Project Title: National and Homeland Security (N&HS) Testing, Training, and Demonstrations Rev 3

Project Description and Purpose:

Revision 3:

This revision includes the following new power pole locations with the capability for cellular testing. Three of these are located along Haul Road next to the powerline, and one is next to the UAS facility building:

IML New Pole	43°32'23.10" N	112°47'19.50" W
High Point 2 Pole	43°32'38.30" N	112°44'8.50" W
High Point 3 Pole	43°33'10.00" N	112°42'11.20" W

The UAS pole would be located in the gravel next to the facility:

UAS Pole: 43°35'55.65"N 112°54'20.65"W

All waste is anticipated to be taken offsite and will not be managed by BEA.

Revision 2:

This revision includes the following new test locations:

Name	Latitude	Longitude	Notes
B27-603	43°30'40.11"N	112°53'50.54"W	WTB storage facility. Testing conducted from parking lot.
B27-606	43°30'51.23"N	112°53'40.16"W	WTB storage facility. Testing conducted from parking lot. Potential for wood pole by the southeast corner.
Fillmore North	43°31'54.79"N	112°49'55.05"W	100' radius as this is a new site, potential for wood pole.
Fillmore South	43°31'15.50"N	112°49'31.51"W	100' radius as this is a new site, potential for wood pole.
Haul Road	43°32'35.76"N	112°43'38.75"W	
Trailer 6	43°32'38.00"N	112°52'10.03"W	
Wilson Magazine	43°32'9.34"N	112°50'44.19"W	

The project may also include the installation of permanent poles at Building B27-606 parking lot (Figure 1) and Trailer 6 (Figure 2) if testing event is successful. Figure 1, Rev. 2: B27-606 pole location.

Figure 2, Rev. 2 : Trailer 6 pole location

Revision 1:

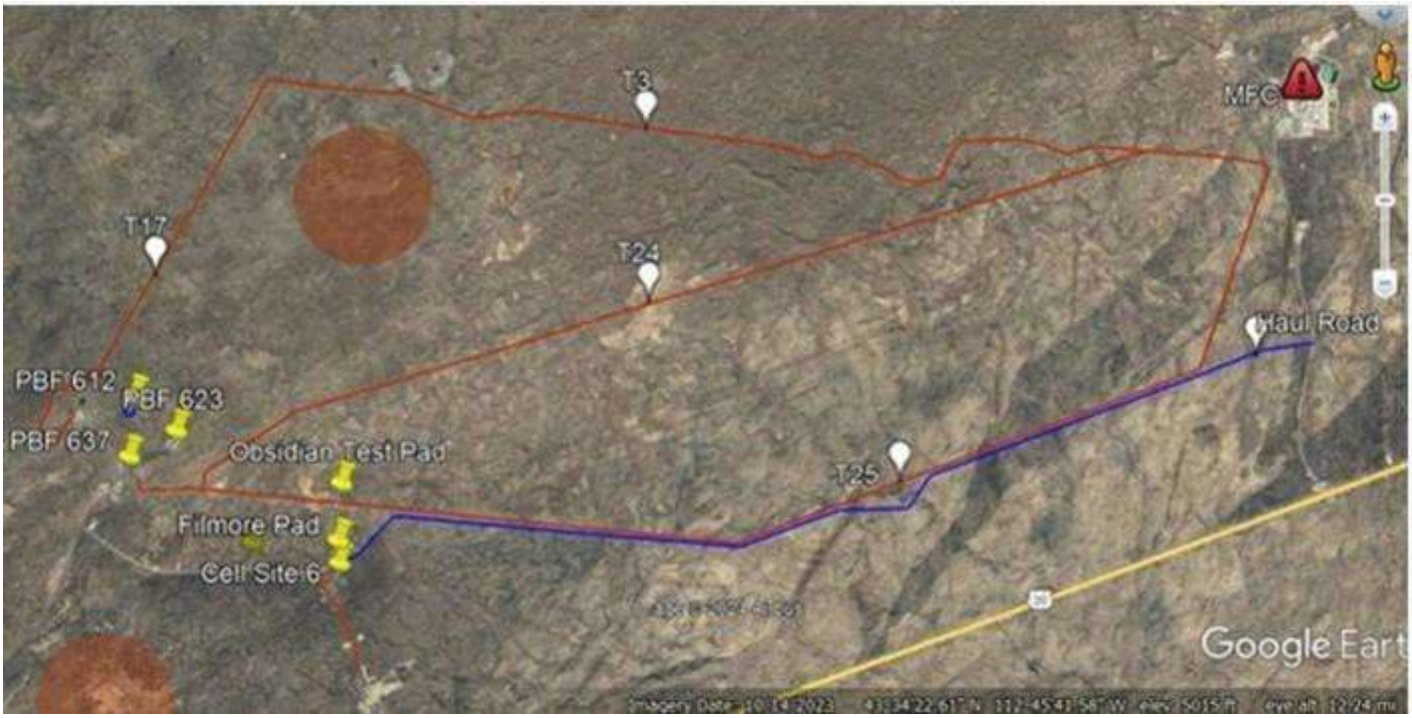
This revision includes new locations for field testing. National and Homeland Security (N&HS) Wireless Testbed (WTB) would like to add additional locations to set up test Lab trailers, portable tower trailers, antennas, generators and test equipment for RF interference testing to include the following roads: Filmore Road, Haul Road, T3, T17, T24, T25. All work will be parking on the T-road for approximately 8 hours at a time, for a period of a weeklong test. Also to include PBF 637, Obsidian Test Pad, Wilson Magazine, Filmore Pad, Cell Site 6, Crater Butte, and Lincoln Boulevard. This will be internal to INL for DOE support to help identify microwave interference for spectrum sharing.

Temporary closures to Haul and Filmore Road may occur. RF Microwave equipment may be purchased

Table 1, Rev. 1: New locations

Test Location	Latitude Longitude	Longitude
Filmore Pad	43°32'10.27"N	112°49'49.04"W
Wilson Magazine	43°32'9.19"N	112°50'44.20"W
T 12 Gravel Pit	43°30'49.99"N	113° 4'7.10"W
Haul Road	43°32'33.05"N	112°43'46.49"W
Haul Road 1	43°32'33.52"N	112°44'7.20"W
Haul Road 2	43°32'23.55"N	112°47'32.73"W
Haul Road 3	43°32'8.30"N	112°49'43.17"W
Haul Road 4	43°32'51.47"N	112°43'18.18"W
Filmore	43°31'18.63"N	112°49'32.12"W

Figure 1, Rev. 1: Location map



Original ECP:

The National and Homeland Security (N&HS) Wireless Testbed (WTB) Program at the Idaho National Laboratory (INL) performs large-scale, independent, end-to-end research and development (R&D) of next generation communication infrastructure such as cellular phone systems, land mobile radios, emergency communications systems, and wireless local area network (WLAN) systems. The N&HS WTB program supports commercial, academia and government efforts and operates under INL's status as a National Telecommunications Information Administration test station. Three test sites at the INL, including monopole tower structures, have been constructed across 16 square miles at the Central Facilities Area (CFA) as part of the National Security and Infrastructure Protection Program and are provisioned with various wireless telecommunications equipment, test equipment and modeling/simulating tools. The N&HS WTB Program provides recurring activities for testing, software and hardware evaluations, maintenance, training, and research of wireless communications technology. Testing activities include equipment testing (temporary installs), projects/upgrades (permanent installs), demonstrations, training and reconfiguration of existing equipment and infrastructure, as well as temporary installation of test devices and power generation, substation, transmission, and related interface equipment.

Recurring testing requires physical changes to the network which usually consists of, but is not limited to, relocating base transmitting station radios and accompanying RF transmission lines, rearranging antennas on towers, and/or adding new sensors on towers and associated baseband equipment in the respective shelters or mobile lab platforms. These activities are representative of equipment changes and tower work that may be required to support WTB work. In addition to the physical changes, system configuration changes may also be required from a network operations center computer workstation.

Customer test equipment may be in the form of rackmount, manpack or handheld transceivers/radios/servers. Associated antennas range from small omni multiband antennas to half size cellular directional antennas. GPS antennas may be used to provide timing and are smaller than a baseball. External communication may be facilitated through VSAT or commercial satellite services. INL WTB staff will install customer equipment and utilize existing power and HVAC within INL approved workspace. Antennas will be placed outside of the buildings or vehicles and the required coax cable will be installed through existing pass-through ports. At trailer locations, including locations where the customer uses their vehicle as a workspace, the customer will integrate equipment into the trailer/vehicle and use trailer/vehicle HVAC and power. Locations for previously deployed equipment are described in the Appendix. Antennas will be deployed outside of the trailer/vehicles and coax will be ran though pass-through ports or windows. INL WTB work trailers require external AC and/or generator connections facilitated by INL electrician and/or site services. Deep cell batteries and/or portable generators may be used with vehicle workspace configurations. All batteries will be strapped down within the vehicle and hitch mount racks will hold/secure portable generators and fuel cans. If required and as directed by the fire marshal, a fire break up to 30-ft in radius may be mowed around field generators; no sagebrush will be mowed. No customer generated/provided excess material or waste will be left at INL.

Recurring activities consist of driving on the established roads on or near the INL site boundaries, with stops along the side of the road to take Radio Frequency (RF) measurements and placing or monitoring measuring equipment at predetermined roadside locations. On occasion, an All-Terrain-Vehicle (ATV) may be utilized for a mobile test platform on designated two track roads. Equipment may be temporarily set up and operated in undisturbed areas adjacent to existing roads. Events may require large-scale test infrastructure to include tents, showers, HVAC, bedding, kitchen, etc. This may include overnight operations at the INL site. Travel on paved and gravel T-roads will be required for testing and experimentation purposes. Other testing activities include the use of mobile field radios, and associated portable antennas that require manual deployment in the field. The ground-base for portable field antennas to include the guy wires for these antennas may span a radius a program specific distance from the center of the antenna mast. The guy wires are usually secured to metal stakes that are driven into the ground.

Recurring testing may also include aircraft and Unmanned Aerial Vehicles (UAVs) flying over various areas of the INL site. Aircraft and UAV's will avoid LEK locations by at least 1 km radius before 9AM and 6PM. Aircraft and UAV's may carry RF or other relevant test equipment. Overflight approvals and notifications will be conducted as required.

Recurring activities occurring at the INL in relation to the N&HS WTB program may include:

- Testing includes developing test articles, setting up and calibrating test instruments, performing tests, and analyzing results
- Accessing test locations using established roads (paved or gravel)
- Installing and placing antennas and test support equipment per test requirements (e.g., generators, tripods, RF measurement tools, etc)
- Removing test and support equipment following testing
- Installing ground rods or guy-wire stakes (requires subsurface investigation)
- Monitoring unmanned equipment on a periodic basis
- Operating and maintaining an Isolated Satellite Backhaul Network (ISBN) that may include portable satellite field kits used at specified locations (vehicle mounted or ground based)
- Reconfiguring current equipment and infrastructure
- Temporary installation of test devices/antennas under or near the INL transmission lines to support power related resilience and reliability testing
- Mowing a fire buffer around field generators
- Mowing and snow removal as needed in field locations
- Temporary placement of portable gas/diesel generators in support of field testing

- Use of low and medium voltage (up to 35-kV class) coaxial cables and communications fiber and cable temporarily installed on pole structures, on the ground, or in facilities
- Use temporary control shelters and equipment trailers
- Travel on existing powerline roads to take RF measurements
- RF interference testing
- Use of Cell on Wheels (COWS) with on-board generator
- Temporary placement of portable restrooms in field locations
- Perform radio frequency (RF) testing and research
- Setting up large-scale tents in field locations including tents, showers, showers, HVAC, bedding, kitchen, etc.
- Installing equipment racks and/or rack-mounted equipment inside of fixed facilities or test trailers
- Relocating network equipment and connectivity
- Fueling activities (small scale gas cans or via fuel truck)

A description of recurring activities occurring under the N&HS WTB program can be found in previously issued categorical exclusions (Appendix).

Recurring activities may result in noise, air emissions, chemical use, and waste generation. These will be managed in accordance in compliance with DOE orders and federal or state regulations and guidelines, or with applicable permits to avoid extraordinary circumstances. IN all instances, the demand for resources and environmental impacts resulting from implementation of these proposed activities would be small and temporary in nature.

Biological reviews shall be performed in accordance with established protocols, policies, and procedures to identify plant and animal species for protection under the Endangered Species Act, candidates for protection, or listing by federal or state agencies as threatened or endangered in accordance with applicable guidance documents and agreements (i.e., the INL Candidate Conservation Agreement). Caution shall be exercised during the bird nesting season. If nesting birds, pair of birds of the same species, or bird defensive behaviors is observed, then work shall stop and a qualified Natural Resource Specialist shall be contacted for guidance. Actions that potentially affect ecological resources shall require a resource review and clearance before proceeding. This may include ground disturbing activities; remove or modify vegetative cover; expand roadways/parking lots; involve unusual noise, light, or chemicals, that may affect wildlife; located near an ecologically sensitive area; conducted on the outside of structures; conducted in abandoned buildings; or have the potential to alter or affect the living environment. If a biological review determines potentially adverse impacts, then appropriate mitigation measures shall be identified and implemented to avoid, minimize, eliminate, rectify, or compensate impacts.

Cultural resource reviews shall be performed in accordance with established protocols, policies, and procedures to identify resource protection consistent with the INL Cultural Resource Management Plan and associated programmatic agreements with the Idaho State Historic Preservation Office. Cultural sensitivity shall be determined using site location topographic maps, geographic information system databases, and/or pedestrian surveys to identify proximity to cultural resources (i.e., historic buildings, traditional cultural properties, artifacts, and previously recorded archaeological sites). A description of cultural resource reviews that have been performed in support of N&HS WTB program can be found in the Appendix.

INL uses an electronic Environmental Review Process (ERP) system to screen proposed activities for potential environmental impacts to the human environment. It shall be incumbent upon the project personnel, environmental staff, NEPA subject matter experts, or other NEPA trained individuals to assure that the requirements and conditions (i.e. project specific instructions and hold points) identified in the ERP system are met prior to applying this umbrella categorical exclusion. These individuals shall also be responsible for assuring that no extraordinary circumstances exist where normally excluded actions may have significant effects on the human environment.

In accordance with the limitations on categorical exclusions (CX) B1.2 (training exercises and simulations), B1.7 (electronic equipment), B1.31(installation or relocation of machinery and equipment), B3.6 (small-scale research and development, laboratory operations, and pilot projects), and B3.11 (outdoor tests and experiments on materials and equipment components) imposed by 10 CFR Part 1021, Appendix B to Subpart D, none of the activities addressed in this ECP include the following:

- Actions that are part of, or in support of, a larger project that requires either an Environmental Assessment (EA) or an Environmental Impact Statement (EIS).
- Actions that change the scope, mission, or hazard categorization of a facility.
- Actions that may cause a significant increase in environmental impacts of a facility.
- Actions for which a separate categorical exclusion is specified in 10 CFR 1021, Appendix B to Subpart D.
- Actions include, but are not limited to, the installation or relocation of contaminated equipment, special nuclear material or related equipment.

- Actions with extraordinary circumstances that affect any sensitive area or natural resources, Undertakings determined during the National Historic Preservation Act Section 106 process that may affect historic properties, 36 CFR 800.4(d)(2), federally-listed threatened or endangered (T&E) species or their habitat, federally-proposed or candidate species and their habitat, state-listed or state-proposed T&E species, and other federally-protected species such as Bald and Golden eagles and birds protected under the Migratory Bird Treaty Act (MBTA), floodplains and wetlands, areas having a special designation (e.g., national landmarks), special sources of water (such as sole source aquifers), and involve genetically engineered organisms, synthetic biology, noxious weeds and invasive species).
- Activities that disturb 1) current or potential sagebrush habitat anywhere on the INL Site outside of current facility footprints, 2) native or naturalized vegetation within the INL boundary, Sagebrush Steppe Ecosystem Reserve, or the area between Specific Manufacturing Capability (SMC) and Test Area North (TAN), 3) soil in the INL storm water corridor, or 4) disturb vegetation or soils in the CITRC area (including previously disturbed areas at CITRC).
- An upgrade or improvement that would extend the useful life of a facility.

Environmental Aspects or Potential Sources of Impact:

Air Emissions

Project activities have the potential to release ozone depleting substances and greenhouse gases.

Air emissions from portable electrical generators, in place less than one year, and from helicopters and other aircraft are not regulated.

Discharging to Surface-, Storm-, or Ground Water

No anticipated discharges to surface, storm or ground water. If project activities involve discharging waters at the INL site, project personnel must contact the PEL to determine required permits.

Disturbing Cultural or Biological Resources

There is the potential for this work to impact vegetation and for project personnel to interact with various wildlife species. A Biological Resource Review will be arranged within two weeks prior to the initiation of any activities that might disturb soil or vegetation and again following completion of project activities. A nesting bird survey is included with the Biological Resource Review for actions occurring between April 1 - October 1 per compliance with the Migratory Bird Treaty Act. Bat surveys are also included with the Biological Resource Review in accordance with the INL Bat Protection Plan.

CULTURAL: A Section 106 review was completed under CRMO project number (BEA-26-024) and resulted in No Historic Properties Affected. Additionally, two of the poles excluded from project-specific Section 106 consultation. Please refer to Hold Points and Project Specific Instructions of the ECP.

Generating and Managing Waste

When wastes are generated, how they are disposed can adversely affect the environment. Managing wastes appropriately and responsibly and implementing recycling or reuse practices, where feasible, during project activities can reduce the potential impact on the environment.

At INL facilities, activities may generate industrial, hazardous, radioactive, and mixed waste. The BEA Waste Management Program's (WMP) Waste Generation Services (WGS) subcontractor assists projects in characterizing and managing waste. WGS brokers handling and shipping of hazardous and radioactive waste.

Releasing Contaminants

When chemicals are used during the project there is the potential for spills that could impact the environment (air, water, soil).

Using, Reusing, and Conserving Natural Resources

NA

Determination

References:

B1.2 Training exercises and simulations (including, but not limited to, firing-range training, small-scale and short-duration force-on-force exercises, emergency response training, fire fighter and rescue training, and decontamination and spill cleanup training) conducted under appropriately controlled conditions and in accordance with applicable requirements.

B1.7 Acquisition, installation, operation, modification, and removal of electricity transmission control and monitoring devices for grid demand and response, communication systems, data processing equipment, and similar electronic equipment.

B1.31 Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.

B3.6 Siting, construction, modification, operation, and decommissioning of facilities for small-scale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.

B3.11 Outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment (including, but not limited to, weapon system components) under controlled conditions. Covered actions include, but are not limited to, burn tests (such as tests of electric cable fire resistance or the combustion characteristics of fuels), impact tests (such as pneumatic ejector tests using earthen embankments or concrete slabs designated and routinely used for that purpose), or drop, puncture, water-immersion, or thermal tests. Covered actions would not involve source, special nuclear, or byproduct materials, except encapsulated sources manufactured to applicable standards that contain source, special nuclear, or byproduct materials may be used for nondestructive actions such as detector/sensor development and testing and first responder field training.

The proposal fits within the classes of actions listed in Appendix B to 10 CFR Part 1021 or Appendix B and C of DOE's NEPA Implementing Procedures and satisfies the conditions that are integral elements of the classes of actions therein. The proposal does not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Appendix B.

There is no extraordinary circumstance related to the proposal that is likely to cause a reasonably foreseeable significant adverse effect or for which DOE does not know the environmental effect. Extraordinary circumstances are unique situations presented by specific proposals, including, but not limited to, scientific controversy about the environmental effects of the proposal; uncertain effects or effects involving unique or unknown risks; and unresolved conflicts concerning alternative uses of available resources.

The proposal has not been segmented to meet the definition of a categorical exclusion. Segmentation can occur when a proposal is broken down into small parts in order to avoid the appearance of significance of the total action. However, segmentation does not include proposals that are developed and potentially implemented over multiple phases where each phase results in a decision whether to proceed to the subsequent phase.

Based on my review of the proposed action, I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

Approved by Robert Douglas Herzog, DOE-ID NEPA Compliance Officer on: 2/24/2026