Occupational Safety and Health Administration

Inspection Number: 117886150

Inspection Dates: 07/23/2003 - 08/07/2003

Issuance Date: 03/26/2004



# Notice of Unsafe or Unhealthful Working Conditions

Company Name: U.S. Forest Service, Intermountain Region 4

Inspection Site: Cramer Fire, T23N, R15E, Section 20, North Fork, ID 83466

# Citation 2 Item 1 Type of Violation: Willful

29 CFR 1960.8(a): The agency did not furnish employees employment and a place of employment which was free from recognized hazards that were causing or likely to cause death or serious physical harm, in that employees were exposed to the hazards of burns, smoke inhalation, and death from fire-related causes:

- (a) Cramer Fire: On July 22, 2003, all of the Ten Standard Firefighting Orders from the Interagency Standards for Fire and Fire Aviation Operations (2003) were violated. Management in the Salmon-Challis National Forest and leadership at the Cramer Fire did not ensure that the Ten Standard Firefighting Orders were followed. The Orders were violated as follows:
  - Fire Order 1 Keep informed on fire weather conditions and forecasts. A spot weather forecast was not requested or received for July 22. Updated information from the National Weather Service indicating stronger winds than specified in the zone forecast was not known and, therefore, could not be relayed to personnel on the fire.
  - Fire Order 2 Know what your fire is doing at all times. The Incident Commander and the rappellers failed to become aware of the status of the fire burning below the Helispot-2 (H-2).
  - Fire Order 3 Base all actions on current and expected behavior of the fire. Although management, leadership, and personnel on the fireline were aware that seasonal conditions were extreme, strategies and tactics were not adjusted to account for expected fire behavior during the afternoon of July 22. As fire activity increased and conditions worsened, tactics were not adjusted and the rappellers were left in harm's way.
  - Fire Order 4 Identify escape routes/safety zones and make them known. The escape routes and safety zones for the rappellers at H-2 were not appropriate due to the presence of unburned fuels and smoke from the advancing fire. Also, a helitack crew member was placed on a hillside near Helispot-1 (H-1) without the identification of escape routes and safety zones.

Fire Order 5 - Post lookouts when there is possible danger. Lookouts were not posted to provide a view of critical fire activity. The rappellers at H-2 did not have a lookout while working in an isolated area uphill from fire activity with the weather getting hotter, drier, and winds increasing.

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Fire Order 6 - Be alert. Keep calm. Think clearly. Act decisively. The Incident Commander appeared to be overwhelmed by the number of logistical and operational duties to be performed, and did not have the situational awareness to be alert to increasingly hazardous conditions. Key leadership and personnel at the fire did not act decisively to direct the rappellers to safety zones or remove them from their hazardous work location at H-2. The rappellers remained working at the helispot even after a decision had been made to not use it.

Fire Order 7 - Maintain prompt communications with your forces, your supervisor, and adjoining forces. Lines of communication were inadequate between fire leadership and the rappellers at H-2. The rappellers received no direct supervisory communication and had not been informed of the increasing fire activity in the Cache Bar drainage below them, nor had they been informed of the decision to abandon the plan to fly crews into the spot they were clearing.

Fire Order 8 - Give clear instructions and insure they are understood. An employee was placed by helicopter on a hillside uphill from active fire without clear instructions; this was not originally planned, the employee was not wearing a flight helmet and did not receive directions. Also, the pilot for the lead plane was not instructed to be the lookout for the rappellers while directing retardant drops and handling other air attack duties.

Fire Order 9 - Maintain control of your forces at all times. There was no supervisory control over the rappellers at H-2 to ensure their safety, even though the Incident Commander (IC) was acting as their supervisor. Also, the IC failed to communicate his decision to abandon his plan for the upper helispot; thus, the rappellers continued to execute the original plan, thereby delaying their departure from the hazardous work location.

Fire Order 10 - Fight fire aggressively, having provided for safety first. The tactics implemented lacked critical safety procedures, including adequate escape routes and safety zones, posting lookouts, and basing actions on the extreme fire conditions present at the time. Also, the safety of the rappellers working in isolation at H-2 was compromised due to the focus on fire operations and activity elsewhere. Furthermore, firefighters continued to be offloaded at H-1 while it was threatened by fire.

Among other methods, one feasible and acceptable abatement method to correct this hazard is to ensure that none of the Standard Fire Orders are violated. Utilizing the simplified LCES (Lookouts, Communications, Escape Routes and Safety Zones) would have prevented most of these hazards from occurring. Hazard recognition and control may involve the addition of safety staff specifically qualified

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to identify hazards to Type 3 or smaller incidents. Specific and in-depth safety training for firefighters, supervisors, incident commanders, and other fire personnel to recognize situations where Fire Orders are violated and to correct them immediately.

(b) Cramer Fire: On July 22, 2003, Forest Service managers and supervisory personnel at the Cramer Fire did not take immediate actions to mitigate the "18 Situations That Shout Watch Out" listed in the Interagency Standards for Fire and Fire Aviation Operations 2003. Those which were not mitigated included the following:

Watch Out #1. "Fire not scouted and sized up." On July 22, as conditions became increasingly hazardous due to increased activity and complexity, the Incident Commander failed to have the fire scouted and sized up.

Watch Out #3. "Safety zones and escape routes not identified." Safety zones and escape routes had not been re-evaluated and re-established as conditions changed. Escape routes through unburned fuels, such as along a ridge potentially exposed to intense heat from fire in the drainage, had been compromised and were not adequate.

Watch Out #4. "Unfamiliar with weather and local factors influencing fire behavior." A spot weather forecast had not been obtained for the day. Leadership and firefighters were not aware that stronger winds were expected during the afternoon.

Watch Out #5. "Uninformed on strategy, tactics, and hazards." The Incident Commander failed to inform the rappellers working on H-2 of the growth of the hazardous fire burning in the drainage below them.

Watch Out #6. "Instructions and assignments not clear." Instructions regarding the placement of lookouts on the fire were not clear. An employee was placed by helicopter on a grassy clearing across the drainage and uphill from active fire without being given instructions or safety information.

Watch Out #7. "No communication link with crew members, supervisors." A communication link was not maintained between the rappellers and the Incident Commander acting as their direct supervisor.

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Inspection Number: 117886150

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Inspection Site: Cramer Fire, T23N, R15E, Section 20, North Fork, ID 83466

Watch Out #8. "Constructing fireline without safe anchor point." Crews were working throughout the day on July 22 to construct fireline without establishing a safe anchor point.

Watch Out #9. "Building fire line downhill with fire below." Rappellers were constructing a helispot (H-2) in order to transport crews to an area above the active fire in rugged terrain and extreme conditions.

Watch Out #11. "Unburned fuel between you and fire." Rappellers were working to construct a helispot (H-2) uphill from active fire with large amounts of unburned fuels, such as grasses, Ceanothus brush, and pine present between them and the active fire burning near the bottom of the Cache Bar drainage.

Watch Out #12. "Cannot see main fire, not in contact with anyone who can." Rappellers working to construct H-2 could not see the main fire, including areas below them on both sides of the ridge, and were not in contact with anyone who could see the hazardous fire developing below them in the Cache Bar drainage.

Watch Out #13 - On a hillside where rolling material can ignite fuel below. The rappellers were working on a ridge between the Cramer Creek and Cache Bar drainages. "Roll-outs" occurred throughout the Cramer Fire due to steep terrain, which allowed the fire to establish itself in the bottom of the Cache Bar drainage then rapidly spread up the drainage to the employee work location and safety zone.

Watch Out #14 - Weather is getting hotter and drier. The rappellers worked from mid-morning into the afternoon with temperatures increasing to near 100 degrees F and relative humidity decreasing to between 10 to 15 percent. The trend for the three days of the fire was recognized as increasingly hotter and drier conditions.

Watch Out #15 - Wind increases and/or changes direction. No changes in tactics or mitigation measures occurred for rappellers working to construct H-2 as afternoon winds and fire activity increased.

Watch Out #17 - Terrain and fuels make escape to safety zones difficult. Steep and rocky terrain made foot travel slow and hazardous. Fire was burning in the drainage below the helispot with unburned fuels between the work location and safety zone. The possible safety zone across the drainage did not meet the Interagency Standards' definition of a safety zone "of

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sufficient size and suitable location that is expected to protect fire personnel from known hazards without using a fire shelter."

Among other methods, one feasible and acceptable abatement method to correct this hazard is to ensure that where hazards such as any one of the 18 Watch Out Situations is present, adequate steps are taken to mitigate the hazards. Hazard recognition and mitigation may involve and be enhanced by the addition of safety officers to Type 3 or smaller incidents who are specifically qualified to identify hazardous situations and take measures to mitigate the hazards. Provide specific and in-depth safety training for firefighters, supervisors, incident commanders, and other fire personnel to recognize Watch Out Situations and to correct them immediately.

Note: Abatement certification and supporting documentation are required for this item.

Date By Which Violation Must be Abated:

04/21/2004

Occupational Safety and Health Administration

Inspection Number: 117886150

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**Issuance Date:** 

03/26/2004



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Company Name: U.S. Forest Service, Intermountain Region 4

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# Citation 3 Item 1 Type of Violation: Repeat

29 CFR 1960.11: The agency did not ensure that the performance evaluation of any management official in charge of an establishment, any supervisory employee, or other appropriate management official, measures that employee's performance in meeting requirements of the agency's occupational safety and health program:

(a) Performance evaluations did not have elements relating to meeting the requirements of the agency's safety and health programs for all fire supervisors, fire program management officials, and line officers. Compliance with the Ten Standard Firefighting Orders and Eighteen Watch Out Situations was not included as an element in the 2003 performance evaluation criteria for line officers, fire managers, and fireline supervisors.

The U.S. Forest Service was previously cited for a violation of this occupational safety and health standard, which was contained in OSHA Inspection Number 303757231, Citation Number 01, Item Number 02, issued on 02/08/2002.

Note: Abatement certification and supporting documentation are required for this item.

Date By Which Violation Must be Abated:

04/21/2004

Jerfold R. Hockett Area Director