

Southeast Coast Network

National Park Service
Inventory & Monitoring Program



Standard Operating Procedure (SOP) 3.1.1

Identification, Treatment, and Reporting of On-duty Injury and Illness

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Summary

This Standard Operating Procedure explains/details the procedure involved in handling an on-duty or job-related injury or illness. This SOP should be read prior to implementing fieldwork and a copy kept in all vehicles for quick reference.

Revision History

Previous Version #	Revision Date	Author	Changes Made	Reason for Change	New Version #
1.0	4/20/11	MM, JP	First Draft	--	N/A
1.0	5/12/2011	SC	Additions to content	Earlier omissions	1.1

Overview of Procedure

If any injury or illness occurs while an employee is on the job, a worker's compensation claim should always be filed.

1. If the employee requires medical attention, he/she should get it immediately. If possible, a CA-16 form, which allows for direct billing of medical expenses to the government for incurred medical expenses, should be obtained prior to treatment. The form can be obtained from the SECN safety officer (to be designated), Sandra Owensby in Atlanta (404-507-5764), or the safety officer for the park where the injury occurred. This form is controlled property and requires the signature of the supervisor or someone else with signatory authority (e.g., superintendent, deputy superintendent, in some cases the park safety officer). Given the nature of field work, it is possible that in some cases this form will not easily be accessed at the time of injury/illness. Do not delay medical attention to obtain this form. If necessary, the billing or reimbursement for medical costs can be handled after the fact during the workman's comp claim process.
2. As soon as possible after treatment, the employee must go to the DOI Safety Management Information System (SMIS) injury reporting website at <https://www.smis.doi.gov> to file a report online about the specifics of the injury/illness. Use the SMIS worksheet designed to assist employees in filling out the CA-1 (Federal Employee's Notice of Traumatic Injury and Claim for Continuation of Pay / Compensation) / CA-2 (Notice of Occupational Disease and Claim for Compensation) forms. The tutorial for completing these forms in the SMIS system can be accessed by clicking on the "Reference Library" link located on the left-hand navigation pane of the SMIS. This will take you to a new window. Under the heading "Reference Guide", click on the first link called "Employees Claim for Compensation Module". This will open a MS Word document that will guide you through the process. The direct link is to this module is <https://www.smis.doi.gov/SMISReference/SMISReference.htm>. The employee should fill in all information to the fullest extent possible. During the reporting process, the employee will be prompted to enter the supervisor's name or email address. An email will be sent automatically to the supervisor to alert them to fill out the supervisory section of the worker's compensation claim in SMIS.

NOTE:

It is the employee's responsibility to report the injury as soon as possible. If the employee cannot make the report, it is expected that a proxy do it (parent, spouse, or friend). It is not recommended that a supervisor do this.

****The employee is required to click a checkbox agreeing to the following statement:**

I hereby authorize any physician or hospital (or any other person, institution, corporation, or government agency) to furnish any desired information to the U.S. Department of Labor, Office of Worker's Compensation programs (or to its official representative). This authorization also permits any official representative of the Office to examine and to copy any records concerning

me. Any person who knowingly makes any false statement, misrepresentation, concealment of fact, or any other act of fraud to obtain compensation as provided by the FECA or who knowingly accepts compensation to which that person is not entitled is subject to civil or administrative remedies as well as felony criminal prosecution and may, under appropriate criminal provisions, be punished by a fine or imprisonment or both.

****Be aware that this is NOT giving authority to the Southeast Regional Office to review your medical records, but rather personnel involved in reviewing the merits of the worker's compensation claim.**

3. The regional safety officer will follow up with any questions or to correct forms. The Southeast Region safety manager is Robert Jett (404-507-5631).
4. Regardless if work time is lost, it is imperative that the injury/illness be reported (via phone, fax, or in person) to the employee's supervisor immediately. Also, by the end of the day on which the injury occurred (if possible) a written memo detailing how the injury occurred should be emailed to the supervisor.
5. Supervisors: The supervisor will receive an email alert from the SMIS with instructions on filling out the supervisory section of the SMIS worker's comp claim. Ensure BOTH tabs are populated prior to closing the window. For reference in filling out this part of the form, access the "Supervisor's Module" tab at <https://www.smis.doi.gov/SMISReference/SMISReference.htm>.
6. Upon completion of the supervisory portion injury/illness report, the claim is sent to Sandra Owensby, who is the NPS Southeast Region workman's compensation coordinator. She will further process the claim and forward it to the US Department of Labor Office of Workman's Compensation (OWCP) in Jacksonville, FL. The claim will then be reviewed and the employee will be sent a worker's compensation claim number. Expect this process to take several months.
7. After the worker's compensation claim number is assigned, it is the employee's responsibility to provide all medical documentation supporting the claim to the U.S. Dept. of Labor. This includes any medical reports, tests, and notes from hospitals and doctor offices where the employee was seen. All documentation should be sent to:

US Department of Labor
Federal Employee Compensation
District 6
P.O. Box 8300
London, KY 40742

8. If an injury occurs in a park, particularly if the injury requires reporting, the park safety officer should be notified. Park safety officers are held accountable for incidents in their parks, so alerting them of an incident occurring in their park should be common practice.

Specific Cases

Tick Bites/Illnesses

Tick bites are common at many of the Southeast Region parks, and the likelihood of tick-related illnesses is high among SECN employees. In 2010, one SECN employee had a confirmed case of Lyme's Disease and another SECN employee had similar symptoms although extensive diagnostic testing was inconclusive. Although each tick bite (as with bee stings and other recurring incidents) does not need to be reported individually, a field log should be kept with the date of a bite, number of bites, types of ticks, etc. If a tick-related illness is suspected, the employee should request medical tests to determine the exact nature of the illness so that it can be reported under a worker's comp claim.

There are three important disease-carrying tick species in the Southeastern United States (Figure 1), the lone star tick (*Amblyomma americanum*), the blacklegged tick (*Ixodes scapulari*), and the American dog tick (*Dermacentor variabilis*), each transmitting different diseases.

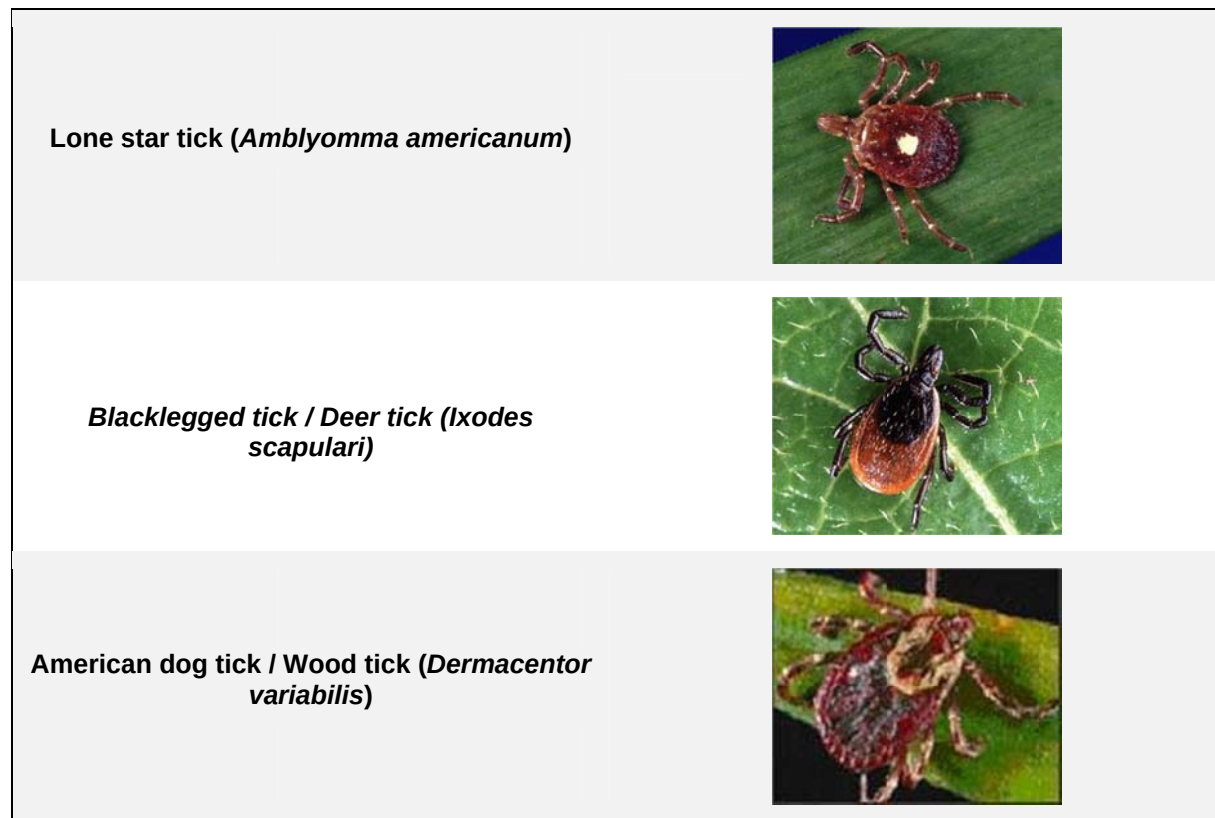


Figure 1. Disease-carrying ticks of the Southeastern United States.

*Photos courtesy of CDC (1, 3) and Agricultural Research Service (2).

These three tick species carry various bacteria and protozoa that can lead to several serious diseases that affect humans (Table 1).

Table 1. Tick-borne diseases and their associated symptoms.

Disease	Symptoms
Anaplasmosis	Headache, fever, chills, muscle pain
Babesiosis	Fatigue, loss of appetite, fever, drenching sweats, muscle ache, headaches, death possible
Ehrlichiosis	High fever and headache, tiredness, nausea, vomiting, muscle ache, loss of appetite, rash in 20% of cases, death possible
Lyme disease	Painless circular lesion in area of bite (95%), lethargy, headache, muscle and joint pain, enlarged lymph nodes, meningitis (10-15%), heart problems (<10%), arthritis (60%)
Relapsing fever	Chills, headache, muscular pains, vomiting, rash; fever for 3-5 days, then clears, followed by a relapse 1-2 weeks later
Rocky Mountain Spotted Fever	High fever, headache, chills, muscle pain; pink rash on wrists, ankles, soles, palms, and trunk that turns dark and can develop into ulcers; death possible
Southern Tick-Associated Rash Illness (STARI)	Expanding bulls eye rash, fatigue, muscle pain, headache
Tick paralysis	Ascending weakness or ataxia, followed by full-body paralysis
Tularemia	Ulcer, enlarged lymph nodes, pneumonia

The best way to prevent a tick-borne illness is to keep ticks away. Some actions to take when working in tick-infested areas include:

- Tuck pant legs into socks and tuck shirt into pants **OR** use duct tape to seal off openings.
- Use a tick repellent such as DEET or permethrin.
- Perform a body check at the end of the day, paying particular attention to hair, armpits, navel, area behind the ears, and groin. Clothing should also be checked.

If ticks are found on the body, quick removal is the best course of action:

1. Grasp the tick as close as possible to the skin using tweezers if available. If tweezers are unavailable, fingers can be used, but should be shielded with a piece of paper (Figure 2).

2. Pull outward on the tick with a steady, even pressure (Figure 2). **Do not jerk, twist, squeeze, crush, or puncture the tick's body. Doing so may cause the injection of fluids to enter the wound. If you cannot remove the tick or if its head detaches, seek medical help.**
3. Keep the tick for later identification, in case illness occurs.
4. After removing the tick, disinfect the area with alcohol or soap and water.
5. Be aware of general warning signs that could occur a few days after infection, such as fever, chills, muscle pain, headache, fatigue, and a large red spot on the bite area. If similar symptoms occur, seek medical help.

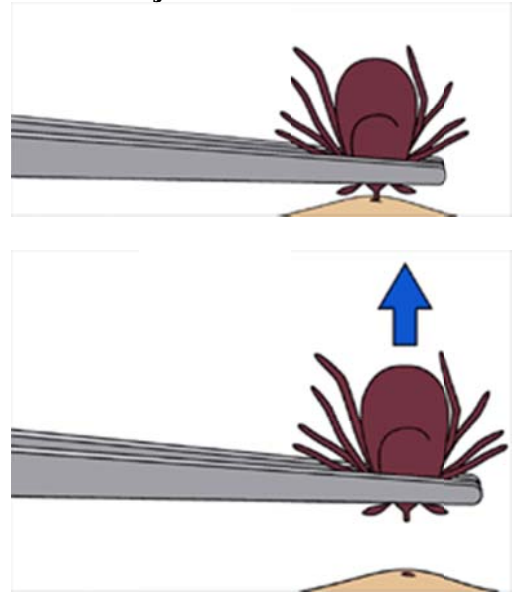


Figure 2. Proper removal method for embedded ticks.

More information on tick-related illness signs and symptoms can be found at the CDC website www.cdc.gov/ticks/diseases, at www.tickencounter.org, or on the SECN CUIS office shared network drive at X:\Ticks.

Insect Bites

Insect bites are common and irritating. They are not life threatening, but they can cause swelling and redness. There are several steps that can be taken in order to prevent insect bites as much as possible:

- Wear long sleeves and pants.
- Avoid wearing strong lotion, soap, perfume, cologne, or other powerful scents.
- Use insect repellents such as DEET or picaridin, or treat clothing with permethrin.
- Be aware of some signs of mosquito-borne illness, such as extreme fatigue or sleepiness, muscle pain, headache, disorientation, fever, or neck stiffness. If these signs occur, medical help may be needed.

More information about mosquito-borne illness can be found at the CDC website www.cdc.gov/ticks/diseases.

Allergic Reactions

Allergic reactions could be caused by different things. Plants such as poison ivy, poison oak, poison sumac, and Brazilian pepper can all cause reactions upon contact. Allergies to Brazilian pepper are less common than the former; however, repeated exposure to Brazilian pepper sap (especially when using machetes to bushwhack through Brazilian pepper) can result in rashes as

severe and long-lasting as those caused by poison ivy, oak, and sumac. Stinging nettle and spurge nettle causes immediate contact dermatitis that may subside within a few hours, though in sensitive individuals, it may cause blistering or a lingering rash. Allergic reactions to wasp or bee stings can also occur.

In order to prevent rashes from poisonous plants, care should be taken in the following ways:

- Learn to identify poison ivy, poison oak, poison sumac, Brazilian pepper, stinging nettle, wood nettle, and spurge nettle (Figure 3).
- Wear long sleeves and pants.
- Wash field clothing regularly, because dried resin from the plants can cause a reaction.
- Do not burn poison ivy, oak, sumac, or Brazilian pepper. Doing so can cause severe respiratory problems.
- Rinse off tools that could be contaminated with resin.

Poison ivy (*Toxicodendron radicans*)

Anacardiaceae



Poison oak (*Toxicodendron pubescens*)

Anacardiaceae



Poison sumac (*Toxicodendron vernix*)

Anacardiaceae



Brazilian pepper (*Schinus terebinthefolius*)

Anacardiaceae



Stinging nettle (*Urtica* spp.)

Urticaceae



Wood nettle / Stinging nettle (*Laportea canadensis*)

Urticaceae



Tread softly / Bull nettle / Spurge nettle (*Cnidosculus stimulosus*)

Euphorbiaceae



Figure 3. Poisonous plants that cause skin rashes in the Southeast.

*Photo 1-5 courtesy of US Department of Agriculture. Photos 6-7 by SECN.

If contact with a poisonous plant has already occurred

1. Wash the affected area thoroughly using soap and lots of water.
2. To reduce itching, apply calamine lotion or hydrocortisone cream to the affected area, or take an antihistamine such as Benadryl.
3. If the rash is severe or there is difficulty breathing, seek medical help as soon as possible.

Precautions to take in order to avoid being stung by insects such as wasps or bees include:

- Be aware of nests or hives in brush or hollow logs. Insects travelling to or from a location may indicate a nest or hive.
- Wear long sleeves and pants.
- Tuck shirt into pants and pants into socks.
- Avoid wearing bright colors and jewelry or other metal objects.
- Avoid wearing anything strongly scented.
- If stinging insects are encountered, do not swat at them.
- Carry emergency medication at all times.

If a worker is stung by an insect, do the following:

1. If the stinger is left in the skin, scrape it off with a knife blade or fingernail. **Do not use tweezers to remove the stinger; this could cause more venom to be released into the wound.**
2. Apply cool water or a cold compress to the area to reduce swelling and pain.
3. An antihistamine such as Benadryl should be taken if stung more than once.
4. If the individual develops a widespread rash, asthmatic breathing, tissue swelling, a drop in blood pressure, or unconsciousness, seek immediate medical help.

For more information about poisonous plants or stinging insects, visit the CDC website at <http://www.cdc.gov/niosh/topics/insects/> or consult the Safety and Health for Field Operations guide of the NPS.

Dehydration and Heat Stress

Dehydration, salt loss, and exposure to high temperatures for long periods of time can lead to serious problems such as heat cramps, heat exhaustion, and heat stroke.

Symptoms of heat cramps, which occur from too much water and salt depletion, include nausea, muscle twitching, and sometimes severe cramping of abdominal muscles, legs, or other muscles. In order to prevent heat cramps, a person should ideally drink 3 to 6 ounces of water every 15 minutes when active. Salts should also be replaced, either by lightly salting the water, or by drinking commercial electrolyte fluids. If heat cramps do occur, move the affected person to a cool place, give him or her water or electrolyte fluids, and massage the cramping muscles.

When a person is affected by heat exhaustion, rapid and shallow breathing, a weak pulse, cold and clammy skin, heavy sweating, weakness, and dizziness may all occur. Heat exhaustion occurs when there is not enough blood reaching the person's head. To prevent heat exhaustion, drink plenty of water and take breaks from working at high temperatures to prevent overheating. If a person becomes affected by heat exhaustion, quickly do the following:

1. Move the person to a cool place to lie down and rest.
2. Make sure the affected person drinks a lot of water and electrolyte fluids.
3. If the person becomes unconscious, elevate the feet above the head to allow blood to flow more easily to the head. **Do not try to administer fluids to an unconscious person.** Once the person awakens, give him or her water and electrolyte fluids, and seek medical attention.

Heat stroke is by far the most serious heat-related condition, and can be life threatening. Heat stroke occurs when a person's body becomes unable to regulate its temperature. Sweating stops and the body's temperature rises dangerously high. **This will result in death if not treated quickly.** If someone becomes confused or starts acting strange while working in very hot conditions, he or she may be experiencing a heat stroke. Other symptoms include shallow breathing, rapid weak pulse, and the skin becoming hot and dry. Loss of consciousness, seizures, and muscle twitching can all occur as well. **This is an emergency situation.** If someone displays these symptoms, perform the following actions as quickly as possible:

1. Move as quickly as possible into a cool place such as a shaded area and have the person lie down.
2. Cool the person as rapidly as possible by removing clothes, wrapping him or her in wet towels, sheets, etc., and pouring cool water over the person.
3. If ice packs are available, place them under the person's armpits, behind the knees, on the groin, on each wrist and ankle, and on each side of the neck.
4. Fan the person to increase evaporative heat loss.
5. Massage the limbs to allow cooler blood to return to the body's core more quickly.
6. Get the person to a hospital as soon as possible. His or her temperature regulation ability will be unstable for some time.

Preventing heat-related illnesses and dehydration is obviously a better course of action than trying to treat someone who is already affected. Some general tips to remember when working in a hot environment include the following:

- Stay in the shade as much as possible.
- Reduce level of activity, move more slowly, and take breaks as necessary.

- Reduce eating (especially salts and proteins) unless there is plenty of water.
- Keep clothing on to protect from the sun and to make the cooling effects of evaporation last longer.
- Drink a lot of water, even if not thirsty.
- Try not to sit or lie on the ground, as it can be much hotter than the air above.

For more information about heat-related illnesses, consult the [Safety and Health for Field Operations](#) guide of the NPS or read more about them in [Wilderness Medicine](#) by William W. Forgey, M.D.

Snake Bites

Of the 52 species of snakes found in the Southeast, 6 are venomous. Figure 4 has photographs of these 6 species: cottonmouth (*Agkistrodon piscivorus*), copperhead (*Agkistrodon contortrix*), timber/canebrake rattlesnake (*Crotalus horridus*), eastern diamondback rattlesnake (*Crotalus adamanteus*), pigmy rattlesnake (*Sistrurus miliarius*), and the coral snake (*Micrurus fulvius*). The coral snake is the only venomous snake of the Southeast that is not a pit viper.

More people are bitten by copperheads in the Southeast than by any other venomous snake. The venom destroys red blood cells and other tissues but is not considered highly toxic to humans, with only one death ever recorded. Copperheads release a musky odor when disturbed and most will bite if they are picked up.

Signs of Envenomation

It is important to recognize the symptoms of envenomation (Table 2), in order to avoid needless worry, evacuation, and improper treatment. Most snake bites do not result in envenomation, because the snake does not release venom, the skin is not penetrated, or the venom is not potent.

Table 2. Symptoms of Snakebite Envenomation

Hemotoxic symptoms	Neurotoxic symptoms
Confusion	Diplopia (double vision)
Rapid pulse	Dysphagia (difficulty swallowing)
Ecchymoses (large bruises)	Hyporeflexia (abnormal reflexes)
Vomiting	Minimal pain
Intense pain	Paralysis
Numbness or tingling	Paresthesia (often numb at bite site)
Bleeding disorders	Ptosis (droopiness)
Edema	Respiratory depression
Unusual metallic taste	Salivation
Muscle twitching	Sweating

Cottonmouth (<i>Agkistrodon piscivorus</i>)	
Copperhead (<i>Agkistrodon contortrix</i>)	
Timber rattlesnake (<i>Crotalus horridus</i>)	
Eastern diamondback rattlesnake (<i>Crotalus adamanteus</i>)	
Pigmy rattlesnake (<i>Sistrurus miliarius</i>)	
Coral snake (<i>Micrurus fulvius</i>)	

Figure 4. Venomous snakes found in the Southeastern United States.

*Photos courtesy of Edward J. Wozniak of CDC (1, 2), free images (4, 5), and NPS (3, 6)

Table 3. Grading Scale for Severity of Snake Bites

Degree of envenomation	Presentation	Treatment
0. None	Punctures or abrasions; some pain or tenderness at the bite	Local wound care, no antivenin
I. Mild	Pain, tenderness, edema at the bite; perioral paresthesias may be present.	If antivenin is necessary, administer about five vials.*
II. Moderate	Pain, tenderness, erythema, edema beyond the area adjacent to the bite; often, systemic manifestations and mild coagulopathy	Administration of five to 15 vials of antivenin may be necessary.
III. Severe	Intense pain and swelling of entire extremity, often with severe systemic signs and symptoms; Coagulopathy	Administer at least 15 to 20 vials of antivenin.
IV. Life-threatening	Marked abnormal signs and symptoms; severe coagulopathy	Administer at least 25 vials of antivenin.

* Because of their less potent venom, grade-I copperhead bites are usually not treated with antivenin.

Treatment for Snake Bites

1. Avoid panic. Instruct the victim to back out of the snake's striking range, which is approximately the length of the snake.
2. Immobilize the bitten extremity by splinting as if for a fracture. Keep the limb well padded at heart level (neither elevated nor lowered) in a position of function.
3. Encourage the victim to drink liquids to maintain adequate hydration.
4. Arrange for the victim to be transported to the nearest medical facility, with minimal exertion.

For more information concerning venomous snakes and how to treat snake bites, visit the CDC website at <http://www.cdc.gov/niosh/topics/snakes/>, consult the Safety and Health for Field Operations guide of the NPS, or check out Field Guide to Wilderness Medicine by Paul S. Auerbach et al., or Medicine for the Outdoors by Paul S. Auerbach.

Trailblazing

Trailblazing is the process of making a new path or way (i.e. cutting a path through thick vegetation with a machete). There are several things to be cautious of when making your way through thick vegetation with a machete:

- Wear leather gloves when using a machete.
- Use a security strap around the wrist connected to the machete handle in case of slippage.

- Be aware of the location of other people that are nearby.
- Swing the machete diagonally to the plane of the body.
- Be aware of sharp edges from machete cuts and briars (falling or tripping could cause serious injury).
- Have secure footing at all times. Do not assume rotten or loose-barked logs are secure footing.
- Be on guard against falling branches or logs.
- Be alert for venomous snakes or biting or stinging insects and their nests in the area.

For more information on safety hazards when in the field consult the Safety and Health for Field Operations guide of the NPS.

Additional Notes for Supervisors

1. If the employee does not fill out a report or if there is no loss of time, a supervisory report can still be filled out. It should always be done for any incident that requires a doctor's visit. It is advised to do this for injuries that might have a recurrence or cause issues later, regardless of whether or not work time was lost.
2. Supervisors should call/conduct boards of review for serious incidents or those that are recurring.
3. Supervisors are held accountable for work injuries of their employees.

Other Circumstances

1. Death on the job due to heart attack is considered a safety issue requiring investigation. NPS has 8 hours to report it to the Federal OSHA office. It is the safety officer's responsibility to do this (either park or regional) and the supervisor should keep asking about this until you are certain that it has happened.
2. If not notified within 8 hours, jurisdiction of the investigation automatically transfers to OSHA, which will essentially shut down operations until the investigation is complete.

EMPLOYEE ACCOUNTABILITY FORM

I certify that I have read and I am familiar with SECN Standard Operating Procedure 3.1.1 for Identification, Treatment, and Reporting of On-duty Injury and Illness.

I understand that the lack of compliance with this SOP will result in possible disciplinary action.

Name

Date