

Environmental Health & Safety

New Mexico State University

MSC 3578, Box 30001

Las Cruces, NM 88003-8001

**NMSU EXPERIMENT SAFETY PLAN - PRIOR APPROVAL FORM**

**HAZARDOUS OPERATIONS SAFETY REVIEW**

**Note: This is a fillable form, please tab through to each question for fillable field. The field will expand to the space needed.**

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| Submitted by: | Building: |
| Department: | Lab/Room Number: |
| Department Leader’s Name: | |

**GENERAL DESCRIPTION OF EXPERIMENT** (Please include a training record for all primary researchers)

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| 1. Description of procedure and potential hazards involved: | | | | | |
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| 1. Hazardous Chemicals/Material Involved (participants must have appropriate training for material): | | | | | |
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| Can less hazardous or non-hazardous chemicals be substituted? Yes No | | | | | |
| **ACTIONS TO ENSURE SAFE OPERATION** | | | | | |
| 1. List all MSDS’s that have been acquired, reviewed and understood: | | | | | |
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| 1. List personal protective equipment needed for experiment: | | | | | |
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| 1. List specific operational items (good safety practices): | | | | | |
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| 1. List engineering controls in use for experiments: | | | | | |
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| **SAFETY PROCEDURES REVIEWED/APPROVED BY** | | | | | |
| \*1 Employee/Student Signature: |  | Title: |  | Date: |  |
| \*1 Advisor or Dept. Head Signature: |  | Title: |  | Date: |  |
| Optional \*2 EH&S Reviewer Signature: |  | Title: |  | Date: |  |
| Key: \*1 Signatures required for all reviews; \*2 EH&S signature required for high hazard experiment – see page 2 | | | | | |

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| **Experiment Safety Plan Attachments** |
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| **Attachment 1: Experiment Scope**  Provide a concise description of the laboratory experiment to be undertaken. Explain why the work is being performed, the goal(s) of the experimental program, the stoichiometry of any chemical reactions and their heat of reactions, and a list of all chemicals to be used in the work.  **Attachment 2: Drawing of the laboratory or pilot area**  Provide a detailed drawing of the laboratory or pilot area in which the work will be performed. Include locations of the experimental equipment, safety equipment (including eyewash stations and safety showers, fire extinguishers, first aid kids, and telephones, also noting the dates of last inspection where relevant), MSDS compilation, chemical storage, and evacuation route.  **Attachment 3: Normal Operations, Startup and Shutdown Procedures**  Provide a step-wise procedure that describes in detail how the work will be performed. The procedure should begin and end assuming the equipment is in the normal idle (inoperative) state.  **Attachment 4: Emergency shutdown procedure and medical emergency instructions**  Provide a step-wise procedure that describes how the equipment will be brought to a safe state in the event of an emergency. The description should also include a detailed explanation of how to attend to potential medical emergencies that may result. Address any hazardous states identified in Attachment 6 in this discussion that may be brought about by such an emergency.  **Attachment 5: Waste Management Procedure**  Prepare a Waste Management Procedure that provides the exact nature and volumes of all wastes to be generated in performing these experiments. The disposal of high hazard substances may require approval of the EH&S Assistant Director of EH&S – Hazardous Waste (if uncertain call 646-3327). Attach a copy of this approval to the ESP. Waste Tracking Forms should be obtained before beginning any experimental work.  **Attachment 6: Hazard Identification and Mitigation**  Using the table below, identify ALL of the hazards associated with the experiment and work area. The analysis should include all sources of energy (electric, chemical, hydraulics, mechanical, compressed gases), extreme conditions of pressure or temperature (from flame or steam to cryogenics), chemical storage, housekeeping, fire, and/or biological hazards. Designate the HIGH HAZARDS and include descriptions of appropriate PPE, researcher training, and engineering controls to be used to mitigate these hazards. A listing of PPE for different chemical, physical and other hazards is provided on the EH&S website.  High Hazards include substances that are highly reactive, radioactive, class 3B laser, highly flammable, highly toxic, mutagenic, teratogenic, carcinogenic, and substances with very low exposure limits. When in doubt about whether a substance represents a HIGH HAZARD, ask the CHO. A listing of PPE for different chemical, physical and other hazards is provided on the EH&S website under programs at<https://safety.nmsu.edu/lab-safety/chem-safety/lab-personnel-protective-equipment/>.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Hazard Description** |  | **Safety Measure(s) To Be Taken** | | |  | | **Hazard Type** | **High Hazard**  **Yes or No** | **Operational – List Good Safety Practices** | **List Engineering Controls** | **List PPE** | **List Special Training** | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |  |  |  |  |  |  | |

**Note: For additional lines, add separate piece of paper.**

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**Attachment 7: Safety Data Sheets for all chemicals used/generated in experiment**

**Attachment 8: Researcher Training [attach a training record for each researcher]**

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| **Training Record Form**  (Please fill out a form for each person involved in experiment)  **Note:** Not all training listed may be required, please consult with EH&S to determine training needs. | | | |
| **A. Name:** | **Title** (e.g. research technician, post-doc, graduate student, undergraduate, visiting scientist): | | |
| **TRAINING RECEIVED** | **DATE** | **TRAINING RECEIVED** | **DATE** |
| Yes Employee Safety |  | Yes Respirator Training and Fit Testing |  |
| Yes Hazard Communication |  | Yes Basic Radiation Safety |  |
| Yes Laboratory Standard |  | Yes Emergency Action Plan |  |
| Yes Hazardous Waste Management |  |  |  |
| Yes Bloodborne Pathogen Class |  |  |  |
| Yes Biosafety |  |  |  |
| Yes Other (explain) | | | |
| *Please refer to the EH&S web site for information on classes* | | | |
| **B. Experience:** Describe in narrative form the qualifications of personnel, by documenting the experience each individual has with respect to hazardous activities and the materials listed. Include the number of years of experience and the capacity in which this experience was gained. The PI should include a ***statement*** that he/she will bear direct responsibility for the training of all personnel and will ensure that every safety guideline is followed.  The PI may include this ***statement*** by checking: Yes | | | |
| **Qualifications of Personnel:** | | | |

ADDITIONAL INFORMATION: