INL/MIS-22-69116-Revision-0

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Idaho National Laboratory

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Contract DE-AC07-05ID14517

SECTION A. Project Title: Temporary Wind Tower and Ambient Monitoring

SECTION B. Project Description and Purpose:

Revision 4:

This revision addresses a slight change in location of one of the test locations and the expanded need to collect soil samples from all test locations. Figure 3-1 identified a test location in the 1st laydown area at NSTR. Since the 1st laydown area was not available for use the testing location was moved just south of the 1st laydown area just off of the T-25 road.

Samples have been requested at the sampling locations identified in the testing locations in the previous revisions to this ECP. Revision 3 did identify the collection of samples from two of the testing locations. Approximately 1-liter of soil will be collected from each location as background samples and will be recollected periodically, as needed. The samples will be shipped to Oak Ridge National Laboratory for analysis. Figure 4-1 identifies all the testing locations that will be sampled. Figure 4-2 shows the testing location at the CITRC Perimeter fence. The MagicKingdom testing location is located at the High Frequency Test Bed and is shown in Figure 4-3. Figure 4-4 (also Figure 3-2 in Revision 3) shows the northeast testing location labeled as MudLake. The T-3 testing location is shown in Figure 1 of the original ECP. Figure 3-1 of Revision 3 of this ECP shows the testing location of kBoom.

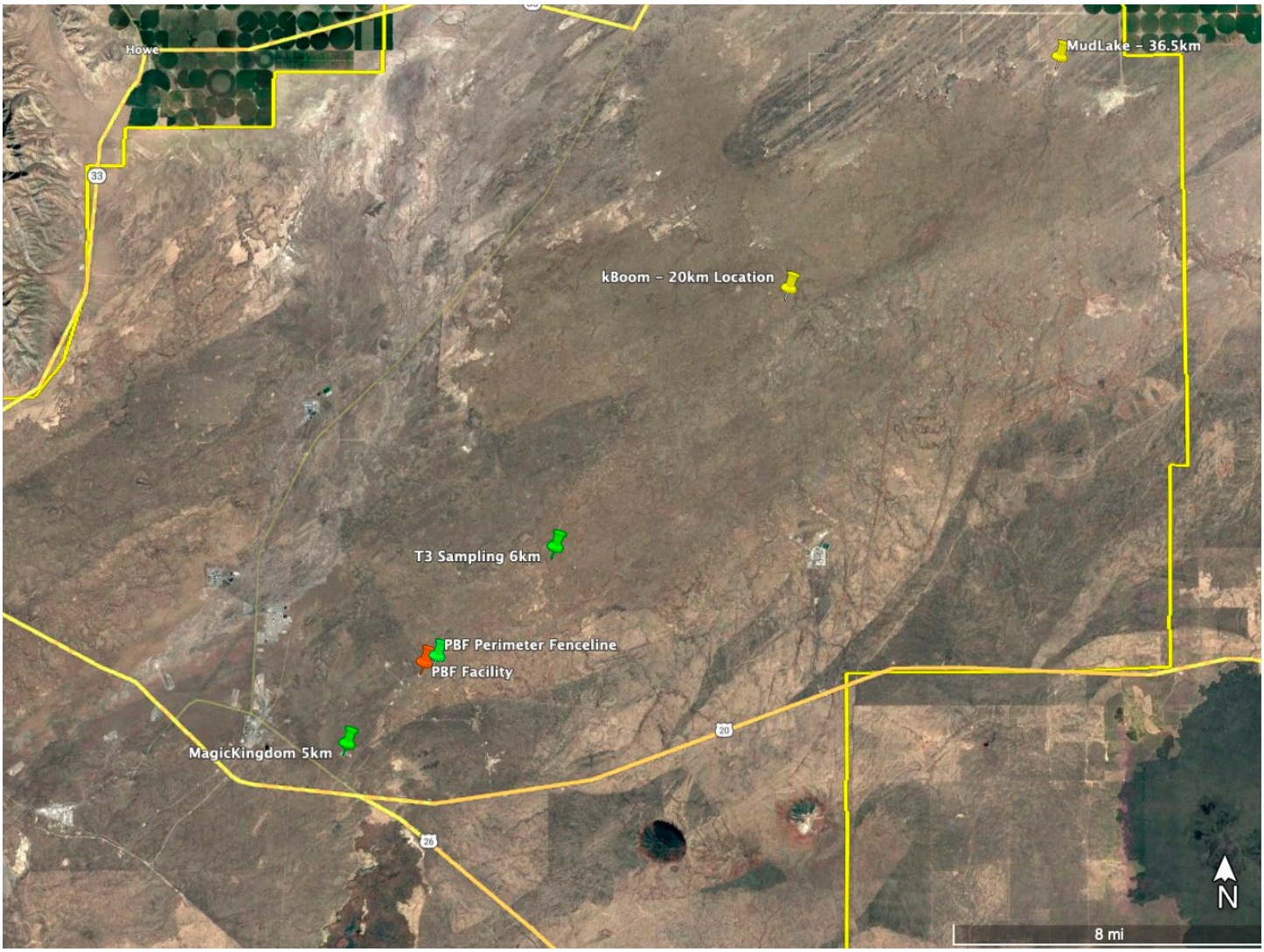


Figure 4-1. All Sampling Locations.

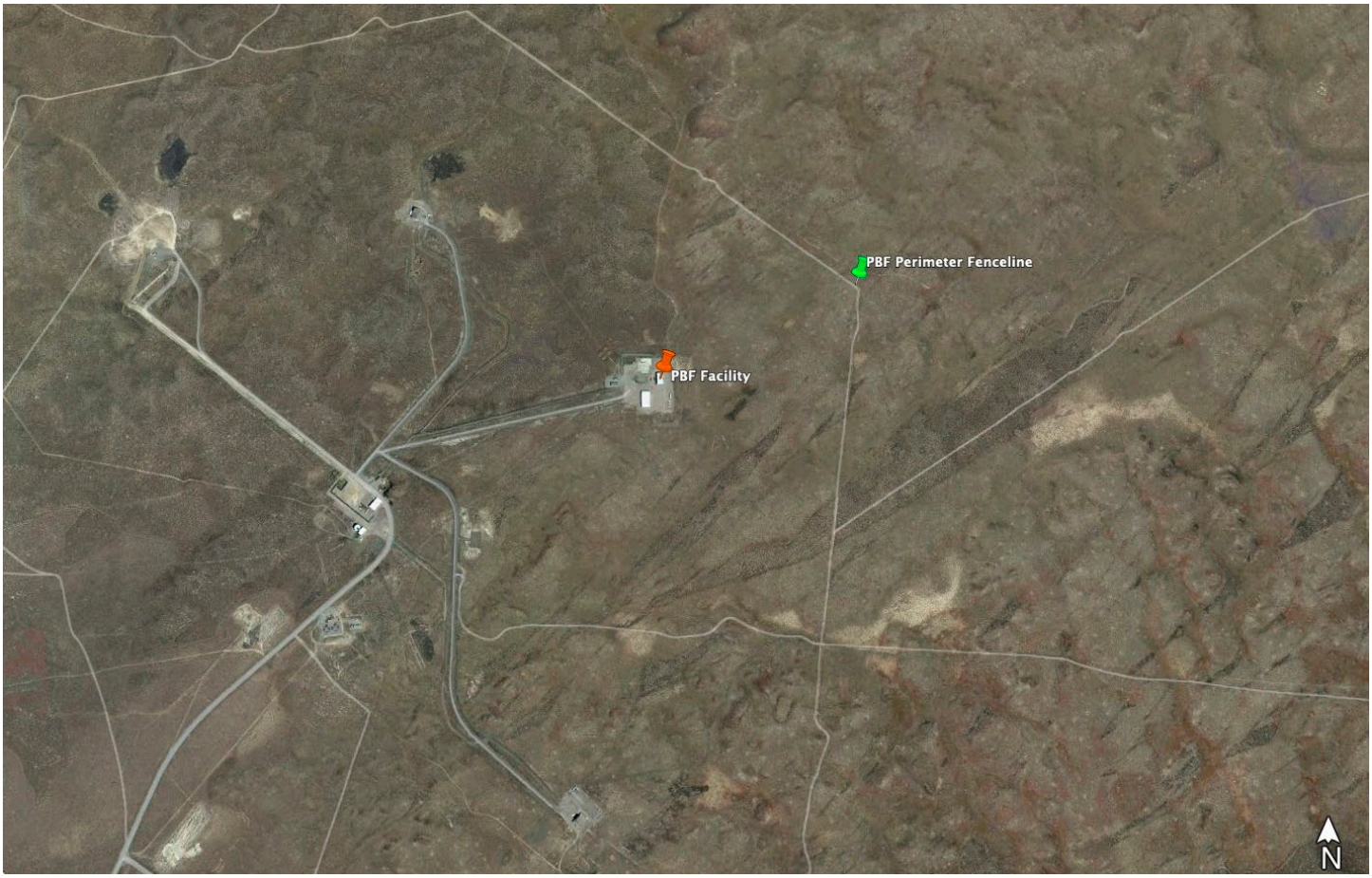


Figure 4-2. Location of PBF Perimeter Fence Location.

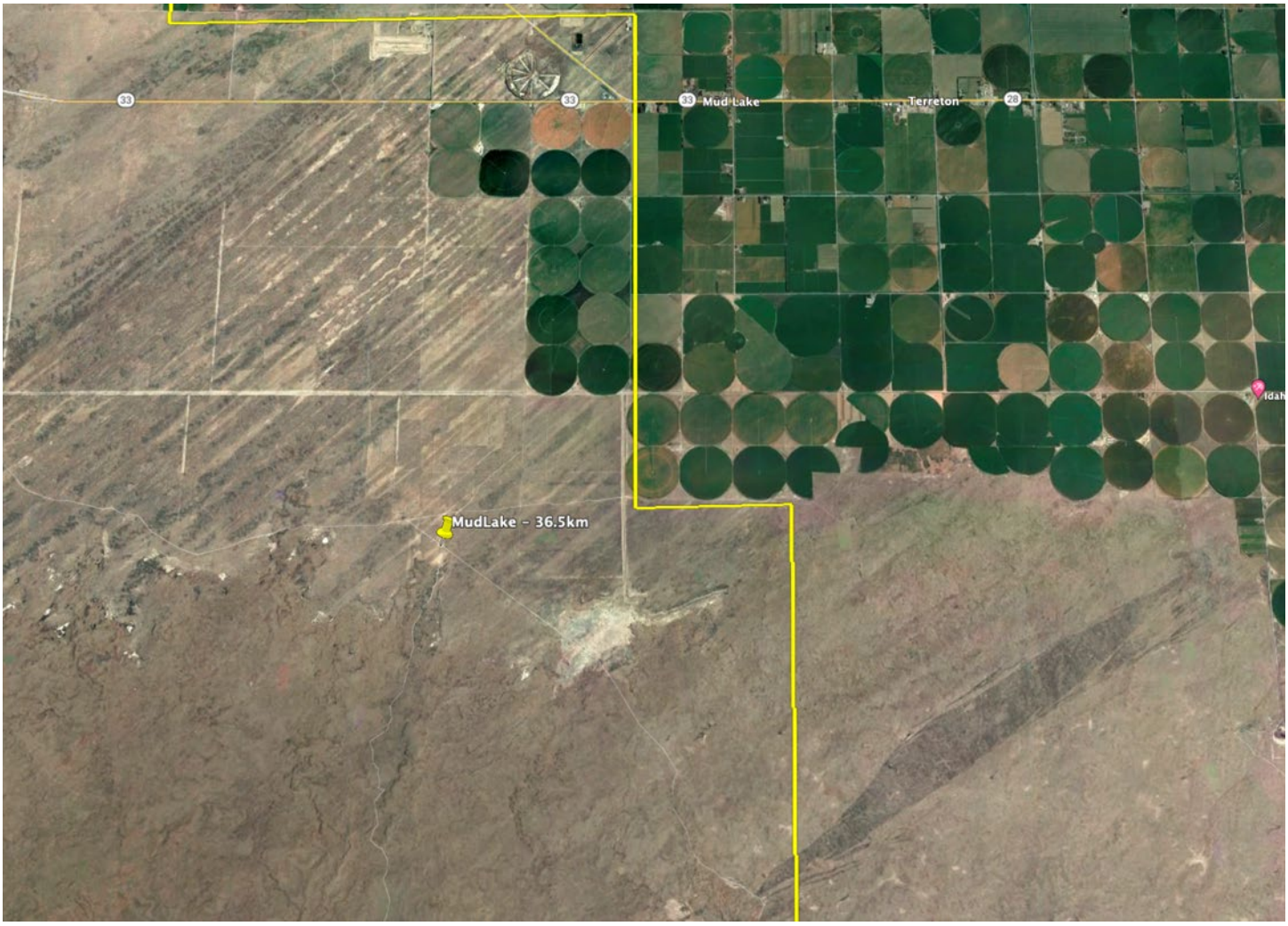


Figure 4-3. Northeast Sampling Location.

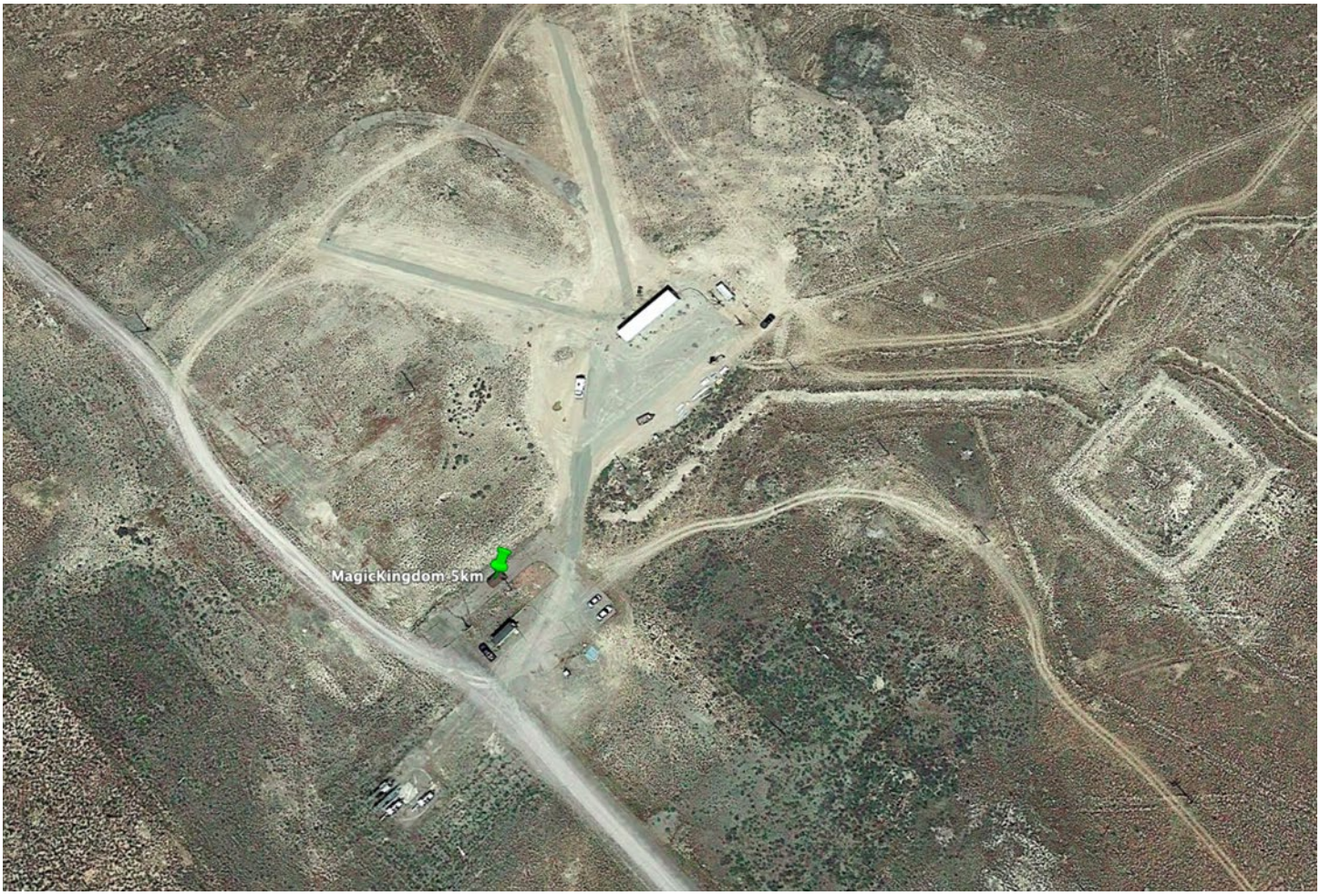


Figure 4-4. High Frequency Test Bed Testing Location.

Revision 3:

This revision identifies the change in the power sources at the location on the T-3 road and adds two new sampling locations. Instead of using gasoline generators the trailer will be powered by a battery bank which is charged and recharged by a bank of solar panels. A propane powered generator will supply backup power if the battery bank is drawn down to a minimum state of charge. The switch over from the battery bank to the propane generator will be automatic. A trailer mounted propane tank will also be needed to provide a fuel source for the generator. The use of a propane generator eliminates the need for personnel to make special trips to refuel and the possibility of fuel spills.

The first new location is in the first laydown area at the National Security Test Range (NSTR) just off of the T-25 road. See Figure 3-1 below. The following equipment will be staged at that location:

- Power Distribution Trailer: An enclosed trailer that holds a UPS battery system to maintain continuity of power for all the system. This will have a number of power cords coming from it to provide power to all the air sampling devices
- Generator Trailer: This is an open trailer will have the propane generator and a propane tank. This supplies power to the Power Distribution Trailer. The refuel of the propane tank will happen once each week of the testing.
- Enclosed trailer for researcher use
- 10x20 Tent tool to provide shelter. Using concrete blocks as anchors to keep it in place
- Researcher vehicles: The numbers of vehicles will fluctuate throughout the testing. I can envision several vehicles parking at the location at all times during testing.
- Researcher's Equipment: Sampling equipment will be tabletop instruments and positioned SW of the trailer and vehicle parking

Figure 3-1. Sampling Location at NSTR.

The second new location is at the intersection of T-roads T9 and T-4. See Figure 3-2. The coordinates are 43°46'37.37"N 112°31'50.43"W. The following equipment will be staged at that location:

- Generator Trailer: This is an open trailer will have the propane generator and a propane tank. The refuel of the propane tank will happen once each week of the testing. No battery backup for this location.
- Enclosed trailer for researcher use
- 10x20 Tent tool to provide shelter. Using concrete blocks to keep it in place
- Researcher vehicles: The numbers of vehicles will fluctuate throughout the testing. A couple of vehicles may be parked at the location at all times during testing.
- Researchers Equipment: Sampling equipment will be tabletop instruments and positioned SW of the trailer and vehicle parking

Figure 3-2. Northeast Sampling Location

In addition, samples will be taken from the actual plant life and soil from the two test locations. This would be instead of bringing plants out to the test locations and having to water and maintain them like was done in Revision 1. Samples will be shipped off-site for analysis. Here is the plant and soil sample information:

- Sample Frequency - Before testing starts (1), Every other day during our testing (4), After our test is complete (1). Max of 6 sample times for 2021.
- Sample Size - For the plants: a small handful of leaves or grasses. For the soil: Three 50 ml containers
- Locations: Outside of PBF-622, NSTR sampling location, and the Northeast sampling location

Revision 2:

This revision addresses retrieval of the sensors identified in Revision 1. During deployment of the seismic sensors it was determined that the equipment was unwieldy and heavy. The project wishes to employ a Kubota Utility Vehicle with a 60-inch track to retrieve the sensors. Figure 2 identifies the approximate locations (blue circles) of the sensors and general paths (yellow lines) that will be used to retrieve them. Cultural Resources personnel will survey and flag the preferred path during the survey. Cultural Resources personnel must be present during the unearthing of the sensors. Figure 3 identifies the Cultural Resources Area of Potential effect (APE) for the 8 sensors.

Figure 2. Approximate locations of sensors and travel paths

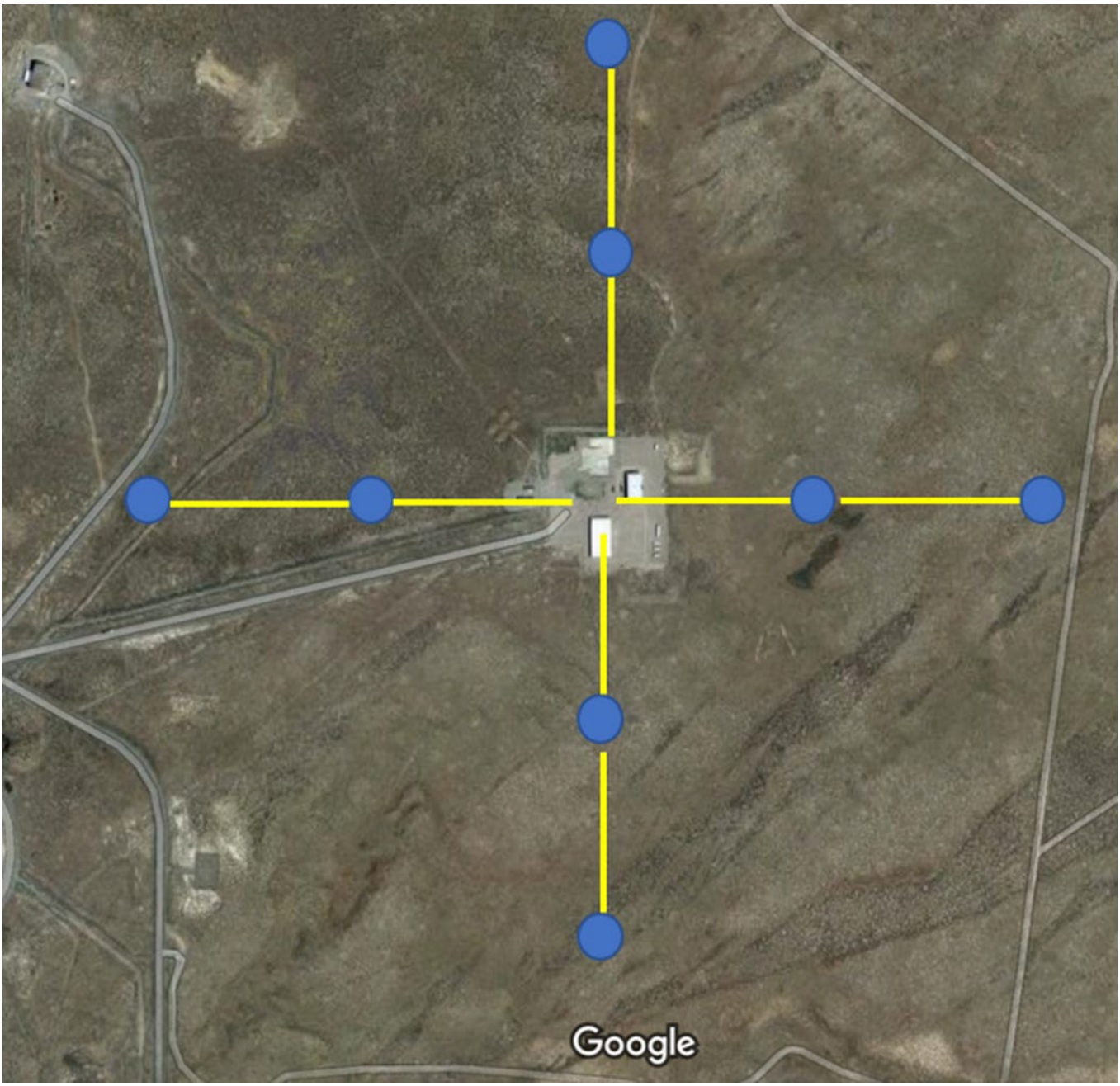
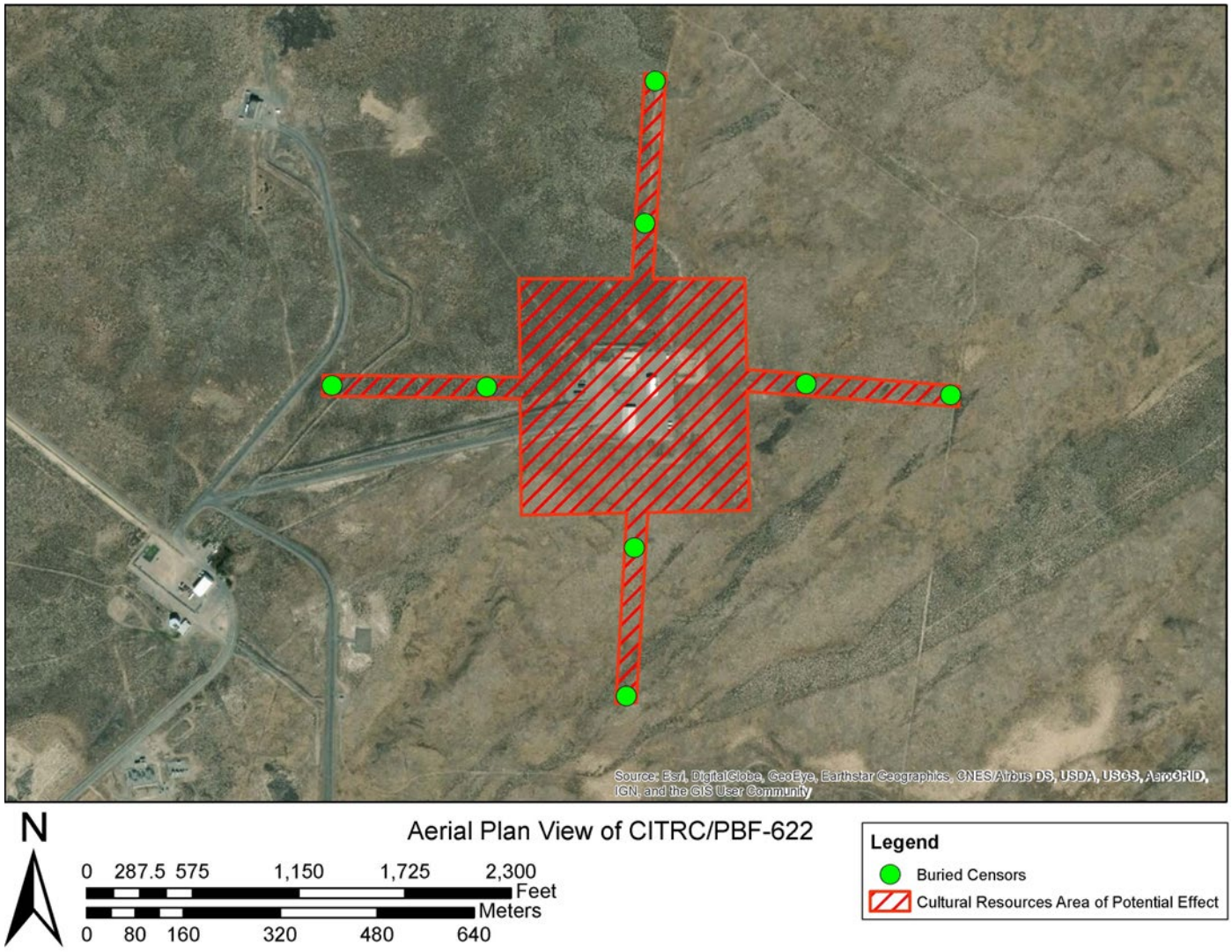


Figure 3. Cultural Resources Area of Potential Effect (APE)



Revision 1:

This revision addresses some additional activities not addressed in the original EC. Off-road vehicles (such as gators) will be utilized on the T-roads to monitor sensors.

Two species of plants will be utilized for spectral sampling and analysis. The species are tobacco and brassica and will be used in two locations. The first location is on T-3 adjacent the wind tower at approximately 43.59N -112.80W. This location will include a total of 48 plants in individual pots with 24 of each type. The second location is at the High Frequency Test Bed at approximately 43.52N -112.89W. This location will include a total of 12 plants in individual pots with 6 of each type. The pots will be placed on an elevated platform for approximately 2 weeks and require daily watering. No fencing will be required to keep animals away.

Eight seismic sensors will also be used. Three of the sensors are a can-type sensor (1 1/2" x 12") and the other five are a trench-type sensor (4' x 6' x 12"). These sensors will be placed in the vicinity of PBF-622. The exact placement will be determined with the assistance of biological and cultural personnel in an effort to avoid biological and cultural resources.

Original EC:

This activity will erect a small portable wind monitoring tower and deploy a trailer-mounted air sampling/monitoring system. The wind monitoring tower is a

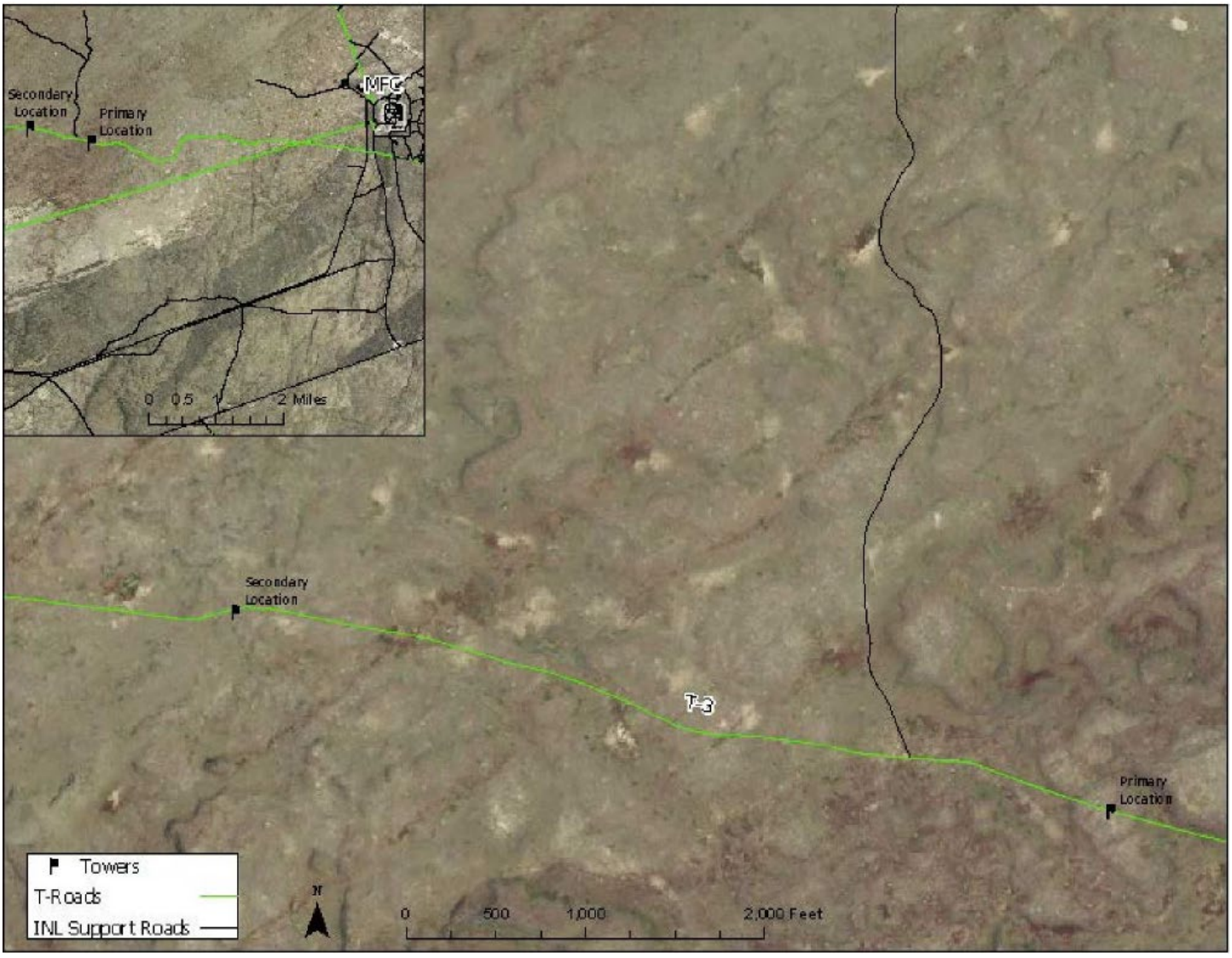
small trailer-mounted unit with a telescoping mast. The portable tower uses solar panels to charge onboard batteries. The mast will be anchored using

concrete blocks as ground anchors to avoid the use of ground stakes. The tower will be located off of the T-3 road at approximately 43.58873 N, -112.74636

W. An alternate location is 43.59169N, -112.764790 W. These areas have been previously disturbed by the Jefferson fire; negative impact to sagebrush is

not anticipated. The preferred and alternate locations are shown in Figure 1.

Figure 1. Proposed locations for portable wind monitoring tower.



The air sampling and monitoring trailer will house air monitoring and sampling equipment. Air samples may be subjected to in-line analysis or gas collection for analysis at other locations, both at INL and customer locations. No wastes, except exhaust air samples, are anticipated from the in-line analysis equipment. Analysis at other locations would take place under separate, existing ECs. The trailer may be located anywhere along the length of T-3, between the junction with T-24 and the junction with Lincoln Blvd, where it may remain for a period of days. It may be moved to a new location during that period of days. It will then be moved to a location on a paved road for another sampling period. Sampling will alternate between locations over an approximate one week period. Sampling activities are expected to take place 2-3 times per year for a number of years. The sampling trailer is powered by two small portable gasoline generators. Unattended generator operation may require creation of a 30-50 ft mowed buffer zone. Prior to any mowing, the area must be surveyed for breeding birds (during the breeding bird season) and for cultural resources. The two proposed locations are not within the Sage Grouse Conservation Area, not within 0.6 mi of a Sage Grouse Lek, and are outside of known Ordnance areas. The sampling unit may be accompanied by a small motor home or camp trailer to use while attending the generator(s) and sampling unit. The western portions of T-3 transit CERCLA site ORD-03. While the sampling unit and personnel accommodations unit will remain on T-3, sampling personnel must obtain Explosives Recognition training in accordance with CERCLA requirements.

SECTION C. Environmental Aspects or Potential Sources of Impact:

Air Emissions

Portable and mobile generators will emit contaminants. All generators will be temporary, in place for less than one year.

Discharging to Surface-, Storm-, or Ground Water

N/A

Disturbing Cultural or Biological Resources

Concrete blocks will be required to tether the tower. This will avoid the use of stakes and the associated subsurface investigation. Cultural reviews must take place prior to using T-3, T-17, or other two-track road. A cultural resource review was completed for this project. Please see BEA-21-29 R1.

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 of the initiation of any activities that might disturb soil or vegetation as well as following project activities. A nesting bird survey is included with the Biological Resource Review for actions occurring between April 1 and October 1 per compliance with the Migratory Bird Treaty Act.

Generating and Managing Waste

Common office trash waste is expected. Common/cold waste will be disposed in approved dumpsters. Any solid waste will be managed by Waste Generator Services (WGS).

Grey water and black water from restrooms facilities may be discharged at the CFA sewage treatment plant (STP) or any other authorized dump station. Wastewater may not be discharged at any other location. Contact the sewage plant operator prior to discharging to the CFA STP for permission and location to discharge. For other INL on-site STPs contact the facility manager.

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

All applicable material will be diverted from disposal in the landfill when possible. Project personnel will use every opportunity to recycle, reuse, and recover materials and divert waste from the landfill when possible.

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 B3.1 "Site Characterization and Environmental Monitoring."

Justification:

Project activities described in this ECP are consistent with 10 CFR 1021, Appendix B to Subpart D, item B3.1 "Site characterization and environmental monitoring (including, but not limited to, siting, construction, modification, operation, and dismantlement and removal or otherwise proper closure (such as of a well) of characterization and monitoring devices, and siting, construction, and associated operation of a small-scale laboratory building or renovation of a room in an existing building for sample analysis). Such activities would be designed in conformance with applicable requirements and use best management practices to limit the potential effects of any resultant ground disturbance. Covered activities include, but are not limited to, site characterization and environmental monitoring under CERCLA and RCRA. (This class of actions excludes activities in aquatic environments. See B3.16 of this appendix for such activities.) Specific activities include, but are not limited to:

a) Geological, geophysical (such as gravity, magnetic, electrical, seismic, radar, and temperature gradient), geochemical, and engineering surveys and mapping, and the establishment of survey marks. Seismic techniques would not include large-scale reflection or refraction testing;
b) Installation and operation of field instruments (such as stream-gauging stations or flow-measuring devices, telemetry systems, geochemical monitoring tools, and geophysical exploration tools);
c) Drilling of wells for sampling or monitoring of groundwater or the vadose (unsaturated) zone, well logging, and installation of water-level recording devices in wells;
d) Aquifer and underground reservoir response testing; e) Installation and operation of ambient air monitoring equipment;
f) Sampling and characterization of water, soil, rock, or contaminants (such as drilling using truck- or mobile-scale equipment, and modification, use, and plugging of boreholes);
g) Sampling and characterization of water effluents, air emissions, or solid waste streams;
h) Installation and operation of meteorological towers and associated activities (such as assessment of potential wind energy resources); i) Sampling of flora or fauna; and
j) Archeological, historic, and cultural resource identification in compliance with 36 CFR part 800 and 43 CFR part 7."

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: 09/07/2022