SUBJECT: Laboratory Safety Plan

1. PURPOSE: This SOP establishes standards for safe laboratory practices in compliance with local and federal guidelines. Employers must inform employees of hazards they may be exposed to in the workplace. This is accomplished through initial and annual training, including the annual completion of a laboratory hazard assessment. This document addresses methods to protect employees from the most common laboratory hazards.

2. DEFINITIONS:

ACOS/R	Associate Chief of Staff for Research
AO/R	Administrative Officer for Research
BSC	Biological Safety Cabinet
CHP	Chemical Hygiene Plan
dB	Decibels
DOT	Department of Transportation
ECOMP	Employees' Compensation Operations & Management Portal
EOC	Environment of Care
GEMS	Green Environmental Management System
GFCI	Ground Fault Circuit Interrupter
HCP	Hearing Conservation Program
HEFP	Healthcare Environment and Facilities Programs
HM	Hazardous Material
HPD	Hearing Protection Devices
HPD	Hearing Protective Device
IATA	International Air Transport Association
IHO	Industrial Hygiene Officer
OH	Occupational Health
ORO	Office of Research Oversight
OSHA	Occupational Health and Safety Administration
PEL	Permissible Exposure Limit
PI	Principal Investigator
PPE	Personal Protective Equipment
RCO	Research Compliance Officer
RDC	Research and Development Committee
RPSS	Research Protocol Safety Survey
RSC	Radiation Safety Committee
RSO	Radiation Safety Officer
SDS	Safety Data Sheet
SOP	Standard Operating Procedure
SRS	Subcommittee on Research Safety
TLV	Threshold Limit Value
TWA	Time-Weighted Average
WOC	Without Compensation Employee

3. ROLES AND RESPONSIBILITIES

a) Associate Chief of Staff for Research (ACOS/R) is responsible for the proper functioning of all aspects of the Research Program at her/his site.

b) The Subcommittee on Research Safety (SRS) is a subcommittee of the Research and Development Committee (RDC) that identifies and manages safety and security risks for the Research Service. The SRS reviews all research activities involving biological, chemical, physical, and/or ionizing and nonionizing radiation hazards and must grant approval prior to the start of the project. The SRS reviews and approves Research Protocol Safety Surveys (RPSSs) submitted by Principal Investigators (PIs) and conducts annual reviews of all active research protocols. The SRS identifies individual projects that require hazard monitoring and/or medical surveillance for affected personnel and ensures that effective training and safety and health programs are in place. Incident reports are reviewed by the SRS to ensure that appropriate action has been taken.

c) SRS coordinates with other local or affiliated regulatory programs, personnel, or committees, such as the Environment of Care (EOC) Committee, the Radiation Safety Committee (RSC), and Green Environmental Management Systems (GEMS) Committee.

d) The SRS establishes and annually reviews the Research Chemical Hygiene Plan (CHP) and other research-specific plans as required. The SRS is responsible for evaluating and mitigating any deficiencies identified during the annual reviews, periodic audits, and from the results of any drills performed.

e) Occupational Health (OH) Services are integral part of the research safety and health programs. OH services include pre-employment physicals, treatment of minor employee injuries, and medical clearance to work with laboratory animals or for the use of a respirator, if required. The services provided by OH are described in *SRS-009 Research Safety Occupational Health Policy.*

f) Research Compliance Officer (RCO) is responsible for reviewing and auditing research projects as specified by the Office of Research Oversight (ORO). The reviews and audits are conducted to ensure compliance with local and federal requirements.

g) Principal Investigators (PIs) are accountable for all research activities in their assigned areas, including scientific, management, and administrative duties.

h) Ensure that all research protocols are submitted to the SRS for review. As leaders of research teams, Principal Investigators must ensure that all safety principles and rules of conduct are followed within research laboratory areas.

i) Identify laboratory-specific hazards and provide training on all procedures performed within their area of responsibility, as well as on safety precautions for each research protocol.

j) Ensure that laboratory staff has appropriate scopes of practice, is competent in the performance of assigned duties, uses appropriate personal protective equipment (PPE), and appropriate engineering controls, such as chemical fume hoods and biological safety cabinets (BSCs).

k) PIs shall maintain a current inventory of all chemicals used on the lab using the Healthcare Environment and Facilities Programs (HEFP), an online chemical inventory. Principal Investigators are responsible for compliance with the Research CHP and for providing access to Safety Data Sheets (SDSs). PIs shall enter into the Employees' Compensation Operations & Management Portal (ECOMP) all occupational injuries or illnesses incurred by staff under their

supervision and notify the Research Safety Coordinator (ext. 31-5180) that an incident has occurred. See *SRS-012 Medical and Security Incident Plan* for more details.

l) Without Compensation (WOC) staff plays a large role in VHA research. They comprise a significant fraction of the total research work force. When they use any VHA resource, they are subject to the same regulations, requirements, and policies as regular VHA employees including training requirements, Occupational Health and Safety Administration (OSHA) regulations, and reporting requirements.

4. **HAZARD DETERMINATION AND APPLICATION:** The PI or designee shall conduct a Hazard Assessment to determine the hazards unique for each job title/description within their laboratory. The job hazard analysis shall include the identification of hazardous substances, physical hazards, and health hazards. These Hazard Assessments shall be reviewed and updated on an annual basis by the PI or their designee (see Attachment A).

5. **BIOLOGICAL SAFETY:** See *Guidelines for Handling Biological Hazards.* If needed, contact the Research Safety Coordinator (ext. 31-5180) for additional information on biological safety.

a) Commercial Transportation of Biohazardous Material
   i) Transportation of all hazardous substances is regulated by the U.S. Department of Transportation (DOT) and the International Air Transport Association (IATA). Some common biohazardous materials shipped from our facility include diagnostic specimens and infectious substances. If you ship a hazardous material (HM), you are responsible for ensuring that you have been trained and the package has been prepared for shipment as specified in Title 49 Code of the Federal Regulations and in the IATA Dangerous Goods Regulations. Contact the Industrial Hygiene Officer (IHO) (ext. 31-2647) if you have questions on training. You must have a current DOT/IATA Training Certificate to ship HM.
   ii) DOT regulations apply to vehicular transportation of HM and personnel who package, transport, and receive these goods. The regulations primarily apply to commercial transportation, but also include transportation in private vehicles or between institutions. Employees are required to be specifically trained on shipping by ground transportation every 3 years. An overview of these requirements can be found online at: https://www.fmcsa.dot.gov/regulations/hazardous-materials/how-comply-federal-hazardous-materials-regulations
   iii) If transported by air, IATA requirements apply, and training is required every 2 years. Current information can be found on the IATA website: https://www.iata.org/en/publications/store/infectious-substances-shipping-regulations/. All transported specimens must meet 29 CFR 1910.1030 and 1910.1200 labeling and packing requirements.
   iv) Basic considerations for safe transport include:
      1) Biohazardous material shall be placed in a sealed and labeled primary specimen container.
      2) The sealed primary container shall be placed into a dedicated secondary container with absorbent packing to cushion the primary container and to absorb liquids in the event of a leak or spill.
      3) The secondary container must be sealed and labeled with a biohazard symbol.

b) Non-Commercial Transportation of Biohazardous Material

When being transported by hand, hazardous materials should be identified and securely packaged in primary and secondary containers. In addition, the transportation route should not be in public areas, and dedicated elevators should be used whenever possible. Individuals transporting hazardous materials should be aware of their environment to avoid slips, trips, and falls.

c) Transportation of hazardous materials in official government or personal vehicles carries specific personal and institutional liability issues and is discouraged. However, any transportation on a public road requires proper packaging, identification, and labeling (consistent with DOT regulations) as well as training of personnel involved.

d) Transportation of hazardous materials on public transportation, including taxis, rideshares, buses, and light-rail is forbidden.

6. PHYSICAL SAFETY

a) Fire Safety. Fire is a significant concern in research laboratories. There is a high fire risk in research laboratories because flammable liquids are commonly used, flammable vapors can be generated, and flames and heating elements are common. Minimizing the storage and use of flammable chemicals reduces the risk of large fires.
   i) Some "best practices" that reduce the risk of a fire in the lab include:
      1) Being aware of possible ignition sources in the laboratory (examples: electrical sparking, heating elements and coils, open flames). Inspect electrical equipment, especially power cords, for defects and other potential ignition sources prior to use.
      2) Limit the use of extension cords, power strips, or similar devices.
         a. Power strips can only be used long term for computers/computer equipment.
         b. If your lab requires temporary use of a power strip/extension cord for other equipment, you must ensure that the power strip is powered off and extension cord unplugged when unattended, and at the end of the day.
      3) Never use flammable liquids in the presence of ignition sources; remember, flammable vapors alone can produce a fire hazard.
      4) Materials soaked with a flammable solvent should be kept in a fume hood until the solvent has evaporated, and then may be discarded as appropriate.
      5) Properly store and limit the total volumes and flammable chemicals used in the research laboratory. Keep containers closed when not in use. Ensure that all flammable liquids are stored in approved containers appropriate for their volume. Total amount of flammables allowed is dependent on the lab's size:
         a. Building 70 labs with 1 door: 2 gallons (7.6 L)
         b. Building 70 labs with 2 doors: 5 gallons (18.9 L)
         c. Building 49 Labs: 3 gallons (11.4 L)
      6) Do not allow flammable liquids to be stored in direct sunlight or near sources of heat.
      7) Static electricity during the transfer of solvent from one metal container to another can ignite solvent vapors. Bond (metal strap) metal containers together to equalize the charge between them or ground the container.
      8) Keep fire doors closed when not in use.
      9) Report any deficiencies to the Research Laboratory Coordinator (ext. 31-1812) or facility Safety Office or Engineering (ext. 31-2017).

ii) Fire Alarms and Fire Extinguishers

1) All staff members are required to know how to report a fire and activate the fire alarm system by using a RED PULL STATION.
2) RED PULL STATIONS are located near stairwells and other points of exit.
3) Employees are expected to know the location of their nearest fire extinguisher and when/how to use a fire extinguisher (PASS, **P**ull **A**im **S**queeze **S**weep).
4) The standard fire extinguisher found in our research laboratories is a dry powder extinguisher for Class A, B, and C fires.
    a. Class A fires: Ordinary combustible materials e.g., cloth, wood, paper, rubber, and some plastics.
    b. Class B fires: Flammable and combustible liquids e.g., gasoline, alcohols, diesel oil, oil-based paints, and flammable gases.
    c. Class C fires : Energized electrical equipment.
    d. FYI: Dry powder residue from Class ABC fire extinguishers can contaminate research laboratory equipment or samples.
5) Facility Safety personnel inspect all fire extinguishers monthly in accordance with NFPA 10 (National Fire Protection Association) code requirements. The inspection date is documented on the tag attached to the fire extinguisher. Non-functioning (discharged) extinguishers will be immediately replaced.

iii) Fire and Emergency Response

1) The response procedures in the event of a fire are described in the Emergency Preparedness General Response Pamphlet. Briefly, dial 1-911 to report the fire and activate a RED PULL STATION.
2) Other actions:
    a. In the event of a fire, shut off all gas sources, if possible. Keep flames away from compressed gas cylinders.
    b. Use heat-resistant gloves to turn off valves that have become too hot to safely handle with unprotected hands.
    c. Do not attempt to move any burning objects.

b) Slips, Trips and Falls

i) Slip, trips, and falls are one of the top five causes of injuries in the research laboratory setting.
ii) Slips, trips, and falls are caused by many different hazards, including poor housekeeping, poor floor and aisle maintenance, wet floors, uneven surfaces, improper storage of equipment and supplies, and employee behavior.
iii) Guidelines for reducing the risk and prevention.

1) Keep all floor areas clean and orderly.
2) Maintain floors in a clean and dry condition. Where wet floors are not avoidable (cage washing areas), drainage shall be maintained.
3) Personnel shall avoid behaviors that frequently contribute to slips, trips, and falls, including:
    a. Wearing inappropriate footwear.
    b. Carrying excessive boxes or other materials that inhibit line of sight.
    c. Using unapproved step aids (chairs, boxes, stools, etc.).
    d. Leaving electrical or phone lines on the floor.

e. Ignoring wet or slippery floors.
f. Storing heavy objects on high shelves.
g. Leaving drawers or cabinet doors open.

c) Noise Hazards

i) Noise associated with the operation of chemical fume hoods, biological safety cabinets, and auto-samplers are generally in the range of 60-75 decibels (dB), which is considered safe by OSHA as documented in 29 CFR 1910.95, Occupational Noise Exposure. However, other equipment that can emit noise at levels greater than the OSHA action level of 85 dB include sonicators, blenders, grinders, homogenizers, compressors, and cage washing units. Therefore, anticipated noise levels should be considered when purchasing these types of equipment.

ii) Noise levels above the action level can also occur in areas where large animals used in research are housed (e.g., pigs, dogs, non-human primates). Additional information on noise levels can be found in OSHA Fact Sheet, Laboratory Safety Noise, available online at: https://www.osha.gov/sites/default/files/publications/OSHA3404laboratory-safety-guidance.pdf and https://www.osha.gov/noise/standards.

iii) Noise levels in research laboratories are usually intermittent and do not typically approach levels near or above PELs. The noise standard and the Hearing Conservation Amendment define the PEL as the noise dose that would result from a continuous 8-hour exposure to a sound level of 90 dB. Duties where workers are known to be exposed to noise levels above the action level will require the use of hearing protection devices (HPDs), including ear plugs, ear muffs, or both when engineering or administrative controls do not effectively reduce the exposure. Noise exposure measurements are reported as time-weighted averages (TWAs), meaning louder noises have a shorter acceptable period of exposure (*see table below*).

OSHA Permissible Noise Exposures									
Duration per Day (Hours)	8.0	6.0	4.0	3.0	2.0	1.5	1.0	0.5	0.25
Sound Level (Decibels)	90	92	95	97	100	102	105	110	115

This table provides the permissible noise exposure, in decibels, for nine periods of continuous exposure, expressed in hours per day. As sound levels increase, permissible exposure periods decrease.

When noise exposures exceed 85 dB or above, a written Hearing Conservation Program (HCP) must be implemented. If excessive noise levels are suspected in your work area, consult the facility IHO (ext. 31-2647) for guidance and assistance.

d) Electrical Hazards

i) The major hazards associated with electricity are electrical shock and fire.

1) Shock occurs when an individual contacts both wires of an electrical circuit, one wire of an energized circuit and the ground, or a part of a piece of equipment that has become energized.
2) Electrical hazards can be reduced by taking reasonable precautions.

ii) Ground safety checks of all electrical outlets in the laboratory are conducted by Facilities Engineering.
iii) If you require more outlets, submit a Maximo report to Facilities Engineering for installation of an additional power outlet.
iv) Never connect multiple power strips together, e.g., daisy-chaining.
v) Do not use equipment with a worn or frayed electrical cord. Visually inspect all electrical equipment and cords before use.
vi) Keep area and hands dry when working around equipment that uses electricity. If liquids are spilled on equipment, shut off power at the main switch or ground fault circuit interrupter (GFCI); then unplug the equipment.
vii) All current leaks (sometimes apparent by a tingling sensation and/or the feeling of being watched) or actual electrical shocks shall be reported so the problem can be rectified. In the event of electrical shock, shut off the electrical power and/or unplug the instrument.
viii) Repairs of electrical equipment by laboratory personnel are prohibited. Any work performed on switches, outlets, circuit boxes, or other electrical equipment shall be referred to Facilities Engineering Service or Biomedical Instrumentation Service.
ix) Three-to-two wire adapters are prohibited from use on all equipment.
x) Never modify a plug by bending or removing the prongs.

1) When plug prongs are bent, loose, or missing replace the device.
2) If the plug prongs break off and remain in the receptacle slots after insertion or withdrawal, do not attempt to remove them. Contact Facilities Engineering Service for assistance.
3) Never unplug equipment by pulling on the cord; always grasp the plug.

xi) Keep power cords off the floor. Excessively long electrical cords are tripping hazards and shall be avoided. Contact Facilities Engineering Service to help solve any power supply problems.
xii) Avoid use of any electrical equipment that has sparking potential near a flammable liquid.
xiii) Refrigerator/freezers shall be kept clear of ice. An over worked compressor may cause heat damage to its power cord and result in potential smoke and fire.
xiv) Facilities Engineering Service is required to provide Research advance notice of any planned electrical shut down of power that affects fume hood exhaust fans, the ventilation system and/or other electrically powered equipment in the laboratory. RED outlets supplying emergency power are to be used for critical laboratory equipment during power outages.

e) Hazards associated with Compressed Gases and Cryogenics are addressed in the Chemical Hygiene Plan.

f) Hazards due to Energized Sources during Equipment Repair or Alteration.
i) All energized sources are required to be “locked and tagged” during equipment repair.
ii) Although Biomedical Instrumentation and Engineering Services perform most equipment repairs, once an item is locked out (as shown below), no one should try to use the item.
iii) If changes are made to equipment by research staff, all energized sources must be locked out while making these changes.

g) Laboratory Equipment Hazards
   i) Autoclaves
      1) The primary hazards of autoclaves are the high heat and steam generated during use. Secondary hazards include potential exposures to infectious agents, contaminated materials, or sharps. Exposure to sharps most often results from handling materials improperly but can be from debris produced by the explosion of improperly filled or sealed liquid containers or equipment failure.
      2) Some steps to protect staff from physical autoclave hazards include:
         a. Fill bags loosely and placing in autoclave-safe plastic or metal trays.
         b. Liquid containers should be no more than half full with loose caps. Tightening the caps increases the risk of the glassware exploding under pressure. Check that glassware is autoclavable before starting cycle.
         c. Use lock out/tag out procedures for autoclaves that are not in safe working order to prevent accidental use while waiting repair.
         d. Wait till the autoclave cycle is complete before opening the door. Be aware that removing glassware from the autoclave shortly after the cycle finishes may cause glass to shatter due to the rapid temperature change.
         e. Allow steam to escape and items to cool before reaching inside and removing items from the autoclave chamber.
         f. Never put solvents, volatile, corrosive chemicals (such as phenol, chloroform, bleach, etc.), or radioactive materials in an autoclave.
      3) Appropriate PPE include laboratory coat, eye protection, closed-toe shoes, and heat resistant gloves.

h) Centrifuges
   i) The hazards of centrifuges are primarily due to the centrifugal energy generated during use.
   ii) Proper operation of a centrifuge relies on balance of the rotor. Balance is achieved by uniform weight of the tubes and proper arrangement within the centrifuge rotor. Operating a centrifuge with unbalanced rotors may result in reduced equipment life, broken tubes, movement of the centrifuge unit, or even disintegration of the rotor.
   iii) If changing out a centrifuge rotor, check that it's the appropriate rotor for that model of centrifuge, and that you will be running the centrifuge within the safe operating parameters of that rotor.
   iv) For safe operation of centrifuges:
      1) The use of and access to high-speed or ultracentrifuges is restricted to authorized persons who are properly trained in operating the equipment in a safe manner.

2) Ensure that the load is balanced (evenly distributed inside the chamber) and does not exceed maximum loads, filling levels, and/or maximum sample density for the equipment.
3) Do not exceed maximum speed for the rotor.
4) Turn the centrifuge off immediately if unusual noises/vibrations occur.
5) **Never** use your hands to slow a spinning rotor.
6) When hazardous materials, such as carcinogens, highly toxic, or infectious agents are placed in a centrifuge, precautions (such as using sealed rotors or sealed rotor cups) must be taken to prevent exposure to aerosols or liquids.

i) Electrophoresis
   i) The presence of high voltage and conductive fluid in electrophoresis equipment can create significant electrical hazards. This equipment can potentially operate at 2000 volts and more than 800 milliamps.
   ii) A leak in the buffer tank can cause a change in flow of electricity and result in a serious shock. A lethal shock can be delivered by standard electrophoresis units operating at 100 volts and 25 milliamps. The following precautions minimize hazards when working with electrophoresis equipment:

      1) Ensuring all power cords and electrical leads are undamaged and properly insulated.
      2) Following the manufacturer's instructions while operating electrophoresis equipment.
      3) Operating equipment away from unintentional grounding points and conductors (e.g., sinks or other water sources, metal plates, jewelry, aluminum foil, pipes, or other electrical/metal equipment).
      4) Never wearing low hanging metal jewelry or an identification card on a metal chain when working around electrophoresis equipment.
      5) Connecting the power supplies to a GFCI protected circuit.
      6) Connecting electrical leads individually with only one dry, gloved hand.
      7) Ensuring that leads are securely connected before operating the equipment.
      8) Using physical barriers (a guard) to prevent accidental contact with energized electrodes or the buffer.
      9) Using gel chamber lids or covers equipped with safety interlocks.
      10) Inspecting equipment to ensure that all switches and indicators are functioning.
      11) Ensuring that power supplies have safety features that detect no-load, overload, sudden load change, short circuit, arc, ground leak, etc.
      12) Turning off power before connecting or disconnecting electrical leads.
      13) Never leaving energized equipment unattended.

j) Heating Equipment
   i) Laboratories may contain one or more heating apparatuses including hot plates, heating mantles, water baths, oil baths, hot-air guns, and/or microwave ovens. It is preferred that research laboratory-grade equipment be purchased because of built-in safety features.
   ii) Hazards associated with heating equipment include burns, electrical shock, and fire.
   iii) Heat-related accidents can be prevented by:

      1) Using heating devices and other electrical equipment away from water sources, including emergency eyewashes.
      2) Ensuring that heating devices have a temperature-limiting controller to prevent overheating.
      3) Posting caution signs near heat sources, e.g., "Caution: High Temperature."

iv) Precautionary steps for safe use of **heating baths** include:

1) Locating equipment on a firm, level surface.
2) Managing power cords to prevent damage and exposure to water.
3) Plugging water baths into GFCI protected outlets.
4) Ensuring that heating temperatures are compatible with the materials being heated.

v) The hazards associated with **microwave ovens** include leakage of nonionizing radiation, rapid changes in temperature and pressure, super heating of liquids, arcing, and boil-over. Precautionary steps to address these hazards include:

1) Making sure the entire unit is clean and working properly.
2) Removing screwcaps from containers while being microwaved.
3) Covering containers with cotton or foam stoppers to maintain sterility and prevent splatters.

7. RADIATION SAFETY

See *SRS-010 Guidelines for Radiation* for information related to radioactive materials. If needed, contact the RSO (ext. 31-2620 or 31-4574) for additional information radiation safety).

8. REFERENCES AND RESOURCES

1) OSHA Laboratory Safety Overview. https://www.osha.gov/laboratories
2) VHA Directive 7701, Comprehensive Occupational Safety and Health Program. December 12, 2022. https://www.va.gov/vhapublications/publications.cfm?Pub=1
3) VHA Handbook 1058.01, Research Compliance Reporting Requirements. October 22, 2020. https://www.va.gov/vhapublications/publications.cfm?Pub=1
4) VHA Handbook 1200.01, Research and Development Committee. January 24, 2019. https://www.va.gov/vhapublications/publications.cfm?Pub=1
5) VHA Handbook 1200.08, Safety of Personnel and Security of Laboratories Involved in VA Research. April 24, 2019. https://www.va.gov/vhapublications/publications.cfm?Pub=1
6) Research Laboratory Safety Guidebook. HEFP, St. Louis, December 4, 2019. http://vaww.hefp.va.gov/guidebooks/research-laboratory-safety-guidebook
7) Title 29 Code of the Federal Register (CFR) Parts 1910.95, 1030, 1200, 1201, 134, 1200, 1450, 1048. https://www.ecfr.gov/current/title-29/subtitle-B/chapter-XVII/part-1910

9. SRS APPROVAL: August 29, 2023

10. RECISSIONS: None

11. FOLLOW-UP RESPONSIBILITY: Subcommittee on Research Safety (SRS)

12. ATTACHMENTS:

Attachment A: Hazard Assessment and Personal

Attachment A – Sample Job Hazard Analysis Form

HAZARD ASSESSMENT AND PERSONAL PROTECTIVE EQUIPMENT SELECTION

POSITION TITLE – ROOM NUMBER(S):	**SERVICE: Research Service**	**LABORATORY PRINCIPAL INVESTIGATOR:**
ANALYSIS CONDUCTED BY: (NAME/TITLE)		**DATE:**
REVIEWED AND APPROVED BY FACILITY SAFETY (NAME/TITLE)		**DATE:**

EVALUATE EACH TASK PERFORMED FOR THE FOLLOWING HAZARDS AND PPE: TYPE OF PROTECTION REQUIRED

ID LETTER	TYPE OF HAZARD	EYE/FACE	HAND	HEAD	FOOT	RESPIRATORY**	ELECTRICAL HAZARDS***
A	Flying Particles	X					
B	Molten Metal*	X	X			X	
C	Liquid Chemicals*	X	X			X	
D	Acids or Caustics*	X	X	X	X	X	
E	Chemical Gases or Vapors*	X				X	
F	Light (Optical Radiation)	X					
G	Falling Objects		X	X	X		
H	Rolling Objects		X		X		
I	Contact With Electrical Conductors***	X	X	X	X		X
J	Punctures/Penetrations		X		X		
K	Extreme Temperatures		X				
L	Thermal Burns		X				
M	Occupational exposure to bloodborne pathogens/infections diseases	X	X			X	
N	Noise			X			

*Refer to applicable Material Safety Data Sheets (SDSs) **Refer to local Respiratory Protection Program ***Refer to Electrical Safe Work Practice Program

LIST OF TASKS PERFORMED	POTENTIAL HAZARDS (IDENTIFY BY LETTER)	TYPE OF PERSONAL PROTECTIVE EQUIPMENT/CONTROL MEASURES

(Continued on next page)

I have read, understand, and agree with the tasks listed above, and I am aware of the appropriate personal protective equipment (PPE) that must be used when performing these tasks. I have been trained in the following elements:

- When PPE is necessary.
- What PPE must be worn.
- How to properly don, doff, adjust, and wear PPE.
- The limitations of the PPE.
- The proper care, maintenance, useful life, and disposal of the PPE.

I have no further questions at this time but understand that I may contact my supervisor or the Safety Officer with additional questions or concerns.

NAME OF PERSON TRAINED	SIGNATURE	DATE