The Job Hazard Analysis form is designed to help supervisors assess and address health and safety hazards that have the potential to cause serious injury or illness (e.g. power tools, electrical repairs). Supervisors can use this document to train staff on safe work procedures.

The information below is a good faith effort to identify hazards encountered by Power Plant Operating Engineer 1. If a specific job task is not listed below, contact your supervisor to determine if a specific job hazard analysis or work plan is required.

This document will serve as the certification of hazard assessment for personal protective equipment for the above working job title position.

<table>
<thead>
<tr>
<th>Job Tasks</th>
<th>Potential Hazard</th>
<th>Controls &amp; Recommended Actions</th>
<th>Training and Personal Protective Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving vehicles</td>
<td>● Bodily injury</td>
<td>● Daily pre-trip vehicle inspection</td>
<td>Task Specific Training</td>
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<td></td>
<td></td>
<td>● Follow all traffic rules</td>
<td>● Driver Safety and Awareness</td>
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<td></td>
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<td>● Maintain current driver’s license</td>
<td>● Monthly shop safety meetings on PPE</td>
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<td>● Report problems with state vehicles</td>
<td>● Seatbelt use policy</td>
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<td>● Adequate lighting</td>
<td>PPE</td>
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<td></td>
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<td>● Request on Ergonomic evaluation from EH&amp;S</td>
<td>● Seatbelt</td>
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<td>● Review ergonomic info on EH&amp;S website</td>
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<td>● Take frequent breaks/stretch/move</td>
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<tr>
<td>Computer work</td>
<td>● Eye strain</td>
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<td>Task Specific Training</td>
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<tr>
<td></td>
<td>● Ergonomic problems such as carpal tunnel and back problems</td>
<td></td>
<td>● Ergonomic Online training (optional)</td>
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<td>PPE</td>
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<td>● None</td>
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<tr>
<td>General use of hand and power tools such as multi-meters, screwdrivers, wrenches, wire strippers</td>
<td>● Bodily injury</td>
<td>● Follow industry safety standards for operating power/hand tools</td>
<td>Task Specific Training</td>
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<td></td>
<td></td>
<td>● Location of exits</td>
<td>● Monthly shop safety meetings on PPE and SDS</td>
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<td></td>
<td>● Location of fire extinguisher</td>
<td>PPE</td>
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<td></td>
<td>● Location of first aid kit</td>
<td>● Gloves (as needed)</td>
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<td></td>
<td></td>
<td>● Safety Data Sheets (SDS) for chemical and products</td>
<td>● Hearing protection (as needed)</td>
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<td></td>
<td>● Impact glasses (as needed)</td>
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<td></td>
<td></td>
<td></td>
<td>● Substantial footwear</td>
</tr>
</tbody>
</table>
| Maintain inventory supplies | • Ergonomic problems such as carpal tunnel and back problems  
• Work off ladders | • Get help or use lifting tools for items exceeding 50 pounds or is an awkward shape  
• Request an ergonomic evaluation from EH&S  
• Set-up work station using ergonomic principles  
• Take frequent breaks/stretch  
• Use hand cart | **Task Specific Training**  
• Back protection & Lifting Safety Online  
• Ergonomic Online training (optional)  
• Ladder Safety Hands On  
• Ladder Safety Online  
• Monthly shop safety meetings on PPE  
**PPE**  
• Dusk mask (as needed)  
• Safety glasses (as needed)  
• Substantial footwear |
| --- | --- | --- | --- |
| Cell phone usage | • Inattention leading to bodily injury | • Be aware of your surroundings  
• Don’t drive and talk unless utilizing a ‘hands-free’ device | **Task Specific Training**  
• Driver Safety and Awareness  
**PPE**  
• None |
<table>
<thead>
<tr>
<th>Job Tasks</th>
<th>Potential Hazard</th>
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<th>Training and Personal Protective Equipment</th>
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</table>
| Perform internal and external cleaning of boilers, including boiler components. | • Airborne contaminants (such as rust, dried chemical precipitate, ash)  
• Confined spaces (such as steam drum, furnace, mud drum)  
• Ergonomic problems such as lifting, repetitive motion, awkward posture  
• Fall hazard  
• Hazardous chemicals (such as Aerokril, furnace patch, solvents)  
• Hazardous energy (mechanical, heat, pressure (gas or liquid lines))  
• Heat stress  
• Insufficient lighting  
• Noise  
• Overhead equipment  
• Power/Hand tools  
• Regulated materials such as asbestos, lead, silica  
• Slip/trip/fall  
• Scaffolding  
• Work off ladders | • Barricades/signs/spotter (if applicable)  
• Confined space permit (if applicable)  
• Ensure work area is clear from spills and trip hazards  
• Fall protection work plan (if applicable)  
• Follow industry safety standards for operating power/hand tools  
• Get help or use lifting tools for items exceeding 50 pounds, or is an awkward shape  
• If hot, drink water and take necessary rest breaks  
• Lockout procedure  
• Location of exits  
• Location of fire extinguisher  
• Location of first aid kit  
• Safety Data Sheets (SDS) for chemical and products  
• Reinforce shop safety standard operating procedures and work practices  
• This job position does not typically perform work on regulated building materials  
• Tool tethering and toe boards (scaffolding)  
• Use temporary lighting (such as flash light, string temp lighting) | • Task Specific Training:  
• Asbestos Awareness  
• Audiometric Hearing Test  
• Back protection & Lifting Safety Online  
• Bloodborne Pathogens for Non-Lab Online (for First Aid)  
• Confined Space Entry /Hands On  
• Department specific training  
• Ergonomic Online training (optional)  
• Fall Protection  
• Fire Extinguisher Hands On  
• Fire Extinguisher Online  
• First aid & CPR  
• HazCom/GHS  
• Hepatitis B Vaccination (must be offered)  
• Hearing Protection/Conservation Online  
• Ladder Safety Hands On  
• Ladder Safety Online  
• Lead Awareness Online  
• Lockout/Tagout Safety  
• Monthly shop safety meetings on PPE, shop safety standard operating procedures and SDS  
• Scaffold Safety  
• Supv LOTO Field Evaluation |

**PPE**  
• Dust mask -as needed  
• Gloves - as needed  
• Hard hat  
• Head light / temporary lighting  
• Hearing protection - as needed  
• Impact glasses/goggles – as needed  
• LOTO locks or tags  
• Personal fall restraint/arrest equipment  
• Substantial footwear
## Job Tasks

<table>
<thead>
<tr>
<th>Clean fuel oil guns and fuel oil systems</th>
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</thead>
<tbody>
<tr>
<td>• Airborne contaminants (such as dust, odors)</td>
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<tr>
<td>• Ergonomic problems such as lifting, repetitive motion, awkward posture</td>
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<tr>
<td>• Hazardous chemicals (such as solvents)</td>
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<tr>
<td>• Hazardous energy (pressure (liquid lines))</td>
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<tr>
<td>• Noise</td>
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<tr>
<td>• Power/Hand tools</td>
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<tr>
<td>• Slip/trip/fall</td>
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</tbody>
</table>

## Potential Hazard

- Airborne contaminants (such as dust, odors)
- Ergonomic problems such as lifting, repetitive motion, awkward posture
- Hazardous chemicals (such as solvents)
- Hazardous energy (pressure (liquid lines))
- Noise
- Power/Hand tools
- Slip/trip/fall

## Controls & Recommended Actions

- Ensure work area is clear from spills and trip hazards
- Follow industry safety standards for operating power/hand tools
- Get help or use lifting tools for items exceeding 50 pounds, or is an awkward shape
- Location of exits
- Location of fire extinguisher
- Location of first aid kit
- Safety Data Sheets (SDS) for chemical and products
- Reinforce shop safety standard operating procedures and work practices
- This job position does not typically perform work on regulated building materials

## Training and Personal Protective Equipment

### Task Specific Training

- Audiometric Hearing Test
- Back protection & Lifting Safety Online
- Bloodborne Pathogens for Non-Lab Online (for First Aid)
- Department specific training
- Ergonomic Online training (optional)
- Fire Extinguisher Hands On
- Fire Extinguisher Online
- First aid & CPR
- HazCom/GHS
- Hepatitis B Vaccination (must be offered)
- Hearing Protection/Conservation Online
- Monthly shop safety meetings on PPE, shop safety standard operating procedures and SDS

### PPE

- Chemical splash goggles
- Dust mask - as needed
- Gloves
- Hearing protection - as needed
- Substantial footwear

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<tbody>
<tr>
<td>Assist with the operations of all boilers and all auxiliary equipment</td>
<td>Compressed gasses (such as calibration gas, refrigerant leak)</td>
<td>Aerial lift (such as scissor lift)</td>
<td>Task Specific Training</td>
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<tr>
<td>(such as combustion control equipment, fuel systems, air compressors,</td>
<td>Electrically energized equipment</td>
<td>Avoid exposure to electrical energized equipment</td>
<td>• Asbestos Awareness</td>
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<tr>
<td>electrical generating equipment, water analysis equipment, fans, blowers,</td>
<td>Ergonomic problems such as lifting, repetitive motion,</td>
<td>Ensure work area is clear from spills and trip hazards</td>
<td>• Audiometric Hearing Test</td>
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<td>pumps, and turbines)</td>
<td>Fall hazard</td>
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<td>• Back protection &amp; Lifting Safety Online</td>
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<td></td>
<td>Hazardous energy (mechanical, heat, pressure (gas or liquid lines))</td>
<td>Fall protection work plan (if applicable)</td>
<td>• Bloodborne Pathogens for Non-Lab Online</td>
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<td></td>
<td>Heat stress</td>
<td>Follow industry safety standards for operating</td>
<td>(for First Aid)</td>
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<td>Insufficient lighting</td>
<td>power/hand tools</td>
<td>• Compressed Gas Safety Online</td>
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<td>Noise</td>
<td>Get help or use lifting tools for items</td>
<td>• Department specific training</td>
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<td>Overhead equipment</td>
<td>exceeding 50 pounds, or is an awkward shape</td>
<td>• Ergonomic Online training (optional)</td>
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<td>Power/Hand tools</td>
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<td>• Fall Protection</td>
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<td>Regulated materials such as asbestos, lead, silica</td>
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<td>• Fire Extinguisher Hands On</td>
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<td>Slip/trip/fall</td>
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<td>• Fire Extinguisher Online</td>
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<td>Work off ladders</td>
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<td>• First aid &amp; CPR</td>
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<td>• HazCom/GHS</td>
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<td>• Monthly shop safety meetings on PPE, shop</td>
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<td>PPE</td>
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<td>• Gloves - as needed</td>
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<td>• Hard hat – as needed</td>
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<td>• Head light / flashlight</td>
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<td>• Hearing protection - as needed</td>
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<td>• Impact glasses/goggles – as needed</td>
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<td>• Personal fall restraint/arrest equipment</td>
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<td>• Substantial footwear</td>
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<tr>
<td><strong>Job Tasks</strong></td>
<td><strong>Potential Hazard</strong></td>
<td><strong>Controls &amp; Recommended Actions</strong></td>
<td><strong>Training and Personal Protective Equipment</strong></td>
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</tbody>
</table>
| Perform boiler chemical treatment and water treatment testing. | • Airborne contaminants (such as dust, refrigerant leaks, odors)  
• Ergonomic problems such as lifting, repetitive motion, awkward posture  
• Hazardous chemicals Hazardous energy (pressure -liquid lines)  
• Noise  
• Power/Hand tools  
• Slip/trip/fall | • Ensure work area is clear from spills and trip hazards  
• Follow industry safety standards for operating power/hand tools  
• Get help or use lifting tools for items exceeding 50 pounds, or is an awkward shape  
• Location of exits  
• Location of fire extinguisher  
• Location of first aid kit  
• Refrigerant leak work plan (if applicable)  
• Safety Data Sheets (SDS) for chemical and products  
• Reinforce shop safety standard operating procedures and work practices  
• This job position does not typically perform work on regulated building materials  
• Use portable refrigerant monitor (operated by Lead)  
• Water Treatment Plan | **Task Specific Training**  
• Audiometric Hearing Test  
• Back protection & Lifting Safety Online  
• Bloodborne Pathogens for Non-Lab Online (for First Aid)  
• Department specific training  
• Ergonomic Online training (optional)  
• Fire Extinguisher Hands On  
• Fire Extinguisher Online  
• First aid & CPR  
• HazCom/GHS  
• Hearing Protection/Conservation Online  
• Hepatitis B Vaccination (must be offered)  
• Monthly shop safety meetings on PPE, shop safety standard operating procedures and SDS  |

**PPE**  
• Chemical splash apron – as required  
• Chemical splash goggles  
• Dust mask -as desired  
• Gloves – as required for chemical handling  
• Hearing protection - as needed  
• Splash face shield – as needed  
• Substantial footwear
### Job Tasks
- Assist with the maintenance and repair of power plant equipment.

### Potential Hazards
- Airborne contaminants (such as dust, odors, refrigerant leak)
- Biological hazards (such as cooling tower – legionella)
- Compressed gasses (such as acetylene)
- Confined spaces (such as pressure vessels, mud drum, firebox)
- Electrically energized equipment
- Ergonomic problems such as lifting, repetitive motion, awkward posture
- Fall hazard
- Hazardous chemicals (such as solvents, degreasers, cleaners)
- Hazardous energy (mechanical, heat, pressure (gas or liquid lines))
- Heat stress
- Insufficient lighting
- Material Handling
- Noise
- Overhead equipment
- Power/Hand tools
- Regulated materials such as asbestos, lead, silica
- Slip/trip/fall
- Scaffolding
- Work off ladders

### Controls & Recommended Actions
- Aerial lift
- Avoid energized electrical work when possible
- Barricades/signs/spotter (if applicable)
- Check-in with the control room prior to work
- Confined space permit (if applicable)
- Ensure work area is clear from spills and trip hazards
- Fall hazard work plan (if applicable)
- Follow industry safety standards for operating power/hand tools
- Follow regulatory practices/standards for operating forklifts
- Get help or use lifting tools for items exceeding 50 pounds, or is an awkward shape
- If hot, drink water and take necessary rest breaks
- Lockout procedure
- Location of exits
- Location of fire extinguisher
- Location of first aid kit
- Refrigerant leak work plan (if applicable)
- Safety Data Sheets (SDS) for chemical and products
- Reinforce shop safety standard operating procedures and work practices
- This job position does not typically perform work on regulated building materials
- Tool tethering and toe boards
- Use portable refrigerant monitor (operated by Lead)
- Use temporary lighting (such as flash lights)
- Water treatment plan
- Cooling tower work practice (employee perform Legionella self-test – as directed)

### Training and Personal Protective Equipment

#### Task Specific Training
- Asbestos Awareness
- Audiometric Hearing Test
- Back protection & Lifting Safety Online
- Bloodborne Pathogens for Non-Lab Online (for First Aid)
- Compressed Gas Safety Online
- Confined Space Entry /Hands On-Department specific training
- Electrical: Arc Flash Awareness Online
- Ergonomic Online training (optional)
- Fall Protection
- Fire Extinguisher Hands On
- Fire Extinguisher Online
- First aid & CPR
- Forklift Operator Safety
- HazCom/GHS
- Hepatitis B Vaccination (must be offered)
- Hoisting and Rigging
- Hearing Protection/Conservation Online
- Ladder Safety Hands On
- Ladder Safety Online
- Lead Awareness Online
- Lift Training
- Lockout/Tagout Safety
- Monthly shop safety meetings on PPE, shop safety standard operating procedures and SDS
- Scaffold Safety
- Supv LOTO Field Evaluation

#### PPE
- Dust mask -as needed
- Gloves - as needed
- Hard hat – as needed
- Flash light / temporary lighting
- Hearing protection - as required
- Impact glasses/goggles – as needed
- LOTO locks or tags
- Personal fall restraint/arrest equipment
- Substantial footwear
- Tyvek coveralls – as desired

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<tbody>
<tr>
<td>Power Plant rounds and collect, log and print operational data, change recording charts, and monitor fuel deliveries.</td>
<td>• Airborne contaminants (such as dust, odors, refrigerant leak)</td>
<td>• Avoid energized electrical work when possible</td>
<td>• Asbestos Awareness</td>
</tr>
<tr>
<td></td>
<td>• Biological hazards (such as cooling tower – legionella)</td>
<td>• Ensure work area is clear from spills and trip hazards</td>
<td>• Audiometric Hearing Test</td>
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<tr>
<td></td>
<td>• Compressed gasses (such as CEMS)</td>
<td>• Follow industry safety standards for operating power/hand tools</td>
<td>• Bloodborne Pathogens for Non-Lab Online (for First Aid)</td>
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<td>• Ergonomic problems such as awkward posture</td>
<td>• If hot, drink water and take necessary rest breaks</td>
<td>• Compressed Gas Safety Online</td>
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<td>• Hazardous energy (mechanical, heat, pressure (gas or liquid lines))</td>
<td>• Location of exits</td>
<td>• Ergonomic Online training (optional)</td>
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<td>• Heat stress</td>
<td>• Location of fire extinguisher</td>
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<td>• Insufficient lighting</td>
<td>• Location of first aid kit</td>
<td>• Fire Extinguisher Online</td>
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<td>• Noise</td>
<td>• Refrigerant leak work plan (if applicable)</td>
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<td>• Slip/trip/fall</td>
<td>• Reinforce shop safety standard operating procedures and work practices</td>
<td>• Hearing Protection/Conservation Online</td>
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<td>• Hepatitis B Vaccination (must be offered)</td>
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<td></td>
<td>• Use portable refrigerant monitor (operated by Lead)</td>
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<td>• Use temporary lighting (such as flash lights)</td>
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<td>• Water treatment plan</td>
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<td>• Flash light / temporary lighting</td>
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