

DOI Interagency BAER Team	1. WORK PROJECT/ACTIVITY Murphy Fire Complex	2. LOCATION: Castleford Idaho Elko Nevada	3. UNIT DOI-BIA, USFS
JOB HAZARD ANALYSIS (JHA)	4. NAME OF ANALYST Erv Gasser	5. JOB TITLE DOI BAER TEAM LEADER	6. DATE PREPARED 7/30/07
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE	
General Air Reconnaissance	Low level flights (<500 feet); helicopter or fixed wing, extreme temperatures affecting density altitude	Is this flight really necessary? Is there another way to do the job? Follow instructions from helitack and the pilot. Ask questions if you do not understand the instructions. Do not fly in hazardous situations. Ask questions of pilots and others to determine what hazardous situations exist. Minimize time in the air. Follow agency guidelines to include flight following and communications. Wear required personal protective equipment (PPE). Early morning flights will be scheduled to avoid extreme midday temperatures which may affect flight safety associated with density altitude.	
General Ground Reconnaissance	Footing on steep, rough, uneven terrain; falling trees; heavy vehicle traffic on narrow, winding roads; dehydration/fatigue; burned out holes.	Wear eight-inch-high leather boots with lug soles. Stay in communication with BAER Team members and always remember LCES. Drive defensively with headlights on. Be aware of suppression efforts within the area you are working in. Be careful not to slip, trip or fall, especially on wet ash. Be aware of road conditions. Conduct tailgate safety sessions with your colleagues. Utilize "Six Minutes for Safety" (http://www.nifc.gov/sixminutes/dsp_sixminutes.php).	
Office	Tight quarters	Keep work space clean and take frequent breaks. Clean up your own messes.	
General Field Work and Monitoring	General personal safety	Work in pairs. Keep fresh batteries in your radio, and carry an extra battery pack. All personnel within the fire perimeter need a working radio and cell phone. If folks separate in the field, each individual WILL have a radio. Wear required PPE. Carry reserved energy food or Meals-Ready-to-Eat (MRE's) and extra water. Be prepared to spend the night if necessary.	
	If driving to a remote area alone, Check in / Check out	Let someone know specifically where you will be. Make sure your radio works before you leave. Get it fixed or replaced if necessary. Be sure someone knows when you have returned. Sign in/ Sign out.	

	Fatigue	Provide 2:1 work/rest ratios and ensure eight hours off between shifts. Manage for cumulative physical, cognitive or emotional fatigue.
	Sun / hyperthermia	Carry sunglasses. Use sunscreen to prevent sunburn. Consider deferring field work when temperatures exceed 100 degrees F.
	Dehydration	Drink enough water supplemented with electrolyte-based drinks to keep hydrated and prevent heat exhaustion or heat stroke (at least six-eight quarts of water per day in extreme temperatures). Pace yourself when climbing steep, open slopes.
	Stream channel surveys	Use extra caution in stream bottoms to prevent falling. Fire-caused stream temperature increases might have already caused rock-slickness to increase.
Field Surveys, Monitoring	Steep slopes and remote worksites	Wear lugged soled shoes with eight-inch tops, with good ankle support. Carry a radio, and leave your itinerary with someone.
Mapping/Inventory Within Fire Perimeter	Working within fire perimeter.	Wear PPE (hard hat, leather boots, NOMEX, fire shelter, goggles, and gloves) at all times. Recognize that the fire is not controlled. Know your ten standard fire orders and 18 "watch out" situations.
	Stump and root holes	Keep your eyes on your path of travel. If your attention is diverted, stop and complete the task before proceeding. Excessive amounts of white ash may indicate the presence of a stump or root hole.
	Snags and hazard trees	Size up your surroundings. Avoid work in areas where hazards exist. Be aware of anticipated conditions. Avoid the common BAER habit of spending all of your time looking down, not noticing hazards in the air. Use spot lookouts, and establish safety zones. If the wind is blowing (trees swaying), stop working.
	Slippery and unstable footings	Be careful in areas of wet ash, retardant drops, loose rocks and unstable slopes.
	Rattlesnakes	Be aware at all times of the potential for encounters with rattlesnakes. Withdraw from the area. If bitten medivac may be required.
	Personal health and safety	Take care of cuts, bruises and blisters immediately. Report any accidents to the Team Leader and complete an accident report. Take no risks that jeopardize your personal safety or the safety of others.
Storm Events	Lightning	Check weather report, and stay off ridge tops and open slopes during lightning storms. If stuck in the open, keep radio and metallic objects away from you, squat down with only your feet on the ground, using an insulated pad if possible. Keep as much of your body off the ground as possible.
	Fog, smoke; poor visibility, disorientation	Drive with lights on low beam. If fog and/or smoke are so dense as to affect safe driving, cease operations before getting into a situation where safety is compromised.
	Rain	Don't walk on logs; avoid small stems that are parallel to the slope; insure footing. If roads are muddy, stay off roads.
	Wind	Check weather reports; monitor wind events. If trees are swaying, move to a safe area with no trees or snags, or get out of the wind path.

Burned Over Environment	Falling rocks	Don't work directly above or below another person; be wary of rocks.
	Heavy brush	Wear long-sleeved shirt, goggles and gloves
	Insect bites / stings	Wear long-sleeved shirt and hat; use repellent at your discretion. Bees and yellowjackets are a problem in fires. Carry anti-histamine and sting kits for bee stings. If you know you are allergic, carry proper medication and instruct coworkers in administration. Tell your Team Leader about your allergies.
Communication/Coordination with Team Leaders and Suppression Personnel	Loss of repeaters or dead spots	Follow Communications Plan. Notify incident personnel on specific zone when working in field.
Defensive Driving	Vehicle accidents and associated injuries; general driving conditions, and vegetation buildup under vehicle and possible vehicle fire	Always wear safety belts and make sure everyone else does! Keep windows clean and remove garbage from the cab of the truck. DRIVE WITH THE LIGHTS ON! Remote roads can be narrow. Drive defensively, giving yourself enough time and space to react to other drivers or wildlife on the road. If possible, remove hazards from the roadbed rather than try to drive over or around them. Stay on roadway and out of heavily vegetated areas to avoid dead vegetative material buildup under vehicle which could cause a fire. Each vehicle should carry a shovel and fire extinguisher in case of fire. Check and clean out undercarriage of vehicle after each field visit to avoid possible vehicle fire. Limit driving time to ten hours or less. Stop and take a break if you feel sleepy while driving, or let someone else drive. (See attachments for local road hazard information) Don't drive if you feel sick or are taking medication that affects your ability to handle a vehicle.
	Mechanical malfunction; narrow, rough roads, heavy use impacts	Conduct daily preventive maintenance checks. Each vehicle is to have a first aid kit and required equipment. Check spare tire to ensure proper inflation in case of flat tire. Drive as far to the right as safely possible. Ensure stopping distance is ½ the sight distance on blind curves. Confirm road status, traffic patterns and the presence of heavy equipment before use. Drive defensively. Watch out for public / contractor use of roads.

Helicopter Operations:		IS THIS FLIGHT REALLY NECESSARY?
1. Approach departure	Rotor and engine exhaust location on different helicopter types pose danger of serious injury	Approach operating helicopter only when instructed to do so by pilot, manager or helitack personnel. All personnel must receive a briefing on the specific type/model of helicopter before working around that helicopter. Each type/model may have different procedures for approach and departure. Standard procedure is as follows: 1) Approach from the front or front side of helicopter, in a slight crouch and in clear view of the pilot. 2) Never go near the rear of the helicopter unless instructed to do so (for models without a tail rotor hazard). 3) Allow helitack personnel to carry long objects, or carry them horizontally, low to the ground if authorized to do so. 4) Approach/depart helicopters to/from the downhill side (never uphill).
2. Loading/Unloading	Some aircraft components are fragile and easily broken. Improperly entering or exiting helicopter could adversely shift the position or orientation of the helicopter.	Follow directions of air operations personnel. Open/close doors only when and as instructed. Do not straddle the skid or step immediately adjacent to skid. Use only designated handholds to enter or exit--DO NOT PUT ANY WEIGHT ON THE DOOR. Enter and exit the aircraft in a carefully controlled manner to avoid shifting the aircraft position. Remain seated and belted in until directed otherwise. Secure the seatbelt back inside the helicopter upon exiting.
3. Personal Protective Equipment	Potential for flash fire and potential for serious head trauma in the event of an accident.	For all helicopter flights, PPE must include: Nomex or fire-resistant cotton shirt and trousers, leather or Nomex gloves, leather boots, *Aviator Flight Helmet*, a two-inch overlap of all PPE. *NOTE: Firefighters being transported to a managed helispot may substitute a hardhat with chinstrap and earplugs for the aviator flight helmet.
Mines	Potential exists to encounter open pit mines	Check with local district personnel and map mine hazard areas. Be on the alert for open pit mine areas in all locations. Watch out for hazardous materials.
Fatigue	Potential to affect judgment, work and relationships	Comply with work/rest ratio (two hours of work/ one hour of rest) Comply with days off - 1/14 or 2/21, or time off sooner if deemed necessary by the Team Leader. Recognize that fatigue affects cognitive (decision making) ability; physical ability (balance, stamina, etc). Emotional responses --guard against reacting to fellow workers and others. Ensure that adequate accommodations are available.
Hazardous Materials	Potential exists to encounter hazardous materials.	Avoid burned buildings on anything that may contain hazardous materials. Be wary around any of the private land, or land bordering private land.

Employee Security	Potential for disgruntled publics and exposure to non-secure situations and off road vehicles.	Disengage from a situation where an irate person appears to be in an escalating angry mode. Watch out for unfamiliar objects that may be lethal. Watch out for illegal drug or hazmat sites. Travel in pairs.
Working Relationships	Inappropriate behavior, anger, disorganized effort, poor communications	Always demonstrate mutual respect for others. Guard against reacting to others' emotional anguish; be supportive and understanding. Recognize that fatigue affects cognitive (decision making) ability; physical ability (balance, stamina, etc). Emotional responses --guard against reacting to fellow workers and others
Monitoring of 30-mile Fire Hazard Abatement Plan	Putting employees at risk	Daily report by way of conference call addressing compliance with the 30-Mile Abatement Plan.
10. LINE OFFICER SIGNATURE /s/	11. TITLE	12. DATE

Job Hazard Analysis - Confirm reading

SIGNATURE DATE SIGNATURE DATE

Frank Lane 7/31/07
Dunbar 7/31/07

Carl Kelly 7/31/07

Adam Lawrence 7/31/07

Bruce Card 8/01/07

Michael R. Dale 8/1/07

~~Michael R. Dale~~ 7/31/07

Erin 8-6-07

Marsha A. Davis 8-6-07

Jessica Gould 7/31/07

~~Jessica Gould~~ 7/31/07

~~John~~ 8/01/07

R. L. Luman 8/6/07

Nancy Lopez 8/6/07

Rick Enders 8/16/07

~~John~~ 8/16/07