

## Safety & Health Guide for Deployed Personnel

Deployment for the highly pathogenic avian influenza (HPAI) response presents some unique safety and health challenges. The primary goal is for you to return home safe and well. Because you will be in an environment that may be new to you, practice situational awareness and trust your instincts. Don't hesitate to ask questions if there's anything you don't understand. If something doesn't feel right, back away from the situation. Injuries are most likely to occur when you are rushed, frustrated, fatigued, or complacent. Use common sense, be aware of the general and unique safety and health challenges present, and look out for one another. Pace yourself – this is a marathon, not a sprint. This document will first provide general safety and health guidelines, then present more information on specific hazards that you may encounter during this or any other deployment.

Ensuring responder safety is the first priority at all times.

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## Before, During, and After Deployment

### Pre-Deployment

- ✓ Fill prescriptions.
- ✓ If you have family at home, make sure they have any information they may need while you're gone.
- ✓ Get a seasonal flu shot, and make sure your tetanus shots are up-to-date.
- ✓ If you have time before deployment, update your first aid / CPR training.
- ✓ Make sure you have comfortable, sturdy work shoes or boots.
- ✓ Avoid cotton clothing, which can contribute to chilling if you perspire heavily under PPE. Instead, choose quick-drying fabrics.
- ✓ Be sure that you're current on your Defensive Driver training -- bring your training certificate.
- ✓ Ensure that your medical clearance is current, and will not expire during the deployment period -- bring proof.
- ✓ Ensure that your respirator fit test is current, and will not expire during the deployment period, bring your fit test results.

*Note: Biosecurity procedures may not allow for the use of powered air-purifying respirators (PAPRs) during the HPAI response. If you are not able to utilize an air-purifying respirator (e.g., N95 or elastomeric facepiece with replaceable cartridges), you will be assigned tasks which do not require the use of respiratory protection. Males are expected to be clean-shaven during use of respirators.*

- ✓ Practice situational awareness and personal safety while traveling to the incident.
- ✓ Remember to bring your APHIS FORM 260 (Medical Alert Card).

### While Deployed

- ✓ When you get your daily assignment, ask yourself:
  - What are the tasks, and how can you do them safely?
  - What actions do we take if there's an accident or someone becomes ill?
  - Do I know the location of the nearest emergency clinic?

The answers to these questions may be contained in several documents, such as the site **Health & Safety Plan, the Incident Action Plan (IAP) the ICS safety messages, or the Standard Operating Procedures (SOP)** for your assignment. Be sure you understand, and don't hesitate to ask questions if you don't.

- ✓ Try to get plenty of rest and sleep. The schedule on deployment can be grueling and a challenge for rest and sleep. If you're not doing physical labor during the deployment, try to get moderate exercise each day. Maintain a similar pre-deployment diet. Avoid alcohol, especially if you will be working in the heat.
- ✓ Remember this is a stressful time for all. Try not to "take it personally" when things don't go well. If you are have an unresolved problem, talk to someone you trust or contact EAP.

- The Employee Assistance Program is available to APHIS employees 24 hours a day, seven days a week. You can reach them at 800-222-0364. There are affiliate counselors nationwide and if there is not one close to a specific city, employees can receive counseling over the phone. In some cases, an EAP counselor may be brought in to an incident response and may be available locally.
- ✓ At the end of each shift wash your hands thoroughly with soap and water, and shower and shampoo your hair before going to the ICP. Wash your vehicle before going to the ICP.
- ✓ Avoid touching eyes, nose, mouth and the N95 respirator face piece. On the average, a person touches his/her own face 20 times per day.
- ✓ If you have a vehicle accident or personal injury,
  - Call 9-1-1 if help is needed.
  - Then contact your Incident Supervisor and the Safety Officer immediately.
- ✓ If you are injured or experience any symptoms of illness during deployment:
  - If at a site, tell your Incident Supervisor or buddy.  
If needed, seek medical attention immediately
  - If off-site or during off-hours,  
If needed seek medical attention immediately.
  - No matter the circumstance, contact your Incident Supervisor and the Safety Officer at the earliest time possible.
- ✓ Be alert for influenza-like symptoms, including fever or feeling feverish, cough, runny nose, sore throat, headache, muscle aches, eye redness, difficulty breathing, shortness of breath, or diarrhea.
- ✓ The buddy system is in force for all on-farm activities throughout the incident response.
- ✓ Be alert for symptoms of heat stress, in you or your buddy. Heat stress is often more obvious to other people than to the person experiencing it. See the chart on page 8.
- ✓ See the next page for guidelines on work assignments and rest days (APHIS Emergency Mobilization Guide). You will not be expected to work more than a 12-hour day unless you receive permission from your Incident Supervisor.
- ✓ Don't forget about safety after hours. For example, know the location of the emergency exit from your hotel room, don't let anyone you don't know into your room without calling the front desk first, and keep the door locked at all times.

### **Post-Deployment**

- ✓ Before you demobilize, make sure you get a copy of the "Influenza-like Illness Questionnaire" from the Safety Officer, and follow instructions for completing and returning the form.
- ✓ Continue to self-monitor for symptoms, including fever or feeling feverish, cough, runny nose, sore throat, headache, muscle aches, eye redness, difficulty breathing, shortness of breath, or diarrhea.
- ✓ Enjoy some well-earned rest.
- ✓ If you have an unresolved problem, talk to someone you trust or contact EAP (800-222-0364).

## **Assignment, Work and Rest Schedules**

(Source: APHIS Emergency Mobilization Guide, APHIS 1050, March 3, 2014, pp. 15 – 16, available at [http://www.aphis.usda.gov/emergency\\_response/downloads/APHIS%20Emergency%20Mobilization%20Guide.pdf](http://www.aphis.usda.gov/emergency_response/downloads/APHIS%20Emergency%20Mobilization%20Guide.pdf))

### *Length of Assignment*

“The scope and severity of the incident and the health and safety of employees are two primary factors in determining the length of assignment. The Incident Command and General Staff, along with the lead program unit, will make this determination on a case-by-case basis. As a general policy, the standard length of an emergency assignment is 21 calendar days (excluding travel), with an extension of up to 7 additional days for a total of 28 calendar days. In some cases, a minimum 28-day assignment will be required. Extensions beyond 28 days must be approved through the Incident Command and General Staff, the lead program unit, and the employee’s home station supervisor.”

### *Work Schedule and Rest Policy*

“The Incident Command and General Staff will establish daily work schedules for all employees at the incident. This includes all necessary shifts, approved overtime, and weekend schedules. When preparing schedules, the Incident Command and General Staff are expected to keep the health and safety of employees as the highest priority and must manage work and rest periods, assignment duration, and length of shifts.

Every manager and supervisor has the critical responsibility to ensure employees are given the proper amount of time off for rest. This means being aware of employees who have long shifts or who may be exhibiting physical and mental signs of stress.

For employees assigned on a continuous basis for 21 calendar days, a minimum of 1 unpaid day off is mandatory midway through the TDY assignment. If an employee is assigned for 28 calendar days or more, a minimum of 2 unpaid days off must be taken each 28-calendar-day period.

Incident supervisors have the discretionary authority to require an individual to take more unpaid days off, if needed, or to order work to be done on the individual’s scheduled day off if workload warrants it.

There are minimum guidelines that can be adjusted with the approval of the Incident Command and General Staff.”

## HPAI-Specific Safety and Health Hazards

Excerpt from *Highly Pathogenic Avian Influenza Response Plan -- The Red Book*, FADPRReP, USDA APHIS, September 2012, available at

[http://www.aphis.usda.gov/animal\\_health/emergency\\_management/downloads/hpai\\_response\\_plan.pdf](http://www.aphis.usda.gov/animal_health/emergency_management/downloads/hpai_response_plan.pdf)

“During an HPAI outbreak, responders are exposed to many hazards. Taking precautions to prevent adverse human health events related to emergency response efforts is important. In an HPAI response, personal protection and safety is particularly essential to protect individuals from HPAI. Typically, those at increased risk for HPAI infection are personnel in prolonged and direct contact with infected birds in an enclosed setting. Upon the confirmation of HPAI, public health authorities should implement appropriate public health measures, including surveillance, prevention, and case management (as required). APHIS will work closely with public health authorities in a response. Unvaccinated workers are highly encouraged to immediately receive the current season’s inactivated influenza virus vaccine to reduce the possibility of dual infection with avian and human influenza A viruses and potential genetic reassortment.”

“PPE is fundamental in ensuring personnel are protected from HPAI, as well as other hazards. ... all workers involved in the culling, transport, or disposal of HPAI virus-infected poultry must be provided with appropriate PPE...”

Excerpts from *Interim Guidance for Implementation of APHIS Directive 6800.1*, July 7, 2008, available at [http://www.aphis.usda.gov/emergency\\_response/downloads/tools/VS%20Draft%20Interim%20Guidance%20for%20Implementation%20of%20APHIS%20Directive%206800.1%20EMD%20comments.pdf](http://www.aphis.usda.gov/emergency_response/downloads/tools/VS%20Draft%20Interim%20Guidance%20for%20Implementation%20of%20APHIS%20Directive%206800.1%20EMD%20comments.pdf)

### “Basic Infection Control

1. After contact with infected or exposed birds; contact with contaminated (or potentially contaminated) surfaces; or after removing gloves, wash hands with soap and water for a minimum of 15-20 seconds or the use of other standard hand disinfection procedures as specified in other USDA (or APHIS or CDC or OSHA) protocols that are developed for basic infection control.
2. Do not eat, drink, or smoke while actively involved in control and eradication activities.”

### “Personal Protective Equipment (PPE)

All APHIS employees involved in HPAI control and eradication activities will be provided with, trained in the proper use of, and be required to use the following appropriate PPE when carrying out these activities:

A. Protective clothing capable of being discarded or disinfected, preferably coveralls (with an impermeable apron) OR surgical gowns with long cuffed sleeves (with an impermeable apron).

B. Gloves capable of being disinfected or discarded (such as nitrile disposable gloves). Cotton inner gloves may be used, in addition to the outer gloves, to absorb perspiration. Gloves must be changed if torn or otherwise damaged. Hands must be washed each time gloves are removed or changed.

C. Respirators (with the minimum recommendation being the use of a disposable filtering face piece respirator e.g., N95, N99, or N100), used as a part of a comprehensive respiratory protection program as described in 29 CFR 1910.134. Workers shall be medically cleared and fit tested for the model and size of respirator they wear and be trained to fit check the seal of the face piece to the face as a minimum. ...

...After having been medically cleared to wear a respirator, the employees will have a quantitative fit-testing with an N-95 respirator using the TSI PortaCount®. ...

D. Eye goggles (or other form of appropriate eye protection).

E. Protective shoe covers, or rubber or polyurethane boots that can be disinfected or discarded.”

Visit the VS SHEP SharePoint site for a Safety Briefing from the 2015 Avian Influenza Outbreak:

<http://sp.we.aphis.gov/VS/shep/vsemp/Shared%20Documents/Safety%20Orientation%20-%20MNAI%202015.pdf>

## **General Safety and Health Hazards**

### **Avoiding Injuries**

Ask yourself: Am I rushing? Fatigued? Frustrated? Complacent to hazards?

**DON'T WORK UNDER THESE CONDITIONS!**

KEEP eyes on task.

KEEP mind on task.

AVOID path of hazards.

MAINTAIN balance / traction / grip.

**USE THE BUDDY SYSTEM.**

Complete all injury / illness forms and forward to your supervisor.

All injuries must be reported to APHIS as soon as the Safety Officer is aware. Therefore, it is your responsibility to report ANY injury, illness, or accident to your Incident Supervisor and the Safety Officer immediately. Certain types of injuries must be reported to the Occupational Safety and Health Administration (OSHA) within a very short time period. The Safety Officer providing immediate notification to APHIS satisfies the Incident Response notification requirements. The APHIS Safety & Health Program Manager will in turn notify OSHA of any required reports.

Again, APHIS/OSHA reporting is not your responsibility, but you must notify your supervisor and the Safety Officer of any injury, illness, or accident as soon as possible so that they can make the required notifications.

### **Heat Stress**

Heat stress is a very real hazard for people who work outside, especially for those who aren't accustomed to working in a warm environment or using full-body personal protective equipment (PPE). Safety and biosecurity may require the use of PPE, but this reduces the body's ability to cool itself by minimizing evaporation of sweat.

People who work in warm conditions gradually become acclimatized. Heat acclimatization can only be gained by working in the heat for a period of days to weeks, and it can quickly be lost. If you take some days off and are able to enjoy cool weather or air conditioning, you will lose some of your heat acclimatization. Likewise, a bout of illness, or other factors that affect your hydration, can have a negative effect on your body's ability to tolerate heat. If any of these situations apply to you, take it easy on your first few days back at work.

Heat stress can range from milder conditions like heat rash to more serious conditions like heat exhaustion. At its extreme, heat stress can result in heatstroke, which is a life-threatening emergency. Be sure you know the signs and symptoms of heat exhaustion and heat stroke (see [www.cdc.gov/extremeheat/warning.html](http://www.cdc.gov/extremeheat/warning.html)). Don't hesitate to seek immediate medical attention for yourself or your co-worker if you're concerned. More information on signs and symptoms is contained

on the next page.

Some suggestions to work safely in the heat and while wearing PPE include the following:

- Don't push yourself too hard, especially the first few days.
- Do drink plenty of water and take rest breaks (at least every 2 hours).
- Use the buddy system throughout the incident response!
- Keep an eye on your co-workers when work and heat conditions are excessive. Signs and symptoms of heat stress are often more apparent to other people than to the victim.
- Get plenty of rest and sleep.
- Stay hydrated – drink lots of water – monitor color and volume of urine.
- Save heavy meals for end of day.
- Be aware of current heat and sun conditions.
- Work in shade when possible. If not wearing PPE, wear a hat and use sunscreen whenever you're outdoors.
- Avoid alcohol in hot weather.
- Be aware of the heat index for that day and time. The Incident Action Plan lists weather forecasts for the day and should also contain daily safety messages.
- If there are any questions, contact the Safety Officer or your Supervisor for guidance.
- Minimal clothing may be worn under the Tyvek coveralls to reduce the risk of heat stress; however, this may slightly increase the risk of cuts and scrapes.
- Avoid wearing cotton clothing under PPE, which can contribute to chilling after the PPE is removed. Wear quick-drying fabrics instead.

**One last thought – people who don't take rest breaks to cool and hydrate put more than their own health at risk. Biosecurity could be compromised if immediate, emergency medical attention is required for a person on an infected premises.**

Heat Stress: Advice from the Mayo Clinic (Adapted for HPAI response)

Condition	Symptoms	What to Do
<p>Heatstroke</p> <p><i>Heatstroke is a life-threatening emergency.</i></p> <p><i>You may notice the symptoms in your buddy before he/she does. Keep</i></p>	<ul style="list-style-type: none"> <li>• <b>High body temperature.</b> A body temperature of 104 F (40 C) or higher is the main sign of heatstroke.</li> <li>• <b>Altered mental state or behavior.</b> Confusion, agitation, slurred speech, irritability, delirium, seizures, and coma can all result from heatstroke.</li> <li>• <b>Alteration in sweating.</b> In heatstroke brought on by hot weather, the skin will feel hot</li> </ul>	<p>Heatstroke requires emergency treatment. Untreated heatstroke can quickly damage the brain, heart, kidneys, and muscles. The damage worsens the longer treatment is delayed, increasing the risk of serious complications or death.</p> <p>If you think a person may be experiencing heatstroke, seek immediate medical help. Call 911 or</p>



<p><i>an eye on each other, especially in warm weather and while wearing PPE!</i></p>	<p>and dry to the touch. However, in heatstroke brought on by strenuous exercise, the skin may feel moist.</p> <ul style="list-style-type: none"> <li>• <b>Nausea and vomiting.</b> The person may feel sick to the stomach or vomit.</li> <li>• <b>Flushed skin.</b> The skin may turn red as body temperature increases.</li> <li>• <b>Rapid breathing.</b> Breathing may become rapid and shallow.</li> <li>• <b>Racing heart rate.</b> The pulse may significantly increase because heat stress places a tremendous burden on the heart to help cool the body.</li> <li>• <b>Headache.</b> The person may have a throbbing headache.</li> </ul>	<p><b>your local emergency services number.</b></p> <p>Take immediate action to cool the overheated person while waiting for emergency treatment.</p> <ul style="list-style-type: none"> <li>• Get the person into shade or indoors.</li> <li>• Remove excess clothing.</li> <li>• <b>Cool the person with whatever means available</b> — put in a cool tub of water or a cool shower, spray with a garden hose, sponge with cool water, fan while misting with cool water, or place ice packs or cold, wet towels on the person's head, neck, armpits, and groin.</li> </ul>
<p>Heat exhaustion</p>	<ul style="list-style-type: none"> <li>• Cool, moist skin with goose bumps when in the heat</li> <li>• Heavy sweating</li> <li>• Faintness</li> <li>• Dizziness</li> <li>• Fatigue</li> <li>• Weak, rapid pulse</li> <li>• Low blood pressure upon standing</li> <li>• Muscle cramps</li> <li>• Nausea</li> <li>• Headache</li> </ul>	<ul style="list-style-type: none"> <li>• Tell your supervisor</li> <li>• Stop all activity and rest</li> <li>• Move to a cooler place</li> <li>• Drink cool water or sports drinks</li> </ul> <p>Seek medical attention.</p>
<p>Heat rash</p>	<ul style="list-style-type: none"> <li>• Clear, fluid-filled blisters and bumps that break easily</li> <li>• Red bumps and itching or prickling in the affected area</li> <li>• Fluid-containing sacs that are inflamed and pus-filled</li> </ul>	<p>Cool the skin and avoid exposure to the heat that caused it.</p> <p>See a doctor if symptoms that last longer than a few days, the rash</p>

	<ul style="list-style-type: none"> <li>• (Less common) firm, flesh-colored lesions that resemble goose bumps</li> </ul>	<p>seems to be getting worse, or you notice signs of infection, such as:</p> <ul style="list-style-type: none"> <li>• Increased pain, swelling, redness or warmth around the affected area</li> <li>• Pus draining from the lesions</li> <li>• Swollen lymph nodes in the armpit, neck or groin</li> <li>• A fever or chills</li> </ul>
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## Driving

Another real risk during deployment is vehicular accidents. Drive Defensively. Be sure you are current on your NSC Defensive Driving training. Drive at safe speeds for traffic, weather, light, and road conditions. Ensure you and any passengers are wearing seat belts. Follow the guidance of the Incident Command to assure that you have returned from your daily assignment by the required time (usually 30 minutes prior to sunset). If you are required to drive after daylight hours, be aware of nocturnal animals, especially deer, on the roads. If you do encounter them, “Don’t veer for deer!” Do not drive when fatigued or when using alcohol or certain medications. **DO NOT USE CELL PHONE WHILE DRIVING.** Never text or talk on phone – even hands-free – while driving. Carry emergency contact phone numbers with you. Make sure all vehicles get routine maintenance and are properly serviced.

Use of cell phones – even hands-free devices – greatly increases the accident risk. That’s because it isn’t about your hands – it’s about your brain. In fact, the highest risk is use of a speech-to-text system to listen, compose emails or texts, and the use of menu-based systems that rely on voice recognition.

DON’T believe the myths about use of communication devices while driving:

- *Myth 1: People can multi-task.*
- *Myth Two. Talking to someone on a cell phone is not different from talking to someone in the car.*
- *Myth Three: Hands-free devices eliminate the danger of cell phone use during driving.*
- *Myth Four: Drivers talking on cell phones still have a quicker reaction time than those who are driving under the influence.*

DO know the federal policies on use of devices while driving.

- Executive Order 13513 Federal Leadership on Reducing Text Messaging While Driving (October 2009) clearly states that “Federal employees shall not engage in text messaging (a) when driving

GOV, or when driving POV while on official Government business, or (b) when using electronic equipment supplied by the Government while driving.” This applies to “any handheld or other electronic device.” The only exemptions are for protective, law enforcement, and national security responsibilities and certain emergency conditions – there is NO exception for hands-free devices. ([http://www.whitehouse.gov/the\\_press\\_office/Executive-Order-Federal-Leadership-on-Reducing-Text-Messaging-while-Driving/](http://www.whitehouse.gov/the_press_office/Executive-Order-Federal-Leadership-on-Reducing-Text-Messaging-while-Driving/))

- In addition to the requirement to obey all state and local laws pertaining to the use or prohibition from use of any wireless telephone equipment, employees of Marketing and Regulatory Programs (MRP, which includes APHIS, GIPSA, and AMS) “are prohibited from using hand-held wireless phones or other “hands free” equipment while driving an owned or leased Government vehicle.”  
([http://inside.aphis.usda.gov/mrpbs/publications/motor\\_vehicle\\_manual/downloads/motor\\_vehicle\\_manual.pdf](http://inside.aphis.usda.gov/mrpbs/publications/motor_vehicle_manual/downloads/motor_vehicle_manual.pdf))

In short, this means NO texting or talking on hand-held or hands-free devices while driving a GOV. NO use of a government device while driving a POV.

### **First Aid / Medical**

IMMEDIATELY INFORM YOUR SUPERVISOR AND/THE SAFETY OFFICER OF ANY ILLNESS, INJURY, ACCIDENT OR EXPOSURE, NO MATTER HOW SMALL.

KNOW the location of the nearest clinic or hospital. Keep your first aid and CPR training up-to-date. Make sure supplies in your first aid kit are current and re-stocked as used. Make sure your tetanus, hepatitis B, and other shots are current. Avoid contact with blood and body fluids when administering first aid; if you are exposed, tell your supervisor. Wash hands and face often; this is required before eating or drinking.

### **Chemical Exposures**

Know the chemicals you are working with. (Refer back to the HAZWOPER Awareness training – you should also be receiving annual HAZWOPER refreshers. Let your Supervisor or Safety Officer know if you need a refresher.) Know how to read and interpret a Safety Data Sheet (SDS), and then familiarize yourself with the SDS for each chemical you work with. Know where the SDSs are located, and keep copies of frequently used SDSs with you in the vehicle. Always use proper PPE -- goggles / face shield, gloves, apron, respirator – depending on chemical. If the chemicals are corrosive or injurious to eyes and skin, ensure that eyewash fountain/bottles are nearby. If you’re relying on bottles, make sure enough fresh water is available to flush the eyes for 15 minutes. Seek medical attention immediately. Make sure the safety shower, if provided, is functional. Store chemicals in a locked area. If you are unfamiliar with chemicals, ask your supervisor for help.

If required, the eyewash fountain must be located within easy access (within 55’ or 10-second travel time, without barriers or steps to impede travel). If it contains cartridges with eye wash solution, the cartridges must be checked to ensure they are within the expiration date. The safety shower should be checked weekly to ensure that lines are flushed and that supply is continuous.

## IF EXPOSED:

Eyes: Use eyewash for 15 minutes. Tell supervisor and seek medical attention immediately.

Skin: Use safety shower. Remove contaminated clothing. Dress in clean, dry clothing. Tell supervisor. Seek medical attention for any injuries.

Inhalation: Get to fresh air. Tell supervisor. Seek medical attention immediately.

Ingestion: DO NOT INDUCE VOMITING. Tell supervisor. Seek medical attention immediately.

## **Weather**

Be aware of changing weather conditions, especially in locations and times of the year when severe thunderstorms, tornados, blizzards, or other severe storms are likely to occur. Be particularly alert for approaching lightning when working with heavy machinery, or standing near trees or tall, isolated structures.

Be alert for hypothermia during cold weather. Stay dry – cold, wind, and water are a dangerous combination.

## **Slips, Trips, and Falls**

Slips, trips, and falls (STF) are a very common cause of injury at all workplaces. Uneven and/or wet surfaces and tripping hazards may be located throughout the work area. Remove tripping hazards when possible. Be alert to avoid slips, trips, falls. Wear sturdy work boots or shoes with good tread. Use proper restraints when working above ground – remember that PPE booties will be slippery when wet.

## **Electrical Injury**

Don't use electrical equipment in wet areas. Be sure ground-fault interrupter system is in place and operational in wet areas. Use double-insulated tools, in good condition. Check tools frequently for safety. Watch for overhead electrical equipment when working with cranes and similar equipment.

## **Struck-by or Caught-in or Between**

Maintain constant awareness of your position relative to hazards. Think before you move. Watch out for your co-workers and moving vehicles. When working with large animals, be aware of your location relative to animals and structures, scissors or nip points, and potential loss of pressure in hydraulic squeeze chutes. Be aware of heavy machinery that may be operating near you – make sure you can see the operator.

## **Noise**

Use hearing protection in places where it's too loud to understand someone speaking 2' away. Use hearing protection when operating power equipment. Employees exposed to excessive levels of noise must be enrolled in a hearing conservation program. Ask the Safety Officer if you think you're exposed to excessive noise.

## **Ergonomics**

Face heavy objects squarely and lift with your legs, not your back. Don't hesitate to get help lifting if you need it. Avoid working in awkward postures. If you're working long hours at a computer, ask the Safety Officer to evaluate the work station.

## **Emergency Planning**

In the office and your vehicle: Keep a packet with phone numbers, CA forms, What to Do If You're Injured, directions to hospital, GSA accident forms including self-insured cards and injury forms. Keep a first aid kit in the vehicle.

## **General Workplace Controls and the Hierarchy of Controls**

### **Engineering Controls**

Engineering controls, including designing the workplace to minimize hazards, are the preferred method of protecting against safety and health hazards; however, many work operations conducted by APHIS VS are not amenable to engineering controls.

### **Work Practices**

Work practice controls are a key element in protecting employee safety and health in most work operations. Employees must be trained to recognize hazardous conditions and activities, and taught the appropriate work methods to avoid injury and illness. In addition to the specific training indicated below, new employees must be trained on-the-job in proper techniques and methods to conduct their assigned duties.

### **Training**

Specific training in hazard communication (chemical safety) must be provided to employees who work with hazardous chemicals, on initial assignment and annually. (This topic should be included in HAZWOPER training, both in the 40-hour and basic awareness level courses.) Employees who work in noisy areas must be trained in noise and hearing protection, when they first work in these areas and annually thereafter. Training on respiratory protective equipment must be provided to employees who regularly use or who may need to use respirators in their work duties. This training must be provided before use of respirators, and refreshed annually.

## **Standard Operating Procedures (SOP) and Job Hazard Analyses (JHA)**

Know the SOPs for the work you are tasked with doing – ask for a copy. Be familiar with the JHA – it’s an analysis of the hazards which may occur during that operations, and how to protect yourself.

## **Personal Protective Equipment**

Personal protective equipment (PPE) is the last method in the hierarchy of controls for protecting employees from workplace hazards because it does not eliminate the hazard – it merely places a barrier between the worker and the hazard. However, not all hazards in APHIS VS activities can be completely eliminated or reduced to acceptable levels; therefore, PPE is necessary to adequately protect employees. When PPE is used in the workplace, it must be managed in a PPE program. PPE must be appropriately selected for the hazards, and provided without cost to you. You must be trained in its appropriate use. In some cases, medical examination is required before use and periodically thereafter.

Some examples for PPE used at APHIS VS include the following:

- Employees who are required to use respirators must be medically cleared, be trained, and receive annual fit testing.
- Protective clothing may include impermeable aprons or other garments for those who may be splashed with chemicals.
- Goggles and face shields must be provided for employees who handle chemicals that could damage the eyes.
- Appropriate gloves must be made available to and used by employees who handle chemicals.
- Minimal clothing may be worn under the Tyvek coveralls to reduce the risk of heat stress.

## **Hygiene**

Wear fresh work clothing daily. Work clothes should be laundered separately from the family laundry to reduce the potential of contaminating family members. In some cases, specific incident response activities may be granted a waiver to provide for more frequent laundering beyond what is normally allowed in the APHIS travel regulations. A change of clean, dry clothes should be available to each employee who may be splashed or come into contact with chemicals. Shower as soon as possible (before going to the ICP) after each work shift to remove any chemicals that may have come in contact with the skin and hair.

## **General Environmental Controls**

Potable water, protected from contamination with chemicals, animal wastes, etc., must be made available for employees. Appropriate restroom facilities (clean and sanitary, appropriate number) must be available or provided nearby with adequate transportation.

Separate waste disposal containers for food waste and potentially contaminated materials should be provided. Disposal arrangements should be made for disposable biocontaminated personal protective equipment and other items.

## **Safety Data Sheets**

Attach Safety Data Sheet PHOS-CHEK® WD881 CLASS A FOAM CONCENTRATE

<http://www.icl-pp.com/MSDS/Fire-Safety/Phos-Chek%20WD881%20Class%20A%20FoamMSDS.pdf>



# Material Safety Data Sheet



RESPONSIBLE CARE<sup>®</sup>  
OUR COMMITMENT TO SUSTAINABILITY

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: PHOS-CHEK®WD881 CLASS A FOAM CONCENTRATE  
Reference Number: AST10045  
Date: January 14, 2013

### Company/Undertaking Identification:

**ICL PERFORMANCE PRODUCTS LP**  
622 Emerson Road - Suite 500  
St. Louis, Missouri 63141

### Emergency telephone

In USA, call CHEMTREC: 1 800 424 9300  
In Canada, call CANUTEC: 1 613 996 6666  
Outside North America, call CHEMTREC: 1 703 527 3887

General Information: 1 800 244 6169 (Worldwide)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS No.</u>	<u>% by weight</u>
Alpha-olefin Sulfonate Solution	- - - -	60 - 80
2,4-pentanediol, 2-methyl-	107-41-5	10 - 30
Water	7732-18-5	<6
Lauryl alcohol	68855-56-1	1 - 5
d-limonene	5989-27-5	0.5 - 5

## 3. HAZARDS IDENTIFICATION

### EMERGENCY OVERVIEW

Appearance and Odor: Golden brown liquid with an odor similar to orange blossoms

### WARNING STATEMENTS

WARNING!  
CAUSES EYE IRRITATION  
MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION

### POTENTIAL HEALTH EFFECTS

Likely Routes of Exposure: Skin contact and inhalation

EYE CONTACT: This product causes moderate eye irritation based on toxicity studies.

SKIN CONTACT: This product may cause skin irritation based on toxicity studies.



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**INHALATION:** This product may cause irritation to the nose and upper respiratory system based on component supplier information.

**INGESTION:** Significant adverse health effects are not expected to develop if only small amounts (less than a mouthful) are swallowed.

Refer to Section 11 for toxicological information.

### 4. FIRST AID MEASURES

**IF IN EYES,** immediately flush with plenty of water for at least 15 minutes. If easy to do, remove any contact lenses. Get medical attention. Remove material from skin, eyes, and clothing.

**IF ON SKIN,** immediately flush with plenty of water. Remove contaminated clothing. Get medical attention if irritation persists. Wash clothing before reuse.

**IF INHALED,** remove to fresh air. Immediate first aid is not likely to be required, if breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

**IF SWALLOWED,** immediate first aid is not likely to be required. A physician or Poison Control Center can be contacted for advice.

### 5. FIRE FIGHTING MEASURES

**FLASH POINT:** Not combustible

**EXTINGUISHING MEDIA:** Not applicable

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known

**SPECIAL FIRE FIGHTING PROCEDURES IN ENCLOSED AREAS:**

**Phos-Chek® WD881 Solutions:** There are no special hazards associated with dilute foam solutions as used for fire fighting.

**Phos-Chek® WD881 Concentrate:** If the concentrate becomes involved in a fire, fire fighters and others exposed to products of combustion should wear self-contained breathing apparatus and protective clothing. Equipment should be thoroughly cleaned after use.

### 6. ACCIDENTAL RELEASE MEASURES

Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Flush residual spill area with water.

Refer to Section 13 for disposal information and Sections 14 and 15 for reportable quantity information.

### 7. HANDLING AND STORAGE

#### HANDLING

Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

#### STORAGE

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is cleaned, reconditioned, or destroyed. The reuse of this material's container for non-industrial purposes is prohibited and any reuse must be in consideration of the data provided in the MSDS.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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**EYE PROTECTION:** Where there is significant potential for eye contact, wear chemical goggles and have eye flushing equipment available.

**SKIN PROTECTION:** Wear appropriate protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing is likely. Wash contaminated skin promptly. Launder contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

**RESPIRATORY PROTECTION:** Avoid breathing vapor or mist. Use NIOSH/MSHA approved respiratory protection equipment (full facepiece recommended) when airborne exposure limits are exceeded (see below). Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134.

**VENTILATION:** Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult NFPA Standard 91 for design of exhaust systems.

### AIRBORNE EXPOSURE LIMITS:

<u>Product/Component</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Phos-Chek®WD881	None established	None established
2,4-pentanediol, 2-methyl-	25 ppm ceiling	25 ppm ceiling

Components referred to herein may be regulated by specific Canadian provincial legislation. Please refer to exposure limits legislated for the province in which the substance will be used.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Golden brown liquid
Odor:	Similar to orange blossoms
Solubility in Water:	Forms foam

**NOTE:** These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

## 10. STABILITY AND REACTIVITY

**STABILITY:** Product is stable under normal conditions of storage and handling.

**MATERIALS TO AVOID:** None known

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, partially oxidized hydrocarbons, smoke and soot.

**HAZARDOUS POLYMERIZATION:** Will not occur

## 11. TOXICOLOGICAL INFORMATION

This material has been defined as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Data from ICL Performance Products LP single-dose (acute) animal studies with this material are given below:

Phos-Chek®WD881 Fire Suppressant Foam Concentrate

Oral -	No More Than Slightly Toxic	(Rat LD <sub>50</sub> , 4378 mg/kg)
Skin -	No More Than Slightly Toxic	(Rabbit LD <sub>50</sub> , > 2,020 mg/kg)
Eye Irritation -	Moderately Irritating	(Rabbit 24-hr 39.3/110.0)

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Skin Irritation - Slightly Irritating

(Rabbit 24-hr 0.9/8.0)

Phos-Chek® WD881 Fire Suppressant Foam Solution (1% solution in water)

Oral - Practically Nontoxic

(Rat LD<sub>50</sub>, > 5,050 mg/kg)

Skin - No More Than Slightly Toxic

(Rabbit LD<sub>50</sub>, >2,020 mg/kg)

Eye Irritation - Minimally irritating

(Rabbit 24-hr 7.5/110.0)

Skin Irritation - Non Irritating

(Rabbit 4-hr 0.0/8.0)

## 12. ECOLOGICAL INFORMATION

### Environmental Toxicity

The following data have been classified using the criteria adopted by the European Economic Community (EEC) for aquatic organism toxicity.

96-hr LC<sub>50</sub> Rainbow Trout: 10.8 mg/l, Harmful

Due to the sensitivity of aquatic life to chemicals, we do not recommend the application of WD881 directly into streams or others bodies of water. WD881 meets the requirements of USDA Forest Service Specification 5100-307a.

### Environmental Fate

Readily biodegradable

## 13. DISPOSAL CONSIDERATIONS

This material when discarded is not a hazardous waste as that term is defined by the Resource, Conservation and Recovery Act (RCRA), 40 CFR 261. Dispose of by incineration or recycle in accordance with local, state, and federal regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

## 14. TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transportation.

IMDG/UN	not hazardous for transportation
ICAO/IATA	not hazardous for transportation
RID/ADR	not hazardous for transportation
Canadian TDG	not hazardous for transportation
US DOT	not hazardous for transportation

## 15. REGULATORY INFORMATION

TSCA Inventory: Listed

DSL Inventory: Listed

WHMIS Classification: D2 (B) - Materials Causing Other Toxic Effects

SARA Hazard Notification

Hazard Categories Under Title III Rules (40 CFR 370): Immediate

Section 302 Extremely Hazardous Substances: Not Applicable

Section 313 Toxic Chemical(s): Not Applicable

CERCLA Reportable Quantity: Not applicable

California Proposition 65: Not applicable

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation and the MSDS contains all the information required by the Canadian Controlled Products Regulation.

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Refer to Section 11 for OSHA/HPA Hazardous Chemical(s) and Section 13 for RCRA classification.

**16. OTHER INFORMATION**

	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	2	0	0	
Suggested HMIS Rating	2	0	0	G G = Safety glasses, gloves, dust & vapor respirator

Reason for revision: Product name and revised section 2.

Supersedes MSDS dated: June 30, 2011

Product Use: Fire Suppressant

PHOS-CHEK® is a registered trademark of ICL Performance Products LP.  
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AST10045.1750.doc

## References and Sources of Information

*APHIS Safety & Health Manual*, (currently undergoing revision)

[http://inside.aphis.usda.gov/mrpbs/publications/safety\\_health\\_wellness\\_manual/index.shtml](http://inside.aphis.usda.gov/mrpbs/publications/safety_health_wellness_manual/index.shtml)

APHIS Safety Forms, available from Web page, see “Related Topics,”

[http://inside.aphis.usda.gov/mrpbs/publications/safety\\_health\\_wellness\\_manual/index.shtml](http://inside.aphis.usda.gov/mrpbs/publications/safety_health_wellness_manual/index.shtml)

*APHIS Emergency Mobilization Guide*, APHIS 1050, March 3, 2014, available at

[http://www.aphis.usda.gov/emergency\\_response/downloads/APHIS%20Emergency%20Mobilization%20Guide.pdf](http://www.aphis.usda.gov/emergency_response/downloads/APHIS%20Emergency%20Mobilization%20Guide.pdf)

APHIS Directive 6800.1, *Ensuring the Protection of Employees Involved in Highly Pathogenic Avian Influenza Control and Eradication Activities*, available at

[http://www.aphis.usda.gov/library/directives/pdf/APHIS6800\\_1.pdf](http://www.aphis.usda.gov/library/directives/pdf/APHIS6800_1.pdf)

CDC website on AI: <http://www.cdc.gov/flu/avian/>

*Interim Guidance for Implementation of APHIS Directive 6800.1*, July 7, 2008, available at

[http://www.aphis.usda.gov/emergency\\_response/downloads/tools/VS%20Draft%20Interim%20Guidance%20for%20Implementation%20of%20APHIS%20Directive%206800.1%20EMD%20comments.pdf](http://www.aphis.usda.gov/emergency_response/downloads/tools/VS%20Draft%20Interim%20Guidance%20for%20Implementation%20of%20APHIS%20Directive%206800.1%20EMD%20comments.pdf)

*Highly Pathogenic Avian Influenza Standard Operating Procedures: 8. Health and Safety & Personal Protective Equipment*, FADPReP, USDA APHIS, January 2014, available at

[http://www.aphis.usda.gov/animal\\_health/emergency\\_management/downloads/sop/sop\\_hpai\\_health\\_safety.pdf](http://www.aphis.usda.gov/animal_health/emergency_management/downloads/sop/sop_hpai_health_safety.pdf)

Highly Pathogenic Avian Influenza Response Plan -- The Red Book, FADPReP, USDA APHIS, September 2012, available at

[http://www.aphis.usda.gov/animal\\_health/emergency\\_management/downloads/hpai\\_response\\_plan.pdf](http://www.aphis.usda.gov/animal_health/emergency_management/downloads/hpai_response_plan.pdf)

Safety Officer for this incident:

Name \_\_\_\_\_

Cell Phone \_\_\_\_\_

Email address \_\_\_\_\_

APHIS VS Safety and Occupational Health Manager, Dr. Deborah Imel Nelson, Ph.D., CIH,

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