

STANDARD OPERATING PROCEDURES

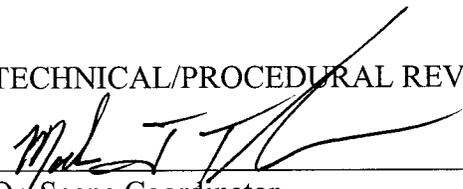
Superfund

US EPA Region VII Emergency Response Plan For
Operation of Public Safety Equipment

September 30, 1998

by Jereme Altendorf

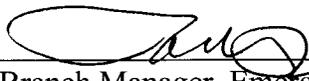
TECHNICAL/PROCEDURAL REVIEW:



On-Scene Coordinator
Emergency Response and Removal Branch

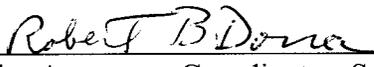
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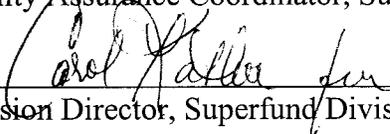
Branch Manager, Emergency Response and Removal Branch

Date: 9-30-98



Quality Assurance Coordinator, Superfund Division

Date: 10-5-98



Division Director, Superfund Division

Date: 1/15/99

PUBLIC SAFETY EQUIPMENT
STANDARD OPERATING PROCEDURE

1.0 PURPOSE

This document stipulates a standard operating procedure (SOP) for the use of emergency lighting and audible warning systems installed in any and all emergency response vehicles maintained and used by the Environmental Protection Agency (EPA).

2.0 EMERGENCY RESPONSE DRIVER RESPONSIBILITIES

The On-Scene Coordinator (OSC) responding to a call for assistance at any time has an enormous amount of responsibility before, during, and after any on-site emergency response activities. The following issues must be carefully considered and understood by the OSC as an integral part of the responsibilities involved when responding to a emergency situation.

2.1 EMERGENCY VEHICLE MAINTENANCE

A routine inspection of the vehicle should occur whenever possible before any departure for an actual emergency response. Therefore, this SOP stipulates that each Monday a new responder is on response duty, or on-call for response duty, he/she will inspect the emergency response vehicle (ERV) to specifications in a checklist provided with this SOP. This checklist will include maintenance checks, response equipment checks, and a drive check. This checklist, when completed, is to be filed for no more than two months. Any anomalies should be reported immediately to the Emergency Response Branch Manager. Actions listed to correct problems will be taken at once. Before operation of this vehicle, the responder must feel confident that the vehicle is safe. It is the responder's responsibility to make an assessment of any questionable system before leaving the garage. The safety of the responder and the public must be the first concern.

When possible those assigned to maintain the vehicle should perform the following system checks:

- 2.1.1 Chassis systems: brakes; battery(s); engine fluid levels; fan belts and water hoses; all lights (interior and exterior); all public safety warning equipment; and power systems.

Corrective Action(s):

Any extreme change, damage, or wear would preclude vehicle operation (i.e.; brake pedal has little or no resistance; extremely low fluid levels or no fluids; battery cables damaged or severely corroded; torn or frayed belts; leaking or broken hoses; light system not working [bulb replacement and fuse replacement has not solved the problem]; etc.)

- 2.1.2 Wheels and tires (including the spare): check for inflation and unusual wear or damage.

Corrective Action(s):

Inflate to proper pressure. (Check the pressure in the spare also.) Do not operate vehicle with tires that have any unusual wear or damage (i.e., cuts, loose or separated tread, bald spots, etc.)

- 2.1.3 Check windows and mirrors for cleanliness and position; check wipers.

Corrective Action(s):

Clean windows and mirrors. Replace wipers if needed.

- 2.1.4 Emergency hazardous-material kits and other instruments stored on the vehicle.

Corrective Action(s):

Replace any missing items available. Note and report any missing items to Emergency Response Branch Manager immediately so items can be located, if needed, during a response (voice mail is sufficient: Robert Jackson, X 7952, Ken Buchholz, X7473, Jereme Altendorf, X7914)

- 2.1.5 Proper text/reference material on-board and communications equipment functioning correctly.

Corrective Action(s):

(See 2.1.4)

- 2.1.6 Spill-report forms, and other reference documents, including logbooks.

Corrective Action(s):

(See 2.1.4)

- 2.1.7 Scene investigation equipment (i.e., camera, logbook, latex gloves).

Corrective Action(s):

Most of this equipment is issued individually to the responder. Those not issued would fall under the comments under 2.1.4.

- 2.1.8 Verify that the crane is functioning properly and stowed for travel.

Corrective Action(s):

Any extreme change, damage, or wear would preclude crane operation.

2.2 DRIVING IN HAZARDOUS ATMOSPHERIC/ENVIRONMENTAL CONDITIONS

Even the most conscientious driver occasionally will run into unexpected situations that may require special driving skills. Driving at a speed appropriate for the weather and road conditions will decrease the need to use these techniques.

- 2.2.1 Hydroplaning occurs when the vehicle's speed is above 30 miles per hour on a wet road, where the tire may be lifted off the road surface by water piling up under it. If hydroplaning occurs, the driver should gradually slow the vehicle without jamming on the brakes.
- 2.2.2 Fog, smog, snow, or heavy rain can cause decreased visibility, and caution should always be taken. Running lights should be on when possible during the day, and at night, use only low beams for maximum visibility without reflection.
- 2.2.3 Ice and slippery surfaces can form very quickly on oily, dusty roads with just a light rain. Good all-weather tires must be maintained on the response vehicle in order to minimize slick problems on the road. The 2x4 rear-wheel drive response vehicle can become uncontrollable in light rainy conditions, extra caution should be taken at these times.

2.3 EMERGENCY VEHICLE OPERATION

The first rule in the safe operation of an emergency vehicle is that speed does not save lives. The second rule is that the driver and all passengers wear seat belts and shoulder restraints at all times. Every OSC should have the chance to become familiar with the characteristics of the ERV with regard to acceleration, cornering, swaying, and stopping. In addition, the OSC should review weather, road, and driving conditions before departing the warehouse on a response. Whether en route to a Level IV site or a traffic accident, the OSC must modify speed according to road conditions. Although the OSC should follow specified routes for most responses, he/she should have alternate routes available for contingencies. During a major incident or disaster, it is especially important that all public safety and emergency services be coordinated so that all vehicles follow assigned routes.

In most instances, on a multi-lane highway, the OSC should keep to the extreme left-hand (fast) lane. Use of this lane offers the least amount of traffic under most conditions and allows other motorists to move over in a normal right-hand manner. Finally, the OSC must always drive defensively. He/she should never rely on what another motorist will do unless a clear visual signal is received. Even then, the OSC must be prepared to take defensive action in case of a misunderstanding, panic on the part of the other party, or careless driving.

2.4 STATE STATUTES REGARDING ERVs

- 2.4.1 In Iowa code §321.423 subsection 2, flashing lights are prohibited on vehicles except for an authorized emergency vehicle. According to §321.423 subsection 5(a) & (c) blue or white lights shall not be used unless en route to the scene of a fire or responding to an emergency in the line of duty requiring the services of the driver, or when the authorized vehicle is at the scene of an emergency.

- 2.4.2 Kansas code (KSA) §8-1720(a), every authorized emergency vehicle, in addition to any other equipment required by this act, shall be equipped with signal lamps mounted as high and as widely spaced laterally as practicable, which shall be capable of displaying to the front two alternately flashing red lights; any such authorized emergency vehicle shall be equipped with at least one rotating or oscillating light, which shall be mounted as high as practicable on such vehicle and which shall display to the front and rear of such vehicle a flashing red light or alternate flashes of red and white light or red and blue light in combination.
- 2.4.3 Missouri code §304.022 subsection 1, 3(6), 4(2)(b-d), (3), states that upon the immediate approach of an emergency vehicle giving audible signal by siren or while having at least one lighted lamp exhibiting red light visible under normal atmospheric conditions from a distance of five hundred feet to the front of such vehicle or a flashing blue light authorized by §307.175, RSMo, the driver of every other vehicle shall yield the right-of-way and shall immediately drive to a position parallel to, and as far as possible to the right of, the traveled portion of the highway and thereupon stop and remain in such position until such emergency vehicle has passed, except when otherwise directed by a police or traffic officer.

An emergency vehicle is a vehicle of any of the following types: Any vehicle designated to perform emergency function for a civil defense or emergency management agency established under the provisions of chapter 44, RSMo. The driver of the vehicle may proceed past a red or stop signal or stop sign, but only after slowing down as may be necessary for safe operation. The driver may also exceed the prima facie speed limit so long as he or she does not endanger life or property. These exemptions herein granted to an emergency vehicle shall apply only when the driver of any such vehicle while in motion sounds audible signal by bell, siren, or exhaust whistle as may be reasonably necessary, and when the vehicle is equipped with at least one lighted lamp displaying a red light or blue light visible under normal atmospheric conditions from a distance of five hundred feet to the front of such vehicle.

- 2.4.4 Nebraska code §60-6,231, indicates that any publicly owned police, fire, or rescue vehicles and publicly or privately owned ambulances and funeral escort vehicles shall be considered to be emergency vehicles. A flashing or rotating red light or red and white light shall be displayed on any emergency vehicle whenever operated in this state. A blue light may also be displayed with such flashing or rotating red light or red and white light.

2.5 USE OF EMERGENCY LIGHTS AND SIRENS ON ERVs

Most states require that any emergency response vehicle must, by definition, be running emergency lighting and audible sirens when en route to a scene. Each situation is different, and the EPA removal program is called on by various agencies at the local, state, and federal levels of emergency response which may require our assistance at any time, day or night. In light of this fact, the OSC has a much less definable determination of what constitutes an emergency and a non-emergency. This must remain a judgement call; the OSC must use his or her judgement in determination of what type of situation requires the use of the public safety equipment. The OSC should consider all of the relevant

facts presented in this SOP in order to make the final decision. It should be noted that many times the situation has already dictated what level or code the responder will proceed to a site/scene with. For situation and trip reports, as well as the responders log book the following code system will be used:

THE OSC EMERGENCY RESPONDER CAN RESPOND TO A SITE/SCENE IN ONE OF THE FOLLOWING THREE LEVELS:

- CODE 1:** Situation warrants normal response, public safety equipment unnecessary.
(Lights used only when on site/scene as necessary.)
- CODE 2:** Situation is serious, or has potential to get worse due to lengthy travel from warehouse to site/scene.
(Lights and siren used as necessary en route to site/scene, NOT to be used for entire trip, on-site usage as necessary.)
- CODE 3:** Situation very serious, it is critical you get to site/scene quickly, or are requested by local authorities to arrive as soon as possible.
(Lights and siren used for entire trip, on-site usage as necessary.)

The OSC's judgement is paramount in this matter; the OSC is not obligated to use any of the equipment as long as normal (Code 1) travel is undertaken. (The exception being that at any time when on a roadside, or at night when visibility or traffic becomes an issue, the emergency lights should be used.) If, while en route, the situation either lessens in seriousness or gets progressively out of control, the OSC may downgrade or upgrade response code-levels at any time. The time and reason for a change in travel code should be noted in the log book as well as any trip or situation reports generated pertinent to the site/scene.

OSCs should note that the automobile driver sitting in a closed car, proceeding at the speed limit, with the radio playing and the air conditioner or heater fan going full volume, cannot hear even a penetrating electronic siren until the vehicle is only a short distance away. If the radio is particularly loud, such a driver may not hear the siren at all.

Also, the use of a police escort is an extremely dangerous practice. The motorist, hearing a siren and seeing a police car passing, may assume that the police car was the only emergency vehicle and may begin to proceed, causing an accident with the emergency response vehicle that is being escorted. As a rule, law enforcement no longer offer escorts, but if it does come up, we do not accept escorts by law enforcement officers unless deemed appropriate by the OSC.

2.6 NOTIFICATION OF LOCAL LAW ENFORCEMENT OFFICIALS

Notification of local law enforcement is essential when responding to any site/scene to prevent any problems or concerns regarding federal officials (OSCs) responding Code 3 through their (local) jurisdiction. The approval of this SOP will entail providing contacts with the following agencies:

- 2.6.1 Iowa State Highway Patrol
- 2.6.2 Nebraska State Highway Patrol
- 2.6.3 Kansas State Highway Patrol
- 2.6.4 Missouri State Highway Patrol

As contacts with these agencies are made and fostered, a list of state highway patrol representatives to call for notification of running Code 3 through local jurisdictions will be made available to the OSC. The notification process would be limited to one number (i.e., one call to a regional state highway patrol office) to minimize calls made while responding. After the call(s) are made, the individual state highway patrol regional offices would disseminate the information to county and city law enforcement officers. This 'one call' notification should diffuse any potential concerns local officials have with OSCs responding Code 3.

2.7 LIABILITY ISSUES CONCERNING OSCs RESPONDING CODE 3

The Federal Torts Act stipulates that those federal employees that are responding Code 3 within the scope of their job and ARE NOT driving in a manner that constitutes reckless endangerment, the United States Department of Justice will provide representation and indemnification for any accident that occurs while responding to a site/scene. As long as the OSC follows this SOP and responds within the scope of his/her job WITHOUT reckless endangerment situations occurring, while responding Code 3, the OSC is in fact acting as an agent of the federal government and has the right-of-way as an ERV operator and cannot be held individually liable for any accident that may occur.

2.8 INTERSECTION HAZARDS

The emergency response driver often assumes that motorists and the public will do the "right thing" when an emergency vehicle is in the vicinity or is following a car. The OSC should anticipate that motorists will pull to the nearest curb and stop or drive as close to the nearest curb as possible. However, the motorist might stop suddenly in front of the vehicle. If the vehicle is not under control, a serious accident could occur.

Intersection accidents are the most frequent and usually the most serious. Intersections abound with hazards for which the OSC must be on the alert. If the call is so urgent that the ERV cannot wait for red lights to change, the OSC should still come to a momentary stop at the light and survey the intersection, looking for those drivers who will go around traffic and enter the intersection, usually at high speed. SOP for the OSC is to stop momentarily at every intersection to verify that all other motorists are stopped and waiting for the ERV to proceed. All red light and stop sign intersections will be handled in this manner when running code 2 or 3 to a site/scene.

Another intersection hazard can occur when the driver of one emergency vehicle follows another emergency vehicle through an intersection without assessing the situation carefully. A motorist who has yielded the right-of-way to the first vehicle may proceed into the intersection not expecting a second

emergency vehicle close behind. The OSC should use a siren tone different from that of the first emergency vehicle in warning other drivers of the approach of a second emergency unit. This procedure will be used anytime an OSC follows another ERV unit.

The driver of an ERV must also be on alert for other ERVs that might be approaching an intersection with their sirens on and expecting to proceed through without yielding. An open window and a "tuned" ear can significantly reduce this risk. However, the most desirable siren practice is to respond with the windows up and the use of hearing protectors in conjunction with headset communication, taking care to stop and look at intersections. OSCs are encouraged to use ear protection while running sirens; however, it is not required. While traveling, the OSC must be able to use and listen to communications equipment inside the vehicle. Most, if not all, of the communications equipment has hands-free operations already, so this should be a non-issue. It is only common sense to advise that while running Code 2 or 3 with siren that your partner handles communications equipment if available. If the driver is alone communications should be limited until on site.

Driving through an intersection when vision is obstructed, without stopping to make sure that the passage is clear, is equivalent to driving blindfolded. Even more likely than the possibility of colliding with another vehicle is the possibility of striking a pedestrian who steps from behind an obstruction, such as a bus or truck.

2.9 OSCs AS ERV DRIVERS

OSC's are a unique group of individuals inside a regulatory agency that is primarily involved in Potential Responsible Party oversight. OSCs do not operate under a typical work day, nor do they do most of their job in the office. Emergency response is only a fraction of what the OSC does in the execution of his or her job. The OSC knows what it means to respond to an emergency incident, and already has a great deal of responsibility onsite. This SOP is being established to give OSCs the background necessary to do their job quickly and safely from the garage to the site and back to the garage. OSCs should not get behind the wheel or respond to incidents unless physically and emotionally prepared to do so. An OSC should not attempt to drive while taking medications such as cold remedies, analgesics, or tranquilizers that may induce sleep or slow reaction times. Common sense dictates that an OSC should never drive or provide assistance after drinking alcohol. Also, an OSC is no stranger to the effects of stress. An OSC must be capable of acting properly under the stresses of emergency conditions. In addition to knowing exactly what to do, he/she must be able to do it under trying conditions.

2.10 PARKING AT THE SITE/SCENE

Emergency vehicles must be properly parked to maintain efficient traffic control and flow. The ERV should not be parked beside the accident site, because it may block the movement of other ERVs. It is best to park uphill and/or upwind of the incident if smoke or hazardous materials are present. All emergency vehicles should park away from any collapsing structures, fire, explosive hazards, or downed wires.

If possible, on approaching the scene, the OSC should make a quick survey and choose the best place to park to unload equipment. If necessary, the emergency response vehicle can be temporarily moved into a position to block traffic so that drums etc. can be moved safely and quickly as possible. Traffic should not be blocked any longer than is absolutely necessary.

2.11 TRAFFIC CONTROL

Rarely does an OSC get involved in what is traditionally the role of law enforcement, traffic control. However, if law enforcement is not on scene or has been delayed, the OSC may want to take action to restore orderly traffic flow and prevent any further accidents. The OSC will have the emergency lights on and the yellow directional traffic lights operating to direct traffic in the proper direction.

Under ordinary circumstances, traffic control is difficult, under conditions that exist at the scene of an accident or disaster, traffic control presents serious additional problems. Passing motorists often try to observe the scene as they drive by, paying little attention to the roadway in front of them. Some curiosity seekers may park and return on foot, creating still other hazards. Ordinarily, OSCs should concern themselves with traffic control for only a short time until the police arrive. Remember that the main objectives in directing traffic are to forewarn other drivers, prevent additional accidents, and keep vehicles moving in an orderly fashion so that continued work to eliminate any threats to public health or environment is not interrupted.

3.0 CONCLUSION

The OSC who is serving as the driver must be aware of the important responsibilities of emergency driving and develop the proper attitude. Although a federally mandated ERV is usually granted right-of-way privileges, the laws are emphatic about the responsibility of the driver who exercises those privileges. Any idea that an ERV driver can do no wrong must be abandoned. Being able to drive to one's destination without interruption (as granted in right-of-way privileges) and being permitted to move from one lane of traffic into the opposite lane are valuable, time-saving privileges that must never be abused.

ACKNOWLEDGMENTS

This SOP was written with modified text from the following two sources:

Heckman, James D., Emergency Care and Transportation of the Sick and Injured, 5th Ed., Revised, American Academy of Orthopaedic Surgeons, Rosemont, IL: 1993.

Iowa, Nebraska, Kansas, and Missouri "State Statutes and Codes".

Steck, Kevin. Council for Federal Bureau of Investigation, Kansas City, MO, Field Office.