SECTION A. Project Title: INL – Site Wide Well Management and Long-Term Stewardship Activities

SECTION B. Project Description

Well management activities include decommissioning (abandonment) of inactive wells and injection wells at the Idaho National Laboratory (INL) Site. Wells and injection wells will be decommissioned per the Idaho Department of Water Resources (IDWR) requirements, as applicable. The wells to be decommissioned are located both within, and outside of the boundaries of the various INL facilities. The proposed action will address all classes of wells including Class IV and V injection wells.

Wells will be decommissioned in a manner to protect water resources, in accordance with the regulatory requirements associated with the well. This may be accomplished by filling in the wells with an appropriate material such as bentonite, grout, or cement. As needed, the well casings, vapor port tubes, cables, or other miscellaneous components may be cut near or below ground surface to eliminate potential obstructions. Soil disturbance associated with a typical well decommissioning is anticipated to be less than 20 sq. ft at the surface. If removal of a shallow injection well is necessary, it is anticipated that mechanical methods such as a backhoe may be used. However, typical decommissioning would use a backhoe or jack hammer to breakup existing concrete pads and have minimal excavation around the casing.

Well management activities also include well maintenance. Specifically, groundwater well maintenance and support activities for CERCLA groundwater monitoring performed at the INL. This program detects and controls deterioration of well systems, repairs damaged well components, cleans well screens and boreholes, standardizes well completion components, collect borehole geophysical logs, and assist in other well related activities (sampling), as requested. Primary activity involves the repair of damaged pumps to allow for groundwater sampling.

Long-term stewardship actions include site inspections and monitoring, implementing repairs as needed (such as repairs to engineered covers), and revegetating disturbed sites. It also specifically addresses weed management, which includes weed growth evaluation and herbicide application. Herbicide application will be performed by a subcontractor, who must be licensed by the State of Idaho. The subcontractor is responsible for proper management of chemicals, materials, and waste generated during the course of completing the scope of work.

The scope of this project covers the entire Idaho National Laboratory Site. Therefore, appropriate personnel must be contacted prior to initiating the work for coordination of facility specific requirements.

SECTION C. Environmental Aspects / Potential Sources of Impact

1. Air Pollutants – Fugitive emissions will be generated from breaking up the concrete pads around the wells and soil disturbance..

Radiological emissions to the environment, including those from point and diffuse sources, must be determined for demonstrating compliance with the NESHAP Standard [see 40 CFR 61.93(a)] and submitted for reporting in the INL NESHAP Annual Report per 40 CFR 61.94. If any fugitive radiological emissions are released, the performing organization Project Manager or Source Owner/Manager shall ensure that the calendar year emissions are determined and reported (via signed memorandum) to Environmental Programs by March 15 for the preceding year.

Fugitive emissions from weed spraying actions will be controlled. Herbicides may be applied only when sustained wind conditions are at or below 10 mph, or within wind conditions identified on the product label.

4. Chemical Use and Storage – Chemicals, such as petroleum products, grout, and other concrete products will be used in support of the well management actions. Project personnel will use non-hazardous chemical substitutes in the place of hazardous chemicals as long as the non-hazardous substitutes meet the requirements/ specifications of the requester. Spill prevention/minimization measures will be employed during storage and use of chemicals/fuels.

Do not apply pesticides, herbicides, or fertilizers within 5 ft of monitoring wells or deep injection wells.

5. Contaminated Site Disturbance – Project personnel anticipate some wells to be located in radiologically-contaminated areas. Soil disturbance will be minimized at these locations. In those areas where subsurface contamination may be present, soil disturbance will be minimized, if possible, by leaving the concrete pad in place and cutting the casing at the top of the concrete pad and backfilling the casing.

Well management actions that disturb CERCLA soils will be assessed to determine if a CERCLA notice of soil disturbance (NSD) is required per the INL Site-wide Institutional Controls Plan.

6. Cultural/Historical Resource Disturbance – Prior to performing well management or long-term stewardship activities in areas outside of the boundaries of INL Site facilities, project personnel must obtain an archaeological clearance.

All vehicle travel will be restricted to existing roads and trails to prevent impact to cultural resources in unsurveyed areas. The Stop Work will be evoked immediately should unusual materials (i.e., bones, flakes of obsidian, "arrowheads" or other artifacts, rusty cans, etc.) be encountered.

7. Discharge to Wastewater Systems or Groundwater – Work will involve the decommissioning of inactive wells, including monitoring wells, injection wells, gas sampling ports, lysimeters, instrumented boreholes, and other wells regulated by the IDWR. Each well and associated groundwater will be protected from sources of contamination during decommissioning. Decommissioning of all well abandonments will follow the applicable regulatory requirements found at IDAPA 37.03.03, IDAPA 37.03.09, and company procedures. Decommissioning of potable water wells will be in accordance with IDAPA 58.01.08.

8. Drinking Water Contamination – Decommissioning of potable water wells will be performed in accordance with IDAPA 58.01.08. Regulatory reviews and approvals will be obtained prior to decommissioning, as necessary, including the submittal of the appropriate closure documentation.

9. Hazardous /Mixed Waste Generation and Management – Project personnel do not anticipate generating hazardous or mixed wastes when performing well management or long-term stewardship actions. However, should hazardous or mixed waste be generated, the waste streams will be segregated, packaged, and stored in a CERCLA storage area until it is transported to an off-site permitted disposal facility or treated and/or disposed onsite.

Long-term stewardship actions may generate waste in the form of excess herbicide, herbicide containers, and other materials contaminated by herbicides. Waste disposal will be the responsibility of the subcontractor.

10. Hazardous /Rad. Material or Waste Handling and Trans. - A Hazardous Waste Determination will be performed on all generated waste to apply the appropriate management practices. Waste streams will be evaluated to determine if any of these materials can be recycled or reused and will be evaluated to implement actions for minimizing waste generation.

11. Industrial Waste Generation and Management - The estimated quantity of industrial waste generation is 50 gallons and will include materials used to clean hydraulic spills, personal protection equipment, and other miscellaneous waste. All industrial waste will be disposed of in the INL Landfill Complex.

12. Interaction with Wildlife/Habitat - All the well locations have been previously disturbed during the initial well drilling activities. Soil disturbance is anticipated to be minimal. Vegetation at the work locations will be mowed, as necessary prior to well management. The well locations outside of facility boundaries are near or on established roads. No new roads will be created and all vehicles will remain on existing road ways and parking areas.

A nesting bird survey is required for any vegetation removal between April 1 and October 1. In addition, some human activities (including maintenance, mowing and weed management) that occur within 1 km of Sage Grouse leks are restricted between 6:00 p.m. and 9:00 a.m. from March 15 to May 15.

16. Radioactive Waste Generation and Management – Project personnel anticipate generating limited quantities of radioactive waste. Radioactive waste generated from the well management activities will be disposed of at the Idaho CERCLA Disposal Facility or at an approved off-Site facility through Waste Generator Services.

19. Work within areas Subject to Flooding – Since the proposed actions are planned to occur in several unidentified locations throughout the INL site, the potential exists for well decommissioning to occur within the 100-year floodplains of the Big Lost River, Birch Creek, or the overland flow 100-year floodplains of INTEC and RWMC.

The well management actions and long-term stewardship actions are not expected to have a significant impact on the 100-year floodplains described above and the work is not expected to disrupt floodplain dimensions, elevations, flow volumes, or velocities of the Big Lost River, Birch Creek or the INTEC or RWMC watersheds. If the hypothetical flood(s) was (were) to occur, access to the work areas may be temporarily interrupted. Work can resume after floodwaters subside as access allows.

SECTION D. Determine the Level of Environmental Review (or Documentation) and Reference(s): Identify the applicable categorical exclusion from 10 CFR 1021, Appendix B, give the appropriate justification, and the approval date.

Note: 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, including requirements of DOE orders; 2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities; 3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases; 4) adversely affect environmentally sensitive resources. In addition, no extraordinary circumstances related to the proposal exist which would affect the significance of the action, and the action is not "connected" nor "related" (40 CFR 1508.25(a)(1) and (2), respectively) to other actions with potentially or cumulatively significant impacts.

References: B1.3, Routine maintenance, B2.5, Safety and environmental improvements of a facility, replacement/upgrade of facility components and B3.1, Site characterization/environmental monitoring

Justification: The well management and long-term stewardship actions will not have a significant effect on the human environment.

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

Approved by Jason Sturm, DOE-ID NEPA Compliance Officer on March 1, 2017.