SECTION A. Project Title: BCTC to Lindsay Relocation and Lease R1

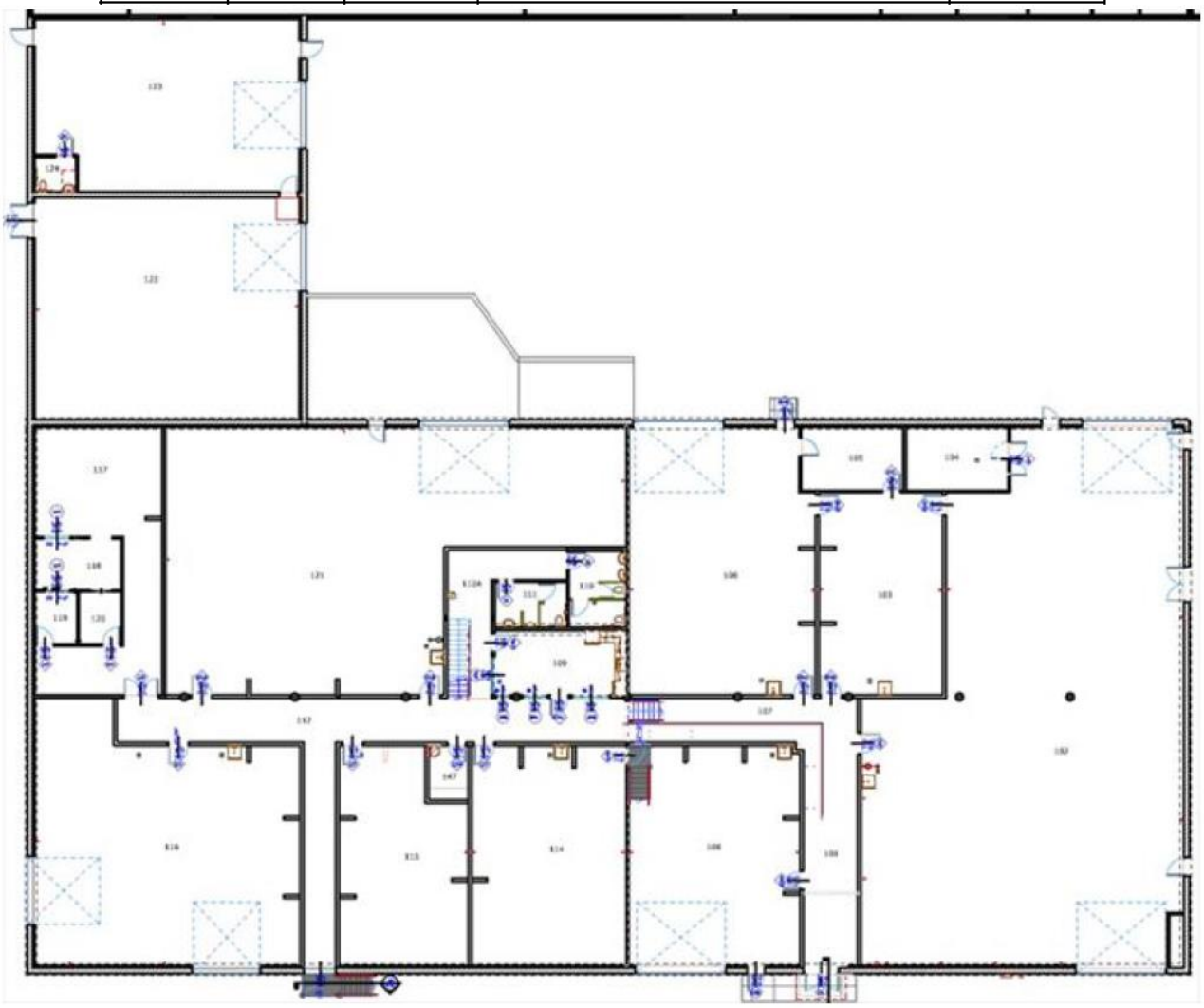
SECTION B. Project Description and Purpose:

Revision 1:

This revision includes the updated facility number, floorplan, and additional projects that will be transferred to the Lindsay Blvd Complex (IF-695, formerly IF-652). This facility is covered by ECAR-5408, Lindsay Boulevard Complex (LBC). The Mobile Hot Cell (SIRE) project will also be transferred to IF-695.

Lindsay Blvd Room	*Formerly Identified in Original ECP*	Org	Project	ECP
103	*Lab 2*	NHS	Radiation Detection Systems Lab	INL-13-013
117	*Lab 3*	NHS	MINOS Infrasound, Rapid Research Response for Detonation Forensics Venture	INL-20-186
117	*Lab 3*	NHS	Burnup Measurement System (BUMS)	INL-21-046 INL-21-101
117	*Lab 3*	NHS	BEARTOOTH	INL-21-025
117	*Lab 3*	NHS	Nonproliferation Stewardship Program	
117	*Lab 3*	NHS	NRIC X-Energy/X-ray Cell	INL-21-046 INL-17-105
102	*HB1*	NHS	Chemical Weapons Detection Lab	INL-16-052
108/114	*HB2*	NHS	Radiation Detection Systems Lab	INL-13-013 INL-15-089
108/114	*HB2*	NHS	Radiological Dispersal Device (RDD)/Improvised Nuclear Device (IND) Material Training Activities and Evaluations Using Radiation Emitting Sources/Material/Device	INL-17-069
102	*HB3*	NHS	Chemical Weapons Detection Lab	INL-16-052
102	*HB4*	NHS	Chemical Weapons Detection Lab	INL-16-052
106	*HB5*	NHS	Radiation Detection Systems Lab	INL-15-089 INL-20-186
121	*HB6*	NST	Solvent Extraction Equipment Testing Lab	INL-14-103 INL-17-069 R2
121	*HB6*	NHS	Radiation Detection Systems Lab	INL-17-069
122/123	*HB7*	EEST/NHS	Unmanned Aerial Vehicle Ordnance Detection Lab	INL-16-149 INL-21-158 IN-21-123

115/116	*MU1*	EEST	Source Recovery Team and Mobile Hot Cell	INL-18-051 INL-19-056 R3
115/116	*MU2*	EEST	Source Recovery Team and Mobile Hot Cell	INL-18-051 INL-19-056 R3
115/116	*MU3*	EEST	Source Recovery Team and Mobile Hot Cell	INL-18-051 INL-19-056 R3



Original ECP:

INL currently leases space in the Bonneville County Technology Center (BCTC, IF-670). This lease will end at the end of FY2022 and not be renewed. An alternate facility will need to be leased so that the current research and program activities in BCTC can continue. Organizations currently using lab space and high bay space in BCTC include National and Homeland Security (N&HS), Nuclear Science and Technology (NS&T) and Energy & Environment Science and Technology (EES&T).

INL already leases space for National and Homeland Security (N&HS) industrial control systems cybersecurity and training purposes (EC INL-18-128) at 765 Lindsay Blvd (IF-652). The rest of this building is vacant and available for lease as well. The building owner will be making all facility modifications as per a "needs requirements document" supplied by BEA. This BEA "needs requirements document" will be in place prior to the owner making the building

modifications. Costs of construction for the building modifications will be incurred as part of the lease agreement/payments.

General BCTC work activities include electronics assembly, typical machining, fabrication, experimental operations using various materials and chemicals, x-ray radiography, startup testing of electrical and mechanical systems, solvent extraction processes, passive screening and active interrogation measurements, sound detection research, and unmanned aerial systems assembly, operation, maintenance, and testing.

The following BCTC labs and high bay areas and associated programs would move to the IF-652 space. More detailed descriptions and the activities associated Environmental Checklists (EC)/Environmental Compliance Permits (ECP) are listed below:

Lab 2 – Radiation Detection Systems Laboratory (N&HS) – Examination of both conventional and unconventional radiation detection methods for applications such as nonproliferation, fuel cycle analysis, safeguards, treaty verification, radon detection, passenger screening and border security. Develop new measurement methods and technology to a sufficient level for further sponsored research and development and licensing. Activities include equipment assembly, equipment and operability testing, use of exempt sealed radioactive sources for detector testing, and data collection and interpretation. See EC INL-13-013 for additional information.

Environmental aspects include generation of small amounts of hazardous waste in the form of scrap solder, industrial waste generation, use of exempt sealed radioactive sources and chemical use such as alcohol for cleaning electronics. There is currently one sink in the lab, however lab processes do not discharge wastewater.

Lab 3 – MINOS Infrasound, Rapid Research Response for Post-Detonation Forensics Venture, BEARTOOTH, Nonproliferation Stewardship Program, NRIC X-Energy (N&HS) –

MINOS Infrasound - Sound evaluation equipment research for detection of centrifuge operation.

Burnup-measurement system (BUMS) measures the burnup of individual pebbles associated with the pebble-bed High Temperature Gas-cooled Reactor (HTGR). Develop and bench test of the sensor and preliminary software system to perform burnup measurements. Characterize the designated crystal detector and perform initial measurement of the unirradiated pebbles composition of interest. See ECP's INL-21-046 (OA 37), INL-21-101.

Environmental aspects associated with this lab include waste generation and use of standard equipment maintenance chemicals. There is no sink in the lab or wastewater generation.

High Bay 2 - Radiation Detection Systems Laboratory (N&HS) – Radiological Dispersal Device (RDD)/Improvised Nuclear Device (IND) Material Training Activities and Evaluations Using Radiation Emitting Sources/Material/Devices.

This lab conducts response training to radiological incidents. Activities are described in EC INL-17-069 R2. The RDD/IND Material Training is designed to allow participants to train and exercise in near real life radiological environments where they are expected to use their training to do measurements, interrogate materials, perform radiation/contamination surveys and collect radioactive, potentially contaminated samples that might be associated with an IND or RDD. The BCTC activities only use sealed radioactive sources.

Environmental aspects include the use of radiation generating devices, sealed radioactive sources, generation of industrial waste and use of chemicals. Wastewater is not discharged from lab processes.

High Bay 3 – Chemical Weapons Detection Laboratory (N&HS) – Machine shop activities associated with the High Bay 4 detection work. Operating and maintaining lathes/milling machines, drill presses, band saws, wheel grinders, chop/circular saws, hydraulic presses, belt sanders, pipe threaders, pneumatic/hydraulic brake/shear, standard/pneumatic hand tools, hydraulic jacks, dollies, rollers, carts, forklift, ladders, etc. See EC INL-16-052.

Environmental aspects include generating scrap metal, RCRA scrap metal, used oil, used cutting fluids/coolants, used hydraulic fluids, plastics, spent batteries, oil contaminated wipes. General machine shop chemicals are used such as lubricants, coolants, cutting fluids, etc. There is a sink in the high bay but processes do not have wastewater discharges.

High Bay 4 – Chemical Weapons Detection Laboratory (N&HS) – Use of radiation generating devices (RGD's) and radiation detection and measurement equipment (RDME) to create 3-dimenesional density-contrast images of items of interest to learn about their construction, assembly, material composition and density, and internal and external dimensions. Activities and equipment include x-ray radiography RGD's, RDME's, Mobile Munitions Assessment System (MMAS) and a shielded room (cave). Some machine shop activities also take place in High Bay 4.

Environmental aspects include generation of small amounts of hazardous waste (lead contaminated gloves 4 pairs/month), lead shielding, x-ray/RGD's use and standard chemical use. There is no sink, processes do not generate wastewater.

High Bay 5 – Radiation Detection Systems Laboratory (N&HS) – Performs passive screening and active interrogation measurements related to the development of methods and techniques for detecting, identifying, and characterizing special nuclear material (SNM), alternate nuclear material (ANM), other radiological materials (ORM), and nonthreatening materials (NTM). Use of a commercially available electronic neutron generator (ENG) (sealed radioactive sources) to irradiate the test objects. Neutron and photon detectors and their associated electronics are used. Measurements will include observations using inorganic scintillators, organic scintillators, solid-state detectors, and gas-filled detectors. See EC INL-15-089 (OA 18) and ECP INL-20-186 (OA 18).

Environmental aspects include electronic neutron generator, use of radioactive material and check sources, lead shielding, laboratory and maintenance chemical use, waste generation in the form of routine office trash, wood, PPE, lead contaminated PPE, LLW and batteries for recycle. There is 1 sink in the lab, but processes do not generate wastewater.

High Bay 6 – Solvent Extraction Equipment Testing Lab (NS&T) – Development and evaluation of new solvent extraction (SX) processes and refinement of existing SX processes to remove selected target species from simulated process streams. Data will be used to design full-scale flowsheets for process scale application. Demonstration of operation of SX equipment is performed for training purposes as well. Lab activities include SX equipment assembly and maintenance, preparation of aqueous and organic test solutions, operation of SX processing equipment including centrifugal contactors, mixers-settlers and pulse columns, sampling organic and aqueous phases and system clean up. There is a fume hood and sink in this high bay. See EC INL-14-103 (OA 18).

Some Radiation Detection Systems Laboratory activities described in High Bay 2 and EC INL-17-069 R2 are conducted in HB 6 as well.

Environmental aspects include chemical storage and use including laboratory chemicals such as acids, caustics, acetone, methanol, etc., maintenance type chemicals including lubricants, adhesives, silicone, etc. RCRA hazardous waste generation (liquids and solids), discharge to City of Idaho Falls sewer for neutralized acid solutions (1 sink), laboratory chemical air emissions (1 fume hood). There are minor air emissions from organic solvents covered under Air Permitting Applicability Determination (APAD) 06-008. Radiation generating devices and radioactive sealed sources are used as described in High Bay 2.

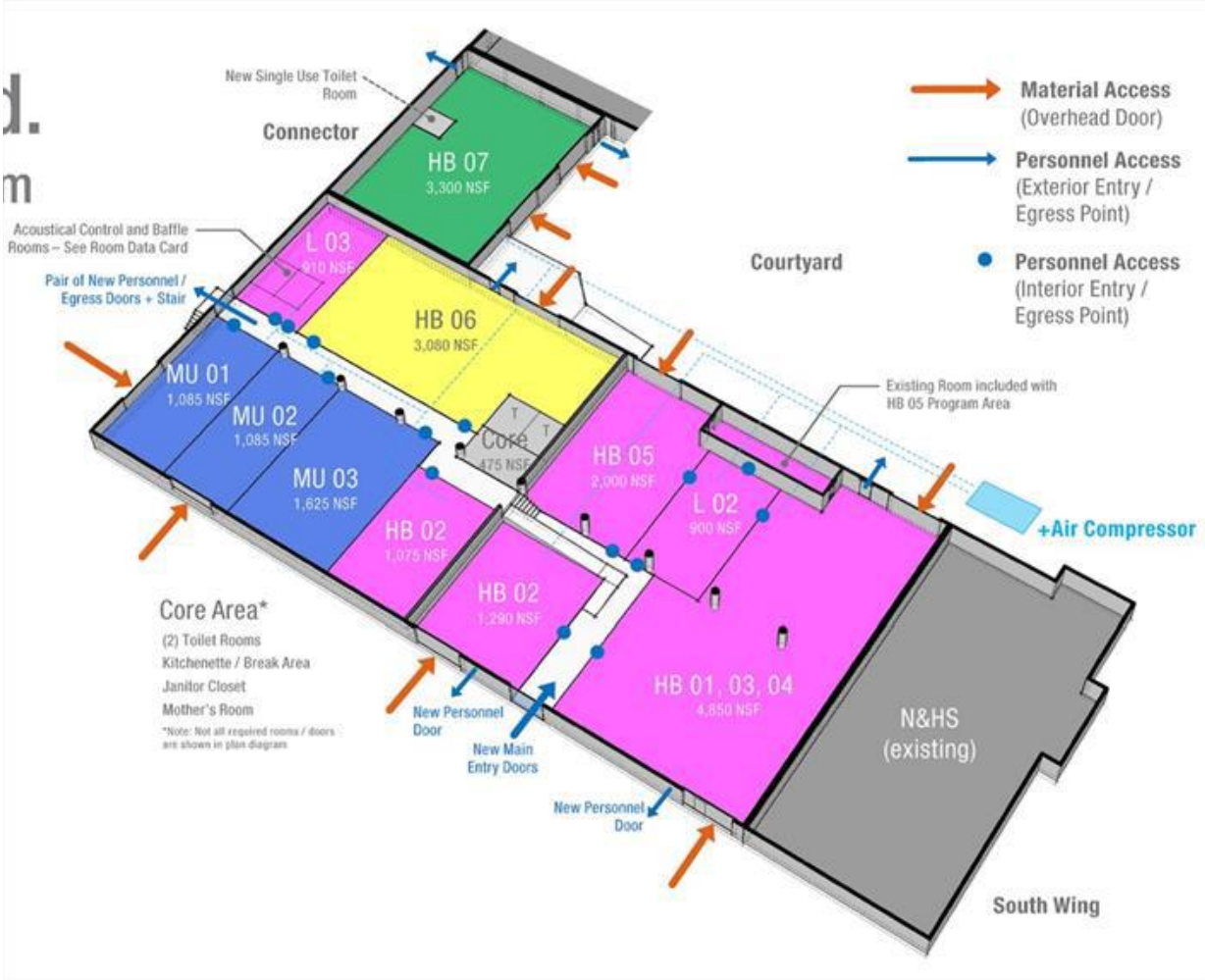
High Bay 7 – Unmanned Aerial Vehicle (UAV) Ordnance Detection Laboratory (EES&T/N&HS) – Fabrication, repair of prototype bench and pilot scale equipment, equipment interfaces, and related equipment for use in research projects for robotics, UAV's, Bio Energy and Renewable Energy programs. Non-flight development and testing including integration, prototyping, and debugging activities. Activities include electronic work, electrical testing and assembly. Unmanned Aircraft Systems (UAS) activities include sensor integration, testing, telemetry, and data collection/analysis. Hand tools, hydraulic shear, band saw, chop saw, drill presses, bench grinders, brakes, punches and presses are used to support the program.

UAV operation activities include engine fueling, engine testing, cleaning aircraft parts/surfaces, soldering and battery use.

See EC INL-16-149, ECP INL-21-158 and ECP INL-21-123 (OA 30).

Environmental aspects include chemical use such as lubricants, fuels, compressed gas, adhesives, isopropanol, cleaners, epoxies. Waste generation such as cleaning rags, isopropanol wipes, various types of batteries for recycle, used oil, floor dry, circuit boards for recycle, solder wire and scrap metal for recycle. There is no sink, processes do not generate wastewater. Fuel/oil storage is in small <55 gallon containers so SPCC requirements do not apply.

The proposed desired floorplan layout for the Lindsay Blvd facility is in Figure 1. below. High bays 1 and 9 and lab 1 activities have moved or are moving to existing facilities already associated with those programs (IRC, SIRE, CAES, IEDF and C3). Existing ECs/ECPs are in place for these activities.



Any potential release or discharge from the leased facility would adhere to all applicable permits and not be at a level or form that would pose a threat to public health or the environment.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Activities that will move from BCTC to Lindsay are covered by existing EC's/ECP's and associated applicable APAD's. APAD 06-008 covers minor air emissions from organic solvents emitted as part of the solvent extraction work that takes place in BCTC High Bay 6. Some BCTC activities that will move to the Lindsay facility use radioactive sealed sources and radiation generating devices. These processes do not have radioactive air emissions. Any future new work that would occupy the Lindsay facility would need to have activity specific ECP's and APAD if applicable.

Discharging to Surface-, Storm-, or Ground Water

The solvent extraction work that takes place in High Bay 6 does discharge neutralized acid solutions to the City of Idaho Falls sewer system. Discharges are required to meet the City of Idaho Falls Title 8, Chapter 1 - Sewers, discharge

requirements. BCTC activities currently do not store any oil in containers/tanks >55 gallons and therefore doesn't require a Spill Planning Control and Countermeasures Plan.

Disturbing Cultural or Biological Resources

Cultural: Pursuant to the 2023 Programmatic Agreement, this federal undertaking is excluded from Section 106 review as the proposed activity has little to no potential to cause effects to historic properties.

Generating and Managing Waste

BCTC activities moving to the Lindsay facility generate various types of waste including routine office trash, hazardous, industrial, and potentially low-level wastes. The amount of hazardous waste generated is <100 kg/month and will be within the Very Small Quantity Generator (VSQG) category. Type of hazardous waste consists of lead contaminated PPE, solders, solvent rags, laboratory chemicals/solutions and spill cleanup wastes. Universal waste such as batteries and light bulbs/tubes may also be generated. Materials such as RCRA scrap metal, scrap metal, batteries will be sent for recycling.

Releasing Contaminants

Activities addressed by this ECP have the potential to release contaminants through air emissions (see above), wastewater discharge (see above), acquiring, using, storing, and dispositioning chemicals, managing and dispositioning excess property and materials, reporting and cleaning up spills and releases managing elemental lead and removing lead from service.

Using, Reusing, and Conserving Natural Resources

Activities addressed by this ECP have the potential for use, reuse and conservation of natural resources related to: building energy use, consuming potable water, generating landfill waste and generating recyclable materials.

SECTION D. Determine Recommended Level of Environmental Review, Identify Reference(s), and State Justification: Identify the applicable categorical exclusion from 10 Code of Federal Regulation (CFR) 1021, Appendix B, give the appropriate justification, and the approval date.

For Categorical Exclusions (CXs), the proposed action must not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environmental, safety, and health, or similar requirements of Department of Energy (DOE) or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment or facilities; (3) disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources (see 10 CFR 1021). In addition, no extraordinary circumstances related to the proposal exist that would affect the significance of the action. In addition, the action is not "connected" to other action actions (40 CFR 1508.25(a)(1) and is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1608.27(b)(7)).

References:

B1.24 "Property transfers", B3.6 "Small-scale research and development, laboratory operations, and pilot projects"

Justification:

B1.24 Property transfers. Transfer, lease, disposition, or acquisition of interests in personal property (including, but not limited to, equipment and materials) or real property (including, but not limited to, permanent structures and land), provided that under reasonably foreseeable uses (1) there would be no potential for release of substances at a level, or in a form, that could pose a threat to public health or the environment and (2) the covered actions would not have the potential to cause a significant change in impacts from before the transfer, lease, disposition, or acquisition of interests.

B3.6 Small-scale research and development, laboratory operations, and pilot projects. 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.

Is the project funded by the American Recovery and Reinvestment Act of 2009 (Recovery Act) ☐ Yes ☒ No

Approved by Jason L. Anderson, DOE-ID NEPA Compliance Officer on: 9/11/2023