Work scope details:

Title: EPSD's Support Role for the CY2018 Deer Hunts

Work Scope Summary: - The work involves EPSD supporting the annual deer hunt at the Oak Ridge Reservation, a joint effort between TWRA and ORNL. EPSD's role is to collect bone and tissue samples from harvested deer for immediate onsite analysis by CSD. Based on the analysis, deer are either released to hunters or retained for disposal due to radiological concerns. EPSD is responsible for processing and packaging retained deer for secure storage.

Key Work Scope Components: - Collecting bone and tissue samples from harvested deer using knives and lopping shears. - Immediate onsite analysis of samples by CSD to determine the release or retention of deer. - Processing retained deer by cutting them into sections no more than 35 lbs using knives, reciprocating saw, or hacksaw. - Packaging each section in a cardboard box with absorbent material, securing, and labeling it appropriately. - Storing the packaged sections in a secure freezer under CSD's custody.

Relevant previous events and lessons learned:

Event Title	Event Summary	Lessons Learned	Reference link
Brookhaven National Laboratory Deer Population Reduction	In the late 1990s, BNL discovered elevated Cs-137 levels in deer meat from road-killed deer due to soil contamination. The NY State Department of Environmental Conservation initiated a deer population reduction program. Deer were collected, and meat samples underwent radiological analysis to assess potential human exposure. Despite contamination, no formal hunting restrictions or expanded disposal actions were implemented as exposures were below regulatory guidance.	The importance of radiological analysis in assessing potential human exposure and the effectiveness of regulatory guidance in managing contamination without imposing hunting restrictions.	BNL Deer Issues
NIST Deer Population Reduction Program	In early 2024, NIST, with USDA Wildlife Services, safely removed 60 deer from its campus. The operation included deer sample collection, secure handling, and safety oversight. The focus was on population and environmental management, with all venison packaged and donated to local food banks following regulatory safety measures.	Effective collaboration with wildlife services and adherence to safety measures can facilitate successful population management and community support through donations.	NIST Deer Population Reduction
No Recent Accidents Documented	No verifiable recent accidents involving radiological analysis, packaging/disposal, or secure storage linked to deer culling at laboratories or industry sites have been documented online.	Continuous monitoring and regulation can prevent accidents and ensure safe operations in deer culling programs.	N/A

Missing Hazards:

Hazard	Missing or Inadequate Mitigation in Current Work Control Document	Recommended Mitigation for Revision	Reference link	SBMS Link
Thermal Stress	Lack of specific controls for thermal stress beyond heat/cold stress	Implement detailed thermal stress management protocols, including environmental monitoring and acclimatization procedures	N/A	Link
Physical Injury from Cutting Tools	No specific mention of cutting tool hazards	Introduce guidelines for safe use of cutting tools, including PPE requirements and training	Safety Notes, HSE Blog, OSHA	Link
Improper Handling and Storage	General manual material handling controls may not cover specific storage hazards	Develop comprehensive storage guidelines for hazardous materials, including compatibility and environmental considerations	OSHA, Palmetto Industries, Chemtrec	Link
Time Pressure and High Workload	No specific controls for managing time pressure and workload	Implement workload management strategies and stress reduction techniques	N/A	Link
Distractive Environment	No specific controls for managing distractions in the workplace	Develop policies to minimize distractions and enhance focus, including workspace design and noise control	N/A	Link

Failure mode analysis:

Current control	Failure mode of the control	Effect of Failure	Cause of Failure	Recommended action
Written permits for work activity	Permit not obtained or invalid	Unauthorized work leading to safety hazards	Miscommunication or oversight	Ensure all permits are valid and reviewed before work begins
Personal Protective Equipment (PPE)	PPE not used or inadequate	Increased risk of injury or exposure	Lack of training or availability	Conduct PPE checks and training sessions

Work instructions and safety procedures	Instructions not followed	Increased risk of accidents	Inadequate training or supervision	Regular training and supervision to ensure compliance
Administrative Control Codes (Training, Labeling, etc.)	Controls not implemented effectively	Increased exposure to hazards	Lack of awareness or enforcement	Regular audits and reinforcement of control measures
Engineering Controls (Ventilation, etc.)	Controls fail or are inadequate	Exposure to hazardous materials	Equipment malfunction or poor maintenance	Regular maintenance and checks of engineering controls
Worker rotation and limited stay time	Rotation not followed	Prolonged exposure leading to health risks	Poor scheduling or oversight	Implement strict adherence to rotation schedules
Hazard assessment and exposure rating	Incorrect assessment leading to inadequate controls	Increased risk of exposure	Inaccurate data or analysis	Regular review and validation of assessment data
Emergency response protocols	Protocols not followed during emergencies	Increased risk of harm or property damage	Lack of training or preparedness	Conduct regular emergency drills and training
Slip/Trip conditions and rough terrain	Inadequate footwear or terrain assessment	Risk of injury from falls	Poor assessment or equipment	Ensure proper footwear and conduct terrain assessments