Appendix C:

Safety and Spill Management

SPILL PLAN

U.S.D.A. FOREST SERVICE
MODOC NATIONAL FOREST

OIL AND HAZARDOUS SUBSTANCE
POLLUTION CONTINGENCY PLAN

APRIL, 2006

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Appendix C: Spill and Safety Management

Pesticide spill prevention and clean-up, as well as storage, transport, and disposal procedures are covered in detail in Forest Service Handbook (FSH) 2109.12 Pesticide Storage, Transportation, Spills, and Disposal. Any herbicide projects would follow the direction given in this handbook. It is available for review at U.S. Forest Service offices.

This Spill and Safety Management Appendix is in two parts:

Part 1 contains the Oil and Hazardous Substance Polluion Contingecy Plan for the Modoc National Forest.

Part 2 consists of samples of Job Hazardard Analysis (JHA) for activities associated with those proposals presented in the FEIS.

Required Equipment

The following equipment should be available with vehicles or pack animals used to transport pesticides and in the immediate vicinity of all spray operations. The list will be adjusted annually to reflect technology and needs identified during the development of the annual operating plans for noxious weed control.

- A shovel
- A broom (except backcountry operations)
- 10 pounds of absorbent material or the equivalent in absorbent pillows
- Large plastic garbage bags
- Rubber gloves
- Safety goggles
- Protective overalls
- Rubber boots
- Material Safety Data Sheets will be reviewed with all personnel involved in the handling of pesticides.

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Oil And Hazardous Substance Pollution Contingency Plan

Herbicide spills will be treated in accordance with the Forest Oil and Hazardous Substance Pollution Contingency Plan which is updated regularly. The following is from the last update of April 2006.

Introduction

The Modoc National Forest (MDF) Oil and Hazardous Substance Pollution Contingency Plan establishes response procedures for hazardous materials incidents occurring within the Modoc National Forest. It is meant to minimize exposure and damage to human health and the environment that may be caused by the release or threatened release of hazardous materials.

This plan should be used for incident preparedness, during a hazardous material incident, and as a guideline to determine the jurisdiction of clean up.

The watersheds of the Modoc National Forest contain drinking water sources, wildlife habitat, and commercial and recreational resources. To protect these resources, every effort should be made, especially at the project planning stage, to safely contain oil and hazardous substances away from surface or subsurface water. Clean up cost of these waters may be prohibitive if hazardous material releases are not contained as soon as possible.

Objectives

- Provide for safety and health of the public and Forest Service employees and contractors involved in a hazardous material incident response.
- Provide a system for notification and response to accidental discharges of oil and hazardous substances on or threatening National Forest System lands.
- Provide procedures for clean up, abatement, disposal and restoration of a release of oil or hazardous substances.
- Emphasize Pollution Prevention on National Forest lands.
- Incorporate the Incident Command System (ICS) to provide Modoc National Forest employees with a clear and concise chain of command in the event of an accidental discharge of oil and/or hazardous materials on National Forest lands.

Authority

Authority for oil and hazardous substance pollution contingency planning is contained in the following documents:

- CERCLA – the Comprehensive Environmental Response, Compensation and Liability Act
- SARA - Super Fund Amendments and re-authorization Act of 1986
- 40 CFR Part 300, National Oil and Hazardous Substances Pollution Contingency Plan
- 40 CFR Part 302, Designation, Reportable Quantities and Notification

- Cost Recovery from Potential Responsible Parties (PRP's) are authorized in 40 CFR 300.160 and 300.315

Definitions

Hazardous Material Emergency Oil Spill – Any release or threat of release of a hazardous substance or petroleum product that presents an imminent and substantial risk of injury to human health or to the environment.

Release – Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment, OR the abandonment or discarding of closed containers of oil or hazardous substances.

(Releases that do not constitute an immediate threat; occur entirely within a facility; are federally permitted; are a routine application of a product (i.e. pesticide, paint); are not considered to be an emergency and are not covered by this plan.)

HazCat – A program designed to assist in the identification of an unknown material. Teams are set up through the EPA (Environmental Protection Agency) and will respond to incidents where product identification is a problem.

Reportable Quantities (RQ) – A threshold amount of oil or hazardous substance which, when exceeded, must be reported to the Office of Emergency Services (OES), provided by the Sheriffs Office.

The threshold amount of released hazardous substance so tabulated in 40 CFR Part 302.

- Any release which violates or has the potential to violate water quality standards.
- Any release of oil which causes "a film or sheen which discolors water surface or adjoining shorelines, or causes a sludge or emulsion to be deposited beneath the surface of the water or adjoining shorelines".
- Any pesticide release, outside of approved plan applications.
- Any petroleum product in excess of 42 gallons.

Responsibilites

Forest Supervisor – In addition to the responsibilities delegated in FSM 7443, R-5 Supplement, the Forest Supervisor shall:

- Designate an Emergency Response Coordinator per FSM 2160.43, also known as the Forest Spill Coordinator
- Provide dispatch capabilities through the Modoc Interagency Command Center Manager.
- Provide line officer input as needed in the event of a large incident.

Public Affairs Officer (PAO) – Due to the sensitive nature of hazardous spills, the PAO will provide official news releases and public announcements.

Forest Spill Coordinator (Emergency Response Coordinator) – The Sierra Cascade Province Safety and Health Officer

- may be assigned as an Alternate, or contact any spill coordinators from Neighboring forests.
- Be assigned as Incident Commander or as resource specialist to the Incident commander.
- Determine if a release is a reportable quantity and contact OES and Forest Service personnel where required.
- Provide for emergency procurement through Sierra Cascade Province Acquisitions section. Have a working knowledge of Regional Contracts for the clean up of Hazardous Materials.
- Notify Law enforcement if a release is possibly intentionally dumped, from a drug lab or other illegal activity. Cost recovery may depend on criminal investigation and prosecution.
- Annually update the Forest Oil and Hazardous Substances Pollution Contingency Plan.
- Have a working knowledge of the EPA Region IX Contingency Plan, the National Contingency Plan, and related 40 CFR's for pollution prevention.
- Insure that Forest First Responders receive proper training.
- Maintain a cache of spill response materials.
- Sign Hazardous Waste Manifests when disposing spilled hazardous material.

Modoc Interagency Command Center (Forest Dispatcher)

- Assign an Incident Commander, incident name and MDF incident number.
- Notify Forest Spill Coordinator (Emergency Response Coordinator) of any release of oil or hazardous substances (see Contacts, pg. 7).
- Request an incident job code from the Forest Financial Officer.
- Make required notifications in the absence of the Forest Spill Coordinator.
- Provide normal dispatch services.

District Ranger

- Works directly or through local law enforcement agencies to warn the public of a possible hazard, when notified of such by the Forest Dispatcher or the Spill Coordinator.
- Furnish district resources to assist in emergency response and subsequent clean up and remediation.
- Coordinate with the Forest PAO for public announcements and news releases. Due to the sensitive nature of this subject, only the PAO will make official news releases and public announcements.

Hazardous Material Incident First Responders (Hazmat First Responders)

- Provide for the safety of the public and personnel on scene of a hazardous material incident.
- Deny entry to untrained or unprepared persons.
- Initiate action based on size and complexity of release. When possible and safe to do so, reduce the potential risk to human health and the environment by containing the release. Initiate the Report of Hazardous Material Release form and relay to the Forest Spill Coordinator.
- Direct on scene resources providing for safety first.

- Perform as Incident Commander as assigned or until relieved by the IC of the agency of jurisdiction.
- Maintain certification in OSHA Hazardous Waste Operations (hazwoper) First Responder.
- CLEAN UP AND REMEDIATION OF HAZARDOUS MATERIALS WILL NOT BE PERFORMED BY FOREST SERVICE PERSONNEL. Containment by placement of dikes, absorbent material or impervious materials may be attempted where risk to personnel is low.

Other Forest Personnel

The first employee to encounter a release of oil or hazardous substances and is aware of the significance, has the responsibility to report the release to Modoc Interagency Command Center. Personnel who encounter a release of an unknown substance shall treat it as hazardous. The primary objective of the first on scene is the protection of personnel and the public.

Jurisdiction

Release Location	Agency with Jurisdiction
Forest Service Land	Forest Service
State Highways & Rights-of-Way	California Highway Patrol
County Roads & Rights-of-Ways	Appropriate County Road Dept.
Railroads	Modoc Western, Goose Lake RR
In or Threatening Streams	CA Dept. of Fish and Game
Illegal Acts Dumps	Appropriate County Sheriff Dept.

Response Procedures

The source of a release of oil or hazardous substances will affect the Forest Service response:

When the release is from a Forest Service Force Account operation, the project leader has the responsibility to take action. All activities in the affected area should be suspended and the Forest Dispatcher notified of the release. The project leader has the role of Hazmat First Responder if so qualified. If not, the Forest Dispatcher will assign a First Responder.

When the release is from a Forest Service contractor or permittee, they have the responsibility to take appropriate action. However, failure to take appropriate action gives the Forest Service project leader (Timber Sale Administrator, COR, inspector, Permit Administrator, etc) authority to take over response actions. Usually, a level of cooperation is achieved with the contractor taking responsibility for clean up, and Forest Service Emergency crews responding to secure access to the incident. In all cases, the Forest Dispatcher and the Forest Spill Coordinator are to be notified to make appropriate determinations and upward reporting.

When the release is from a third party operation, the Forest Service will respond if the third party fails to take appropriate action. The Forest Dispatcher and the Forest Spill Coordinator need to be notified to determine if appropriate action is being taken and required reporting is made.

When the release is from a transportation related incident, the Forest Service will respond if the driver is unable or fails to take appropriate action. The Forest Dispatcher and the Forest Spill Coordinator need to be notified to assist the appropriate jurisdiction determine if appropriate action is being taken and required reporting is made.

When oil or hazardous substances are abandoned or dumped on Forest Service land, whether in sound containers or releasing directly to the environment, notify the Forest Dispatcher immediately. The Forest Dispatcher will assign an Incident Commander, the Forest Spill Coordinator and Law Enforcement.

Reporting Procedures

The nature and severity of a release of oil or hazardous substances will determine the extent of upward reporting. All releases are to be reported to the Forest Dispatcher or the Forest Spill Coordinator (who will contact the other). They will make all further required reports.

When any of the five criteria of Reportable Quantities are met, OES (Office of Emergency Services) for the state and the respective counties are to be notified by telephone. The Forest Service Environmental Engineer in the Regional Office should also be notified.

The Public Affairs Officer, the District Ranger and the Forest Supervisor should all be notified of any release, regardless of severity. The Forest leadership should not be surprised by a public inquiry about a recent release of which they were unaware.

Required Training

- Emergency Response Coordinator (Spill Coordinator) – OSHA 40 hr classroom training: 8 hr. annual refresher.
- First Responder, Hazardous Material Incident– OSHA Hazardous Waste Operations (Hazwoper) First Responder 24 hr classroom training; 8 hr. annual refresher.
- All Employees – Hazmat awareness.

Project Planning

All projects on the forest that propose to use petroleum products in excess of planning threshold quantity or hazardous substances in excess of reportable quantities are required to have a written Pollution, Prevention, Control and Countermeasures Plan (40 CFR Part 112).

Planning threshold quantity for petroleum products is cumulative 1320 gallons when considering all containers (full or not) 55 gallons capacity or larger. This includes and combines all grades of petroleum products: fuels in bulk storage, hydraulic fluid, waste oil, etc. One exception is a fuel tank used solely to power the motor vehicle that the tank is mounted on.

The Pollution, Prevention, Control and Countermeasures Plan must consider:

- Staging areas that employ secondary containment in defensible, non-sensitive areas.
- Reduction of quantities used at any one time and place.
- Planning to avoid crossing live water or sensitive areas when accessing project areas.
- Identify specialized equipment for proper safe handling of hazardous products.
- Maintaining a stock of absorbent or impervious materials to control accidental release.
- Have available communication and contacts in the event of a release.
- Maintaining MSDS's (Material Data Safety Sheets) and specialized PPE (Personal Protective Equipment) on hand for employees and emergency response personnel.

Available Resources

Contractors for emergency spill response and hazardous waste clean up:

- A/C Industrial Services, Chico, CA 530-343-5488 Reference contract # AG-91S8-C-06-0025/0002
- Tetra Tech, San Francisco, CA 415-543-4880 Reference contract # AG-91S8-C-06-0024/0003
- PARC Environmental Services, Fresno, CA 559-233-7156 Reference contract # AG-91S8-C-06-0026/0002
- NRC Environmental Services, Alameda, CA 510-749-1390 Reference contract # AG-91S8-C-06-0027/0002

The use of these Region 5 contracts are not mandatory, but are set up as a quick and convenient option for Forest Service use. Private parties are free to contact these companies as well. The Forest Spill Coordinator, Sierra Cascade Province Acquisitions and the Regional Environmental Engineer can all assist in using these contractors.

Any disposal of waste must be transported by a State Certified Hazardous Waste Hauler (such as these contractors), in a certified vehicle, to a certified facility. A manifest must be accurately filled out and signed by trained personnel, using the State EPA Hazardous Waste Generator Number, "CAL 000022954."

Emergency response spill kits are located at South Fork Compound warehouse and at the Big Valley Ranger Station. Spill kits are purposely limited in that local personnel are not trained to use more extensive spill kits. Spill kits typically include petroleum absorbing materials (pads and skimming booms), impervious plastic sheets, and sealable 55 gallon drums.

MSDS's (Material Safety Data Sheets) – MSDS's contain important information regarding the safe handling of a product and should be referenced whenever possible when responding to an incident. All Forest Service and related projects should have MSDS's available. They are also available on-line at http://msds.ehs.cornell.edu/msdssrch.asp and http://jrm.phys.ksu.edu/Safety/msds.html.

DOT (Department of Transportation) Orange Book – The North American Emergency Response Guidebook is widely available in Forest Service vehicles and offices. The Forest Dispatcher maintains a copy. The Orange Book provides quick reference for most common hazardous substances found in transportation.

CHEMTREC is the Chemical Transportation Emergency Center, a public service of the Manufacturing Chemicals Association. They provide valuable information 24/7 when chemicals are involved in fire, explosions or spills.

Cost Recovery

DOCUMENTATION CANOT BE OVERSTRESSED! The cost of an emergency response to an oil or hazardous substance incident and the related clean up and restoration is not routinely covered by forest funds. Whether the financial responsibility falls on the Forest Service, a contractor or permittee, or other third party, all costs will be scrutinized and will need to be well documented to be reimbursed. The Forest Dispatcher will request a reimbursable account from the Forest Financial Officer for all involved in the incident. Recoverable costs may include:

- Personnel time and overtime.
- Equipment use and mileage
- Per diem
- Supplies
- Damage to facilities
- Restoration of environmental damage

Contacts

Office of Emergency Services (County offices are reached by calling the Sheriff's Office)

- California State O.E.S. 800-852-7550 or 916-845-8911
- Modoc 233-4416
- Lassen 251-8013
- Siskiyou 842-8300

Forest Contacts

- Forest Spill Coordinator – Ron Rhodes 299-8427;
- Alternate Spill Coordinator – Matt Dorgan 233-8851; 233-8675
- SCP Safety & Health Officer – Mike Martinez 252-6437
- DG/WM Districts Ranger, Jim Irvin – 233-8812
- BV/DH Districts Ranger, Laurence Crabtree – 299-8410
- Public Affairs Officer, Laura Williams – 233-8713
- Forest Supervisor, Stan Sylva – 233-8700

Regional Office Contacts

- Environmental Engineer, Dennis Geiser – 707-562-8729
- Pesticide Use Coordinator, Dave Bakke – 707-562-8916

State of California

- CA Dept. of Fish and Game 257-5206
- CA highway Patrol 257-2191
- Cal Trans 225-3066

County Road Departments

- Modoc – 233-6403
- Lassen – 251-8116
- Siskiyou – 842-8250

Railroads

- Burlington Northern RR 800-832-5452; 541-880-5639; 541-891-7435
- Modoc Northern RR (parent company Utah Central) 667-2500
- Lake County RR 541-219-1948

Note:

- Burlington Northern runs Klamath Falls to Nubieber and south.
- Modoc Northern runs Klamath Falls to Alturas.
- Lake County runs Lakeview to Alturas.

CHEMTREC – 800-424-9300

MSDS sources - http://msds.ehs.cornell.edu/msdssrch.asp

http://jrm.phys.ksu.edu/Safety/msds.html.

Job Hazard Analysis

In addition the above Forest Service policy requires project supervisors to complete or review a Job Hazard Analysis for each project undertaken annually. The following examples are samples of Job Hazard Analysis for activities associated with noxious weed treatments. The examples attached are for field work, weed cutting, vehicle travel, and application of herbicides.These samples will be updated and modified to reflect the specific sites and treatments provided in the annual noxious weed treatment program of work.

FS-6700-7 (2/98)

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY Field Work	2. LOCATION Modoc National Forest	3. UNIT MDF
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST Robert Haggard	5. JOB TITLE Public Services Staff Officer	6. DATE PREPARED 01/26/2006

7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE
COMMUNICATION	Safety, crew unity	Talk to each other. Let other crewmembers know when you see a hazard. Avoid working near known hazard trees. Yell "ROCK!" if you see one start to roll down the hill. Always know the wherabouts of fellow crewmembers. Supervisors or crew bosses will carry a radio and spare batteries. Be familiar with the communication plan and know your assigned frequency.
WALKING AND WORKING IN THE FIELD	Falling down, twisted ankles and knees, poor footing	Always watch your footing. Slow down and use extra caution around logs, rocks, and animal holes. Extremely steep slopes (>50%) can be hazardous under wet or dry conditions; consider an alternate route. Tree root holes are prevelant and should be flagged. Work boots, hiking boots, or sturdy shoes will be required. Open toed shoes such as; sandals, tennis shoes, and the like are prohibited.
	Falling objects	Wear your hardhat for protection from falling limbs and pinecones, and from tools and equipment carried by other crewmembers. Stay out of the woods during extremely high winds.
	Damage to eyes	Watch where you walk, especially around trees and brush with limbs sticking out. Exercise caution when clearing limbs. Advise wearing eye protection. Ultraviolet light from the sun can be damaging to the eyes; look for sunglasses that specify significant protection from UV-A and UV-B radiation.
	Bee and wasp stings	Watch for respiratory problems. Notify Communications and get person to a doctor immediately if there is trouble breathing. Gently scrape stinger off of one is present. Apply analgesic swab and a cold pack if possible, and watch for infection. Flag the location of any known nests and inform other crewmembers. Advise packing an inhaler and Benadryl or Epi-pen if you are prone to severe allergic reaction.
	Tools and Equipment	Supervisors have the responsibility to : 1) ensure that tools are not modified or used in any manner that increases the risk of injury, 2) ensure that tools remain in a safe condition through periodic inspection and repair. This includes tools furnished by Volunteers. 3) Monitor Volunteers performance periodically to ensure proper methods are followed. Gloves shall be worn while performing work tasks.
	Lifting and Bending	Ask for help if the load is too heavy. Do not try to lift or otherwise move material beyond abilities.
	Working with others	Avoid injury to yourself and others by maintaining awareness of fellow crew members; wear hardhats.
	Stings from contact with thistle plants and blisters from use of hand tools	Wear leather gloves to protect hands and long sleeved shirt to protect arms.
ENVIRONMENTAL HEALTH CONSIDERATIONS	Heat Stress	Remain constantly aware of the four basic factors that determine the degree of heat stress (air temperature, humidity, air movement, and heat radiation) relative to the surrounding work environmental heat load. Know the signs and symptoms of heat exhaustion, heat cramps, and heat stroke. Heat stroke is a true medical emergency requiring immediate emergency response action. NOTE: The severity of the effects of a given environmental heat stress is decreased by reducing the work load, increasing the frequency and/or duration of rest periods, and by introducing measures which will protect employees from hot environments. Maintain adequate water intake by drinking water periodically in small amounts throughout the day (flavoring water with citrus flavors or extracts enhances palatability). Some over hydration is strongly recommended. Curtail or suspend physical work when conditions are extremely severe
	Wind	Terminate all work during periods of high winds due to snag hazards.

	Dusty Conditions	Dust masks will be worn while working in dusty conditions along with eye protection
	Lightning	Although most common in the summer, thunder and lightning can occur anytime. If caught in a storm near a vehicle, return to the vehicle and stay inside while the storm is most active. Park vehicle in an open area away from trees. Turn off radios during the storm. Lightning is more likely to strike when radio transmission occurs. After the storm passes, turn forest radio on and check in with communications. If caught in a storm away from your vehicle, try to find some form of building or shelter. DO NOT seek shelter under large trees or open areas. Stay off ridge tops and mountain tops. Seek shelter in low lying areas such as a ditch or cave. High winds can snap off snags and healthy trees unexpectedly.

10. LINE OFFICER SIGNATURE	11. TITLE	12. DATE

Previous edition is obsolete

FS-6700-7 (2/98)

U.S. Department of Agriculture Forest Service		1. WORK PROJECT/ACTIVITY Weed Cutting	2. LOCATION Various	3. UNIT Modoc NF
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)		4. NAME OF ANALYST Robert Haggard	5. JOB TITLE Public Services Staff Officer	6. DATE PREPARED 01/26/2006
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE		
Pre Use Inspection of weed trimmer	Missing & Loose Parts. Lack of Maintenance	Before running Trimmer. Check for missing , worn , and loose parts. Ensure guards are attached. Consult operator's manual for instruction. Inspect fuel lines and fuel tank. Do not repair unit without proper instructions. Follow Manufacturers Maintenance and servicing guidelines. Adjust handle and strap for comfort and balance. If unit is unsafe to operate tag it out of service in a position that will be immediately obvious to anyone attempting to operate.		
Operator	Lack of Training	Read the operators manual. Locate the safety decals on your unit. Make sure the decals are legible and that you understand and follow the instructions on them. You should be in good mental and physical health.		
Work site	Uneven and steep terrain. Ground squirrel holes. Bottles & Glass, Hidden Objects, Snags and Widow Makers. Bees & Snakes	Inspect the area before using the unit. Remove objects which the unit could throw or become entangled with. Remember where there are obstructions to be avoided. Mark or flag hazards. Remove dead or weaken branches and trees. Public and other workers must be warned, and children and animals must be prevented from coming within 50 feet while the trimmer is in use.		
Proper PPE	Flying Objects: Dust, glass, rocks, cans and wood. Hearing Loss	Wear safety glasses or goggles eye protection ANSI Standard Z87.1 compliance. Face shield maybe used only if safety glasses or goggles are worn underneath. Again the Face shield shall be ANSI Z87.1 compliance. Wear ear plugs or hearing protection headsets. Gloves must be worn. Long sleeves and long pants and sturdy boots. Dust Masks may be worn.		
Operations	Flying Objects, Cutting Head Hot Muffler Hot gear shaft	Never operate the cutting head above your knees. Always start the unit on the ground. shut down immediately if the unit starts to shake or vibrate. Keep feet and hands away from rotating cutting head. Do not operate one handed. Always hold the unit with your fingers and thumbs encircling the handles. Avoid touching muffler and gear shaft until the unit has time to cool.		
Fueling	Fire Spills	Fill unit from labeled fuel container only. Let unit cool before fueling. Never refuel running unit. Wear eye protection. Wipe any spilled fuel from unit and move at least 10 feet from fueling spot before starting. Do not smoke or bring flame or sparks near fueling area. Have firefighting extinguishing device near by.		
Workplace	Violence or Threat of Violence	The most effective way to ensure a safe workplace is to establish and maintain a healthy, professional environment which fosters mutual respect and encourages open communication. Recognize the warning signs of violence. Watch for physical signs. Threats or acts of violence must be acted upon immediately. Notify ECC immediately if Law Enforcement is needed.		
Emergency Evacuation Procedures	Serious Illness or Injury	First aids kits shall be available at each facilities and in each vehicle. Supervisors or Work Leader shall be trained in First Aid and CPR. Minor injuries should be treated by agency trained employees. Seriously injured or ill employee needing Advanced Life Support and transport, notify ECC by Radio Or 911 by telephone. render first aid to the sick and injured until local agency Medical First Responder takes over care of the employee. Notify your Supervisor ASAP. Complete the required paperwork.		
10. LINE OFFICER SIGNATURE	11. TITLE	12. DATE		

FS-6700-7 (2/98)

U.S. Department of Agriculture		1. WORK PROJECT/ACTIVITY	2. LOCATION	3. UNIT
Forest Service		Vehicle Travel	Modoc National Forest	MDF
JOB HAZARD ANALYSIS (JHA)		4. NAME OF ANALYST	5. JOB TITLE	6. DATE PREPARED
References-FSH 6709.11 and -12 (Instructions on Reverse)		Robert Haggard	Public Services Staff Officer	01/14/2006
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE		
Operating vehicles - general	Break-downs; Flat tires; Exhaust leaks; Collisions; UFP's (Unidentified Flying Projectiles); Carbon monoxide poisoning;	a) Keep current on preventive maintenance checks. b) Walk around vehicle prior to leaving compound to check for flat tires, fluid leaks, etc. c) Daily vehicle condition check should also include: lights, windshield wipers, fluid levels, seat belts. d) Make sure the vehicle has a first aid kit and that all medications are current. e) Make sure vehicle is equipped with warning signs and/or flares and that the warning flashers work. f) Vehicle should have FS and CB radios that are in good working condition g) Vehicles carrying tools will have a safety cage in place. All hand tools must be equipped with safety features, (e.g.. blade guards), first aid kit and fire extinguisher must be securely mounted. h) Vehicle must be equipped with chock blocks. i) Check and maintain vehicle's exhaust system. j) All drivers will be training in defensive driving before operating the vehicle. k) Sign out with vehicle number, destination, estimated time of return - radio in if plans change. l) Make sure you have enough gas to get you there and back again.		
Travel on forest roads.	a) Collision with other vehicles; b)Collision with animals or objects; c)Running or Skidding off road; d)Icy and/or muddy roads; e) UFO's (flying objects kicked up by other vehicles e.g. rocks); f) Poor visibility; g) Backing; h) Clearing obstacles from roadway; i) Carbon monoxide poisoning. j) Vehicle wear/tear	a) Drive defensively, drive at safe speeds, use seat belts, watch ahead for oncoming traffic, use lights, pull over to right and stop if vehicles following want to pass. Call out mile locators if you have a CB. Adjust your speed so that you are able to stop in less than 1/2 your line of sight. b) Use care in tall brush and grass, clear debris from roadways rather than trying to drive over or around. c) Drive on the main roadway, avoid soft gravel shoulders, do not straddle a gravel berm or drive with wheels on berm, pull over and stop if you have to look at a map d) Slow down! Don't' drive on the on the road if there is potential for resource or vehicle damage. Use 4WD drive to get out of trouble, not into trouble Consider carrying and using chains if conditions warrant. Know how to put on chains. Ask about road conditions before traveling. e) Follow from a safe distance. Pull off road when oncoming vehicle is passing. f) Keep windows clean inside and out, keep dash clear. Maintain safe speeds, replace badly damaged or cracked windshields, make sure wipers are in good repair g) Try to park so that you don't have to back up to leave. Use mirrors and a spotter, if you don't have a spotter, get out to check behind your vehicle before backing. h) Cut trees into easily removable pieces, use proper lifting techniques. i) Keep vehicle well ventilated when idling/heating by opening a window at least 6 inches. j) When descending forest roads, use a lower gear to control your speed, rather than the brakes. Take care of the vehicle you drive.		
Parking	Run-away vehicle	Use chock blocks when parking, set parking brake, don't leave vehicle unattended when it is running.		
10. LINE OFFICER SIGNATURE		11. TITLE		12. DATE

FS-6700-7 (11/99)

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY Herbicide Weed Treatment	2. LOCATION Modoc National Forest	3. UNIT Modoc NF
JOB HAZARD ANALYSIS (JHA) References-FSH 6709.11 and -12 (Instructions on Reverse)	4. NAME OF ANALYST Robert Haggard	5. JOB TITLE Public Service Staff Officer	6. DATE PREPARED 1/26/2006

7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS Engineering Controls * Substitution * Administrative Controls * PPE
General herbicide use	Exposure/Contamination	Read the product label before each use and follow the directions
Transporting herbicides	Spill/contamination	Keep chemicals and related equipment in designated area of vehicle outside the passenger area. If bedliners are used only use those made of non-porous material. Carry herbicide containers inside a catch basin. Read the Material Safety Data Sheets for herbicide used.
Mixing herbicides	Exposure/spills	Wear face shield or goggles, chemical resistant rubber gloves, apron, long sleeves, pants, and chemical resistant rubber boots. Fill tank half way with water, add herbicide, then finish filling tank. Read Material Safety Data Sheets for specific herbicides. Use only recommended amounts. Close container immediately after use.
	Synergism	Be aware of the effects of mixing chemicals. Read labels.
Spraying herbicides	Exposure	Wear personal protective equipment: hard hat as basic safety equipment and to protect head from herbicide drift; non-vented goggles to protect eyes from drift; respirator to prevent inhalation of drift (if respirator doesn't fit properly it doesn't do any good); long sleeves and long chemical resistant gloves to protect arms and hands; long pants and unlined, chemical resistant boots. Use unlined equipment because liners can carry residue. Wear disposable or washable coverall as added protection against drift or spills. Remove coveralls before getting back in vehicle. Wash or dispose of after each use. Avoid walking through treated areas. Do not touch your face with gloves. Think about hands: do not touch your face or food until hands are washed. Treat chemicals with respect. Don't get complacent. Do not spray if temperature is over 90 degrees F because more vapors created. Do not spray if winds are above about 7 miles per hour.
	Trips/Falls	Take extra when walking with PPE on. Goggles and respirators can reduce your field of vision. Watch your footing. A backpack sprayer can throw off your balance. Watch your footing and balance.
Clean-up	Contamination	After emptying sprayer tank fill with water and spray as if it were a herbicide. Wash outside of sprayer with soap and water in the field. Wash all personal protective equipment in the field with soap and water then wash again with warm soapy water at the station. Return all equipment to proper storage area. Bathe or shower as soon as possible after spraying. Wash clothing separate from other laundry.
10. LINE OFFICER SIGNATURE	11. TITLE	12. DATE