Safety Inspection Checklist

Month_____20____ **Date Revised Jan. 4, 2006** **Revision Number: 11**

Inspection Date												
Unit Operations Area												
Safety Equipment												
HF-54 and HF-2 is on, switch by door to B003												
Evacuation routes posted												
All exits and fire doors clearly marked and unobstructed												
Check inventory of spill kit supplies												
Telephones accessible and labeled with emergency numbers												
Eyewash and Safety Showers												
Clearly marked and unobstructed												
Eyewash inspection up to date with tag												
Safety shower inspection up to date with tag												
Water continued to flow when handle was released												
Eyewash flushed out unitl water is clear												
Safety shower flushed out until water is clear												
First Aid												
Adequate supplies stocked												
Clearly marked and unobstructed												
Fire Extinguishers												
Clearly marked and unobstructed												
Inspection up to date with tag												
Correct extinguisher for hazards present												
Personal Protective Equipment												
Non-porous, ankle-high safety boots worn												
Long pants worn												
No loose clothing, hair, or jewelry												
Appropriate eye wear and properly marked												
Safety goggles worn when handling hazardous chemicals												
Hard hat worn in designated areas												
Earplugs available												
Appropriate gloves worn and available												
Dust masks available												
Electrical												
Extension cords away from traffic and water												
3-pronged plugs on cords with ground												
Cords without frays or splices												
Make sure the overhead crane is locked and tagged.												
Chemicals												
Stored in the proper cabinet												
Clearly and properly labeled												
Storage cabinets labeled clearly												
Transported properly												
Housekeeping												
Counters and floors clean and uncluttered												
Ladders in good condition and chained when not in use												
Cylinders labeled, upright, and secure												
Waste containers provided and labeled												
Make sure drain plugs are present												
Drain is accessible												

Inspection Date												
Individual Experiments												
Batch filtration												
Agitator locked out when adding slurry to the tank												
Mercury manometer is used												
All valves in proper position when flushing out lines												
Bioprocess Experiments												
All handling of microorganism in hood (besides transfer)												
Proper sanitation												
Proper disposal of waste materials and biohazard bags												
Proper handling of sodium hydroxide												
Cylinders labeled, upright, and secure												
Continuous Stirred Tank Reactors												
Cart wheels are kept blocked												
Agitator immersed in solution when starting and stopping												
Valves closed when starting reaction												
Cooling Tower												
Use ladders safely while taking air flow measurements												
Use care when using electrical equipment around water												
Fixed Bed Reactor												
Guards are in place												
Impeller is submersed												
Product discharge line is extended into sink												
Max. temp is 65C												
Flow Measurement												
Mercury manometer is used												
Pump guards properly secured												
Vent and drain lines before changing orifice												
Fluidization												
Dusk mask worn when screening sand												
Ear plugs worn when using Ro-Tap												
Slowly open valve on air supply												
Fuel Cell												
Fume hood is working												
High pressure gas cylinders are secured properly												
Gas lines are leak tested												
Regulator is at or below 40 psig												
Heat Transfer -- Shell & Tube and Single Pass												
Insulated gloves worn when operating steam valves												
Be sure condensate hoses extend into the drain												
Open steam valves slowly												
Clean up water spills immediately												
Liquid-Liquid Extraction												
Protective gloves, apron, and goggles worn to handle glacial acetic acid												
Kerosene samples poured back into kerosene barrel after use												
Kerosene pump guard in place												
Sampling valves closed after samples taken												
Stay clear of steam traps and uninsulated surfaces												

Month_____20____

Inspection Date												
Membrane Separation												
Hazards of enriched N2 and O2 are understood												
Air outlet valve is left open while running membrane unit												
non-Newtonian Flow												
Capillary viscometer pressure no greater than 20 psig												
Tanks not overfilled												
PDMS Bench-Scale Reactor												
Goggles, rubber apron, and rubber gloves used to handle KOH												
Pipes and hoses are in good condition and connections are tight												
System inerted with nitrogen at all times												
Experiment run in the hood												
Main gas cylinder valve fully open												
Glassware and thermometer transferred in proper container												
PDMS Jacketed Reactor												
Goggles, rubber apron, and rubber gloves used to handle KOH												
Appropriate container used to weigh and transfer EB, 245 fluid, and low boilers												
Pipes and hoses are in good condition and connections are tight												
System inerted with nitrogen at all times												
Glassware and thermometer transferred in proper container												
Face shield, apron, and gloves worn when adding chemicals to reactor												
Polymer Extrusion												
Insulated gloves worn when needed												
Heat Shield is on Extruder												
Long sleeves are worn												
Floor is free of water, pellets, & debris												
Proper tools used for scraping polymer												
Pumping Part A												
Pump guards are in place and properly secured												
Tanks are not overfilled												
Water spills cleaned up immediately												
Pumping Part B												
Pump guards are in place and properly secured												
Tanks are not overfilled												
Water spills cleaned up immediately												
Power supply is and pump start-up/shut-down is executed properly												
RSST												
Specific chemical hazards are known												
Hood fan is operating and blast gate is open												
Insulated gloves used to handle internal vessel												
Operating pressure kept below 325 psig												
Face shield worn when handling hazardous chemicals												
Rupture disk discharge should be toward back of hood												
Solvent Recovery												
Gloves to be worn during sampling												
System inerted with nitrogen at all times												
Take precautions during sampling (i.e. dripping after sampling)												
All manual valves are in correct position												
Vacuum Drying												
Vacuum pump guard properly secured												
Insulated gloves used to operate steam valves												
Dusk mask worn when screening sand												
Ear plugs worn when using Ro-Tap												