



Hazardous Substance Emergency Response Plan

Risk Management & Safety Department

I. Introduction

UNLV has over 300 laboratories and numerous industrial maintenance facilities that use Hazardous Substances (HS). In addition, there is fuel storage at over 30 locations, natural gas boilers, campus roadways on which hazardous materials are carried and a system of storm sewers that could be affected by a release of HS. The labs and facilities are located on the main campus at 4505 Maryland Parkway, and the Shadow Lane Campus at the intersection of Charleston Boulevard and Shadow Lane. The Risk Management and Safety Department, within the Office of the Vice President for Finance and Business, is required to respond to hazardous material emergencies on both campuses. RMS emergency response does not include physical response to Sam Boyd Stadium or Nevada State College, however, this plan outlines the general responsibilities which should be followed at those locations for response activities and coordination. This plan addresses response to HS as defined in the U.S. Comprehensive Response, Compensation and Liability Act (CERCLA, also known as Superfund) and adopted by state and local statutes and ordinances. Also included are Hazardous Materials (HM) identified in the National Fire Protection Administration (NFPA) and the Clark County Fire Code as well as Hazardous Wastes (HW) as defined in the Resource Conservation and Recovery Act (RCRA) and HM as defined in the Hazardous Materials and Transportation Security Act.

II. Applicability

This plan is applicable to UNLV Academic and Research Departments, other organizational entities and facilities located on the main campus of UNLV, the Shadow Lane Campus, Sam Boyd Stadium, or any other UNLV location, department or facility or individual, including students, faculty or staff, in any department, that uses, stores or ships HS, HW or HM.

III. Purpose

The primary purpose of this emergency response plan is to ensure that processes are in place to reduce risks and consequences resulting from the inadvertent or intentional release of HS as a result of a laboratory accident, transportation incident or intentional criminal act or misuse. It is the intent of the plan to identify HS on the campus(es) and to analyze the potential for release at certain locations to enable better planning for emergencies and to facilitate a more efficient emergency response action.



IV. Responsibilities

The following have been identified as Emergency Responsibilities in policies and procedures developed by each UNLV department:

A. UNLV Police Services

- Notify RMS of any incident involving a release of HS at or from any building identified in Appendix D, and any incident that would require RMS personnel resources on an emergency basis.
- Establish Incident Command System (ICS) components for incidents until other ICS responsibilities, (e.g. Clark County Fire Department, CCFD) are identified.
- Coordinate security including the facilitation and coordination for the establishment of a perimeter at release sites or other emergency incidents.
- Coordinate resources to conduct necessary evacuations that are not already carried out. Police will not enter hazardous areas and will coordinate activities of responders, including building proctors and others involved in evacuation activities.
- Will seek advice on technical aspects of hazardous substances, including public protective actions, from RMS.

B. Hazardous Substance Emergency Coordinator (HSEC)

- The HSEC will provide support to the Incident Commander (IC) upon arrival at the scene of an incident.
- The HSEC will direct the HS activities of qualified HS emergency response personnel who formally agree to respond to emergencies as part of their official UNLV duties. Such staff will henceforth be called Qualified Emergency Responders (QERs).
- The HSEC will provide timely reporting to the IC.
- The HSEC will consult with other safety or HS professionals on scene, including faculty who may have expertise in specific substances, and Occupational Safety experts who may respond
- The HSEC for UNLV is:

Gary B. Snodgrass, Manager, Environmental Health and Laboratory Safety
Risk Management and Safety Department, Emergency Cell phone number 702-
278-3011 Office CSB 119, Office Phone 702-895-0463



C. Risk Management and Safety Department

- Will identify a qualified manager as the HSEC
- Will notify the Police Services, the help desk and the Provost with specific response information and plans
- Will notify the Purchasing department immediately if there are any plans to enlist a cleanup contractor or analytical lab.
- Will identify and train personnel who formally agree to emergency response as part of their official duties, to respond to emergencies. Such personnel are identified in section IV.B as QERs.
- Provide radios to QERs for emergency communications and an emergency cell phone for the EMLS group
- Procure adequate safety and response equipment to ensure basic capability to respond to hazardous substance spills safely and to mitigate the effects of releases
- Develop and procure the capability to perform characterization of unknown hazardous substances at release sites

D. Academic and Research Departments

- Notify RMS and Police Services of any release or other incident involving HS.
- Departments who use, store or transport HS will procure and store adequate response material for, at a minimum, a release from the largest single container of HS, and other equipment deemed necessary to mitigate extraordinary emergency situations
- In the event of a release, ensure that all non emergency personnel leave the area immediately
- Ensure that all personnel that work with HS receive adequate, required training from RMS

E. Facilities Maintenance and Student Life Departments

- Facilities Maintenance and Student Life organizations who use, store or transport HS will procure and store adequate response material for, at a minimum, a release from the largest single container of HS, and other equipment deemed necessary to mitigate extraordinary emergency situations



- In the event of a release, ensure that all non emergency personnel leave the area immediately
- Ensure that all personnel that work with HS receive adequate, required training from RMS

V. Emergency Planning

1. Campus Layout and Programs

The main campus is bordered by Maryland Parkway on the east, Flamingo Boulevard on the North, Swenson Boulevard on the West and Tropicana Avenue on the south. (see map, Appendix A).

A. Hazardous Materials Locations and Facilities

There are several buildings and industrial facilities with the large concentrations of HS, including HW and HM, posing the highest risks and forming the prioritized basis of HS emergency response. UNLV has over 300 laboratories and more than 20 industrial facilities. Hazardous materials are used, stored and shipped to or from these laboratories and facilities to accomplish required daily operations. Materials include acids, bases, organic solvents, poisons, infectious materials and virtually all the classes identified in numerous laws, regulations and codes. Specific lists of chemicals, by building and class can be accessed by entering the UNLV RMS website at <http://rms.unlv.edu/>. Storage of HS takes place mostly where there is significant work being conducted with the materials. All locations discussed below generally work with acids, bases and compressed gasses. The following are locations where there is HS work or storage:

Main Campus (See map Appendix A)

Chemistry Building (CHE, Map Building 64) – located in the central area of main campus, the Chemistry building receives, stores, uses and ships HS. HS is located on all floors with the largest quantities in the chemistry storeroom on the main floor. Shipping takes place to

the storeroom with additional movement from the storeroom to the various labs.

Life Sciences Building (Juanita Greer White Life Sciences (WHI), Map Building 63) – located in the central area of the main campus, the life sciences building includes the Biology Department. HS including



Biohazardous Materials, are received, stored, used and shipped to this building. The HS includes infectious substances, such as pathogens and toxins. There are no select agents worked with or shipped to or from this building or anywhere else on any of the UNLV campuses.

Robert Bigelow Physics Building (BPB, Map Building 66) – centrally located on the main campus this building houses the Physics Department and Material Sciences. The Physics Department works with and stores HS including toxic metals, flammable solids, and very small (a few grams) quantities of explosives.

Thomas Beam Engineering Building (TBE, Map Building 59) - centrally located on the main campus, this building houses the Howard Hughes College of Engineering. There is a moderate amount of HS used and stored in the building.

Facilities and Maintenance Buildings (Map Between Buildings 40 and 41) - The buildings and facilities in this group are located mainly in the Facilities Maintenance area centrally located on the main campus. Use of HS is mainly garden chemicals, solvents and fuels. There is gasoline storage in several locations within this area, including 7000 gallons of fuel in underground tanks.

Bigelow Health Sciences (BHS, Map Building 50) – The school of Health Sciences works with and stores HS, including biohazardous and infectious substances.

Lily Fong Geosciences (LFG, Map Building 71) – The Lily Fong Geoscience program works with, stores and ships a small amount of chemicals for soil studies.

Student Recreation and Wellness Center (RWC, Map Building 4) – The Student Health Center within this building collects and receives human specimens, which include: excreta, blood, tissue, tissue swabs, specimens in transport media, and culture media. The Student Recreation Center within this building receives and stores chemicals for the RWC swimming pool.

Harry Reid Center (HRC, Map Building 34) – The Harry Reid Center does a considerable amount of chemistry, biology and radioactive material work. There is occasional transportation of HS, mainly to the building.



Shipping and Receiving (Map, Rear of Building 41) - Ships and receives the majority of HS on the main campus.

90 Day Hazardous Waste (HW) Accumulation Area (Map, between Buildings 37 and 42) – Substantial quantities of HS mainly hazardous waste (HW) is stored at this facility, known as the Hazpad. Shipments leave from the subject area approximately every quarter, not exceeding 90 days.

Radiation Protection Laboratory (RPL) (Map, Building 69) – The RPL uses HS, mostly radioactive HS. The materials are received, stored, and used in experiments..

Shadow Lane Campus

The Shadow Lane Campus (SLC, see map Appendix B) is located in Las Vegas, Nevada, at the intersection of Charleston Boulevard and Shadow Lane. The SLC has 4 buildings (A,B, C, D) as follows: A - Dental School; B – Biotech Research; C – Campus Services; and D – Advanced Dental Education. HS is used, stored and shipped to and from this area. Use, storage and transportation of biohazardous materials is to and from the Biotech Research facility and laboratories. There are small quantities of chemicals used and stored at SL Campus Services including reagent chemicals for science programs and industrial cleaning supplies.

B. Risks and Vulnerabilities

The risk of an incident on the campuses is largely dictated by the location and movement of HS, mainly reagent chemicals. The analysis of risks takes into account the probability of theft or misuse of HS as well as the probability of an accident or inadvertent release. The following are most probable scenarios leading to a release and the need for emergency response. The largest percentage of HS use is in Chemistry Building research labs followed by experiments in teaching labs.

- The inadvertent release of HS is most likely to occur in a classroom by a student, because students do not have the level of experience and training in chemical safety that is evident in researchers and faculty.



- Inadvertent spills are most likely to occur in the Chemistry building, considering the quantity and types of chemicals present.
- The next most probable incident would be at any of a number of labs on campus where chemicals are used, including the Physics building, Engineering Department, Geology Department and Life Sciences. All those departments are identified in the Hazardous Materials Locations section of this report.
- The risk scenarios for those locations are similar to the risk scenarios at the Chemistry Department.
- The risk of a non-life threatening release is determined to be release of oil or other petroleum from a vehicle accident, equipment hitting a tank or the breaking of a hose connection on a motorized vehicle.

VI. Emergency Response

A. Emergency Notifications

All departments must ensure that they notify Police Services immediately, at 895-3668 if an incident or release is beyond the capability of their department, or if the release may impact public health or the health and safety of students or others in the immediate area of the lab or facility. Police Services will immediately notify RMS of the incident. If an incident involving HS is not a health threat but may have regulatory requirements regarding cleanup or waste disposal, RMS must be notified immediately at 895-4226.

B. Initial Response Actions and Assessment

1. Evacuations
 - a. Evacuations will be coordinated by Police Services.
 - b. When police arrive and determine that there is danger to the public in a building or enclosed area, they will immediately coordinate an evacuation using available personnel to assist, including building proctors, RMS or other qualified personnel.
 - c. If any person in charge of a lab or work area has knowledge that there has been a release of a substance that may be harmful to staff, students, or the general public in a building or enclosed area he/she should immediately ask all persons to leave the building with the exception of those trained personnel who have responsibilities under this plan.
2. Police Services will facilitate the establishment of a perimeter, cordoning the area of concern. The area could be a whole building, an area within a building



or an area outside. Police Services will make notifications to ensure that the appropriate organizations respond to stabilize the emergency. For HS incidents Police Services may notify CCFD.

3. After making notifications, the UNLV academic department or other UNLV organization that experiences the release should immediately direct all non-emergency personnel, including students, faculty or staff to leave the area, regardless of the perceived severity of the release. This will enable the emergency personnel to better assess the incident and keep people from traversing the area, avoiding the spread of potential contamination.
4. If the incident is severe, potentially impacting public health, CCFD will be notified. If a release is potentially life threatening, all UNLV personnel will stay out of the incident area until after the CCFD has stabilized the release and clears the area for entry. After CCFD makes the decision to allow entry, RMS will enter to assess damage, determine requirements for cleanup, and examine the quantity of hazardous waste that has been generated or that may be generated in cleanup or to assess other requirements, such as the need for a cleanup contract.

C. Mitigative Actions

1. For significantly health threatening releases of HS, CCFD will be notified and will be in charge of mitigative actions. CCFD will take action to stabilize the incident, such as shutting off valves, opening vents, and shutting off electricity. After the health threat is stabilized, RMS will complete actions not taken by CCFD, such as spreading sorbent, repackaging broken bottles, labeling waste containers from the repackaging, and in some instances neutralizing acids or bases.
2. For lesser releases, RMS will respond, stabilize the release and conduct such actions as: use sorbent, clean up broken containers, and attempt to identify unknown chemicals or mixtures using the RMS Fourier Transform Infra Red (FTIR) portable spectrometer.
3. For small waste quantities, on the order of 50 gallons of waste, RMS will package wastes in appropriate containers, label according to EPA waste codes and place in the UNLV approved 90 Day Hazardous Waste Accumulation Area on the main campus. For wastes quantities greater than 50 gallons, RMS will evaluate the need for a cleanup contractor and contract for emergency waste disposal.
4. For major releases with major emergency actions and cleanup requirements RMS will evaluate the need for a cleanup contractor to respond, conduct cleanup and disposal. RMS will develop a draft emergency cleanup contract that may be used to for rapid contracting requirements.



D. Emergency Response Team Readiness and Training for Dangerous Atmospheres

1. Until fully equipped and trained for incidents involving the release of a HS resulting in a dangerous atmosphere, RMS policy will be to not enter the area until stabilized by first responder, usually CCFD.
2. In June 2008 RMS began the refurbishment and testing of its Self Contained Breathing Apparatus (SCBA) and Fully Encapsulating Suits for response to dangerous atmospheres. The testing was completed and EMLS personnel are now were able to start training described below.
3. In September 2008, RMS started a departmental training program in the donning and use of fully encapsulating chemical suits and SCBA for use in dangerous atmospheres.
4. With the completion of the equipment testing, refurbishment and training, RMS personnel, who are in agreement, with the exception of one person who needs an SCBA mask, are able respond to emergencies in dangerous atmospheres.
5. Personnel who are trained and authorized to respond to dangerous atmospheres will only do so for life saving and not for mitigation purposes.

VII. Emergency Capabilities

A. Personnel Qualifications

1. All RMS emergency personnel will be trained in the disciplines appropriate for response to specific HS, e.g., hazardous chemicals, biohazardous materials and hazardous wastes. Training will include appropriate safety training.
2. RMS will initially have two Chemists for chemical incident response, one Biologist for biohazardous substance response, and one hazardous waste technician for hazardous waste response activities associated with spill cleanup.
3. Training and enlistment of additional RMS personnel will begin immediately upon approval of this plan.
4. The RMS goal for 2008 is to have 5 personnel trained and agreeable to respond to all types of emergencies. Four of those personnel will be trained and are agreeable to responding to a life threatening situation as described in section VI.D.5 of this plan. Those personnel are:

Gary B. Snodgrass
Robert Deaver, RMS

RMSGeorge Fratus RMS Bryan Necessary



Other member members that are agreeable, will be trained in early calendar year 2009.

B. Communications

1. Radios will be kept in the office of each response staff member, charged and available for response at all times. Radios will be taken to all emergencies by RMS personnel.
2. The EMLS cell phone will be kept in the office of the EMLS Manager forwarded to his private cell phone. If the Manager is out of the office or out of town, the cell phone will be passed to the Chemical Hygiene Officer (CHO). If the CHO is not available the phone will be passed to the BioSafety Officer (BSO). If the BSO is out of the office or out of town, the cell phone will be passed to the Hazardous Materials Safety Technician. There must be at least two emergency response team members in town and/or available for emergency response at all times. The EMLS manager is responsible to ensure that qualified emergency response people are available for Hazardous Substance emergencies at all times, including weekends and nights.

C. Training

1. All HS Emergency Response Personnel are required to have 40-hour Hazwoper Training prior to approval to participate in HS emergency response.
2. All HS Emergency Response Personnel must complete the following training for specific HS response: Biosafety Training; Radiation Safety Awareness; Bloodborne Pathogen Training.
3. Within one year of approval for emergency response, emergency personnel must complete CPR Training and First Aid Training.
4. Mitigation Training will be provided as possible depending on budget.
5. RMS will conduct monthly Safety training for emergency responders, to include SCBA use and other PPE use as well as a review of procedures.

D. Exercises

RMS will hold campus exercises for the emergency response team on a regular basis. EMLS will also conduct Table Tops exercises will also be held periodically as needed.

E. Equipment



1. Personnel Protective Equipment (PPE)

RMS will store the bulk of PPE supplies at the Hazpad. A ready supply for immediate response will be kept by each emergency response staff member in the offices at the Campus Services Building, room 119. The ready supply will include, gloves, level B suits, and SCBA (after August 1, 2008). Backup supplies of gloves and level B suits will be kept in the Red Response Van in the parking lot of the CSB.

2. Monitoring and Sampling Equipment

- a. The basic tool for determining qualitative relative concentrations of volatile organics is the photoionization detector which will be kept in the RMS offices, CSB room 119.
- b. The Fourier Transform Infra Red (FTIR) spectrometer will be used on some occasions for determining unknowns. The FTIR will be kept at the Hazpad adjoining shed.
- c. Other monitoring equipment will be stored near the RMS Training Office in the CSB room 119.

3. Mitigation Equipment

- a. Primary response sorbent material will be kept in the response truck in the parking lot of the CSB.
- b. Shovels and other tools will be stored in the response truck.
- c. Sorbent material should be purchased and stored in strategic locations by the Student Life Maintenance and Facilities Maintenance Services Departments. Locations should be determined by those departments and provided to RMS as soon as possible after approval of this plan.

4. Decontamination Equipment and Operations

- a. At this time there is no decontamination equipment in the RMS inventory.
- b. All decontamination at an incident location anywhere on campus will be accomplished with safety showers and eyewashes, where available, within each lab location.



- c. All buildings and facilities managed by the Student Life Facilities and Facilities and Maintenance Services departments should identify sources for water and soap in areas where hazardous materials are stored.

VI. Revisions, Distribution and Effective Dates

A. Revisions

Revisions to this plan will be accomplished when:

- The Plan Fails to Provide the Required Level of Security
- When Regulatory Requirements Change Resulting in New or Obsolete Requirements
- When Policy at UNLV Change Regarding Security or Management of HS

RMS will be responsible for maintaining and updating the plan and for distribution. Copies will be provided to and maintained by departments having responsibilities in use, storage or transportation of HS. The Plan is effective from the last date of signature on the approval page until the next revision.



Appendix A

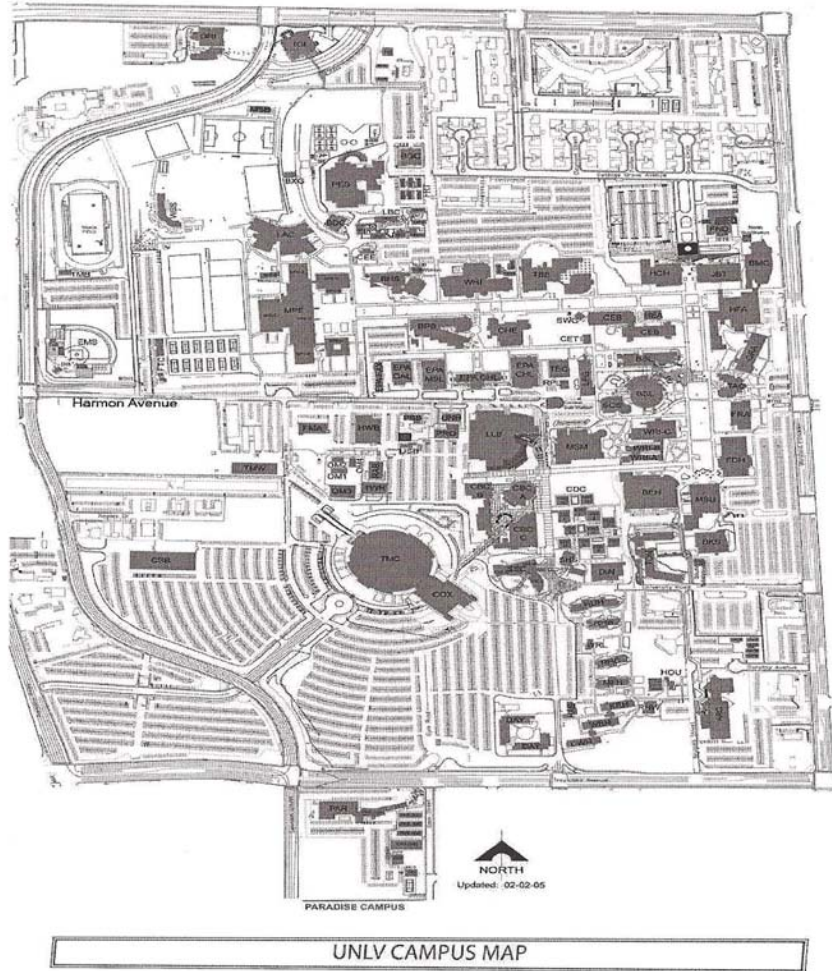
Homeland Security Planning Criteria

The following are emergency response planning and response criteria established under the National Response Plan. Each criterion is addressed in this plan and is identified in parenthesis.

- Criterion 1: Identification of Facilities (V.1.A)**
- Criterion 2: Response Methods Response (VI.B, C and D)**
- Criterion 3: Emergency Management Coordinator Information (IV.B)**
- Criterion 4: Notification Procedures (VI.A)**
- Criterion 5: Release Event Responsibilities (IV)**
- Criterion 6: Emergency Equipment (VII.E)**
- Criterion 7: Evacuation Plans Evacuation (VI.B.1)**
- Criterion 8: Training Programs (VII.C)**
- Criterion 9: Exercise Programs (VII.D)**

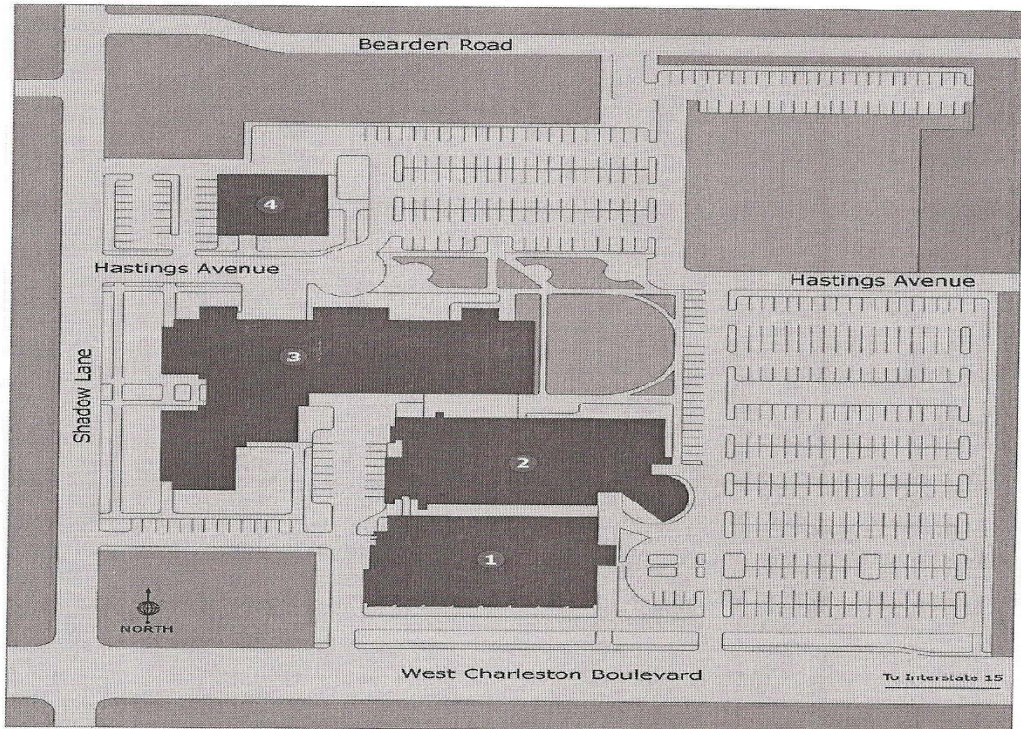
Appendix B

Appendix A - Map of UNLV and Surrounding Area



Appendix C

Appendix B Shadow Lane Campus



BUILDING NAME	ABBREV.	NUM.
Advanced Dental Education Building	SLC-D	1
Biotech Research, Shadow Lane	SLC-B	3
Campus Services Building, Shadow Lane	SLC-C	4
Dental School, Shadow Lane	SLC-A	2


Shadow Lane Campus
2D Parking Map
 1001 Shadow Lane
 Las Vegas, NV 89106
<http://maps.unlv.edu/>