

# DOE-ID NEPA CX DETERMINATION

## Idaho National Laboratory

### SECTION A. Project Title: INL Site In-Vivo Detection Facility

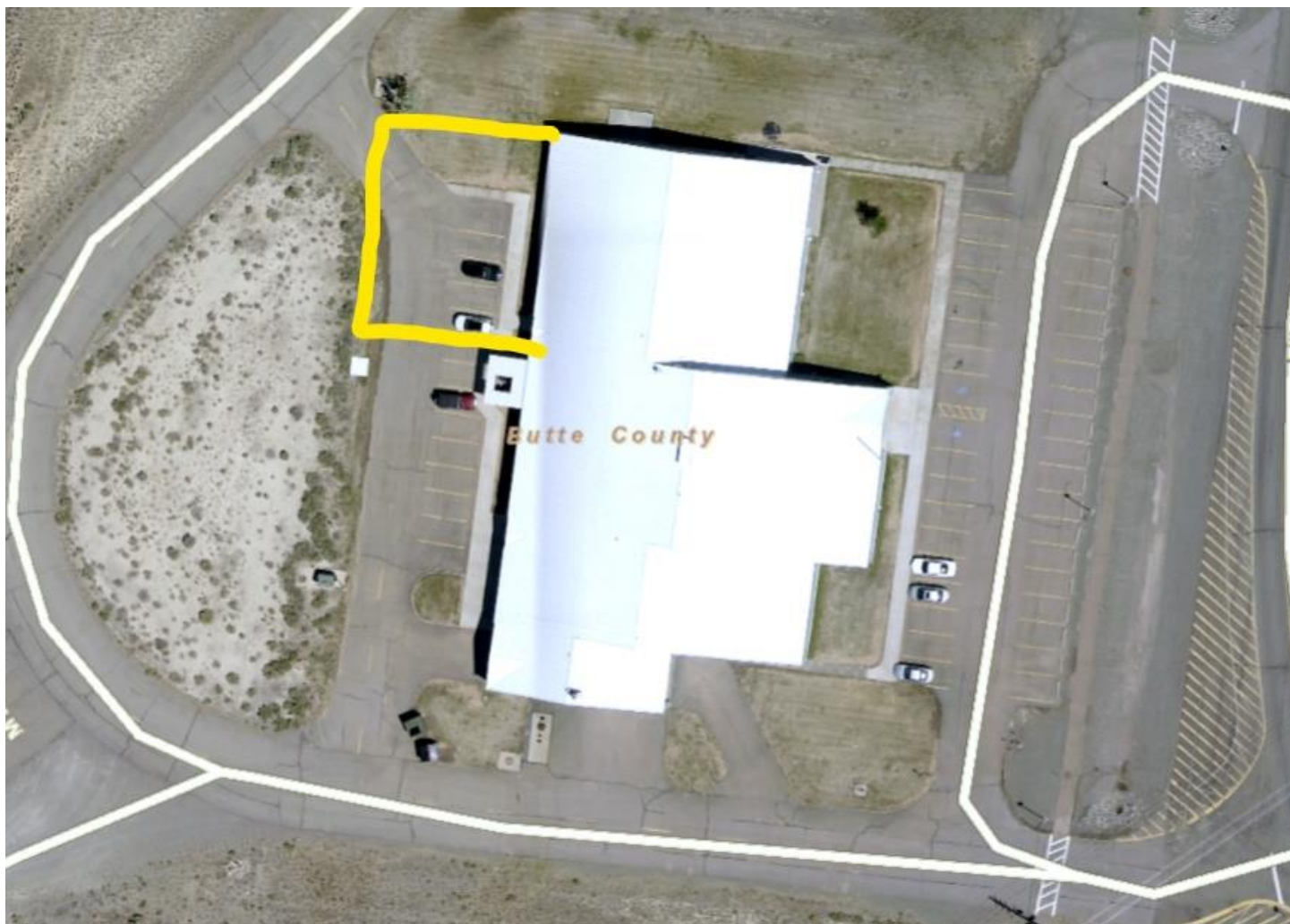
### SECTION B. Project Description and Purpose:

In the conduct of work at the Idaho National Laboratory (INL) Site, monitoring for possible intake or exposure to radioactive material is an essential program for radiation workers. This monitoring program includes measurements of radionuclides in the body through direct and indirect radiobioassay programs where sample analyses are used to detect and quantify intakes of radiological material by workers into their bodies. The necessity for having direct radiobioassay monitoring capability located on the INL Site and geographically close to an established medical facility is imperative for routine monitoring against radiation exposure limits, and in case of an exposure event. In case of the latter, having immediate access to radiobioassay sample results enables rapid administration of therapy to remove the radioactive material from the blood stream before it can be deposited into a specific (target) organ.

For these reasons there is a need to install, operate and maintain an effective and efficient in-vivo detection capability at the INL Site to include whole body, lung, and wound counting in support of radiation workers supporting core/priority mission functions performed there. The proposed building acquisition is anticipated to require ~ 1,800 ft<sup>2</sup> of space. Establishing the ability to operate and maintain an effective and efficient in-vivo detection capability at the INL Site requires consideration of the following criteria:

- Locate facility adjacent to CF-1612, Central Facilities Area (CFA) Medical (see figure below). The site location was selected based on these study findings:
  - a. Locating the facility adjacent to the existing CFA Medical will provide the opportunity for existing equipment to be relocated into a single location that will support radiation body counts in day-to-day operation and during an emergency event.
  - b. The site is centrally located to activity at the desert complexes.
  - c. The facility will be located as an addition to an existing building to be able to take advantage of co-located staff and utilize existing toilet/ showers/ changing room space. If the In-Vivo Detection Facility were to be a standalone building, then toilets/ showers/ changing rooms would need to be added to the floor plan. The site is located near existing toilets/ showers/ changing area within CF-1612.
  - d. The site provides quality access to views and natural daylight.
- Reutilize the pre-World War II steel vaults from CF-690 facility. Shielded vaults are necessary to achieve the minimum detectable activity (MDA) values required for detecting isotopes of concern, low energy x-rays, and photons. The vaults reduce background radiation levels and the MDA to values that meet regulatory requirements.
- Adequate floor space to 1) house a whole body/lung/wound counter device and associated analyzer control cabinetry, 2) accommodate a waiting room for 4 persons, and 3) a private consultation rooms.
- Minimize spectral background interference by installing additional shielding, if necessary.
- Physical infrastructure features that enable DOELAP accreditation per 10 CFR 835.402(a), while meeting other electrical, communication and environmental control code requirements.
- The facility must be available for use 24 hours per day, 7 days a week, and 365 days a year.

A detailed siting study was performed as part of the advanced planning and conceptual design stages (CDE-1). The approach used a systems engineering methodology that integrated requirements analysis, risk identification and analysis, acquisition strategies, and concept exploration in order to evolve a cost-effective preferred solution to meet mission need. The environmental impacts described in this Environmental Compliance Permit (ECP) apply to constructing a new facility as an Annex to the existing CFA Medical Facility (CF-1612). Building utilities (electrical power, fire water, and fiber optic cable) will be distributed from existing utilities. Locations and tie-ins will be identified in subsequent design phases.



**SECTION C. Environmental Aspects or Potential Sources of Impact:**

**Air Emissions**

- Generating air pollutants, including but not limited to chemical and combustion emissions
- Generating hazardous emissions, such as by operation of fuel burning equipment, use of construction or maintenance products that contain hazardous constituents, and disturbance of contaminated soils
- Maintaining, servicing, or repairing stationary heating, ventilation, air conditioning and refrigeration equipment
- Acquiring and dispositioning chemicals
- Generating fugitive dust or other fugitive emissions
- Purchasing, relocating, operating, modifying, or maintaining portable air emission sources, including non-road internal combustion engines.

**Discharging to Surface-, Storm-, or Ground Water**

- Discharging Wastewaters
- Managing storm water discharges.

**Disturbing Cultural or Biological Resources**

Activities addressed by this EC have the potential to disturb cultural or biological resources through the constructing facilities, structures, equipment and/or processes. Construction of new facilities may adversely affect the historic character of adjacent historic properties.

# DOE-ID NEPA CX DETERMINATION

## Idaho National Laboratory

### Generating and Managing Waste

Activities addressed will generate waste typical of construction activities, including concrete from pad demolition.

### Releasing Contaminants

Typical construction chemicals such as fuels, lubricants, adhesives, paints, concrete, concrete cure, asphalt, refrigerants, etc., will be used and will be submitted to chemical inventory lists with associated Safety Data Sheets (SDSs) for approval in the vendor data system prior to use. The facility Chemical Coordinator will enter these chemicals into the INL Chemical Management Database. All chemicals will be managed in accordance with laboratory procedures. When dispositioning surplus chemicals, project personnel must contact the facility Chemical Coordinator for disposition instructions.

Although not anticipated, there is a potential for spills when using chemicals or fueling equipment. In the event of a spill, notify facility PEL. If the PEL cannot be contacted, report the release to the Spill Notification Team (208-241-6400). Clean up the spill and turn over spill cleanup materials to WGS.

### Using, Reusing, and Conserving Natural Resources

- Building energy use
- Consuming potable or industrial water
- Generating landfill waste or construction and demolition wastes
- Generating recyclable materials
- Providing an opportunity to engage in sustainable acquisition practices.

**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:** 10 CFR 1021, Appendix B to subpart D, item B1.15, "Siting, construction or modification, and operation of support buildings and support structures."

**Justification:** B1.15 "Siting, construction or modification, and operation of support buildings and support structures (including, but not limited to, trailers and prefabricated and modular buildings) within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible). Covered support buildings and structures include, but are not limited to, those for office purposes; parking; cafeteria services; education and training; visitor reception; computer and data processing services; health services or recreation activities; routine maintenance activities; storage of supplies and equipment for administrative services and routine maintenance activities; security (such as security posts); fire protection; small-scale fabrication (such as machine shop activities), assembly, and testing of non-nuclear equipment or components; and similar support purposes, but exclude facilities for nuclear weapons activities and waste storage activities covered in B1.10, B1.29, B1.35, B2.6, B6.2, B6.5, B6.6, and B6.10 of this appendix."

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: 09/14/2021