

**NOTE: Any yellow text shading or red text annotations have been added by ORNL Subject Matter Experts (SMEs). The annotations have been made in order to document (1) certain Forest Service requirements that have been waived or (2) where some requirements for the ORNL participants have been clarified or established within the ORNL Research Safety Summary (RSS) instead. The RSS 7728 is the work control document that governs the ES&H the activities/actions of the ORNL participants doing work at the Marcell Experiment Station.**

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY <b>Field Work: Soil Sampling</b>	2. LOCATION <b>Grand Rapids, MN</b>	3. UNIT <b>RWU-410/43511</b>
<b>JOB HAZARD ANALYSIS (JHA)</b> References-FSH6709.11 and -12 (Instructions attached)	4. NAME OF ANALYST	5. JOB TITLE	6. DATE PREPARED

7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS
Driving to Field Sites	-Traffic accidents  -Hazardous road conditions	Engineering Controls * Substitution * Administrative Controls * PPE  <p style="color: yellow;">-Attend defensive driving training and use learned skills <b>ORNL SME: Instead, ORNL Participants urged to use caution and drive defensively as called out by another Field Work JHA</b></p> <ul style="list-style-type: none"> <li>-Use seat belts</li> <li>-Keep first aid kit in vehicle</li> <li>-Avoid driving in extreme weather conditions</li> <li>-Use 4-wheel drive for off-road driving</li> <li>-Use chains when appropriate</li> <li>-Keep jack, shovel, and spare tire in vehicle</li> <li>-Use flares or reflectors when stopped in hazardous locations <b>ORNL SME: transport/Use of flares, etc. may not be possible in ORNL rented travel vehicles, etc. but do refer also to RSS Question 13.5</b></li> </ul>
Hiking and/or walking around research site	-Falls, twisted or sprained joints, broken bones -Branch and other eye or head hazards -Exposure to bites, stings, poisonous plants, sunburn, heatstroke	<p style="color: yellow;">-Tell other people where you are going and when you will return</p> <ul style="list-style-type: none"> <li>-Work in groups of at least 2 persons</li> <li>-Keep a cell phone with you while in the field</li> </ul> <p><b>ORNL SME: Per 9-8-09 email from R. Kolka (USFS)-Buddy System is not required and a "sign Out" protocol does not exist. Instead, use the field communication controls in RSS Question 16.0.</b></p> <ul style="list-style-type: none"> <li>-Attend first aid training</li> <li>-Wear eye protection and hard hats</li> <li>-Wear appropriate protective clothing, study boots</li> </ul> <p><b>ORNL SME: Hardhats not required per 9-8-09 email from R. Kolka (USFS), Instead, See RSS LAST Question for explanation of when eye protection, field clothing, and foot protection requirements..</b></p> <ul style="list-style-type: none"> <li>-Use caution and awareness of terrain and local conditions</li> <li>-Carry insect repellent, sun block, ivy block, antihistamine/allergy medication, &amp; first aid kit</li> </ul>

Sampling Soil (core sampler)  ATV Travel (read JHA-ATV use) <b>ORNL SME: No JHA provided, ORNL use of ATVs have been added to the RSS.</b>	<ul style="list-style-type: none"> <li>--Back strain</li> <li>-Pounding Noise</li> <li>-Repeated sample pounding</li> </ul>	<ul style="list-style-type: none"> <li>-Loosen core sampler before removing from soil</li> <li>-Use two person crews to remove sampler</li> <li>-Lift with arms,legs and shoulders(<b>read Health &amp; Safety Handbook on lifting</b>)</li> <li><b>ORNL SME: Instead, requirements will be added to RSS as tasks that require them are introduced into the RSS.</b></li> <li>-Do not overload samples when hauling to vehicle</li> <li><b>-Wear protective ear wear</b></li> <li><b>-Wear gloves</b></li> <li><b>ORNL SME: Instead, requirements will be added to RSS as tasks that require them are introduced into the RSS.</b></li> <li>-Rotate sampling every plot</li> </ul>
Maintanence-sharpening,filing	Cuts,punctures,	<p><b>Wear safety glasses and gloves</b> <b>ORNL SME: Instead, requirements will be added to RSS as tasks that require them are introduced into the RSS.</b></p> <p>Inspect equipment regularly</p>
Emergency Evacuation Procedures	Serious Illness or Injury	<p>First aids kits shall be available at each facilities and in each vehicle. Supervisors or Work Leader shall be trained in First Aid and CPR. Minor injuries should be treated by agency trained employees. Seriously injured or ill employee needing Advanced Life Support and transport, notify supervisor by cell phone or 911 by telephone. render first aid to the sick and injured until local agency Medical First Responder takes over care of the employee. Notify your Supervisor ASAP.</p> <p>Complete the required paperwork. <b>ORNL SME: Each vehicle does not need a first aid kit at it is maintained at the S-1 Building. Also see RSS Question 16 for ORNL supplemental information.</b></p>

10. LINE OFFICER SIGNATURE

11. TITLE

12. DATE