Subcontractor Name:       Project Title and Subcontract Number:

Description of planned activities/tasks for the scope-of-work for the entire project.

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| Hazard / Regulatory Requirements | ES&H Clause | Worker Information and Requirements |
| Unbound Engineered Nanoparticles  DOE Order 456.1A | Seller's employees, lower-tier subcontractors, and agents identified as Nanoparticle Workers must comply with all UNP requirements as provided in the Company-provided training and work control documents including appropriate controls to minimize the potential for exposure to unbound engineered nanoparticles. Seller, its employees, lower-tier subcontractors, and agents, who may be exposed through inhalation or dermal exposure to unbound engineered nanoparticles (UNP) will be considered as Nanoparticle Workers. Prior to performing exposure-potential activities, Nanoparticle Workers and their on-site supervisor must complete ORNL training "Nanoscale ES&H for R&D Operations and Support Services". Seller must offer their employees, who are identified as Nanoparticle Workers, a baseline medical examination in accordance with DOE Order 456.1 The Safe Handling of Unbound Engineered Nanoparticles, Attachment 1 Company will provide UNP exposure monitoring for all Nanoparticle Workers, including Seller#s employees, lower-tier subcontractors, and agents. Results of exposure monitoring will be provided to the Seller upon request. Company will inform any identified Nanoparticle Worker of the requirements of the Medical Surveillance portion of this Order but it is the sole responsibility of the Seller to provide adequate Medical Surveillance. | Worker shall have completed the ORNL Nanoscale ES&H training prior to starting work.  Worker shall ensure their employer has enrolled them in their companies’ medical surveillance program.  Worker shall ensure an Exposure Assessment has been performed and proper work control is in place. If ORNL is not dictating the work control, then the SME should review proposed work control before work is conducted.  Worker shall post areas where UNP are handled and post PPE requirements.  Worker shall place UNP in a container closure that prevents leakage; package and label container with UNP.  Worker shall contact ORNL’s Technical Project Officer to have Waste Representative present to ensure waste is managed in accordance with ORNL’s Waste Management procedures |

**Subcontractor Activity Hazard Analysis (AHA)**

| Activity | Hazard | Controls |
| --- | --- | --- |
|  |  | **Elimination, substitution, engineering controls**:  HEPA-Filtered vacuum cleaner  Laboratory hood or glove box  Air Handler, HEPA filtered  Shrouded tool with HEPA filter  Continuous wetting (dust control)  Containment  Isolation  General Ventilation  Other Local Exhaust System:  Other: Specify below |
| **Administrative controls** (work methods, training, medical, etc.): |
| **Personal protective equipment** - specify the exact type of PPE (e.g. hearing protection device with minimum NRR of 20 dBA, Ansell Nitrile SOL-VEX gloves, etc.): |

AHA Author:       Date:

ES&H/QHSP Representative Concurrence signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_

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| Technical Procurement Officer (TPO) signature indicates approval of activity-specific hazard controls identified in the subcontractor AHA.  Printed Name/Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_ |