## Job Safety Analysis

### JOB/TASK NAME
EB0030-0031 ASPHALT AND AGGREGATE LABORATORY

### DATE
12/22/2011

### JOB TITLE PERFORMING THE JOB/TASK
Instructors, Teaching Assistants, Students

### REQUIRED PERSONAL PROTECTIVE EQUIPMENT
Safety glasses, face shield, gloves, work boots/shoes as required by the particular work being done. See detailed instructions in individual laboratory experiment procedure handouts for Personal Protective Equipment (PPE) required for certain operations.

### EQUIPMENT / TOOLS REQUIRED FOR JOB (Complete Tool Inspection Prior to Start of Job):
- Superpave gyratory compactor
- Ovens
- Fume hoods
- Parts washer
- Sieve shaker
- Asphalt melting pot
- Asphalt ignition oven

### JOB STEPS | POTENTIAL HAZARDS | HAZARD CONTROL METHOD
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1. Safety Training | See items listed below | 1) All persons actively engaged in laboratory activities must have safety training. The training shall include the following parts:
   a) General Laboratory Rules
   b) Laboratory Experiment Procedures
   c) Personal protective equipment (PPE)

2. Housekeeping | a. Slips, trips, falls  
   b. Dust | 2) Keep work area clean and clear of debris and liquids.  
3) Be aware of everything going on around you.  
4) Keep an eye on fellow workers and alert them of any potential risk/harm.  
5) Keep the floor and bench tops clean but do NOT sweep them. Do use the HEPA vacuum cleaner for DRY dust pickup only. For cleaning other concrete dust from surfaces not safely or easily cleaned using the HEPA vacuum, use a wet rag or mop.

3. Attire | a. Cuts, abrasions  
   b. Entanglement | 6) All persons in the area where sanding, grinding, cutting operations are occurring must wear safety glasses.
7) No open-toe shoes are allowed in the lab.
8) Long pants must be worn whenever there is risk that heavy or sharp or abrasive materials could pose a risk of injury.
9) Do NOT wear loose clothing or jewelry that could be caught or entangled in machinery.
10) Tie back long hair wear headwear to prevent long hair that be caught or entangled in machinery.

3. **Tools and Equipment**
   
   a. Cut/Burn  
   b. Electrical Hazards  
   c. Noise levels  
   d. Pinch points  
   e. Dust

11) Ovens in this lab area are used for drying wet materials, heating asphalt cement and hot-mix asphalt materials, molds and utensils, or burning the asphalt. Wear proper PPE appropriate for the oven and temperature range that you are working with.

12) Assume that all materials, utensils and asphalt cement in this lab area may be hot. Approach them carefully to determine if they are indeed hot before touching anything.

13) While tools or equipment are being used properly fitted personal protective equipment must be worn by the operator and others in the area.

14) Before use of any powered equipment or tool, a thorough inspection must be completed to insure proper working condition. Make any proper necessary corrections before use of the equipment.

15) Do not use equipment or tool that is damaged beyond repair or has any safety features missing (guards). Report damaged tool/equipment to team captain or safety advisor for “DO NOT OPERATE” tag.

16) Portable power equipment shall be unplugged when not in use.

17) All power cords shall be inspected before the cord or tool is used, periodically while being used and when work with the cord or equipment is done for the day. Any
damaged cord must be taken out of service immediately.

18) Do not use or touch electrical equipment if water or other fluids are on the equipment, the floor around it, or your clothes are wet

   a) Exception: The concrete saw and concrete grinder use a stream of water to cool the blade. However, the water shall not be allowed to collect on the power cord or on/off switch or on the floor or on your clothing. Dry any fluid from those areas before using the equipment.

19) If while operating the equipment or power tool a circuit breaker trips for any reason, the instructor, lab TA or other qualified person must determine the cause and correct it before resetting the breaker.

20) All dust producing work must be done in a well-ventilated area. If the area cannot be well ventilated then active dust collection must be used. Use the JET dust collector provided” with the large pleated (2-micron) filter on top for all dust created while working with power tools or hand tools.

21) When working with cementitious and aggregate materials, do so in the aggregate area with the overhead filtered vent hood operating to remove the dust. Even with the vent hood operating, avoid breathing the dust that may cloud the area.