



Statement of Work (SOW)

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Nuclear Accident Dosimetry Services Statement of Work Advanced Mixed Waste Treatment Project

Idaho Treatment Group, LLC

Revision: 1

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Statement of Work (SOW)

1.	<p><u>SCOPE</u></p> <p>The Idaho National Laboratory (INL), operated by Battelle Energy Alliance (BEA), Radiological Control Directorate (RCD) is required to maintain compliance with the external dose monitoring requirement of Title 10, Code of Federal Regulations, Part 835 (10 CFR 835), which includes establishing methods and equipment for analysis of biological materials and maintaining a system of fixed and personal nuclear accident dosimeter units. The nuclear accident dosimeter program is coordinated by the BEA HPDL and involves several supporting organizations. Per this agreement, the Health Physics Dosimetry Laboratory (HPDL) will provide the analysis and evaluation of nuclear accident dosimeters (NADs) for AMWTP.</p> <p>The effectiveness of the FNADs program is assured through periodic inspections and replacement. The Annual inspection of all FNADs is conducted in accordance with MP-RS&C-6.4, Control of Radiological Dose. Replacement of FNADs is done every three years to ensure cumulative background radiation does not exceed 1000 mrem on the dosimeter components. Replacement is coordinated by the HPDL and involves supporting organizations.</p> <p>Multiple tasks specified by this program are supported by organizations outside of the HPDL. These tasks involve NAD disassembly, gamma analysis of NAD components and biological samples such as blood or hair, and the Phosphorus-32 laboratory analysis of sulfur tablets.</p> <p>Radioanalytical work activities involving ³²P is performed at CFA Building 625, Room 110. Gamma analysis is performed at the Advanced Test Reactor Complex (ATRC), Radiation Measurement Laboratory (RML) located at the TRA-678.</p> <p>Nuclear Accident Dosimeter components and personnel hair samples are provided by the INL Analytical Laboratories and the INL Occupational Medical staff, respectively, and are obtained from nuclear accident dosimeter components and personnel from the various INL facilities and either delivered to or picked up by the RML staff. The RML/ACL staff prepares the samples for radiochemical analyses. The HPDL staff reads dosimeter chips and generates data packages and files of the radioanalytical results for dose reporting records.</p>
2.	<p><u>TECHNICAL REQUIREMENTS/TASKS</u></p> <p>Health Physics Dosimetry Laboratory (HPDL):</p> <ul style="list-style-type: none"> • Coordinates the NAD program. • Use data provided from the field and the analysis laboratory to estimate doses received. The HPDL staff generates data packages and files of results for reporting and records per LI-15013, "Dose Analysis and Reporting of Nuclear Accident Dosimeters". <p>Radiation Measurements Laboratory (RML):</p> <ul style="list-style-type: none"> • Disassemble the NADs and prepare dosimeters and samples for shipment, count the foils for gamma activity, count blood samples and report results to the HPDL per ACMM-3611, "Disassembling Nuclear Accident Dosimeters (NADS)" and ACMM-3612. "Analyzing Nuclear Accident Dosimeters". <p>Analytical Chemistry Laboratory (ACL):</p> <ul style="list-style-type: none"> • Process sulfur pellets and hair samples, and report results to the HPDL, per LI-15012, "Determination of Phosphorus-32 for Nuclear Accident Dosimeters". <p>Health Physics Dosimetry Laboratory (HPDL):</p> <ul style="list-style-type: none"> • Coordinate evaluation of dosimeter components removed from NADs, per LI-15013 "Dose



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Analysis and Reporting of Nuclear Accident Dosimeters”.	
3.	<p><u>REPORTS, DATA, AND OTHER DELIVERABLES</u></p> <p>AMWTP</p> <ol style="list-style-type: none"> 1. In the event of a criticality, AMWTP will provide HPDL with any FNADs and personnel dosimeters involved. AMWTP will coordinate delivery of materials be to the RML, located at ATRC (TRA-678) or to alternate location as directed by HPDL. 2. AMWTP will ascertain and communicate information about the event to HPDL in a timely manner. 3. AMWTP is responsible for maintaining all dose of records for AMWTP employees. 4. If requested, biological samples such as hair and blood from personnel involved must also be provided for analysis by the ACL and RML, respectively. (The INL Occupational Medical Staff is responsible for taking biological samples). AMWTP may request biological samples to be analyzed as well. 5. Request HPDL to provide replacement FNADs . 6. Exchange FNAD components and send replaced components to HDPL. <p>BEA (HPDL)</p> <ol style="list-style-type: none"> 1. The HPDL will ensure that nuclear accident dosimetry is provided and analysis is available when necessary to meet the criteria of 10 CFR 835 1304. 2. HPDL through the RML: will accept FNADS, personnel dosimeters, and any biological samples from AMWTP. 3. The HPDL will ensure that all NADs, biological media and other nuclear accident dosimetry is processed and analyzed in a timely fashion and will provide AMWTP with the results. 4. HPDL will share information with the AMWTP in a timely manner. 5. HPDL will use data provided from the field and the analysis of dosimetry and biological media to estimate doses received. 6. Provide dose estimate results to the AMWTP. 7. Provide and maintain all equipment and supplies necessary and provide competent personnel to perform the required analysis. Equipment includes all materials and chemicals, associated analytical equipment, infrastructure, and facilities. 8. Provide materials and direction to AMWTP for FNAD refurbishment as requested by AMWTP or as necessary. 9. Ensure FNADs are analyzed and results are provided to the AMWTP every time FNADs are returned. Only the dosimeter chips in the FNADs will be analyzed upon refurbishment and data provided to AMWTP. 10. Coordinate any analysis needs with other dosimetry service providers and other laboratories (e.g., RDR, RESL, ACL). 11. Non-disclosure: HPDL shall not disclose information governed under the Privacy Act of 1974, either officially or unofficially, to anyone other than the Director, AMWTP Radiological Control Directorate designee or to the affected individuals as allowed under the Privacy Act of 1974. 12. Compliance: HPDL shall promptly notify the AMWTP of reportable compliance issues related to the provided scope of work. 13. HPDL shall maintain the ability to handle and dispose of waste generated from this process in compliance with the applicable federal and state licenses and permits. 14. HPDL shall maintain safe working conditions for all personnel. 15. BEA shall maintain a Quality Assurance program as described in the applicable procedures in accordance with BEA’s Quality Assurance Manuals 13A and 13B..