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Environmental Programs Directorate

Standard Operating Procedure

for **AIRNET - OPERATION OF THE PORTABLE
GENERATOR**

APPROVAL SIGNATURES:

| Subject Matter Expert: | Organization | Signature | Date |
|----------------------------------|---------------------|-------------------|-------------|
| C. Jake Martinez | WES | Signature on File | 4/2/2009 |
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1.0 PURPOSE AND SCOPE

This standard operating procedure (SOP) states the responsibilities and describes the safe operation of the trailer-mounted diesel-powered generator for the Los Alamos National Laboratory (LANL) Waste and Environmental Services Division (WES), AIRNET team.

All **WES participants** shall implement this procedure when transporting or operating a trailer mounted diesel-powered generator.

2.0 BACKGROUND AND PRECAUTIONS

2.1 Background

This procedure applies to any division member assigned to move, connect, or operate the trailer-mounted generator. This procedure does not cover re-fueling. Re-fueling will only be done by calling the mobile gas truck.

2.2 Precautions

N/A

3.0 EQUIPMENT AND TOOLS

- Trailer-mounted generator

4.0 STEP-BY-STEP PROCESS DESCRIPTION

4.1 Towing the Generator

Personnel assigned to transport the generator

1. Towing vehicle: Ensure the vehicle you plan to use to tow the trailer is rated to tow the weight of the generator (2700 pounds). Ensure it has a proper trailer hitch and the correct trailer ball (2 5/16"). Always use the safety chains; cross them to attach to hitch.
2. Hooking and unhooking trailer: Chock BOTH trailer wheels to ensure they are properly inflated and securely blocked before raising the trailer tongue to hook or unhook the trailer from the vehicle. Keep hands and fingers clear and watch for sudden movement. Always use crank tongue lift to raise and lower tongue; remember to swing it to horizontal before towing.

Caution: As the hitch comes off the ball, the trailer may move. Stand away a foot or more and be ready to move.
3. Towing: Use extra caution when towing; assume longer stopping distances, use mirrors when changing lanes, be aware of the extra width and length of the vehicle.

4.2 Connecting and Operating the Generator

Personnel assigned to operate generator

1. Read operating manual: This procedure is not a substitute or replacement for the instructions and information contained in the generator operating manual. Read the manual for all operating instructions.

Personnel
assigned to
operate
generator

2. Starting the generator:
 - Read the manual and the labels on the generator.
 - Check the engine vital fluids: engine oil, coolant, and fuel. Ensure cords are unplugged before starting generator.
 - Follow the manufacturer's starting sequence. Allow the cold engine to idle for a few minutes before setting the throttle lever to "Run"

3. Connecting power from generator:
 - Do not attempt to connect power cables to the terminals on the generator. Contact a qualified electrician to connect to these terminals. Normally, only the provided outlets on the generator will be used.
 - Use a cord equipped with a ground fault circuit interrupter (GFCI) at the generator end if generator is not so equipped. Turn off the breaker to the outlets before connecting cords. Turn on the breaker to energize the power cord.
 - Periodically test the GFCI on the generator (can only be tested when the generator is running and the breaker is on).

4. Adjusting output voltage:
 - A dial on the control panel adjusts the voltage output of the generator. The meter reads the voltage of the 220V circuit. Adjust the dial so the voltage reads 240V; this will provide 120V to the 120V outlets.

5. Shutting down the generator:
 - Turn off the breaker to the outlets and set the throttle lever to "Idle." Allow the engine to idle for about 5 minutes before turning the engine off with the key.
 - **Caution:** Never just turn off the ignition key unless there is an emergency.

6. Fueling:
 - Contact the LANL mobile gas truck to refuel the generator. Establish an appropriate refueling schedule with them (usually 72 hours).

NOTE: the trailer unit contains two fuel tanks; ensure both get filled.

 - If a fuel spill is noted, shut down the generator if it is safe to do so. If the generator is not running, do not start it. Contact the LANL EOC and the Los Alamos Fire Department.

4.3 Maintenance of the Generator

Personnel
assigned to
operate
generator

1. Oil Changes:
 - Record the engine hours from the tachometer when oil changes are performed. Keep a log sheet in the generator maintenance notebook to record oil change hours.
 - The engine requires an oil change after every 200-250 hours of operation (this is every 8 to 10 days of continuous operation). Contact the LANL heavy equipment shop to establish regular oil changes when the generator is being used continuously.

- Personnel assigned to operate generator (continued)
2. Other maintenance:
 - Consult the engine-operating manual to determine maintenance intervals. Record when maintenance operations are performed in the generator maintenance notebook. Plan ahead for required maintenance and contact LANL heavy equipment for all maintenance work.
 - If the generators are not deployed in the field, run each generator for 30 minutes each month to keep the battery charged and moving parts lubricated.

4.4 Records Management

- Personnel assigned to operate generator
1. Generator maintenance records will be kept in the field office near the generators. These records are for maintenance purposes and do not need to be submitted to the Records Processing Facility.

5.0 DEFINITIONS

None

6.0 PROCESS FLOW CHART

None

7.0 ATTACHMENTS

None

8.0 REVISION HISTORY

| Revision No. <i>[Enter current revision number, beginning with Rev.0]</i> | Effective Date <i>[DCC inserts effective date for revision]</i> | Description of Changes <i>[List specific changes made since the previous revision]</i> |
|--|--|---|
| 0 | 11/27/00 | New document. |
| 1 | 11/14/05 | Quick change revision to change attachment HCP to HR. |
| 0 | 4/2/2009 | New document number and reformatted for WES division. Formerly ENV-MAQ-241, R5. |