Job Hazard Analysis (JHA) Form

Department of Environmental Health & Safety

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| **Job Code and Job Title** | **Department** | **Supervisor** | **Date:** |
|  |  |  | ­­­\_\_\_\_\_\_\_\_\_\_\_\_  NEW JHA  REVISED |
| **Location where tasks are performed:** | **Analysis Performed by:** | | **Reviewed by:** |
| Main campus  South campus  Buildings: |  | | ­­­Date: |

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| **Tasks** *(list one task per row)* | **Tools/equipment used:** | **Hazards** | **Controls** |
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| **Check all hazards associated with job code:** | | |
| Chemical | Hazardous materials (lead, asbestos, etc) | Radiological (ionizing) |
| Confined space | Hoisting | Radiological (non-ionizing) |
| Fire | Hot work (spark generating) | Heat illness/temperature extremes |
| Elevated work | Material handling/lifting | Covid-19 |
| Ergonomics (office) | Elevated noise > 85dB | Biohazard |
| Driving (carts) | Hazardous atmospheres | Other |
| Slips, trips, falls | Arc flash | Other |
| Stored energy LOTO | Mobile industrial vehicle | Other |

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| **Personal Protective Equipment Associated with Job Code** | | |
| Are there minimum requirements for working in the affected area(s)?  No  Yes (if yes, check all that apply) | | |
| Eye protection | Steel toed boots | Chemical resistant gloves |
| Face shield | Leather gloves | Face mask (COVID-19) |
| Fall protection | Hard hat | Other: |
| Welding shields | Hearing protection | Other: |
| Reflective vest | Arc rated clothing | Other: |

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| **Training Assigned:** |
| Additional training needed? |

If you have any questions about how to fill out this form, please contact Matt Nymeyer, matt.nymeyer@sjsu.edu

#### Things to consider when filling out a JHA:

#### Hazard Control Measures

Information obtained from a job hazard analysis is useless unless hazard control measures recommended in the analysis are incorporated into the tasks. Managers should recognize that not all hazard controls are equal. Some are more effective than others at reducing the risk.

The order of precedence and effectiveness of hazard control is the following:

1. Engineering controls.
2. Administrative controls.
3. Personal protective equipment.

Engineering controls include the following:

* Elimination/minimization of the hazard Designing the facility, equipment, or process to remove the hazard, or substituting processes, equipment, materials, or other factors to lessen the hazard;
* Enclosure of the hazard using enclosed cabs, enclosures for noisy equipment, or other means;
* Isolation of the hazard with interlocks, machine guards, blast shields, welding curtains, or other means; and
* Removal or redirection of the hazard such as with local and exhaust ventilation.

Administrative controls include the following:

* Written operating procedures, work permits, and safe work practices;
* Exposure time limitations (used most commonly to control temperature extremes and ergonomic hazards);
* Monitoring the use of highly hazardous materials;
* Alarms, signs, and warnings;
* Buddy system; and
* Training.

Personal Protective Equipment such as respirators, hearing protection, protective clothing, safety glasses, and hardhats is acceptable as a control method in the following circumstances:

* When engineering controls are not feasible or do not totally eliminate the hazard;
* While engineering controls are being developed;
* When safe work practices do not provide sufficient additional protection; and
* During emergencies when engineering controls may not be feasible.

Use of one hazard control method over another higher in the control precedence may be appropriate for providing interim protection until the hazard is abated permanently. In reality, if the hazard cannot be eliminated entirely, the adopted control measures will likely be a combination of all three items instituted simultaneously

#### Common Hazards and Descriptions

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| **Hazards** | **Hazard Descriptions** |
| Chemical (Toxic) | A chemical that exposes a person by absorption through the skin, inhalation, or through the bloodstream that causes illness, disease, or death.The amount of chemical exposure is critical in determining hazardous effects. Check Material Safety Data Sheets (MSDS), and/or OSHA 1910.1000 for chemical hazard information. |
| Chemical (Flammable) | A chemical that, when exposed to a heat ignition source, results in combustion. Typically, the lower a chemical's flash point and boiling point, the more flammable the chemical. Check MSDS for flammability information. |
| Chemical (Corrosive) | A chemical that, when it comes into contact with skin, metal, or other materials, damages the materials. Acids and bases are examples of corrosives. |
| Explosion (Over Pressurization) | Sudden and violent release of a large amount of gas/energy due to a significant pressure difference such as rupture in a boiler or compressed gas cylinder. |
| Electrical (Shock/Short Circuit) | Contact with exposed conductors or a device that is incorrectly or inadvertently grounded, such as when a metal ladder comes into contact with power lines. 60Hz alternating current (common house current) is very dangerous because it can stop the heart. |
| Electrical (Fire) | Use of electrical power that results in electrical overheating or arcing to the point of combustion or ignition of flammables, or electrical component damage. |
| Electrical (Static/ESD) | The moving or rubbing of wool, nylon, other synthetic fibers, and even flowing liquids can generate static electricity. This creates an excess or deficiency of electrons on the surface of material that discharges (spark) to the ground resulting in the ignition of flammables or damage to electronics or the body's nervous system. |
| Electrical (Loss of Power) | Safety-critical equipment failure as a result of loss of power. |
| Ergonomics (Strain) | Damage of tissue due to over exertion (strains and sprains) or repetitive motion. |
| Ergonomics (Human Error) | A system design, procedure, or equipment that is error-provocative. (A switch goes up to turn something off). |
| Excavation (Collapse) | Soil collapse in a trench or excavation as a resultof improper or inadequate shoring. Soil type is critical in determining the hazard likelihood. |
| Fall (Slip, Trip) | Conditions that result in falls (impacts) from height or traditional walking surfaces (such as slippery floors, poor housekeeping, uneven walking surfaces, exposed ledges, etc.) |
| Fire/Heat | Temperatures that can cause burns to the skin or damage to other organs. Fires require a heat source, fuel, and oxygen. |
| Mechanical/Vibration (Chaffing/Fatigue) | Vibration that can cause damage to nerve endings,or material fatigue that results in a safety-critical failure. (Examples are abraded slings and ropes, weakened hoses and belts.) |
| Mechanical Failure | Self explanatory; typically occurs when devices exceed designed capacity or are inadequately maintained. |
| Mechanical | Skin, muscle, or body part exposed to crushing, caught-between, cutting, tearing, shearing items or equipment. |
| Noise | Noise levels (>85 dBA 8 hr TWA) that result in hearing damage or inability to communicate safety-critical information. |
| Radiation (Ionizing) | Alpha, Beta, Gamma, neutral particles, and X-rays that cause injury (tissue damage) by ionization of cellular components. |
| Radiation (Non-Ionizing) | Ultraviolet, visible light, infrared, and microwaves that cause injury to tissue by thermal or photochemical means. |
| Struck By (Mass Acceleration) | Accelerated mass that strikes the body causing injury or death. (Examples are falling objects and projectiles.) |
| Struck Against | Injury to a body part as a result of coming into contact of a surface in which action was initiated by the person. (An example is when a screwdriver slips.) |
| Temperature Extreme (Heat/Cold) | Temperatures that result in heat stress, exhaustion, or metabolic slow down such as hypothermia. |
| Visibility | Lack of lighting or obstructed vision that results in an error or other hazard. |
| Weather Phenomena (Snow/Rain/Wind/Ice) | Self explanatory. |