DOE-ID NEPA CX DETERMINATION
IDAHO NATIONAL LABORATORY

CX Posting No.: DOE-ID-ICP-14-001

SECTION A. Project Title: INL – Idaho Completion Project Environmental and Regulatory Services Activities

SECTION B. Project Description

The proposed action addresses the site-wide sampling and monitoring and waste characterization sampling programs that support the Idaho Completion Project (ICP) operations. Actions include:

- groundwater monitoring,
- day-to-day monitoring activities (i.e., measurement of liquid or gaseous effluents for purposes of characterizing and quantifying contaminants, collection and analysis of samples, direct measurement of air, soil, water, biota and other media etc.),
- characterization of sites, systems and containers suspected of being contaminated with or containing hazardous, radioactive, and mixed wastes,
- collection and/or shipment of various media types for multiple organizations, and
- drinking water back flow testing and cross connection control.

Data developed from sampling and monitoring activities will:

- assist environmental restoration in identifying and delineating contaminated areas,
- verify process knowledge and identify particular technologies that could be applicable for remediation of contaminated sites,
- provide information to complete hazardous waste determinations, ascertaining compliance to waste acceptance criteria for treatment, storage, and disposal facilities including interim and permitted facilities and 90-day accumulation areas, and
- demonstrate compliance with federal, state, and local laws and regulations, and Department of Energy (DOE) Orders.

Proposed activities will include, but not be limited to, the following:

(a) travel to conduct sampling or monitoring activities requiring driving where roads exist or two track Priority 4 roads exist, or travel by foot on the INL where no roads exist, (**Travel by vehicle in essentially undisturbed area where no roads or two track Priority 4 roads exist requires submittal of additional, activity-specific environmental checklists (ECs) prior to initiating field activities**);
(b) collection of surface water such as, rivers, streams, ponds, discharge outfalls, impoundments; and other open systems;
(c) collection of solid, liquid, or air samples from open systems, such as municipal landfills, hazardous waste dumps, irrigation discharge, soil sludge and sediment, and bulk material;
(d) collection of solid, liquid, or air samples from closed systems such as containers, where process or other knowledge indicates that no radioactive materials are present and that no hazardous materials are present that could result in airborne releases or sample collection from closed systems that potentially contain radioactive or hazardous contaminants that could become airborne during sampling activities (this work will be managed using engineering controls such as a glovebox);
(e) collection of samples from raw water systems and potable water systems;
(f) geological, geophysical, geochemical, and engineering surveys and mapping including the establishment of survey marks;
(g) operation of portable field instruments, such as stream-gauging stations or flow measuring devices, telemetry systems, geochemical monitoring devices and similar portable devices, provided that preparation of the site such as addition of permanent mounting pads is not required; **(Construction and operation of essentially permanent field measurement devices, such as stream-gauging weirs, meteorological towers, or similar installations that are not considered portable and that require site preparation prior to use, requires submittal of additional, activity-specific environmental ECs, prior to initiating activities);**
(h) installation and operation of ambient air monitoring equipment [i.e., sampling and/or monitoring regulated and/or non-regulated stack emissions, suspended particulates, organics, volatile organic compounds, and radioactivity;
(i) construction of temporary sample and equipment decontamination pads to support proposed actions;
(j) analysis of samples by an approved laboratory that has undergone a liability assessment;
(k) disposal of samples in compliance with applicable regulations;
(l) store equipment, prepare samples, calibrate instruments, preserve samples, and package samples for shipment; and
(m) drinking water back flow testing and cross connection control.

The proposed action will support sampling and environmental monitoring under the Clean Air Act, Toxic Substances Control Act, Clean Water Act, Safe Drinking Water Act, Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act (RCRA), State of Idaho rules and regulations, and DOE Order 450.1A. Activities, carried out within a Waste Area Group (WAG), will support the remedial investigation/ feasibility studies (RI/FS) under CERCLA and appropriate RCRA actions. These actions will not unduly limit the choice of reasonable alternatives (by permanently altering substantial site area or by committing large amounts of funds to the scope of the remedial alternatives). For CERCLA investigations, investigation-derived waste (IDW) will be treated, stored, and/or disposed at appropriate facilities. Should treatment, storage and/or disposal not be available, those wastes will be stored either at the area of contamination pending a CERCLA Record of Decision for the particular WAG or as CERCLA-IDW at a designated area. Storage of IDW has been determined to be in compliance with the Land Disposal Restriction storage prohibition. Storage of IDW outside of the immediate area must go to an on-site treatment, storage, and disposal facility.

SECTION C. Environmental Aspects / Potential Sources of Impact

1. Air Pollutants – Fugitive dust emissions may be generated from setting up equipment and decontamination pads. All fugitive emissions should be controlled using GDE 369 – Fugitive Dust Control.

Portable generators used for temporary power are considered non-road engines and not subject to New Source Review. No further analysis for these sources is required.

Potential or known disturbances of contaminated soils should follow MCP-3480 in determining RAD NESHAP reporting requirements.

Sampling activities that could potentially result in airborne releases of radioactive or hazardous contaminants will be controlled using engineering controls such as a glovebox.

2. Asbestos Emissions – Project personnel may encounter asbestos during project activities (i.e., sampling hazardous or mixed waste sites). If regulated asbestos containing materials are expected to be or are encountered, comply with MCP-3480 (Section 4.12

4. Chemical Use and Storage – Small quantities of chemicals will be used for decontamination of equipment and sample preservation. In addition, petroleum products such as antifreeze, lube oils, gasoline, and diesel fuel will be used in the normal operation of machinery. 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. Affirmative Procurement (MCP-1185) will be used as guidance in procuring applicable chemicals and materials.

5. Contaminated Site Disturbance – Project activities will occur within the boundaries of CERCLA sites in support of ongoing RI/FS activities, and/or as part of a response action under CERCLA as identified in the FFA/CO and implementing action plan for the INL.

Actions that disturb CERCLA soils will be assessed to determine if a CERCLA notice of disturbance (NSD) is required per Appendix D of the INL Sitewide Institutional Controls Plan.

Actions that disturb soils outside of INL facility boundaries may come in contact with unexploded ordnances. To avoid contact with unexploded ordnances, a review of the unexploded ordnance maps will be completed to ensure personnel safety.

6. Cultural/Historical Resource Disturbance – Soil disturbance outside defined INL facility boundaries, including off-road vehicle use, has the potential to impact cultural resources and cultural review is required for these activities. All vehicle travel will be restricted to existing roads and two-track Priority 4 roads 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 – Monitoring of liquid effluents and groundwater is conducted to ensure CWI-operating facilities and operations are properly maintained and comply with EPA and State of Idaho regulatory requirements. Water will be used for standard drilling operations, aquifer response testing, characterization of in-situ soil hydraulic properties, lab activities, and decontamination of equipment by wiping, washing, and/or steam use. Temporary decontamination pads will be constructed, using geomembrane and railroad ties or similar methods to collect the decontamination water. Contaminated water will be disposed according to the hazardous characteristics of the effluent and applicable regulations and guidelines.

8. Drinking Water Contamination – Monitoring is conducted to ensure CWI-operating drinking water systems are properly maintained and comply with State of Idaho and DOE requirements. Facilities are inspected for cross connections with non-potable water and backflow devices are tested to ensure proper operation.

9. Hazardous /Mixed Waste Generation and Management – Small quantities of hazardous waste may be generated from project activities. Small quantities of mixed waste (liquids and/or solids) may be generated during decontamination activities. Treatment, storage, and disposal options either on-site or off will depend on the characteristics of the waste stream generated and treatment options available at the time of generation.

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. Samples returned to Environmental and Regulatory Services that no longer meet the sample exclusion of 40 CFR 261.4(d) must be managed as solid waste. These samples may be hazardous (see Section C, #9, Hazardous/Mixed Waste Generation and Management).

11. Industrial Waste Generation and Management – Industrial waste in the form of plastic tarps, tape, plywood, uncontaminated personal protective equipment, contamination control material, and other sampling equipment that cannot be reused will be disposed of in the INL Landfill Complex. This waste will include unused samples and sample residues returned from laboratories that are not radioactively contaminated or hazardous waste.

12. Interaction with Wildlife/Habitat - Soil disturbance is anticipated to be minimal. Revegetation will be implemented, if necessary, in accordance with MCP-3480, Section 4.7.51. 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 soil disturbance between April 1 and September 1 (see Section E, Conditions #2). Time of day and seasonal restrictions may apply for field work done in the vicinity of known sage grouse leks from March 15 through May 15 (see Section E, Conditions #3). NOTE: the dates may change per the approved *Candidate Conservation Agreement for Sage-Grouse on the Idaho National Laboratory*.

14. PCB Contamination – Samples and wastes generated during sampling and monitoring operations of regulated PCBs (above the threshold limit of 50 ppm) will be managed in compliance with the instructions in MCP-3480, Section 4.21 and 40 CFR 761 Subpart D.

15. Radioactive Materials Use and Storage – To support operation of the in-situ gamma spectrometry units, sealed sources will be stored and used.

16. Radioactive Waste Generation and Management – Sampling and monitoring activities may generate small quantities of radioactive liquids and solids during investigation of contaminated sites, equipment decontamination, or packaging and contamination control processes. This waste stream will be disposed of at a permitted facility.

19. Work within areas Subject to Flooding – Since the sampling and monitoring work is planned to occur in several unidentified locations throughout the INL site, the potential exists for the activities 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 Big Lost River 100-year floodplain is defined in the report entitled “Big Lost River Flood Hazard Study,” (D. A. Ostenaa and D. H. O’Connell, 2005, Report 2005-2). The Birch Creek 100-year floodprone area is identified in the study entitled "Simulation of Water-Surface Elevations for a Hypothetical 100-Year Peak Flow in Birch Creek at the INEEL", by Berenbrock and Kjelstrom (USGS, 1997). The overland flow 100-year floodplain at INTEC is discussed and mapped in the report "100-year Floodplain and 25-Year Runoff Analyses for the Idaho Nuclear Technology and Engineering Center at the INEEL" INEEL-EXT-03-01174, by Clear Creek Hydrology and Hutten (2003). The overland flow 100-year floodplain at RWMC is discussed and mapped in the report "100-Year Floodplain and 25-Year Runoff Analyses for the RWMC at the INEEL," (Mitchell, et. al., 2001) (INEEL/EXT-02-00093).

The sampling and monitoring work described in this EC is 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: The actions are categorically excluded from further NEPA review (B3.1, Site characterization/environmental monitoring).

Justification: The ongoing ICP site-wide sampling and monitoring and waste characterization sampling programs is a categorical excluded action that meets the above criteria (NOTE).

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

Approved by Jack D. Depperschmidt, DOE-ID NEPA Compliance Officer on June 2, 2014.