepare WP prior to start of work |                                    |
|      | Conventional Coils I&C Design and Fab                              | Kalish        | Reiersen      |                               |              | 1355                   | Conventional Coils I&C Design & Fab                    | Kalish        | Prepare WP prior to start of work |                                    |
| 1088 | Prototype Modular Coil Winding Form                                | Heitzenroeder | Reiersen      | Closed                        | Standard     | 1404                   | Modular Coil Winding Form R&D                          | Heitzenroeder |                                   |                                    |
| 1125 | Modular Coil Winding R&D plus Procurement of Coil Winding Supplies | Chrzanowski   | Dudek         | Pending Installation Approval | Serious      | 1406, 1408             | Modular Coil Winding R&D Modular Coil Winding Supplies | Chrzanowski   |                                   |                                    |
| 1018 | Winding Equipment & Tooling  | Chrzanowski   | Dudek         | Closed                        | Standard     | 1407 1412              | Modular Coil Winding Facilities                        | Chrzanowski   |                                   |                                    |
| 1138 | Manufacturing of Modular Coils- Production Activities              | Chrzanowski   | Dudek         | Pending Installation Approval | Serious      | 1408, 1451, 1459, 1460 | Modular Coil Winding                                   | Chrzanowski   |                                   |                                    |
| 1100 | Coil Power Test Area   | Gettelfinger  | Von Halle     | Closed                        | Standard     | 1409                   | Modular Coil Test Stand                                | Gettelfinger  |                                   |                                    |

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| 1188 | Manufacturing Twisted Racetrack Coil (TRC)           | Chrzanowski   | Dudek     | Closed                        | Serious      | 1410              | MC Twisted Racetrack Fabrication            | Chrzanowski   |                                   |                             |
| 1256 | MCWF Fabrication                                     | Heitzenroeder | Nelson    | Pending Installation Approval | Serious      | 1411              | MCWF Fabrication                            | Heitzenroeder |                                   |                             |
| 1237 | Operate NCSX Coil Test Facility                      | Gettelfinger  | von Halle | Closed                        | Serious      | 1414              | Modular Coil Testing                        | Gettelfinger  |                                   |                             |
| 1308 | Prep C1 Coil for Power Testing                       | Gettelfinger  | Reiersen  | Closed                        | Standard     | 1414              | Prepare C1 for Power Test                   | Gettelfinger  |                                   |                             |
| 1096 | Modular Coil Final Design and Analysis (FY2004-2005) | Williamson    | Nelson    | Closed                        | Serious      | 1416, 1421        | Modular Coil Final Design                   | Williamson    |                                   |                             |
| 1357 | Modular Coil Shim Friction Testing                   | Gettelfinger  | Dudek     | Pending Initial Approval      | Standard     | 1429              | Friction Testing of MC Shims                | Gettelfinger  |                                   | DUDEK REVIEW AND APPROVE    |
| 1355 | Modular Coil Interface Hardware                      | Dudek         | Reiersen  | Pending Final Approval        | Standard     | 1431              | MC Interface Hardware                       | Dudek         |                                   | WILLIAMS REVIEW AND APPROVE |
| 1019 | Winding Prototype Modular Coil                       | Chrzanowski   | Dudek     | Closed                        | Standard     | 14XX              |   |               |                                   |                             |
| 1360 | TF & PF Support Structure Design & Analysis          | Dahlgren      | Reiersen  | Pending Final Approval        | Serious      | 1501              | TF & PF Support Structure Design & Analysis | Dahlgren      |                                   |                             |
| 1101 | Structural Support Castings                          | Kalish        | Nelson    | Closed                        | Serious      | 1501,             | Structures Design                           | Kalish        |                                   |                             |
|      | Coil Structures Procurements                         | Dahlgren      | Reiersen  |                               |              | 1550              | Coil Structures Procurements                | Dahlgren      | Prepare WP prior to start of work |                             |
|      | Coil Services Design                                 | Williamson    | Nelson    |                               |              | 1601              | Coil Services Design                        | Nelson        | Prepare WP prior to start of work |                             |
| 1254 | Cryostat and Base Support Structure Design           | Gettelfinger  | Reiersen  | Pending Installation Approval | Standard     | 1701              | Cryostat and Base Support Structure Design  | Gettelfinger  |                                   |                             |
|      | Cryostat Procurement                                 | Gettelfinger  | Reiersen  |                               |              | 1751              | Cryostat Procurement                        | Gettelfinger  | Prepare WP prior to start of work |                             |
|      | Base Support Structure Procurement                   | Gettelfinger  | Reiersen  |                               |              | 1752              | Base Support Structure Procurement          | Gettelfinger  | Prepare WP prior to start of work |                             |
| 1224 | FP Assembly Oversight and Support                    | Viola         | Dudek     | Pending Installation Approval | Serious      | 1802              | FP Assembly Oversight and Support           | Viola         |                                   |                             |
| 1249 | FPA Tooling and Constructability                     | Brown         | Dudek     | Pending Initial Approval      | Serious      | 1803,             | FPA Tooling and Constructability            | Brown         |                                   | DUDEK REVIEW AND APPROVE    |
| N/A  | Metrology Hardware                                   | Raftopoulos   | Dudek     |                               |              | 1804              | FPA Measurement Systems                     | Raftopoulos   | No WP required per RLM.           |                             |

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| 1363 | Field Period Assembly Specifications and Drawings  | Cole         | Nelson    | Pending Installation Approval | Standard     | 1806                 | FPA Specs and Drawings   | Cole         |   |                       |
| 1350 | Perform C-C Coil prototype fitup                   | Viola        | Dudek     | Pending Final Approval        | Standard     | 1810                 | Field Period Assembly  | Viola        |   |                       |
| N/A  | Stellartore Core Mgmt & Integration                | Nelson       | Reiersen  |                               |              | 1901                 | Stellarator Core Management and Integration                      | Nelson       | No WP required per RLM.   |                       |
|      | Fueling System                                     | Blanchard    | Dudek     |                               |              | 2101                 | Fueling System   | Blanchard    | Prepare WP prior to start of work   |                       |
|      | Vacuum Pumping System                              | Blanchard    | Dudek     |                               |              | 2201                 | Vacuum Pumping System  | Blanchard    | Prepare WP prior to start of work   |                       |
| 1126 | C Site NCSX NBI Testing and Development            | Stevenson    | von Halle | Pending Final Approval        | Standard     | 2501,                | Neutral Beam Refurbishment                                       | Stevenson    | <b>Cog is keeping WP open in the event more work can be done.</b>   |                       |
| 1212 | NCSX External Magnetics                            | Stratton     | Dudek     | Pending Final Approval        | Standard     | 3101                 | Magnetic Diagnostics   | Labik        |   |                       |
|      | Edge & Divertor Diagnostics                        | Stratton     | Dudek     |                               |              | 3601                 | Edge & Divertor Diagnostics                                      | Stratton     | Prepare WP prior to start of work   |                       |
| 1091 | Diagnostic Systems Integration (FY2004)            | Johnson      | Johnson   | Closed                        | Standard     | 3901,                | Diagnostic Systems Integration                                   | Johnson      |   |                       |
| 1116 | Power Systems Engineering and Design               | Ramakrishnan | von Halle | Closed                        | Standard     | 4101<br>4401<br>4501 | AC Power Control & Protection Power Systems Design & Integration | Ramakrishnan |   |                       |
|      | Power Systems Engineering and Design               | Ramakrishnan | von Halle |                               |              | 4101<br>4401<br>4501 | AC Power Control & Protection Power Systems Design & Integration | Ramakrishnan | Prepare WP prior to start of work   |                       |
| 1118 | DC Transmission Structure & Trays from D to C site | Ramakrishnan | von Halle | Closed                        | Standard     | 4301                 | DC Systems   | Ramakrishnan |   |                       |
| 1216 | NCSX WBS4 C-Site DC System Design and Installation | Ramakrishnan | von Halle | Pending Installation Approval | Major        | 4301                 | DC Systems   | Ramakrishnan |   |                       |
| N/A  | Control Room Walls and Floor                       |              | Perry     |                               |              | 7201                 | Control Room Walls and Floor                                     | Perry        | <b>Work will most likely be GPP will not be done this FY. WP will be prepared when work scheduled. May be assigned to GPP. Close?</b> | <b>Perry</b>          |

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| 1247 | Platform Design and Fabrication                        | Perry      | Reiersen  | Pending Installation Approval | Standard     | 7301, 7501                   | Platform Design and Fabrication  | Perry                                       |   |                                       |
| 1146 | NCSX Test Cell Copper Ground Plane Cuts                | Perry      | Reiersen  | Approved for Installation     | Standard     | 7401 (613.030)               | TC Prep and Machine Assy Planning (Test cell copper ground plane cuts)                                       | Perry                                       | <b>IS THIS DONE YET?</b>                            | <b>UPDATE BY 1/26/2007 IF NEEDED.</b> |
| 1137 | Shielding in CS Building High Bay                      | Priniski   | Perry     | Pending Installation Approval | Standard     | 7401, 7101                   | Test Cell Facility Preparations  | Perry                                       | <b>This was done under GPP. SHOULDN'T WE CLOSE?</b> | <b>UPDATE BY 1/26/2007</b>            |
| 1241 | Prep for NCSX Installation                             | Perry      | Reiersen  | Pending Final Approval        | Standard     | '7401, '7501                 | Test Cell Facility Preparations  | Perry                                       |   |                                       |
|      | Machine Assembly Tooling Design & Fab                  |            | Perry     |                               |              | 7601                         | Machine Assembly Tooling Design & Fab  | Brown                                       | <b>No work scheduled until 10/07</b>                |                                       |
| 1093 | Project Management and Control (FY2004)                | Strykowski | Neilson   | <b>Closed</b>                 | Standard     | 8101<br>8102                 | Project Management & Control NCSX MIE Management at ORNL   | Neilson                                     |   |                                       |
| 1094 | Systems Engineering Support (FY2004)                   | Reiersen   | Neilson   | <b>Closed</b>                 | Standard     | 8202<br>8203<br>8204<br>8205 | Engineering Management & Systems Engineering Support Design Integration Systems Analysis Dimensional Control | Reiersen<br><br>Brown<br>Brooks<br>Stratton | <b>WP not required on future work per the RLM</b>   |                                       |
| 1095 | Project Physics Support (FY2004)                       | Zarnstorff | Neilson   | <b>Closed</b>                 | Standard     | 8401<br>8402                 | Project Physics  | Zarnstorff                                  |   |                                       |
| 1045 | Re-install Chiller for C-Site Rectifier Cooling System | Dudek      | Reiersen  | <b>Closed</b>                 | Standard     |                              |  |   |   |                                       |
| 1046 | Checkout of the NCSX NB Rectifier Cooling Water System | Dudek      | Reiersen  | <b>Closed</b>                 | Standard     |                              |  |   |   |                                       |
| 1048 | NCSX NBI Development Activities                        | Stevenson  | Von Halle | <b>Closed</b>                 | Standard     |                              |  |   |   |                                       |
| 1061 | C site NBI Modulator Repair                            | Stevenson  | Von Halle | <b>Closed</b>                 | Standard     |                              |  |   |   |                                       |

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| 1082 | Neutral Beam Box Exhaust Monitoring System           | Carnavelle | Von Halle | Closed                 | Standard     |                   |           |             |          |                       |
| 1090 | Stellarator Core Management and Integration (FY2004) | Nelson     | Reiersen  | Closed                 | Standard     |                   |           |             |          |                       |
| 1098 | NCSX Conventional coils Preliminary Design           | Kalish     | Reieren   | Closed                 | Standard     |                   |           |             |          |                       |
| 1102 | NCSX WBS 6 - Facility systems FY04 Support           | Dudek      | Reiersen  | Closed                 | Standard     |                   |           |             |          |                       |