

**NEPA REVIEW SCREENING FORM (NRSF) 3**  
**Categorically Excluded Actions**

**Document ID #:**  
**DOE/CX-00235**

**I. Project Title:**

Project Z-383, Security Sensor Test Yard

**II. Describe the proposed action, including location, time period over which proposed action will occur, project dimension (e.g., acres displaced/disturbed, excavation length/depth), and area/location/number of buildings. Attach narratives, maps and drawings of proposed action. Describe existing environmental conditions and potential for environmental impacts from the proposed action. If the proposed action is not a project, describe the action or plan.**

BACKGROUND

The U.S. Department of Energy (DOE), Richland Operations Office (RL), Security and Emergency Services Division (SESD), proposes to construct a security sensor test yard in 200 East Area of the Hanford Site, west of the 212-H Canister Storage Building. The proposed test yard would allow comparison and compatibility testing of wireless security sensor technologies, camera systems, robotics, and support personnel training. The proposed test yard would replicate environmental conditions (i.e., wind, precipitation, temperature) and equipment configurations typically found in Perimeter Intrusion Detection and Assessment Systems (PIDAS) at the Hanford Site.

The establishment and maintenance of reliable and effective sensor systems to support protection of Special Nuclear Material at the Hanford Site requires on-going testing and modification. A PIDAS sensor system must function in an environment that is typical of the semi-arid conditions of the Hanford Site. Reliability includes sensor system responsiveness and the minimizing of False Alarm Rates (FAR) and Nuisance Alarm Rates (NAR). The requirements for the system and its performance were originally contained in DOE Order 473.3A, Protection Program Operations. However, in August 2021, DOE Order 473.1A, Physical Protection Program, and DOE Order 473.2A, Protective Force Operations, were issued canceling DOE Order 473.3A in its entirety. DOE Order 473.1A requires the deployment of a sensor system to alert protective force operations of possible intrusion into protected areas. This order further sets performance criteria for the sensor systems including response time and FAR and NAR rates.

The span of the expected Hanford Site mission makes it highly likely that new technologies would need to be tested to maintain security reliability as current components age, become obsolete, and are no longer available. A security sensor test yard would fulfill the contract requirement under the Hanford Mission Essential Services Contract (HMESC) to design security system upgrades for existing facilities with changing requirements and design security systems for new facilities. The current mission is expected to last at least 20 years. As the current PIDAS was built and put into service prior to 2010, this duration would require Engineering and Maintenance to adapt, modify, and test the security sensor systems to accommodate changes in support of future activities. It would also allow Engineering and Maintenance to perform hardware, software, and firmware upgrades to existing components in addition to the development and validation of preventative maintenance (PM) procedures. A local security sensor performance testing capability would allow the leveraging of new technologies, as they become available, to provide better performance, quality assurance, and potential cost savings.

In 2019, National Environmental Policy Act (NEPA) requirements for a security sensor test yard in the 200 East Area of the Hanford Site were documented via NEPA Review Screening Form (NRSF) DOE/CX-00202, Activity-Specific Categorical Exclusion for Project Z-238, Security Sensor Test Yard. However, the original site has since changed due to potential expansion of canister storage capacity at the 212-H Building. The project number was also changed from Z-238 to Z-383.

PROPOSED ACTION

The security sensor test yard would provide an area that is prototypic of the PIDAS deployed in the Interim Storage Area (ISA) to protect Special Nuclear Material at the Hanford Site. The surfaces, fencing, and support structures would be nearly identical to those used in the actual PIDAS. The test yard would replicate three zones of the PIDAS, so the test configuration of the security sensors are oriented in the same east/west direction and exposed to similar environmental conditions. To meet these and other objectives a roughly 55 feet by 400 feet fenced area would be constructed to contain mounting structures for three microwave sensor detection zones, two capacitance fence zones, one infrared sensor tower arrangement, two camera towers/poles, three data gathering panels, three power terminal boxes, and light-emitting diode (LED) lighting. The

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test yard surface would be gravel except for an eight feet wide asphalt path below the microwave zones and a 55 feet by 29 feet concrete pad to simulate a truck lock. The fence would be seven feet tall with a one foot top guard/extension and have two truck gates at the north and south ends of the concrete pad.

The test yard would be located southwest of the intersection between 7th Street and Akron Avenue (see Figure 1). A 40 feet tall camera tower would also be constructed just south of the 2727E Building (see Figure 2). This tower would be used as a wireless receiver for data from the test yard. Data from the wireless receiver would be routed to the Alarm Monitoring Operational Support System (AMOSS) room in the 2727E Building where the testing would be monitored.

The test yard may require blading and grading for gravel installation. Tie-ins and trenching for utilities would be required within the affected area. Excavations for installation of equipment and utilities would reach depths of up to approximately 6 feet below surface and 3 feet in width. Access to the project site would be through existing roads and other previously disturbed areas. Staging and stockpiling areas would be located within the project area or within existing laydown yards, staging areas, paved areas, or graveled areas.

**ECOLOGICAL RESOURCES REVIEW (ECR-2024-208)**

DOE-RL Site Stewardship Division (SSD) Ecological Compliance performed a pedestrian survey of the project area on January 31, 2024. The majority of the project area has been disturbed in the past but contains a mix of habitat types including revegetated areas that span the northeast corner, native stands of big sagebrush with an understory dominated by cheatgrass, successional shrub areas with a non-native understory, and areas that are dominated by non-native plant species.

The Hanford Site Biological Resources Management Plan (BRMP, DOE/RL-96-32, Rev. 2) ranks wildlife species and habitats based on the level of concern for each resource (Levels 0-5). BRMP Level 0 and 1 habitats have little to no ecological value and do not require compensatory mitigation other than compliance with applicable environmental regulations (e.g., Migratory Bird Treaty Act). For BRMP Level 2, 3, and 4 habitats, compensatory mitigation is required if the total project impact, after avoidance, minimization, and onsite rectification, is greater than 1.2 acres. Replacement ratios for BRMP Levels 2, 3, and 4 habitats are 1:1, 3:1, and 5:1, respectively. BRMP Level 5 habitats are rare element occurrences that are difficult to replace if lost and compensatory mitigation is determined on a case-by-case basis.

Of the approximately 50 acre project area that was surveyed, 2.5 acres are BRMP Level 4 habitat, 5.4 acres are BRMP Level 3 habitat, 22.4 acres are BRMP Level 2 habitat, 5.9 acres are BRMP Level 1 habitat, and 14.0 acres are BRMP Level 0 habitat (Figure 1). The total compensatory mitigation required after applying the habitat replacement ratios would be approximately 51.1 acres if all surveyed areas were impacted.

Mitigation requirements during construction of this project would include the following:

**Avoidance/Minimization:** Project staff would be directed to avoid and/or minimize impacts to high value resource levels to the greatest extent feasible. This includes areas designated as BRMP Level 3 and 4 habitats.

**Rectification:** All land areas disturbed by this project that are not needed for continued project use, access, or safety considerations would be replanted using locally derived, native plant species. The Hanford Site Revegetation Manual (DOE/RL-2011-116, Rev. 2) provides guidance regarding species mix, planting rates, and methods. Revegetation would occur in the first planting window (November - January) after project completion and revegetation planning would occur between January and March of the year prior (7-9 months before the planting window) to allow time for procurement of plant materials.

**Compensation:** The proposed project footprint covers approximately 1.5 acres of BRMP Level 2 habitat within the project area. Compensatory mitigation for impacts to BRMP Level 2 habitat is based on a 1:1 replacement ratio; therefore, the resulting compensatory requirement for permanent impacts due to the proposed project footprint would be 1.5 acres. Actual compensatory mitigation requirements would be determined following completion of the proposed project and would be based on the areas impacted.

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Per the Ecological Compliance Review (ECR) and the BRMP, a project-specific compensatory ecological resources mitigation plan, which would incorporate best management practices (i.e., existing policies, practices, procedures, plans, and other measures) as an integral part of the proposed action, would be prepared prior to project completion. Each project is unique in the types and amounts of resources that would need to be mitigated as well as physical and other constraints. Therefore, the project-specific compensatory mitigation plan would state the particular ecological resources mitigation commitments that DOE-RL/SSD Ecological Compliance would make regarding that project. The budgeting, funding, work scope, and implementation schedule for the compensatory mitigation plan would be determined by DOE-RL/SSD Ecological Compliance. Upon completion, compensatory mitigation actions would be included in the Hanford Site Ecological Monitoring and Compliance (EMC) Database. The project would be responsible for funding required compensatory mitigation.

There is always the potential for birds to nest within the project area on the ground, on buildings, or on equipment. The nesting season is typically from mid-March to mid-July. Project management would instruct workers to watch for nesting birds. If any nesting birds are encountered or suspected, or bird defensive behaviors are observed within the project area, then project management would contact DOE-RL/SSD Ecological Compliance to evaluate the situation. A nesting bird survey is required if the project begins ground disturbing activities during the nesting season. Project management would submit a service request to schedule a nesting bird survey of the project area at least one week prior to initiation of ground disturbing activities.

The DOE-RL/SSD ecological compliance review is valid for one year from the issuance date of the clearance letter (April 23, 2024) and would be renewed if the project has not been completed. Implementation of compensatory ecological resources mitigation, as documented in the ECR clearance letter and summarized in this NEPA determination, would mitigate adverse impacts to ecological resources anticipated from proposed project activities as an integral part of the proposed action.

**CULTURAL RESOURCES REVIEW (HCRC#2023-200-014a)**

On November 20, 2023, the DOE-RL/SSD Cultural and Historic Resources Program (CHRP) sent an Area of Potential Effects (APE) notification to the Washington State Department of Archaeology and Historic Preservation (DAHP) and regional Native American Tribes. On December 20, 2023, the DOE-RL/SSD CHRP performed a cultural resources review (CRR) field survey of the project area. No cultural resources were previously identified within the project area and the CRR field survey did not identify any new cultural resources. On March 12, 2024, DOE-RL/SSD CHRP transmitted a CRR, with a finding of No Historic Properties Affected, to the DAHP and regional Native American Tribes for a 30-day comment period. On March 12, 2024, the DAHP concurred with the findings of the CRR. On April 18, 2024, the DOE-RL/SSD CHRP provided a notice of compliance with 54 U.S.C. §306108 (formerly known as Section 106) of the National Historic Preservation Act for this project.

DOE-RL/SSD CHRP anticipates no impacts to cultural resources from proposed project activities. Notwithstanding, project management would direct all workers to watch for cultural materials (e.g., bones, stone tools, mussel shell, arrowheads, burned rocks/charcoal, cans, and bottles, etc.) during work activities. If any cultural materials are encountered, work in the vicinity of the discovery would stop until a DOE-RL/SSD CHRP Cultural Resources Specialist has been contacted, the significance of the find assessed, appropriate consulting parties notified, and if necessary, arrangements made for mitigation of the find.

**CONCLUSIONS**

The proposed action to construct and maintain a security sensor test yard to ensure the long-term reliability and effectiveness for the nearby PIDAS meets the requirements (10 CFR 1021.410) and conditions that are integral elements (10 CFR 1021, Subpart D, Appendix B) for applying NEPA categorical exclusions (CXs) without extraordinary circumstances, where a normally excluded action may have significant effects. If an extraordinary circumstance is present, DOE nevertheless may categorically exclude the proposed action if the agency conducts an analysis and determines that the proposed action does not have the potential to result in significant effects or the action is modified to avoid the potential for significant effects. CXs may include mitigation measures that would ensure that any environmental effects are not significant, so long as a process is established for monitoring and enforcing any required mitigation measures [40 CFR 1501.4(b)(1) and (d)(3)]. As previously stated, compensatory ecological resources mitigation required by the BRMP would represent best management practices and be an integral part of the proposed action.

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Although approximately 1.5 acres of BRMP Level 2 habitat would be impacted by the proposed action, implementation of compensatory ecological resources mitigation, as documented in the ECR clearance letter and summarized in this NEPA determination, would mitigate adverse impacts to ecological resources anticipated from proposed project activities. In addition, compensatory ecological resources mitigation required to develop the proposed security sensor test yard and support areas would occur at a 1:1 replacement ratio for impacts to BRMP Level 2 habitat resulting in the revegetation of approximately 1.5 acres in an established area on the Hanford Site selected by DOE-RL/SSD Ecological Compliance for its ecological value and quality (i.e., lack of habitat fragmentation, enhance ecosystem connectivity, abundant species biodiversity, etc.).

In conclusion, the following 10 CFR 1021, Subpart D, Appendix B, CXs would apply to the proposed action to construct the security sensor test yard and support areas:

B1.19, Microwave, Meteorological, and Radio Towers. Among other things, this CX covers siting, construction, modification, operation, and removal of microwave, radio communication, and meteorological towers and associated facilities, provided that the towers and associated facilities would not be in a governmentally designated scenic area.

B2.2, Building and Equipment Instrumentation. Among other things, this CX covers installation of, or improvements to, building and equipment instrumentation including, but not limited to, safeguards and security equipment.

B3.11, Outdoor Tests and Experiments on Materials and Equipment Components. Among other things, this CX covers outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment under controlled conditions.

In accordance with 10 CFR 1021.410(d), categorical exclusions are a class of actions that include activities foreseeably necessary to implement proposals encompassed within the class of actions such as award of implementing grants and contracts, site preparation, purchase and installation of equipment, and associated transportation activities.

Any changes to the proposed action described in this NEPA Review Screening Form may require additional review and approval by the DOE Hanford NEPA Compliance Officer; potentially including, but not limited to, additional cultural and ecological resource reviews if the area of potential effects is expanded.

**III. Existing Evaluations (Provide with NRSF to DOE NCO):**

**Maps:**

Figure 1 - Project Z-383 Project Area Overview

Figure 2 - Proposed Receiver Tower Location (Site Evaluation Request #200E-2024-0001)

**Other Attachments:**

N/A

**IV. List Applicable CX(s) from Appendix B to Subpart D of 10 CFR 1021:**

B1.19, Microwave, Meteorological, and Radio Towers; B2.2, Building and Equipment Instrumentation; B3.11, Outdoor Tests and Experiments on Materials and Equipment Components.

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<b>V. Integral Elements and Extraordinary Circumstances</b> (See 10 CFR 1021, Subpart D, B. Conditions that are Integral Elements of the Class of Actions in Appendix B; and 10 CFR 1021.410(b)(2) under Application of Categorical Exclusions)	<b>Yes</b>	<b>No</b>
Are there extraordinary circumstances that may affect the significance of the environmental effects of the proposed action? If yes, describe them.	<input type="radio"/>	<input checked="" type="radio"/>
Is the proposed action connected to other actions with potentially significant impacts, or that could result in cumulatively significant impacts? If yes, describe them.	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action threaten a violation of applicable statutory, regulatory, or permit requirements related to the environment, safety, health, or similar requirements of DOE or Executive Orders?	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities?	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action disturb hazardous substances, pollutants, contaminants, or natural gas products already in the environment such that there might be uncontrolled or unpermitted releases?	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action have the potential to cause significant impacts on environmentally sensitive resources? See examples in Appendix B(4) to Subpart D of 10 CFR 1021.	<input type="radio"/>	<input checked="" type="radio"/>
Would the proposed action involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, such that the action is not contained or confined in a manner designed, operated, and conducted in accordance with applicable requirements to prevent unauthorized release into the environment?	<input type="radio"/>	<input checked="" type="radio"/>
If "No" to all questions above, complete Section VI, and provide NRSF and any attachments to DOE NCO for review. If "Yes" to any of the questions above, contact DOE NCO for additional NEPA review.		
<b>VI. Responsible Organization's Signatures:</b>		
<b>Initiator:</b>		
<u>Jerry W. Cammann, HMIS/NEPA SME</u> <i>Print First and Last Name</i>	<b>JERRY CAMMANN</b> <i>(Affiliate)</i>	<i>Digitally signed by JERRY CAMMANN (Affiliate)</i> <i>Date: 2024.05.20 15:20:01 -07'00'</i>
<b>Cognizant Program/Project Representative:</b>		
<u>Kevin C. Kopp, DOE-RL/SESD</u> <i>Print First and Last Name</i>	<b>KEVIN KOPP</b>	<i>Digitally signed by KEVIN KOPP</i> <i>Date: 2024.05.21 10:30:24 -07'00'</i>
<b>VII. DOE NEPA Compliance Officer Approval/Determination:</b>		
Based on my review of information conveyed to me concerning the proposed action, the proposed action fits within the specified CX(s): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
<u>Douglas H. Chapin, DOE Hanford NCO</u> <i>Print First and Last Name</i>	<b>DOUGLAS CHAPIN</b> <i>Digitally signed by DOUGLAS CHAPIN</i> <i>Date: 2024.05.21 12:46:13 -07'00'</i>	
NCO Comments:		

**DOE/CX-00235**

**FIGURES**







**Project Z-383, Security Sensor Test Yard**

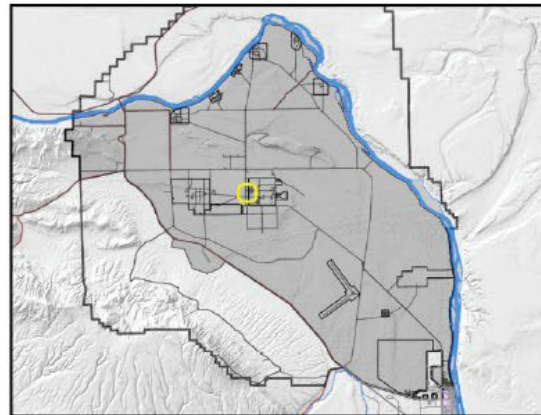
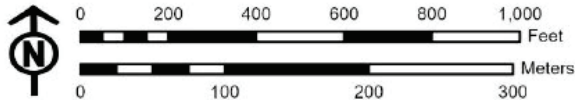
**3 Pages (including this page)**

Figure 1. Project Z-383 Project Area Overview



**LEGEND**

-  Project Area
-  Proposed Project Footprint
-  BRMP Level 4 Habitat
-  BRMP Level 3 Habitat
-  BRMP Level 2 Habitat
-  BRMP Level 1 Habitat



**Fig. 1. Project Area Overview**

ECR-2024-208 | New Security Test Yard Site  
Hanford Site, Benton County, WA

Figure 2. Proposed Receiver Tower Location (Site Evaluation Request #200E-2024-0001)

