

C-AD OPM 13.6.1.a Design Review Questionnaire

|   |  |  |
|---|--|--|
| Design Review Questionnaire   |  | Prepared by:   |
| Revision #  | <input type="text" value="00"/>  | <input type="text" value="APendzick"/>               |
| Project/Equipment Description:  |  |  |
| <input type="text" value="Prefabricated building @911 High Bay and Utilities"/> |  |  |
| Date:   | Reviewed by:   | Drawing # (s)  |
| <input type="text" value="7/24/08"/>  | <input type="text" value="R. Karol, A. Javidaf, E. Lessard, A. Pendzick"/> | <input type="text" value="List (#, #): D14-1698-4"/> |

Indicate Applicable Sections of Questionnaire:

- [A. General Design Questions \(Required\)](#)
- [B. Safety, Security and Quality Assurance \(Required\)](#)
- [C. Electrical forms](#)
- [D. Structural and Pressurized Systems](#)
- [E. Equipment Layout and Installation](#)
- [F. Ionizing Radiation Shielding](#)
- [G. Materials](#)
- [H. Vacuum](#)
- [I. Drawings](#)
- [J. Thermal](#)
- [K. Vibration, Noise and Natural Phenomena](#)
- [L. Manufacturing](#)
- [M. Software, PLC, Firmware, Human Factors and Controls](#)

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Summary of documentation to be included in the final design review file (see blue shaded boxes in questionnaire):

|                                     |                          |
|-------------------------------------|--------------------------|
| <input checked="" type="checkbox"/> | Calculations             |
| <input checked="" type="checkbox"/> | Specifications           |
| <input checked="" type="checkbox"/> | Drawing(s)               |
| <input checked="" type="checkbox"/> | Materials Certifications |
| <input type="checkbox"/>            | Welding Certifications   |
| <input type="checkbox"/>            | Test Results             |
| <input type="checkbox"/>            | Equivalence or Variance  |
| <input type="checkbox"/>            | Procedures               |

If the Section (A, B, C, etc.) is applicable, then indicate full answer where required. Indicate Yes/No/NA/TBD in last column where required. If the entire Section is not applicable, then go to the next Section. (Note: TBD = to be determined and NA = not applicable)

**A. General Design Questions (Required)**

General Comments on Section A

|    |  |                                  |
|----|--|----------------------------------|
| 1. | Has the design criteria been fixed and agreed to by all involved?  | <input type="text" value="Yes"/> |
| 2. | Is there a cost estimate and project schedule?   | <input type="text" value="Yes"/> |
| 3. | Will the controls be ergonomically designed (i.e. clear, easy to reach and operate)? (Refer to Human Factor requirements in SBMS Ergonomics/Occupational subject area) | <input type="text" value="N/A"/> |
| 4. | What is the design life, and does the design meet the needs over the required life?  |                                  |

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| 5.  | <p>What efforts will be taken to assure that the design criteria will be met by this design?<br/>(Check all that apply)</p> <p><input checked="" type="checkbox"/> Engineering investigations</p> <p><input type="checkbox"/> Computer modeling or simulation</p> <p><input type="checkbox"/> Tests</p> <p><input type="checkbox"/> Analyses</p> |
| 6.  | <p>What other design approaches were considered and why were they rejected?</p> <p>Schedule of modifying old MCR did not match with a normal shutdown period</p>   |
| 7.  | <p>Which Groups specifically will be impacted by the new design?</p> <p>Operations</p>   |
| 8.  | <p>Will access to other equipment be impaired or limited?</p> <p style="text-align: right;"><input type="checkbox"/> No</p>  |
| 9.  | <p>What components or hardware need to be maintained for spares, and are they readily available?</p> <p>HVAC parts/yes</p>   |
| 10. | <p>What are the anticipated maintenance requirements for the installation?</p> <p>1/year</p>   |
| 11. | <p>Will any consumables be used (e.g., oil, grease, foils, seals, vacuum tubes, etc.)?</p> <p style="text-align: right;"><input type="checkbox"/> Yes</p>  |

**B. Safety, Security and Quality Assurance (Required)**

General Comments on Section B

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| 12. | Will any chemicals be used?<br><br>If so, are they approved and listed on the CMS?  | <input type="checkbox"/> No<br><br><input type="checkbox"/> TBD |
| 13. | Will any of the materials chosen give off toxic fumes when heated or burned?  | <input checked="" type="checkbox"/> Yes                         |
| 14. | Will any of the materials selected present a disposal or environmental problem?   | <input type="checkbox"/> No                                     |
| 15. | Will materials and components be checked for counterfeit parts?   | <input checked="" type="checkbox"/> Yes                         |
| 16. | Will materials or components have to be stored in secured areas?  | <input type="checkbox"/> No                                     |
| 17. | Please specify the <a href="#">Quality Classification</a><br><a href="https://sbms.bnl.gov/sbmsearch/subjarea/73/7304e011.doc">https://sbms.bnl.gov/sbmsearch/subjarea/73/7304e011.doc</a><br>(A1, A2, A3 or A4)<br><input checked="" type="checkbox"/> Overall system classification<br><br><input type="checkbox"/> Highest classification of any subsystem |   |

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| 18. | <p>What safety review committees are involved, or will be involved, in the review?</p> <p><input checked="" type="checkbox"/> Accelerator Systems Safety Review Committee</p> <p><input type="checkbox"/> Experimental Safety Review Committee</p> <p><input type="checkbox"/> Radiation Safety Committee</p> <p><input type="checkbox"/> ALARA Committee</p> <p><input type="checkbox"/> Security Committee</p> <p><input type="checkbox"/> BNL Cryogenic and Pressure Safety Committee</p> <p><input checked="" type="checkbox"/> Other: <input type="text" value="BORE"/></p> |                                  |
| 19. | Have you contacted all the appropriate safety committees?  | <input type="text" value="Yes"/> |
| 20. | <p>Have you completed the <a href="http://www.rhichome.bnl.gov/AGS/Accel/SND/C-AHazardTool/C-AD%20Hazard%20Screen%20for%20OPM%209.11.pdf">Hazard Screening Questionnaire?</a><br/> <a href="http://www.rhichome.bnl.gov/AGS/Accel/SND/C-AHazardTool/C-AD Hazard Screen for OPM 9.11.pdf">www.rhichome.bnl.gov/AGS/Accel/SND/C-AHazardTool/C-AD Hazard Screen for OPM 9.11.pdf</a></p>  | <input type="text" value="Yes"/> |
| 21. | <p>What acceptance tests will be needed?</p> <div data-bbox="289 1037 1507 1163" style="border: 1px solid black; padding: 5px; margin-bottom: 10px;">BORE</div> <p>How, and where will they be performed?</p> <div data-bbox="289 1253 1507 1379" style="border: 1px solid black; padding: 5px;">BNL/SOP/SBMS</div>  |                                  |
| 22. | Will intermediate tests be needed during assembly to validate each stage, phase, or component?   | <input type="text" value="Yes"/> |
| 23. | <p>What standards and specifications will be used to determine if the individual components (and final assembly/installation) are acceptable?</p> <div data-bbox="289 1682 1507 1808" style="border: 1px solid black; padding: 5px;">CAD-1212 / 1207, USI--(ESHH), PE specs for fire detection and protection</div>  |                                  |

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| 24.  | Are documentation and certifications needed for acceptance?  | <input checked="" type="checkbox"/> Yes |
| 25.  | Are preventative maintenance and safety procedures required?   | <input checked="" type="checkbox"/> Yes |
| 26.  | Does this work involve the use, research, and/or development of materials, equipment, or procedures related to the nuclear fuel cycle?<br><br>If yes, describe:<br><br><div style="border: 1px solid black; height: 40px; width: 100%;"></div> | <input type="checkbox"/> No             |
| <p><b>C. Electrical</b></p> <p>General Comments on Section C</p> <div style="border: 1px solid black; height: 80px; width: 100%;"></div> |  |   |
| 27.  | Will fuses and circuit breakers be coordinated?  | <input checked="" type="checkbox"/> Yes |
| 28.  | Has the temperature rise of all conductors been considered?  | <input checked="" type="checkbox"/> Yes |
| 29.  | Are there any special grounding and bonding requirements?<br><br>If yes, please explain:   | <input checked="" type="checkbox"/> Yes |
| 30.  | Will there be strain relief provisions included in all cables and wires, and will they be secured as necessary to prevent damage or insulation failure from vibration, pinching, chaffing, or other movement?                                  | <input type="checkbox"/> No             |
| 31.  | For all the materials and components used, have flammability and radiation damage issues been considered?  | <input checked="" type="checkbox"/> Yes |

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| 32.  | Have energy-discharge issues been considered for energy storage devices?   | <input type="checkbox"/> N/A            |
| 33.  | Have LO/TO provisions been made?   | <input checked="" type="checkbox"/> Yes |
| 34.  | What type of cooling will be provided?<br><br><input type="checkbox"/> Not Applicable:   |   |
| 35.  | Will you be requesting an equivalence or variance from any NFPA, NEC and OSHA requirement?   | <input type="checkbox"/> No             |
| 36.  | Will an NEC design class be selected for operation in flammable or explosive environments?   | <input type="checkbox"/> No             |
| 37.  | If batteries are installed, will code requirements such as eye wash stations and ventilation be implemented?                                 | <input type="checkbox"/> No             |
| 38.  | Is an emergency stop button needed?  | <input type="checkbox"/> No             |
| 39.  | Are there arc blast or arc flash concerns?   | <input checked="" type="checkbox"/> Yes |
| 40.  | Will this design use equipment that needs to be inspected by an Electrical Equipment Inspector (EEI) before being put into service?          | <input type="checkbox"/> No             |
| 41.  | Will correct electrical hazard labeling and signage be specified?  | <input checked="" type="checkbox"/> Yes |
| <p><b>D. Structural and Pressurized Systems</b></p> <p>General Comments on Section D</p> <div style="border: 1px solid black; height: 50px; width: 100%;"></div> |  |   |
| 42.  | Will all of the loads (including transportation, floor loading, anticipated use, and handling loads) be properly identified and distributed? | <input checked="" type="checkbox"/> Yes |

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| 43. | Will thermal loads (e.g. from expansion / contraction) be included with the structural loads?   | <input type="checkbox"/> No  |
| 44. | Will dynamic loads be identified and included?  | <input type="checkbox"/> Yes |
| 45. | Will fatigue, creep, cyclic loading, or any critical structural conditions be identified and included?  | <input type="checkbox"/> N/A |
| 46. | <p>Which codes will apply to the analysis:</p> <p><input type="checkbox"/> American Society of Mechanical Engineers (ASME) Boilers and Pressure Vessel Code, sections I through XII including applicable Code Cases, (2004)</p> <p>ASME B31 (ASME Code for Pressure Piping) as follows:</p> <p><input type="checkbox"/> B31.1—2001—Power Piping, and B31.1a—2002—Addenda to ASME B31.1—2001</p> <p><input type="checkbox"/> B31.2—1968—Fuel Gas Piping</p> <p><input type="checkbox"/> B31.3—2002—Process Piping</p> <p><input type="checkbox"/> B31.4—2002—Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids</p> <p><input checked="" type="checkbox"/> B31.5—2001—Refrigeration Piping and Heat Transfer Components, and B31.5a—2004, Addenda to ASME B31.5—2001</p> <p><input type="checkbox"/> B31.8—2003—Gas Transmission and Distribution Piping Systems</p> <p><input type="checkbox"/> B31.8S—2001—Managing System Integrity of Gas Pipelines</p> <p><input checked="" type="checkbox"/> B31.9—1996—Building Services Piping</p> <p><input type="checkbox"/> B31.11—2002—Slurry Transportation Piping Systems</p> <p><input type="checkbox"/> B31G—1991—Manual for Determining Remaining Strength of Corroded Pipelines</p> |                              |
| 47. | Will materials certifications be required?  | <input type="checkbox"/> Yes |
| 48. | Will welding certifications be required?  | <input type="checkbox"/> Yes |
| 49. | Will code stamps be required?   | <input type="checkbox"/> No  |

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| 50.   | Will the material have QA requirements?   | <input type="checkbox"/> Yes |
| 51.   | Will requirements for proper stress relief (if needed) be included?                                     | <input type="checkbox"/> No  |
| 52.   | Will margins of safety be determined and specified?   | <input type="checkbox"/> TBD |
| 53.   | Will calculations require independent review?   | <input type="checkbox"/> Yes |
| 54.   | Will finite element analysis be required?   | <input type="checkbox"/> No  |
| 55.   | Will hand calculations be used to check and bound the results of finite element analysis?               | <input type="checkbox"/> N/A |
| <p><b>E. Equipment Layout and Installation</b></p> <p>General Comments on Section E</p> <div style="border: 1px solid black; padding: 5px; min-height: 40px;"> <p>NA</p> </div> |   |                              |
| 56.   | Will components move?   | <input type="checkbox"/> No  |
| 57.   | Will exclusion zones, clearance zones, guards, or shields be needed?                                    | <input type="checkbox"/> Yes |
| 58.   | Could any body parts be pinched if components were to move unexpectedly?                                | <input type="checkbox"/> N/A |
| 59.   | Will the potential exist for body parts to contact anything hazardous?                                  | <input type="checkbox"/> N/A |
| 60.   | Will there be adequate clearance over the full range of motion allowed to all moving and movable parts? | <input type="checkbox"/> N/A |
| 61.   | Will drive motors or actuators accelerate the load (including friction) sufficiently?                   | <input type="checkbox"/> N/A |

**F. Ionizing Radiation Shielding**

General Comments on Section F

NA

|     |  |    |
|-----|--|----|
| 62. | What will determine the shielding requirements?<br><input type="checkbox"/> ALARA concerns<br><input type="checkbox"/> Machine protection / radiation damage to parts<br><input type="checkbox"/> Personnel safety<br><input type="checkbox"/> Environmental issue (e.g., to prevent ground water contamination) |    |
| 63. | Will shielding calculations be performed and checked by an independent party?  | No |
| 64. | Will approvals be required from the C-AD Radiation Safety Committee for the proposed shielding?  | No |
| 65. | Will approved shielding drawings be used?  | No |

**G. Materials**

General Comments on Section G

|     |  |     |
|-----|--|-----|
| 66. | Will materials have delivery requirements?                   | Yes |
| 67. | Will materials have security requirements if stored at C-AD? | No  |

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| 68. | Will any of the materials chosen be:<br><input type="checkbox"/> High value metals<br><input type="checkbox"/> Targets for theft<br><input type="checkbox"/> Required to be on the C-AD Valuable Materials List ( <a href="http://www.rhichome.bnl.gov/AGS/Accel/SND/OPM/Ch01/01-20.PDF">OPM 1.20</a> )<br><a href="http://www.rhichome.bnl.gov/AGS/Accel/SND/OPM/Ch01/01-20.PDF">www.rhichome.bnl.gov/AGS/Accel/SND/OPM/Ch01/01-20.PDF</a><br><input type="checkbox"/> Marked or identified as "US Government Property"   |   |
| 69. | Will manufacturers, federal, military, or other specifications be used?  | <input checked="" type="checkbox"/> Yes |
| 70. | Will C-AD/BNL specifications documents be used?  | <input checked="" type="checkbox"/> Yes |
| 71. | Will any of the materials chosen degrade significantly in use due to:<br><input type="checkbox"/> Galvanic and/or chemical corrosion<br><input type="checkbox"/> Rust/oxidation<br><input type="checkbox"/> Creep<br><input type="checkbox"/> Fatigue<br><input type="checkbox"/> Thermal effects<br><input type="checkbox"/> Ionizing radiation effects<br><input type="checkbox"/> Galling<br><input type="checkbox"/> Excess wear<br><input type="checkbox"/> Non-ionizing radiation effects (e.g. visible/UV light)<br><input type="checkbox"/> Aging<br><input type="checkbox"/> Erosion<br><input type="checkbox"/> Normal operation |   |
| 72. | Will the materials be compatible with each other and suitable for the application (including all potential operating environments)?  | <input checked="" type="checkbox"/> Yes |
| 73. | Will the materials chosen be readily joined (e.g. by welding, brazing, etc)?   | <input checked="" type="checkbox"/> Yes |

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| 74.   | Will any of the materials chosen be:<br><input type="checkbox"/> Sole sourced<br><input type="checkbox"/> Available only from a single supplier                        |                              |
| 75.   | What components will wear and what are the implications of wear?<br>NA   |                              |
| <b>H. Vacuum</b><br>General Comments on Section H<br>NA |  |                              |
| 76.   | Will all materials be vacuum-compatible and will the design be acceptable for vacuum service?  | <input type="checkbox"/> No  |
| 77.   | Will the vapor pressures of the selected materials be acceptable to the Vacuum Engineer?   | <input type="checkbox"/> N/A |
| 78.   | Are there any trapped volumes that are not adequately vented?  | <input type="checkbox"/> No  |
| 79.   | Are vented fasteners or relief channels used where needed?   | <input type="checkbox"/> No  |
| 80.   | Will bushings, bearings, low friction materials/surface treatments be used?  | <input type="checkbox"/> No  |
| 81.   | Will weld joint design be appropriate for vacuum service?  | <input type="checkbox"/> No  |
| 82.   | Will there be any in-vacuum transitions or water-to-vacuum weld or braze joints whereby a water-to-vacuum, cryogen to vacuum or any fluid-to-vacuum leak could result? | <input type="checkbox"/> No  |

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| 83. | <p>What provisions will be included to release pressure for any failure that allows in-vacuum components to become pressurized?</p> <div style="border: 1px solid black; height: 50px; width: 100%;"></div> |     |
| 84. | <p>If in-vacuum, will the appropriate materials, finishes, and cleaning processes be chosen?</p>  | No  |
| 85. | <p>Will there be any steel or cadmium-plated materials in the vacuum?</p>   | No  |
| 86. | <p>Will there be any vendor hardware used that is not designed for vacuum compatibility?</p>  | No  |
| 87. | <p>Will any greases, lubricants, or chemicals be used in vacuum?</p>  | No  |
| 88. | <p>Are special vacuum flanges or seals required?</p>  | TBD |
| 89. | <p>Will special cleaning procedures be required?</p>  | No  |
| 90. | <p>Will intermediate leak checks be performed before final assembly or installation?</p>  | No  |
| 91. | <p>If vacuum bake-out is needed, will all of the materials withstand bake-out temperatures (thermal growth effects, low ignition temperature, etc.)?</p>  | No  |
| 92. | <p>Will bake-out procedures be required?</p>  | No  |
| 93. | <p>Will thin vacuum windows be used?</p>  | No  |
| 94. | <p>Will vacuum windows need to be protected from the environment or workers during installation and/or nearby maintenance?</p>  | No  |
| 95. | <p>Will the design be reviewed by a Vacuum Engineer?</p>  | No  |

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| <b>I. Drawings</b>  |  |   |
| General Comments on Section I   |  |   |
| <div style="border: 1px solid black; height: 50px; width: 100%;"></div> |  |   |
| 96.   | Will detailed fabrication drawings or specifications be required?  | <input checked="" type="checkbox"/> Yes |
| 97.   | Will the workload in the design room be considered with regard to schedule?  | <input type="checkbox"/> N/A            |
| 98.   | Should a designer be involved in a preliminary design review?  | <input type="checkbox"/> No             |
| 99.   | Will the drawings be reviewed with the technicians who will do the assembly and installation?                                    | <input type="checkbox"/> N/A            |
| <b>J. Thermal</b>   |  |   |
| General Comments on Section J   |  |   |
| <div style="border: 1px solid black; padding: 5px;">NA</div>            |  |   |
| 100.  | Will there be thermal loads from any energy source (e.g., electric current, particle beam, electromagnetic radiation, neutrons)? | <input type="checkbox"/> No             |
| 101.  | Will thermal and stress analysis be performed?   | <input type="checkbox"/> No             |
| 102.  | Will the effects of transient thermal conditions be considered?  | <input type="checkbox"/> No             |
| 103.  | Can temperatures exceed normal operating conditions?   | <input type="checkbox"/> No             |
| 104.  | Will thermal limits or controls be required?   | <input type="checkbox"/> No             |

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| 105.   | Where will the signals from thermal sensors be sent?<br><br><div style="border: 1px solid black; height: 60px; width: 100%;"></div>                                    |
| 106.   | Will thermal limit switches shut down the system? <span style="float: right;"><input type="checkbox"/> No</span>   |
| 107.   | Will thermal limit switches shut down accelerator operations? <span style="float: right;"><input type="checkbox"/> No</span>   |
| 108.   | Can injury to personnel or equipment occur under normal operating conditions due to thermal conditions? <span style="float: right;"><input type="checkbox"/> No</span> |
| 109.   | Will high temperature warning labels used or needed? <span style="float: right;"><input type="checkbox"/> No</span>  |
| 110.   | Will thermal shields be used? <span style="float: right;"><input type="checkbox"/> No</span>   |
| 111.   | Will pressure relief be needed due to thermal effects? <span style="float: right;"><input type="checkbox"/> No</span>  |
| 112.   | Do warm-up or cool down rates need to be controlled? <span style="float: right;"><input type="checkbox"/> No</span>  |
| <p><b>K. Vibration, Noise and Natural Phenomena</b></p> <p>General Comments on Section K</p> <div style="border: 1px solid black; height: 50px; width: 100%;"></div> |  |
| 113.   | Will vibration and noise criteria be considered for equipment? <span style="float: right;"><input type="checkbox"/> No</span>  |
| 114.   | Will vibration and noise sources be determined? <span style="float: right;"><input type="checkbox"/> No</span>   |
| 115.   | Will natural mode and vibration frequencies need to be analyzed? <span style="float: right;"><input type="checkbox"/> No</span>  |
| 116.   | Will noise abatement be required? <span style="float: right;"><input type="checkbox"/> No</span>   |
| 117.   | Will vibration damping be required? <span style="float: right;"><input type="checkbox"/> No</span>   |

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| 118.  | Will protection against natural phenomena (earthquakes and hurricanes) be required?  | <input checked="" type="checkbox"/> Yes |
| <p><b>L. Manufacturing</b></p> <p>General Comments on Section L</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>   |  |   |
| 119.  | Will special manufacturing processes be needed?  | <input type="checkbox"/> No             |
| 120.  | Will components be built by manufacturers according to BNL supplied detailed specifications?   | <input type="checkbox"/> No             |
| 121.  | Will components be built by manufacturers according to BNL supplied detailed drawings?   | <input type="checkbox"/> No             |
| 122.  | Do requirements in <a href="https://sbms.bnl.gov/sbmsearch/subjarea/10/10_Exh1.cfm?ExhibitID=6218">BNL QA 101</a> need to be met?<br><a href="https://sbms.bnl.gov/sbmsearch/subjarea/10/10_Exh1.cfm?ExhibitID=6218">https://sbms.bnl.gov/sbmsearch/subjarea/10/10_Exh1.cfm?ExhibitID=6218</a> | <input checked="" type="checkbox"/> Yes |
| 123.  | Will sole source justification be used to purchase components or systems?  | <input type="checkbox"/> No             |
| 124.  | Will a single source supplier be used to supply components or systems?   | <input checked="" type="checkbox"/> Yes |
| <p><b>M. Software, PLC, Firmware, Human Factors and Controls</b></p> <p>General Comments on Section M</p> <div style="border: 1px solid black; height: 60px; width: 100%; padding: 5px;">NA</div> |  |   |
| 125.  | Will software be in-house or commercial?   | <input type="checkbox"/> No             |
| 126.  | For PLCs, will the configuration be documented?  | <input type="checkbox"/> No             |

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| 127. | Will ladder logic, state tables or functional diagrams be preserved on an archived C-AD system?  | <input type="checkbox"/> No                                    |
| 128. | Will software revision control be required?  | <input type="checkbox"/> No                                    |
| 129. | Will the electronic design files be controlled?  | <input type="checkbox"/> No                                    |
| 130. | Will there be a large amount of data logged as part of the operation of a new system?  | <input type="checkbox"/> No                                    |
| 131. | Will the system controls be integrated into the Accelerator Controls System (ACS)?<br><br>If integrated into the ACS, does the equipment utilize standard controls components and framework? | <input type="checkbox"/> No<br><br><input type="checkbox"/> No |
| 132. | Will simple text pages be sufficient for console displays or will custom GUI application be required?  | <input type="checkbox"/> No                                    |
| 133. | Will the design be in compliance with cyber security requirements?   | <input type="checkbox"/> No                                    |
| 134. | Will the design need to comply with NEC and NFPA 70E?  | <input type="checkbox"/> No                                    |
| 135. | Will the design need to comply with FCC regulation?  | <input type="checkbox"/> No                                    |
| 136. | Will equipment need to be inspected by an Electrical Equipment Inspector (EEI) before being put into service?  | <input type="checkbox"/> No                                    |
| 137. | Will the design need to meet interface specifications as documented in the IEEE specifications?  | <input type="checkbox"/> No                                    |