



United States
Department of
Agriculture

Forest
Service

Pacific
Northwest
Region

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File Code: 6700

Date: March 26, 2002

U.S. Department of Labor
Occupation Safety and Health Administration
Suite 302
505 106th Avenue N.E.
Bellevue, Washington 98004-5033

Re: Inspection Number 303757231

Dear Ms. Joy Flack, Area Director:

Enclosed with this letter is our plan to abate the hazards documented in your February 8, 2002, Notice of Unsafe or Unhealthful Working Conditions for Inspection Number 303757231. If you have any questions or require further information, please contact Temple Tait-Ochs at 503-808-2626.

/s/ Nancy Graybeal (for)

HARV FORSGREN
Regional Forester

Enclosure

cc:
Chief, WO
J.Williams, WOAFM
L.Hileman, WOHRM
L.Perrett, R6AFM
J.Payne, R6AFM
T.Tait-Ochs, R6HRM



**Hazard Abatement Plan
Required by the Occupational Safety and Health Administration
for the
Thirtymile Fire Accident Investigation
Okanogan-Wenatchee National Forest
Occurring in July 2001**

The Occupational Safety and Health Administration (OSHA) notified the Forest Service of the findings of their investigation of the Thirtymile Fire on the Okanogan-Wenatchee National Forest in July 2001. OSHA cited the Forest Service for two willful and three serious violations.

In response to the violations, the Forest Service is immediately implementing all of the actions described below. For actions that are National in scope, the Chief is the responsible official with Laurie Hileman, National Occupational Health and Safety Manager as the primary point of contact. For actions that are specific to Region 6, the Regional Forester is the responsible official, with Temple Tate-Ochs, Regional Safety and Health Manager as the primary point of contact.

OSHA Citation 1 Item 1 Serious

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.

OSHA Hazards Identified:

Hazard A: Work-rest cycles developed by the Forest Service were not followed. This resulted in a lack of situational awareness and impaired judgment in responding to critical fire situations.

Hazard A - Abatement Actions:

In a meeting of Forest Service National Leadership Team (Deputy Chiefs, Regional Foresters, Area Director, Station Directors) held on March 20, 2002, the Chief emphasized the importance that all employees (managers and firefighting crews) adhere to agency work-rest guidelines (two hours of work for each one hour of rest). All Leadership Team members were directed to reiterate this message with their leaders, managers, and firefighters. The Chief used the enclosed "Key Messages – Fire Season 2002" during this meeting (Enclosure No. 1).

On March 15, the National Director of Fire and Aviation issued direction to Regional Foresters, Station Directors, Area Director, IITF Director, and WO Staff to emphasize adhering to work-rest guidelines with their employees, a copy of the letter is enclosed (see Enclosure No. 2).

Monitoring compliance with work-rest guidelines will occur on incidents by:

- 1) Ongoing assessments by Incident Commanders (ICs) and Safety Officers. Compliance with work-rest guidelines will be monitored and documented on all incidents that exceed one operational period (16 hours from initial action). A letter of direction on this subject will be issued by April 30. A draft of this memo has been developed (Enclosure No. 3). ICs will establish the method of monitoring and documentation. At a minimum, documentation will include:
 - a) Description of actions taken to monitor work-rest cycles.
 - b) Every incidence where work-rest cycle limitation guidelines were exceeded.
 - c) Action taken to assure compliance.
- 2) Agency Administrators during daily interaction with ICs and documented close out debriefings on all fires (Type 1-5).
- 3) Fire and Aviation Safety Teams (FAST) when assigned by Regional Foresters or the National Office. FASTs are composed of a small number of Fire and Aviation subject matter experts who assist Line Officers in monitoring firefighter compliance with safety and health standards, and recommend changes to policy and/or procedures to improve firefighter safety.

An Internet web site has been established the National Interagency Fire Center to provide information for fire managers conducting firefighter refresher training. Discussion topics on managing fatigue and work-rest cycles have been posted under "Lessons Learned: Thirtymile Fire. The Web address is: www.nifc.gov/safety_study/annual-refresh/topics.html

Hazard B: An Incident Commander for all stages of the Thirtymile Fire was not clearly assigned. Incident Command was not formally passed between various leaders.

Hazard B - Abatement Actions:

In a January 11, memo (Enclosure No. 4) to Regional Foresters, Station Directors, Area Director, IITF Director, and WO Staff, the Chief directed that every Type 3, Type 2, and Type 1 fire have a dedicated Incident Commander, who has no collateral duties. Type 4 and 5 fires (small fires in the initial attack phase), many of which are staffed with only two to three people may still have an IC who has other collateral duties.

In the letter mentioned above, the Chief also directed that the National Mobilization Guide include direction to dispatch centers that will ensure all resources know the name of the assigned Incident Commander and announce all changes in incident command via phone and/or radio. The Chief also directed all Geographic Area, Zone, and Local Mobilization Guides contain this direction as they are revised for the 2002 fire season. The National Mobilization Guide is scheduled for publication and distribution by April 30. The Pacific Northwest Mobilization Guide is scheduled for publication and distribution to field units by June 1.

The formal assignment of Incident Commanders will be documented on Resource Order Forms specific to each incident per Mobilization Guide direction.

Hazard C: Fire shelter deployment procedures had not been developed for firefighters whose escape routes were compromised. All firefighters must begin preparing for deployment of fire shelters when they are surrounded by fire, even if they believe they are in a safety zone.

Hazard C - Abatement Actions:

The Chief's letter of January 11, (Enclosure No. 4), requires that every fireline qualified individual will receive training on entrapment recognition and deployment protocols. This training will be conducted in conjunction with refresher training and/or annual fire schools. This training will be accomplished by July 1, with actual implementation dates varying by Geographic Area. The training will be ongoing in subsequent years. Employees without the training will not be assigned to fire suppressions tasks on the fireline.

Revision of the fire shelter training is under development by the Missoula Technology and Development Center, and will include updated deployment protocols and incorporate principles of entrapment avoidance. The training curriculum and Instructor's Guide will be released through the National Wildfire Coordinating Group (NWCG) Safety and Health Working Team. This training will be published and distributed by mid April. Enclosure No. 5 is a briefing on this subject.

Additionally, entrapment avoidance and deployment protocols have been revised and issued in the Incident Response Pocket Guide published in January (PMS No. 461/NFES No. 1077). The guide contains a specific "Risk Management Process" on page 1, and "Last Resort Survival" protocols on page 18 (see Enclosure No. 6). This guide will be issued to every firefighter during refresher fire training courses held this year.

The new Standards for Fire & Aviation Operations 2002, scheduled to be published May 1, will be distributed to each fireline supervisor. This handbook provides direction to Incident Commanders on fire suppression safety including risk analysis, escape routes, and safety zones. A letter will be issued with the handbook stating that the Standards for Fire & Aviation Operations 2002 supplements existing agency manual or handbook direction (Enclosure No. 7). An electronic copy of this document is available now at: <http://www.fire.blm.gov/standards/redbook.htm>.

OSHA Citation 1 Item 2 Serious

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

OSHA Hazards Identified:

Hazard A: Evaluations of supervisory and management officials at the Okanogan and Wenatchee National Forests, above the level of crew boss, did not have performance elements relating to their support of, or meeting of the requirements in, the occupational safety and health program.

Hazard A - Abatement Actions:

All Region 6 Forest Supervisors have specific supplemental performance standards that measure their safety performance. The Regional Forester has issued a letter, dated March 22, requiring the implementation of supplemental safety performance standards for all R6 supervisors and managers. The supplemental standards must be discussed with the affected employees during the FY 2002 mid-year performance reviews and must be in place no later than June 30. A copy of the letter, which outlines both the Forest Supervisor standards and the Supervisor/Manager standards, is enclosed to this plan as Enclosure No. 8.

OSHA Citation 1 Item 3 Serious

29 CFR 1960.55(a): The agency did not provide occupational safety and health training for supervisory employees.

OSHA Hazard Identified:

Hazard A: A NWR No. 6 (Northwest Regular) crewmember that had not completed his task book and required courses was assigned as a squad boss.

Hazard A - Abatement Actions:

Forest Service Handbook 5109.17 provides direction (Enclosure No. 9) on the form and function of Fire Qualifications Review Committees (FQRC) at the Forest level. At a minimum, the FQRC is composed of the Fire Program Manager, a Line Officer (usually a District Ranger), the unit's Incident Fire Qualifications Database Administrator (usually the Dispatch Coordinator) and representatives knowledgeable of the unit's personnel. One primary role of the FQRC is to review and validate the firefighting qualifications of each employee on the Forest. The Forest FMO will document the qualifications for each employee as part of their annual preparedness activities. A summary of employee qualifications by fire position will be provided to the unit's Dispatch Coordinator who will ensure that only qualified employees are dispatched to fire assignments.

The new Standards for Fire & Aviation Operations 2002, scheduled to be published May 1, will be distributed to each fire line supervisor. This handbook provides

additional direction and guidance to Fire Management Officers regarding training and certification of employees for fire assignments. A letter will be issued with the handbook stating that the Standards for Fire & Aviation Operations 2002 supplements existing agency manual or handbook direction (Enclosure No. 7). An electronic copy of this document is available now at: <http://www.fire.blm.gov/standards/redbook.htm>.

OSHA Citation 2 Item 1 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.

OSHA Hazards Identified:

Hazard A: All of the 10 Standard Firefighting Orders from the National Wildfire Coordinating Group (NWCG) Fireline Handbook 410-1 were violated. Supervisors at the Wenatchee National Forests and at the Thirtymile Fire did not ensure that the 10 Standard Firefighting Orders were followed.

Hazard A - Abatement Actions:

The Chief's letter of January 11, (Enclosure No. 4) to Regional Foresters, Station Directors, Area Director, IITF Director, and WO Staff, requires local agency administrators to convey their expectations to Incident Commanders, including the provision "provide for the safety and welfare of all personnel and the public".

At the National Fire and Aviation meeting on February 25, the National Fire Director verbally directed all Regions to consider the 10 Standard Firefighting Orders as "firm rules of engagement". The Director also emphasized accountability for compliance with the 10 Standard Firefighting Orders during inspections by Line Officers and Fire Managers. (Enclosure No. 10, page 4).

In a meeting of the Forest Service National Leadership Team (Deputy Chiefs, Regional Foresters, Area Director, Station Directors) held on March 20, the Chief emphasized the importance that all employees (managers and firefighting crews) adhere to the 10 Standard Firefighting Orders as "firm rules of engagement". That all decisions to engage, disengage, or re-engage in a suppression action are made in terms of these Orders. All Leadership Team members were directed to reiterate this message with their leaders, managers, and firefighters. The Chief used the enclosed "Key Messages – Fire Season 2002" during this meeting (Enclosure No. 1).

The Forest Service in a joint effort with other interagency partners is developing a new Standards for Fire & Aviation Operations 2002. This handbook is designed to provide tactical fire suppression direction to all firefighters down to the crew level. The handbook directs fireline supervisors and firefighters comply with the 10 Standard Firefighting Orders, and provides acceptable means to tactically mitigate the hazards identified in the 18 Situations That Shout Watch Out. This handbook is scheduled for publishing and distribution by May 1. A letter will be issued with the handbook stating that the Standards for Fire & Aviation Operations 2002 supplements existing agency manual or handbook direction (Enclosure No. 7). An electronic copy of this document is available now at: <http://www.fire.blm.gov/standards/redbook.htm>.

An updated, 2002 version of the Incident Response Pocket Guide (Enclosure No. 6) has been published and is being issued to all fireline supervisors. This guide emphasizes compliance with the 10 Standard Firefighting Orders and the 18 Situations That Shout Watch Out.

Hazard B: Forest Service Supervisory personnel at the Thirtymile fire did not take immediate actions to mitigate “Watch Out” situations. The 18 situations are listed in the NWCG Fireline Handbook.

The Chief’s letter of January 11, (Enclosure No. 4) to Regional Foresters, Station Directors, Area Director, IITF Director, and WO Staff, requires local agency administrators to convey their expectations to Incident Commanders, including the provision “provide for the safety and welfare of all personnel and the public”.

In a meeting of the Forest Service National Leadership Team (Deputy Chiefs, Regional Foresters, Area Director, Station Directors) held on March 20, the Chief emphasized the importance that all employees (managers and firefighting crews) adhere to the 10 Standard Firefighting Orders as “firm rules of engagement”. That all decisions to engage, disengage, or re-engage in a suppression action are made in terms of these orders. All Leadership Team members were directed to reiterate this message with their leaders, managers, and firefighters. The Chief used the enclosed “Key Messages – Fire Season 2002” during this meeting (Enclosure No. 1).

The Forest Service, in a joint effort with other interagency partners, is developing a new Standards for Fire & Aviation Operations 2002. This handbook is designed to provide tactical fire suppression direction to all firefighters down to the crew level. The handbook provides direction to fireline supervisors and firefighters how to address the 18 Situations That Shout Watch Out through a risk analysis process (Chapter 4). Subjects include: Escape routes and safety zones, actions when the fire is spreading with multiple spot fires and crown fire, weather information, giving clear instructions, having and using current fire information, the use of lookouts, and the mitigation of several other hazardous situations. This handbook is scheduled for publishing and distribution by May 1.

A letter will be issued with the handbook stating that the Standards for Fire & Aviation Operations 2002 supplements existing agency manual or handbook direction (Enclosure No. 7). An electronic copy of this document is available now at: <http://www.fire.blm.gov/standards/redbook.htm>.

An updated, 2002 version of the Incident Response Pocket Guide (Enclosure No. 6) has been published and is being issued to all fireline supervisors. This guide emphasizes compliance with the 10 Standard Firefighting Orders and the 18 Situations That Shout Watch Out.

OSHA Citation 2 Item 2 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.

OSHA Hazards Identified:

Hazard A: Management failed to conduct inspections of firefighting operations including on-site, frontline evaluations of Type 3, 4, and 5 fires to ensure that established firefighting practices were enforced.

Hazard A - Abatement Actions:

In a January 11, memo (Enclosure No. 4) to Regional Foresters, Station Directors, Area Director, IITF Director, and WO Staff, the Chief directed local Line Officers to convey their expectations on incident management to their Type 3, 4, and 5 Incident Commanders. In addition, he directed that those expectations should include as a minimum:

- Provide for the safety and welfare of all personnel and the public.
- Develop and implement viable strategies and tactics for the incident.
- Monitor effectiveness of the planned strategy and tactics for the incident.
- Disengage suppression activities immediately if the strategies and tactics cannot be implemented safely.
- Use local rules and specific criteria to determine when a fire has moved beyond initial attack.

In a meeting of the Forest Service National Leadership Team (Deputy Chiefs, Regional Foresters, Area Director, Station Directors) held on March 20, the Chief emphasized the importance that Line Officers and Fire Program Managers conduct monitoring and reviews of fire suppression activities. He strongly emphasized personal involvement by Line Officers. All Leadership Team members were directed to reiterate this message with their Line Officers

and managers. The Chief used the enclosed “Key Messages – Fire Season 2002” during this meeting (Enclosure No. 1).

On March 15, the National Director of Fire and Aviation issued direction to Regional Foresters, Station Directors, Area Director, IITF Director, and WO Staff to stay involved in the management of incidents on their units, and to monitor fire suppression and support activities. Key emphasis items were identified for local Line Officers, and local Fire Management Officers related to inspecting and monitoring fire suppression efforts. A copy of the letter is enclosed (see Enclosure No. 2).

To help Line Officers and Managers monitor fire operations, a standard complexity analysis format has been developed for their use in assessing the complexity of Type 3-5 incidents. In addition, guidelines have been developed for conducting quality transitions in incident management from one management level to another as the complexity level and associated health and safety hazards change. These documents are included in the newly developed Standards for Fire & Aviation Operations 2002, which will be issued to all fireline managers. This handbook is scheduled for publishing and distribution by May 1. A letter will be issued with the handbook stating that the Standards for Fire & Aviation Operations 2002 supplements existing agency manual or handbook direction (Enclosure No. 7). An electronic copy of this document is available now at: <http://www.fire.blm.gov/standards/redbook.htm>.

To further develop the management skills necessary to conduct quality monitoring of incident operations, the Forest Service Line Officer Team is developing core fire management competencies for agency administrators/line officers having fire program responsibilities. The Forest Service Director of Fire and Aviation Management and the Director of Human Resources will seek inclusion of these competencies into the position descriptions and in the selection criteria for agency administrators/line officers. The Line Officer Team completed all staff work associated with this item on February 25. Full implementation of this work is expected before October.

The NWCG Threat Mitigation Team is in the process of identifying the thresholds at which large fires typically occur. These thresholds indicate fire danger levels that significantly affect the safety of firefighters. This information will be used by Line Officers and Fire Managers as they monitor fire suppression operations for safety and management issues that need resolution. The Threat Mitigation Team expects to have this project completed by June 1.

Incident Commanders for Type 3-5 fires have the responsibility to inspect each of their fires for safety and health hazards. These inspections are conducted personally by the IC on Type 4 and 5 fires, and accomplished by the IC and Safety Officers on Type 3 fires. Compliance with established firefighting practices, hazards and mitigation actions, and other firefighter safety and health issues will be documented on ICS Unit Logs. A letter of direction on this subject will be issued by April 30. A draft of this memo has been developed (Enclosure No. 3).

Hazard B: After-action reports prepared for out-of-forest firefighting crews on Type 3, 4, and 5 fires did not identify safety and health hazards.

Hazard B - Abatement Actions:

After-action reports, individual overhead performance evaluations, and crew evaluations will be completed on every Type 3, 4, and 5 fire assignment for out-of-Forest crews by their immediate fireline supervisor. These evaluations will include use of the 10 Standard Firefighting Orders and the 18 Situations That Shout Watch Out as standards for measuring performance. Corrective action, even if satisfactorily completed, will be documented in the reports and evaluations. Local units will keep these records in the official files for the incident, and share them with the evaluated resource and the resource's home unit Line Officer and/or Fire Management Officer. A letter of direction on this subject will be issued by April 30. A draft of this memo has been developed (Enclosure No. 3).

Enclosures

- Enclosure No. 1: Key Messages – Fire Season 2002
- Enclosure No. 2: March 15, 2002 memo from Jerry Williams, Director F&AM
- Enclosure No. 3: Draft memo from Deputy Chief, S&PF
- Enclosure No. 4: January 11, 2002 memo from Dale Bosworth, Chief
- Enclosure No. 5: Briefing on Entrapment Avoidance Training
- Enclosure No. 6: Incident Response Pocket Guide
- Enclosure No. 7: Cover memo to Standards for Fire & Aviation Operations 2002
- Enclosure No. 8: March 22, 2002 memo from Harv Forsgren, Regional Forester
- Enclosure No. 9: Excerpts from FSH 5109.17
- Enclosure No. 10: February 25, 2002 Talking Points, Jerry Williams, Director F&AM