

Appalachian National Scenic Trail		1. WORK PROJECT/ACTIVITY Portable Gas Generator	2. LOCATION Trail Wide	Includes work performed on lands of National Park Service, and various states' park and lands
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 OSHA (Instructions on Reverse)		3. NAME(S) OF ANALYST(S) Keith Stegall	4. Work Supervisor Various	5. DATE PREPARED 8/28/2020
Required Standards and General Notes:	Specific operators manual, for remote/field use only. Not for powering grid-connected facilities.			
Required Personal Protective Equipment	Gloves, hearing protection as required			
Tools and Equipment	First aid kit, power generator, GFCI cord, fire extinguisher			
Available Training				
7. TASKS/PROCEDURES		8. HAZARDS, POTENTIAL HAZARDS / INJURY SOURCE	9. ABATEMENT ACTIONS OR PROCEDURES Engineering Controls * Substitution * Administrative Controls * PPE	
Pre-Operation Inspection		Injury Due to Lack of Inspection	<ul style="list-style-type: none"> • Perform visual inspection of the generator and area around it. Ensure that there are no leaks and no blocks. Check for damage or loose fuel lines. • Always wipe and clean the generator so that it remains dry. Keep the operation area clear of dirt, stones etc • Check oil levels of the generator. If your generator has been sitting unused for some time, the crankcase might get some water mixed in with the oil. • Check the spark plus, and clean or replace necessary. • Inspect the pull cord. Ensure it is not frayed and is properly tensioned. 	
Carrying Generator to Work Site		Muscle/back strain	<ul style="list-style-type: none"> • Use proper lifting/bending technique, lift with your legs, not with your back; • Use a load-carrying device if necessary, such as wheelbarrow or power carrier. 	
		Injury to foot from dropped generator	<ul style="list-style-type: none"> • Wear required appropriate footwear; • Seek assistance carrying generator if necessary; • Use load-carrying device if necessary, such as wheelbarrow or pack-frame 	
Starting up Generator		Muscle/back strain	<ul style="list-style-type: none"> • Ensure generator is flat and securely seated. • Inspect/test pull cord prior to first pull by slowly pulling cord out and checking cord condition for fraying and tension. • Use proper bending/pulling technique when pulling start cord 	
		Damage to hearing	<ul style="list-style-type: none"> • Position generator as far away from other workers and the public as possible. • Let others around you know when you are going to start the generator. 	

Operating Generator	Electrocution hazard	<ul style="list-style-type: none"> ● Keep generator away from water; ● Do not operate in rain; ● Use only with GFCI protected cables. ● Unit should be grounded directly from panel to metal stake in ground--if connection point is provided 			
	Overload, damage to generator	<ul style="list-style-type: none"> ● Use a generator that is rated for the amount of power that you think you will need. Look at the labels on equipment you plan to operate simultaneously to determine the amount of power that will be needed. ● If your generator does not produce adequate power for all your needs, plan to stagger the operating times for various equipment. ● Use a heavy duty, outdoor-rated extension cord that is rated (in watts or amps) for the output of the outlet on the generator. ● Use GFCI-protected cordset. ● Check that the entire cord is free of cuts or tears and that the plugs are securely attached to the cord and have all three prongs. ● Test the GFCI prior to running tools or equipment. 			
	Burns	<ul style="list-style-type: none"> ● Many generator parts are hot enough to burn you during operation. Avoid contacting muffler. 			
	Damage to hearing	<ul style="list-style-type: none"> ● If working in close proximity to generator, wear appropriate hearing protection. 			
	Inhalation of gases	<ul style="list-style-type: none"> ● Running a generator produces carbon monoxide (CO) poisoning from the toxic engine exhaust. ● Follow the directions supplied with the generator. ● Do not use indoors, in a garage, or within 20 ft of an occupied building or tent. 			
Fuel / Refueling Generator	Fire hazard	<ul style="list-style-type: none"> ● Turn off the generator while refuelling. ● Keep sparks and open flames away when refueling generator. ● Avoid spilling gas by using a fuel funnel. ● Do not overfill. ● Allow gas spills to dry up before operating generator. ● Store fuel for the generator in an approved safety can. ● Use the type of fuel recommended in the instructions or on the label on the generator. 			
	Inhalation of Gases	<ul style="list-style-type: none"> ● Running a generator produces carbon monoxide (CO) poisoning from the toxic engine exhaust. ● Follow the directions supplied with the generator. ● Do not use indoors, in a garage, or within 20 ft of an occupied building. 			
<table border="1"> <tr> <td>10. OFFICIAL SIGNATURE</td> <td>11. TITLE Kurt Speers</td> <td>12. DATE</td> </tr> </table>			10. OFFICIAL SIGNATURE	11. TITLE Kurt Speers	12. DATE
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<i>Kurt Speers</i>	Acting Chief Ranger - CDSO	09/01/20
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Previous edition is obsolete

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JHA Instructions (References-FSH 6709.11 and .12)

The JHA shall identify the location of the work project or activity, the name of employee(s) involved in the process, the date(s) of acknowledgment, and the name of the appropriate line officer approving the JHA. The line officer acknowledges that employees have read and understand the contents, have received the required training, and are qualified to perform the work project or activity.

Blocks 1, 2, 3, 4, 5, and 6: Self-explanatory.

Block 7: Identify all tasks and procedures associated with the work project or activity that have potential to cause injury or illness to personnel and damage to property or material. Include emergency evacuation procedures (EEP).

Block 8: Identify all known or suspect hazards associated with each respective task/procedure listed in block 7. For example:

- a. Research past accidents/incidents.
- b. Research the Health and Safety Code, FSH 6709.11 or other appropriate literature.
- c. Discuss the work project/activity with participants.
- d. Observe the work project/activity.
- e. A combination of the above.

Block 9: Identify appropriate actions to reduce or eliminate the hazards identified in block 8. Abatement measures listed below are in the order of the preferred abatement method:

- a. Engineering Controls (the most desirable method of abatement). For example, ergonomically designed tools, equipment, and furniture.
- b. Substitution. For example, switching to high flash point, non-toxic solvents.
- c. Administrative Controls. For example, limiting exposure by reducing the work schedule; establishing appropriate procedures and practices.
- d. PPE (least desirable method of abatement). For example, using hearing protection when working with or close to portable machines (chain saws, rock drills, and portable water pumps).
- e. A combination of the above.

Block 10: The JHA must be reviewed and approved by a line officer. Attach a copy of the JHA as justification for purchase orders when procuring PPE.

Blocks 11 and 12: Self-explanatory.

Emergency Evacuation Instructions (Reference FSH 6709.11)

Work supervisors and crew members are responsible for developing and discussing field emergency evacuation procedures (EEP) and alternatives in the event a person(s) becomes seriously ill or injured at the worksite.

Be prepared to provide the following information:

- a. Nature of the accident or injury (avoid using victim's name).
- b. Type of assistance needed, if any (ground, air, or water evacuation).
- c. Location of accident or injury, best access route into the worksite (road name/number), identifiable ground/air landmarks.
- d. Radio frequencies.
- e. Contact person.
- f. Local hazards to ground vehicles or aviation.
- g. Weather conditions (wind speed & direction, visibility, temperature).
- h. Topography.
- i. Number of individuals to be transported.
- j. Estimated weight of individuals for air/water evacuation.

The items listed above serve only as guidelines for the development of emergency evacuation procedures.

JHA and Emergency Evacuation Procedures Acknowledgment

We, the undersigned work leader and crew members, acknowledge participation in the development of this JHA (as applicable) and accompanying emergency evacuation procedures. We have thoroughly discussed and understand the provisions of each of these documents:

SIGNATURE DATE

SIGNATURE DATE
