**Hazard Identification and Mitigation:**

Requirement:

*Identify and discuss ALL HIGH hazards associated with the experiment. Use the WERC Lab Hazard Assessment Checklist as a guide (See the reference button). The analysis must consider · all sources of energy (electric, chemical, hydraulics, mechanical, compressed gases), · extreme conditions of pressure or temperature (from flame or steam to cryogenics), · chemical use and storage, · housekeeping, · fire potential · biological hazards · When in doubt about whether something represents a HIGH HAZARD, ask COE Safety for a determination The discussion must include: Description of the HIGH hazard; Operational and engineering controls that will be used (based on identified industry best-practices used in addressing this safety hazard); Required PPE (beyond minimum) when this HIGH hazard is present; and Special training (beyond minimum) that is necessary. Download file from Reference button, fill it, then scan and upload it.*

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| College of Engineering Lab Hazard Assessment | | | |
| Activity | Yes | No | Comments |
| Working with gas under pressure, in gas cylinders or as part of experimental conditions |  | x |  |
| Working with water volume in excess of 1 gallon | x |  | Item: 5 gallon water sample of 20 ppm phosphate provided by NMSU.  Solution: Be prepared with abundance of sorbent pads. |
| Working with corrosive Liquids |  | x |  |
| Working with organic solvents or flammable chemicals |  | x |  |
| Working with acutely toxic , carcinogenic or highly hazardous chemicals |  | x |  |
| Working with air or water reactive chemicals |  | x |  |
| Working with engineered nanomaterials such as carbon nanotubes, silver wire, carbon fiber etc. or other dusts with particle sizes |  | x |  |
| Working with potentially explosive chemicals |  | x |  |
| Working with temperatures 100C |  | x |  |
| Working with radioactive compounds |  | x |  |
| Working with Class 3 or Class 4 Lasers |  | x |  |
| Working with cryogenic materials including dry ice |  | x |  |
| Working with liquids >100C including from sources such as oil bath, water bath, pressure vessel, autoclave etc.) |  | x |  |
| Working with open flames |  | x |  |
| Working with loud equipment (>85 db) |  | x |  |
| Working with a centrifuge |  | x |  |
| Working with a sonicator |  | x |  |
| Working with sharp objects such as needles, knives, razor blades etc. |  | x |  |
| Working with machine hazards such as pinch points, caught by or stuck by dangers etc. |  | x |  |
| Working with electrical hazards such as un-insulated wiring, exposed control panels, wet conditions, etc. |  | x |  |
| Working with electrical voltage in excess of 110V |  | x |  |
| Working with batteries, all types such as lead-acid, nickel-cadmium, lithium etc. |  | x |  |
| Working with high center of gravity hazards such as tall apparatus that requires extra support etc. | x |  | Item: Tall column used as as adsorption filter.  Solution: Properly stabilize column with supports and cone off radius around it. |