

CAPSTONE/SENIOR DESIGN HAZARD ASSESSMENT AND SAFETY PLAN

Project title: Seismic-Magnetic Collocation

Project advisor: Rich Krahenbuhl

Team members: Julia Berglind & Peyton Chandler

Brief project summary:

The USGS has been deploying magnetic variometers at many seismic stations around the United States. The goal of this project would be to use seismic and magnetic data from the variometers and geomagnetic observatories to collocate and help scientists at the Albuquerque Seismological Lab (ASL) develop metrics for quality-control.

Locations where work will take place: Colorado School of Mines, USGS Golden, Boulder Geomagnetic Observatory

Materials list (you can reference other documents): USGS Provided

Personal Protective Equipment list: Vest, safety goggles, hard hat, gloves

List of the things that might go wrong: Installation risks including electric shock, short circuits, electrostatic discharge, electronic overheating, uneven terrain, weather exposure, wildlife, pinch points, lifting injuries, etc.

General Safety (a checklist)

Emergency contact card at room entrance	Yes	
First aid kit?	Yes	
Work areas clean, orderly, and uncluttered?	Yes	
Surfaces dry, slip resistant materials? Walkways clear?	Yes	
Phone?	Yes	
Fire Extinguisher?	Yes	
Lighting? Activated by occupancy sensors, and can the sensors see across the room?	N/A	
Handwashing sink?	N/A	
Eating/drinking prohibited?	N/A	
Nearest Eyewash/drench showers? Is an eyewash necessary?	N/A	
Fire protection, are there smoke detectors in the space that may be activated by dust generation?	N/A	
Need a designated hot work area? What kind of hot work will be performed? Grinding, torch (soldering irons do not necessitate Hot Work process),	N/A	
Have combustibles near spark producing equipment been removed?	N/A	
Portable ladders, fixed ladders, rolling stairs, scaffolds, lift trucks in good condition?	N/A	
I have someone working with me	Yes	

Possible Sources of Harm		
Hazard	Present?	Control method
Dust generated?	No	
Paint vapors and spray?	No	
Fumes from 3D printers	No	
Soldering fumes?	No	
Electrical cords – trip hazards, water hazards	Yes	Ground fault interrupter, cable management
Frayed cords?	No	
Power tools	No	
Sharp objects	No	
Rotating machinery	No	
Glassware, slippery when washing	No	
Tight spaces	No	
Falling/rolling objects (= foot injuries)	No	
Hand injuries	Yes	Gloves
Noise	No	

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