SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

University of Nevada, Las Vegas

4505 South Maryland Parkway
Las Vegas, Nevada 89154

June 22, 2008
Revised August 22, 2008

Prepared by
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Boulder City, Nevada, 89005

Version 1.0, 6/22/2008

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LIST OF ACRONYMS AND ABBREVIATIONS

AST	Aboveground Storage Tank
EPA	U.S. Environmental Protection Agency
NDEP	Nevada Division of Environmental Protection
NPDES	National Pollutant Discharge Elimination System
PE	Professional Engineer
POTW	Publicly Owned Treatment Works
SPCC	Spill Prevention, Control, and Countermeasure
STI	Steel Tank Institute
UST	Underground Storage Tank

Implementation of the SPCC Plan

UNLV has prepared this SPCC plan pursuant to the requirements in the Code of Federal Regulations Title 40 (CFR 40) part 112 with the intent to quickly implement actions directly related to facility spill prevention. To comply with the Part 112 requirements, UNLV contracted for the preparation of the plan which was signed by a Nevada Registered Professional Engineer. Although certain parts of this plan are not followed strictly according to the recommendations of the PE, UNLV is in compliance with part 40 CFR part 112.7 (a)(2) deviating from the plan only by providing equivalent environmental protection measures.

The following are sections of the plan for which we will provide equivalent environmental protection:

Page 14: The plan proposes an oil/water separator to be placed upstream of the Maryland Parkway Storm Water Sewer Intercept. This oil/water separator was recommended for the purpose of capturing overflow from an overfill incident from the 2000 gallon diesel tank at the rear (southwest corner) of the Lied Library. Alternatively, we propose to build augmented secondary containment under the Lied Library tank to capture 1 ¼ the volume of the tank, i.e. 2500 gallons. The tank is already double lined, providing secondary containment from a rupture; the additional containment will provide protection from an overfill incident.

Page 18: The plan is unclear as to the exact location proposed for the rollover berm. The plan, as prepared, is not clear as to the best method for capturing spilled petroleum from the gas station and the mobile tanks at the Operations and Maintenance (OM) yard. As an alternative to the rollover berm, individual containment devices are proposed for individual mobile tanks (portable generators) and a permanent structure to capture a fuelling overflow spill from two underground tanks at the gas station.

Pages 19 & 20: Inspections - We recommend an inspection protocol be be prepared between RMS and the other organizations Facilities Maintenance Services , Student Life Services, and Thomas & Mack Maintenance Services will be responsible to conduct monthly and annual inspections. For tanks that are integral to building generators, the monthly visual inspection can be conducted with the monthly generator test adding a column or section to the generator inspection comments regarding the piping, valves and tanks and their condition. RMS will periodically inspect the documentation at those locations to ensure inspections are up to date. For other tanks, e.g. the 2000 gallon tank behind Lied Library and other tanks in various maintenance buildings, a sign off sheet next to the tank, protected by a plastic holder or binder, will be prepared for the inspections. The inspections are expected to take no more than five minutes per tank. The

inspection must include a visual inspection of diked areas, berms or other secondary containment at the same time, and noted on the inspection sheet for that tank.

Page 35: Testing of buried piping. If any new tanks are installed RMS must be informed by FMS, T&M and/or SLFO and we will be present when leak testing is performed.

Page 75 Generator Tank: This is the T&M tank down the hill and west of the T&M Facility. It needs to have concrete on its south side in a manner that will contain a 1 1/4 the volume of the tank.

Each responsible organization must develop and provide to RMS, a checklist. The responsible organizations are Facilities and Maintenance Services (FMS), Student Affairs Facilities & Operations, and Thomas & Mack Facilities Engineering. As provided in the plan, inspections should begin in September 2008. In order to remain compliant with EPA regulations, each responsible organization should provide a copy of the monthly and annual inspection checklist to RMS.

As part of the implementation of this plan, we have met with all organizations who have petroleum storage to ensure that key parts of the plan are implemented and documented. In addition we will document plans for complying with secondary containment requirements, i.e. dikes, berms or other containment.

INTRODUCTION

Purpose

The purpose of this Spill Prevention, Control, and Countermeasure (SPCC) Plan is to describe measures to be implemented by the University of Nevada, Las Vegas (UNLV) to prevent oil and petroleum product discharges from occurring, and to prepare UNLV to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge.

This Plan has been prepared to meet the requirements of Title 40, *Code of Federal Regulations,* Part 112 (40 CFR part 112).

In addition to fulfilling requirements of 40 CFR part 112, this SPCC Plan is used as a reference for oil and petroleum product storage information and testing records, as a tool to communicate practices on preventing and responding to discharges with employees, as a guide to facility inspections, as a resource during emergency response, and has been prepared in coordination with Best Management Practices (BMP's) for storm water pollution prevention.

The UNLV Risk Management and Safety Department has determined that UNLV facilities do not pose a risk of substantial harm under 40 CFR part 112, as recorded in the "Substantial Harm Determination" included in Appendix B of this Plan.

This Plan provides guidance on key actions that UNLV must perform to comply with the SPCC rule:

- Complete monthly and annual site inspections as outlined in the Inspection, Tests, and Records section of this Plan (Section 3.7) using the inspection checklists included in Appendix C.

- Perform preventive maintenance of equipment, secondary containment systems, and discharge prevention systems described in this Plan as needed to keep them in proper operating conditions.

- Conduct annual employee training as outlined in the Personnel, Training, and Spill Prevention Procedures section of this Plan (Section 3.8) and document them on the log included in Appendix E.

- If either of the following occurs, submit the SPCC Plan to the EPA Region 9 Regional Administrator (RA) and the Nevada Division of Environmental Protection (NDEP), along with other information as detailed in Section 5.4 of this Plan:

    - The facility discharges more than 1,000 gallons of oil into or upon the navigable waters of the U.S. or adjoining shorelines in a single spill event; or

- The facility discharges oil in quantity greater than 42 gallons in each of two spill events within any 12-month period.

- Review the SPCC Plan at least once every five (5) years and amend it to include more effective prevention and control technology, if such technology will significantly reduce the likelihood of a spill event and has been proven effective in the field at the time of the review. Plan amendments, other than administrative changes discussed above, must be recertified by a Professional Engineer on the certification page in Section 1.2 of this Plan.

- Amend the SPCC Plan within six (6) months whenever there is a change in facility design, construction, operation, or maintenance that materially affects the facility's spill potential. The revised Plan must be recertified by a Professional Engineer (PE).

- Review the Plan on an annual basis. Update the Plan to reflect any "administrative changes" that are applicable, such as personnel changes or revisions to contact information, such as phone numbers. Administrative changes must be documented in the Plan review log of Section 1.4 of this Plan, but do not have to be certified by a PE.

- Both an Administrative and Technical Amendment is recommended before the Final EPA deadline of July 1, 2009, as outlined in this SPCC Plan. This SPCC Plan recommends the installation of BMP's and countermeasures to be installed before the 2009 deadline, pursuant to 40 CFR Part 112. The following improvements are recommended as part of this SPCC Plan.
  - An oil/water interceptor located immediately upstream of Maryland Parkway
  - A dike/berm located downstream of Tank #13 (2000-gallon) Lied Library Above Ground Storage Tank (AST);
  - An 6- inch high roll-over berm at the UNLV Motor Pool area;
  - Portable Tanks #15, #16, #17, and #18 are stored in a secure location on the Operations and Maintenance yard (OM3) vicinity, protected by an 8-foot high security fence and lighting, and a 6-inch concrete dike.
  - Placement of Tank #31at the Thomas and Mack in a newly constructed area with acceptable foundation and sidewall supports, including acceptable security fencing, and other improvements
  - Security fencing around Tank #4 at Frank and Estella Beam (BEH) Hall
  - Other measures outlined in this plan.

Part 1: Plan Administration

1.1 Management Approval and Designated Person (40 CFR 112.7)

UNLV is committed to preventing discharges of oil to navigable waters and the environment, and to maintaining the highest standards for spill prevention control and countermeasures through the implementation and regular review and amendment to the Plan. This SPCC Plan has the full approval of the UNLV Risk Management and Safety Department. UNLV has committed the necessary resources to implement the measures described in this Plan.

The UNLV Risk Management and Safety Department manager is the Designated Person Accountable for Oil Spill Prevention at the facility and has the authority to commit the necessary resources to implement this Plan.

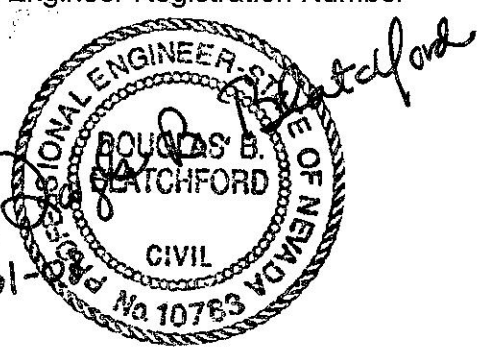
Authorized Facility Representative (facility response coordinator): Gary Snodgrass
Signature: G Snodgrass
Title: Environmental Safety, Manager
Date: August 22, 2008

1.2 Professional Engineer Certification (40 CFR 112.3(d))

The undersigned Registered Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the *Code of Federal Regulations* (40 CFR part 112) and has visited and examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility. The SPCC Plan has been prepared based on the best available information provided by UNLV, and is expected to have both an Administrative and Technical Amendment prior to July 1, 2009, to accommodate recommendations made herein [40 CFR 112.3(d)].

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC Plan in accordance with the requirements of 40 CFR part 112. This Plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

Signature	10783, Nevada Professional Engineer Registration Number
Douglas B. Blatchford Name	*President* Title
Southwest Hydrology & Hydraulics, LLC Company	Date 6-22-08 EXP 12-31-08



1.3 Location of SPCC Plan (40 CFR 112.3(e))

In accordance with 40 CFR 112.3(e), a complete copy of this SPCC Plan is maintained at the UNLV Risk Management and Safety Department. The department is attended from 8:00 AM to 5:00 PM, 5 days per week (closed on Saturdays and Sundays).

1.4 Plan Review (40 CFR 112.3 and 112.5)

1.4.1 Changes in Facility Configuration

In accordance with 40 CFR 112.5(a), the UNLV Risk Management and Safety Department periodically reviews and evaluates this SPCC Plan for any change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge, including, but not limited to:

- commissioning of containers;
- reconstruction, replacement, or installation of piping systems;
- construction or demolition that might alter secondary containment structures; or
- changes of product or service, revisions to standard operation, modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures.

Amendments to the Plan made to address changes of this nature are referred to as technical amendments, and must be certified by a PE. Non-technical amendments can be done (and must be documented in this section) by the facility owner and/or operator. Non-technical amendments include the following:

- change in the name or contact information (i.e., telephone numbers) of individuals responsible for the implementation of this Plan; or
- change in the name or contact information of spill response or cleanup contractors.

The UNLV Risk Management and Safety Department should make the needed revisions to the SPCC Plan as soon as possible, but no later than six months after the change occurs. The Plan should be implemented as soon as possible following any technical amendment, but *no later than six months* from the date of the amendment. The department manager is responsible for initiating and coordinating revisions to the SPCC Plan.

1.4.2 Scheduled Plan Reviews

In accordance with 40 CFR 112.5(b), the UNLV Risk Management and Safety Department reviews this SPCC Plan at least once every five years. Revisions to the Plan, if needed, are made within six months of the five-year review. A registered Professional Engineer certifies any technical amendment to the Plan, as described above, in accordance with 40 CFR 112.3(d). This is the first SPCC Plan and no other review has occurred. This Plan is dated June 22, 2008. The next plan review is therefore scheduled to take place on or prior to June 22, 2008.

1.4.3 Record of Plan Reviews

Scheduled reviews and Plan amendments are recorded in the Plan Review Log (Table 1-1). This log should be completed even if no amendment is made to the Plan as a result of the review. Unless a technical or administrative change prompts an earlier review of the Plan, the next scheduled review of this Plan must occur before July 1, 2009, to review any Administrative and Technical Amendments.

1.5 Facilities, Procedures, Methods, or Equipment Not Yet Fully Operational (40 CFR 112.7)

Section 4.2.6 of this Plan describes the inspection program to be implemented by the facility following a regular schedule, including the dates by which each of the bulk storage containers must be tested.

1.6 Cross-Reference with SPCC Provisions (40 CFR 112.7)

This SPCC Plan does not follow the exact order presented in 40 CFR part 112. Section headings identify, where appropriate, the relevant section(s) of the SPCC rule. Table 1-2 presents a cross-reference of Plan sections relative to applicable parts of 40 CFR part 112.

Table 1-1: Plan Review Log

By	Date	Activity	PE certification required?	Comments
Gary Snodgrass	June 22, 2008	Prepare Plan	Yes	Initial SPCC Plan.

Table 1-2: SPCC Cross-Reference

Provision	Plan Section	Page
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112.20(e)	Certification of Substantial Harm Determination	Appendix B

* Only selected excerpts of relevant rule text are provided. For a complete list of SPCC requirements, refer to the full text of 40 CFR part 112.

Part 2: General Facility Information

Name:	UNLV
Address:	4505 South Maryland Parkway Las Vegas, NV 89154 (702)-895-5522
Type:	Public Facility (University)
Date of Initial Operations:	September 10, 1957
Owner/Operator:	UNLV Facilities Management and Planning Administrative Services 4505 South Maryland Parkway Box 451048 Las Vegas, NV 89154-1048
Primary contact:	Gary Snodgrass Manager, Risk Management and Safety Department Work: (702) 895-0463 Cell (24 hours): (702) 498-3528

2.1 Facility Description (40 CFR 112.7(a)(3))

2.1.1 Location and Activities

UNLV is a public facility and university serving higher education in southern Nevada. The facility handles, stores, and primarily uses petroleum products in the form of gasoline and natural gas associated with a motor pool located in the facilities maintenance complex of the main campus, and back-up generators to its various building facilities. UNLV receives petroleum products by common carrier via tanker truck. The products are stored in various locations throughout the University, ranging from 50 gallons to 2,000 gallons.

UNLV never officially stops operating. However, there are times when, because of emergency situations a facility or the entire campus may be closed. In an effort to ensure the safety of the faculty and staff, emergency conditions will be monitored so that a decision to close can be made in a timely fashion. Refer to the Emergency Operations Center Guidelines for specific direction and contact information in the event of an emergency.

The Site Plan and Facility Diagrams included in Appendix A of this Plan show the location and layout of the facility. The site plan is taken from the USGS 7.5' quadrangle for the Las Vegas Valley (Figure A-1). The Facility and Drainage Map (Figure A-2) shows the location of AST's, UST's, the storm drain system, and, buildings in relation to the UNLV campus. Additionally, photographs are included in lieu of detailed Facility Tank Diagrams to show individual tank layouts and appurtenances, and critical spill control structures. Although CFR part 112 requires facility diagrams, photographs serve as an acceptable substitute for the layout of the ASTs throughout campus.

UNLV is located in unincorporated Clark County, Nevada, bounded by Flamingo Road on the north, Tropicana Avenue on the south, Paradise Road on the west, and Maryland Parkway on the east. Onsite storm drains convey storm water runoff to storm water facilities in Maryland Parkway, thence to Flamingo Wash, the Las Vegas Wash, and finally to Lake Mead. Flamingo Wash is considered Waters of the United States (WOUS).

The site includes many building structures, such as classroom facilities, a sports complex, housing complexes, and other structures. Petroleum products are stored throughout campus mostly associated with back-up generator facilities. Most storage tanks are comparatively modern as the UNLV campus has undergone recent construction and remodeling.

2.1.2 Oil Storage

Oil storage at the facility consists of various tanks, including a 500 gal above ground tank for emergency generation at the Thomas and Mack sports facility, a 380 gallon tank for emergency generation at Cox Pavilion, a 1,000 gallon tank for emergency generation at the Classroom Building Complex, and a 2,000 gallon tank for emergency generation at the Lied Library. Many other smaller tanks are scattered throughout the University at various locations. The capacities of oil containers present at the site are listed below and are also indicated on the facility map in Figure A-2. All containers with capacity of 50 gallons or more are included.

Table 2-1a: Campus Fuel Storage Tank Inventory

Tank No	Building	Tank	Make	Model/Part #	Serial #	Capacity	Primary EMG Vent	Annular EMG. Vent
1	ARC	Diesel Emergency Generator	----	96278	11191	115 Gallons	51644 cf/hr	N/A
2	BEH	Diesel Emergency Generator	----	----	-----	300 Gallons	----	N/A
3	BEH	Diesel	----	-----	-----	100 Gallons	N/A	N/A
4	BEH	Diesel	----	----	-----	~1100 Gallons	N/A	N/A
5	BHS	Diesel	Pryco	----	-----	100 Gallons	N/A	N/A
6	BPB	Diesel	Pryco	-----	------	100 Gallons	N/A	N/A
7	CBC	Diesel Emergency Generator	Pryco	PY5B1000	04320257	1000 Gallons	------	N/A

Tank No	Building	Tank	Make	Model/Part #	Serial #	Capacity	Primary EMG Vent	Annular EMG. Vent
8	FND	Diesel Emergency Generator	Onan	159-1474	ODT-16893	100 Gallons	63,200 cf/hr	N/A
9	Greenspun	Diesel Emergency Generator	United Power Products	CPG1000	650139	1000 Gallons	265,000 cf/hr	N/A
10	LLB	Diesel	Brown-Minneapolis	------	-------	2000 Gallons	195,250 cf/hr	219,490 cf/hr
11	LLB	Red Dye	-----	-----	-----	300 Gallons	N/A	N/A
12	LLB	Diesel Cooling Pump	Spectrum	-----	------	50 Gallons	N/A	N/A
13	LLB	Diesel	-----	------	-------	2000 Gallons	N/A	N/A
14	MSM/HRC	Diesel Emergency Generator	Onan	PY5B50	07218855	50 Gallons	N/A	N/A
15	OM3	Diesel Portable Generator	------	484000	024531	100 Gallons		
16	OM3	Diesel Portable Generator	Whisper-Watt	------	-------	500 Gallons+ 129 Gallons	105,000 cf/hr	N/A
17	OM3	Diesel Portable Light	-------	---------	-------	-------	--------	N/A
18	OM3	Diesel Portable Generator	Transfer-Flow	MultiQuip	1198772078 00F796F28	41 Gallons	--------	N/A
19	PSP	Diesel Emergency Generator	-------	99125	11940	85 Gallons	28950 cf/hr	N/A
20	SCS	Diesel	-------	--------	-------	100 Gallons	N/A	N/A
21	Science and Engineering Building	Diesel Emergency Generator	-----	-------	------	------	-------	N/A
22	TBE	Diesel Emergency Generator	-------	-------	-------	150 Gallons	--------	-------
23	WHI	Diesel Emergency Generator		41075	------	500 Gallons	34,900 cf/hr	63,400 cf/hr
	WHI	Diesel				300	63,200 cf/hr	N/A

24		Emergency Generator	Kohler			Gallons		
25	WRI	Diesel Emergency Generator	Wedlake Fabricating Inc	770087	-------	400 Gallons	105460 cf/hr	N/A

Table 2-1b: Student Life Facilities Fuel Storage Tank Inventory

Tank No	Building	Tank	Make	Model #	Serial #	Capacity	Primary EMG Vent	Annular EMG. Vent
26	MSU	Diesel Emergency Generator	United Power Products	cps-0159-1473	641147	366 Gallons	105,000 cf/hr	N/A
27	TON	Fire Pump	WE MAC Manufacturing	A671095	N/A	75 Gallons	42,100 cf/hr	N/A
28	TON	Diesel Emergency Generator	Onan	159-1473	odt-199-39	366 Gallons	105,000 cf/hr	N/A
29	KRH	Fire Pump	Chicago Boiler Co.	44923	N/A	60 Gallons	48,460 cf/hr	N/A
30	DAY	Diesel Emergency Generator	Onan	N/A	Odt-292	500 Gallons	105,00 cf/hr	N/A
31	RWC	Diesel Emergency Generator	Onan	159-1575-02	ODT-34143	400 Gallons	105,000 cf/hr	N/A

Table 2-1c: Thomas & Mack/ Cox Pavilion

Tank No.	Building	Tank	Make	Model #	Serial #	Capacity	Primary EMG Vent	Annular EMG. Vent
32	TMC	Diesel Emergency Generator	Fireguard Above-ground tank	B-464210	17608	500 Gallons	114,900 cf/hr	129,300 cf/hr
33	TMC	Diesel Emergency Generator	------	------	------	100 Gallons	-------	N/A
34	COX	Diesel Emergency Generator	Olympian Power Systems Tank	Belly Tank	N/A	380 Gallons	81, 050 cf/hr	N/A
Total Oil Storage:		**13,387 gallons**						

Other containers: (1) oil/water interceptor

Note: An oil/water interceptor is recommended to treat diesel spills at Maryland Parkway prior to discharge into the offsite storm drain system. The oil/water interceptor should be one of various Best Management Practices (BMP's) recommended for the UNLV campus. Discharge from UNLV facilities includes storm water collected from the paved areas on campus. No external oil tanks are associated with the oil/water interceptor. This equipment is used to meet certain secondary containment requirements under 40 CFR part 112, as described later in this Plan. Thus, the capacity of the oil/water interceptor is not counted towards the facility total storage capacity.

(2) 2000 gallon and 5000 gallon underground horizontal tanks at UNLV Motorpool.

Note: These two underground storage tanks are subject to, and meet, all the technical requirements of Nevada Division of Environmental Protection Underground Storage Tank Program, as approved under 40 CFR part 281, and are therefore not counted in the storage capacity for this facility (exempted under 40 CFR 112.1(d)(4). The tanks are located at OM3 in the UNLV Motorpool.

2.2 Evaluation of Discharge Potential

2.2.1 Distance to Navigable Waters and Adjoining Shorelines and Flow Paths

The facility is located immediately south of Flamingo Wash in south-central part of the Las Vegas Valley. Drainage generally flows west to east across campus, and onto Maryland Parkway, thence north to Flamingo Road, and to Flamingo Wash. Existing drainage is characterized by urban runoff associated with commercial development in and around the UNLV campus. A relatively high percentage of the campus is paved, especially in the vicinity of the Thomas and Mack sports complex and Cox Pavilion. Storm flows are conveyed by both surface flow and through an existing, on-campus storm drain system. It is assumed that most storm water runoff from the UNLV campus that reaches Maryland Parkway does not cross the street, and is diverted north to Flamingo Road. Storm flows originating from UNLV should split at the Maryland Parkway/Flamingo Road intersection, with some flows continuing north approximately 0.25 miles to Flamingo Wash, and other flows continuing east along Flamingo Road. The Clark County Regional Flood Control District (CCRFCD) Master Plan Update of the Las Vegas Valley (2002) indicates a future storm drain facility in Maryland Parkway that drains directly north to Flamingo Wash.

2.2.2 Discharge History

Table 2-2 summarizes the facility's discharge history.

Table 2-2: Oil Discharge History

Description of Discharge	Corrective Actions Taken	Plan for Preventing Recurrence
No known discharge to date	N/A	N/A

PART 3: Discharge Prevention - General SPCC Provisions

The following measures are recommended to prevent oil discharges during the handling, use, or transfer of oil products at the facility. Oil-handling employees should received training in the proper implementation of these measures.

3.1 Compliance with Applicable Requirements (40 CFR 112.7(a)(2))

This facility proposes to use oil/water interceptors and dikes as part of its drainage system to contain oil discharged into the on-campus storm drain system. The interceptor provides environmental protection equivalent to the requirements under 112.8(b)(3) to use ponds, lagoons, or catchment basins to retain oil at the facility in the event of an uncontrolled discharge. As described in Section 3.5 of this Plan, the operational and emergency oil storage capacity of the oil/water interceptor is sufficient to handle the quantity of oil expected to be discharged from a transportation spill on campus.

3.2 Facility Layout Diagram (40 CFR 112.7(a)(3))

Figure A-1 in Appendix A shows the general location of the facility on a U.S. Geological Survey topographic map. Figure A-2 in Appendix A presents a Facility and Drainage Map and the location of storage tanks. As required under 40 CFR 112.7(a)(3), Appendix A indicates the location and content of ASTs, USTs, and transfer stations and connecting piping. Figure A-4 shows individual tank photographs. Tank diagrams were not prepared for the AST's because the connecting piping could easily be shown on the photos, and because the tanks are distributed throughout campus.

3.3 Spill Reporting (40 CFR 112.7(a)(4))

The discharge notification form included in Appendix I should be completed upon immediate detection of a discharge and prior to reporting a spill to the proper notification contacts.

3.4 Potential Discharge Volumes and Direction of Flow (40 CFR 112.7(b))

Table 3-1 presents expected volume, discharge rate, general direction of flow in the event of equipment failure, and means of secondary containment for different parts of the facility where oil is stored, used, or handled. Potential for discharge on campus is greatest when tanks at various campus locations are being filled.

Table 3-1: Potential Discharge Volumes and Direction of Flow

Tank No.	Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
	Fuel Storage Area				
1	Failure of tank at Paul B. Sogg Architecture Building (ARC)	1 to 115	Gradual to Instantaneous	Vicinity of the tank. Does not reach storm drain.	YES;
2	Failure of tank at Frank and Estelle Beam Hall (BEH)	1 to 300	Gradual to Instantaneous	Storm drain north of building, then east to Maryland Parkway	YES;
3	Failure of tank at Frank and Estelle Beam Hall (BEH)	1 to 100	Gradual to Instantaneous	Storm drain to the north of building, then east to Maryland Parkway	YES;
4	Failure of tank at Frank and Estelle Beam Hall (BEH)	1 to 1100	Gradual to Instantaneous	Storm drain to the north of building, then east to Maryland Parkway	YES;
5	Failure of tank at Bigelow Health Sciences (BHS)	1 to 100	Gradual to Instantaneous	Vicinity of the tank. Does not reach storm drain.	YES;
6	Failure of tank at Bigelow Physics Building (BPB)	1 to 100	Gradual to Instantaneous	Vicinity of the tank. Does not reach storm drain.	YES;
7	Failure of tank at Classroom Building Complex(CBC)	1 to 1000	Gradual to Instantaneous	Storm drain to Maryland Parkway	YES;
8	Failure of tank at Foundation Building (FND)	1 to 100	Gradual to Instantaneous	Vicinity of the tank. Does not reach storm drain.	YES;
9	Failure of tank at Greenspun Building	1 to 1000	Gradual to Instantaneous	Storm drain to Maryland Parkway	YES;
10	Failure of tank at Lied Library (LLB)	1 to 2000	Gradual to Instantaneous	Contained inside the building.	YES;
11	Failure of tank at Lied Library (LLB)	1 to 300	Gradual to Instantaneous	Contained inside the building.	YES;
12	Failure of tank at Lied Library (LLB)	1 to 50	Gradual to Instantaneous	Storm drain and drop inlet south of tank enclosure/ building, east to Maryland Parkway	YES;
13	Failure of tank at Lied Library (LLB)	1 to 2000	Gradual to Instantaneous	Storm drain and drop inlet south of tank enclosure/ building, east to Maryland Parkway	YES;
14	Failure of tank at Marjori Barrack Museum/Harry Reid Center (MSM/HRC)	1 to 50	Gradual to Instantaneous	Storm drain south of building, then north, and east to Maryland Parkway	YES;
15	Failure of tank at Operations/Maintenance 3 (OM3)	1 to 100	Gradual to Instantaneous	Storm drain east to Maryland Parkway	YES;

Tank No.	Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
16	Failure of tank at Operations/Maintenance 3 (OM3)	1 to 500/129	Gradual to Instantaneous	Storm drain east to Maryland Parkway	YES;
17	Failure of tank at Operations/Maintenance 3 (OM3)	1 to ?	Gradual to Instantaneous	Storm drain east to Maryland Parkway	YES;
18	Failure of tank at Operations/Maintenance 3 (OM3)	1 to 41	Gradual to Instantaneous	Storm drain east to Maryland Parkway	YES;
19	Failure of tank at Claude I Howard Public Safety (PSP)	1 to 85	Gradual to Instantaneous	Storm drain north of building, then east to Maryland Parkway	YES;
20	Failure of tank at System Computing Services (SCS)	1 to 100	Gradual to Instantaneous	Storm drain north of building, then east to Maryland Parkway	YES;
21	Failure of tank at Science and Engineering Building	------	Gradual to Instantaneous	East to storm drain , then north, and east to Maryland Parkway	YES;
22	Failure of tank at Thomas T. Beam Engineering Complex (TBE **)**	1 to 150	Gradual to Instantaneous	Storm drain east to Maryland Parkway	YES;
23	Failure of tank at Juanita Greer White Sciences Building (WHI)	1 to 500	Gradual to Instantaneous	Storm immediately south of building, then east to Maryland Parkway	YES;
24	Failure of tank at Juanita Greer White Sciences Building (WHI)	1 to 300	Gradual to Instantaneous	Storm immediately south of building, then east to Maryland Parkway	YES;
25	Failure of tank at John S. Wright Hall (WRI)	1 to 400	Gradual to Instantaneous	Storm drain east to Maryland Parkway	YES;
26	Failure of tank at Memorial Student Union (MSU)	1 to 366	Gradual to Instantaneous	East to Maryland Parkway, and into storm drain	YES;
27	Failure of tank at Tonopah Residence Complex (TON)	1 to 75	Gradual to Instantaneous	Contained inside the building.	YES;
28	Failure of tank at Tonopah Residence Complex (TON)	1 to 366	Gradual to Instantaneous	Contained inside the building.	YES;
29	Failure of tank at Kitty Rodham Residence Hall (KRH)	1 to 60	Gradual to Instantaneous	Contained inside the building.	YES;
30	Failure of tank at Dayton Complex (DAY)	1 to 500	Gradual to Instantaneous	South to Tropicana, then east to Maryland Parkway	YES;

Tank No.	Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
31	Failure of tank at Sunset Recreation and Wellness Center (RWC)	1 to 400	Gradual to Instantaneous	Vicinity of the tank. Does not reach storm drain.	YES;
32	Failure of tank at Thomas and Mack (TMC)	1 to 500	Gradual to Instantaneous	Overland to Tropicana, or via storm drain , both conveyances to Maryland Parkway	YES;
33	Failure of tank at Thomas and Mack (TMC)	1 to 100	Gradual to Instantaneous	Contained inside the building	YES;
34	Failure of tank at Cox Pavilion (COX)	1 to 380	Gradual to Instantaneous	Overland to Tropicana, or via storm drain , both conveyances to Maryland Parkway	YES;

3.5 Containment and Diversionary Structures (40 CFR 112.7(c))

Methods of secondary containment at this facility include a combination of structures (e.g., dike, berm, built-in secondary containment), drainage systems (e.g., oil/water interceptor), and land-based spill response (e.g., drain covers, sorbents) to prevent oil from reaching navigable waters and adjoining shorelines:

- For bulk storage containers (refer to Section 4.2.2 of this Plan):

  - **Dike.** A concrete dike enclosure is recommended around fixed aboveground storage tanks, and other locations, as described in Section 4.2.2 of this Plan.

  - **Double-wall tank construction.** Most all fixed and portable above-ground storage tanks at UNLV have double-wall design with a secondary shell designed to contain 110 percent of the inner shell capacity. It is recommended that all portable tanks are stored within a fenced part of the operations and maintenance yard, protected from impact by bollards, with adequate security lighting; however, it may be used elsewhere on site. It is used to refuel various small pieces of equipment such as trucks and compressors that may be deployed at different areas on the site.

  - **Spill pallets.** It is recommended that spill pallets have a capacity of 75 gallons, which can effectively contain the volume of any single 55-gallon drum. Drums are not stored onsite and may be used in the future as a temporary storage mechanism for used sorbent materials during a spill. Any hazardous waste shall be processed according to Resource Recovery and Response Act (RCRA) and other environmental law.

- At the UNLV Motor Pool (refer to Section 3.10 of this Plan):

    - **Rollover berm.** The UNLV Motor Pool at OM3 is proposed to be surrounded by a 6-inch rollover berm that provides sufficient containment for the largest compartment of the tank truck loading or unloading at the facility (5000 gallons), and an additional amount of freeboard for precipitation, based on the CCRFCD criteria for detention ponds, or the 2-yr, 6-hour storm.

- In transfer areas and other parts of the facility where a discharge could occur:

    - **Drip pans.** Fill ports for all ASTs should be equipped with drip pans to contain small leaks from the piping/hose connections.

    - **Sorbent material.** It is recommended that spill cleanup kits that include absorbent material, booms, and other portable barriers are located at strategic locations on the UNLV campus. The spill kits should be located within close proximity of the oil product storage and handling areas and the various facility tanks for rapid deployment should a spill occur. Sorbent material, and other portable barriers should be stored adjacent the Motor Pool area to allow for quick deployment in the event of a discharge during loading/unloading activities or any other accidental discharge outside the dike or loading rack/unloading area, such as from tank vehicles entering/leaving the facility or spills associated with the fuel dispenser. The recommended response equipment inventory for the facility is listed in Appendix J of this Plan. The inventory should be checked monthly to ensure that used material is replenished.

    - **Drainage system.** An oil/water interceptor should be located on the storm drain system immediately upstream of Maryland Parkway to intercept potential spills before reaching the offsite storm drain system. It is assumed that immediate response throughout campus with sorbent material will be used to intercept spills before reaching the storm drain system.

    - **Oil/water interceptor.** The oil/water interceptor should be installed on the storm drain system immediately upstream of Maryland Parkway. The oil/water interceptor has a total capacity for oil/water mixture of 2000 gallons. The oil/water interceptor should be inspected monthly as part of the scheduled inspection to check the level of water within the interceptor and measure the depth of bottom sludges and floating oils. Floating diesel fuel should be removed by a licensed waste collector.

3.6 Practicability of Secondary Containment (40 CFR 112.7(d))

UNLV Risk Management and Safety Department management has determined that secondary containment is practicable at this facility.

3.7 Inspections, Tests, and Records (40 CFR 112.7(e))

As required by the SPCC rule, UNLV Risk Management and Safety Department should perform inspections, tests, and evaluations listed in the following table. Table 3-2 summarizes the various types of inspections and tests performed at the facility. The inspections and tests are described later in this section, and in the respective sections that describe different parts of the facility (e.g., Section 4.2.6 for bulk storage containers).

Table 3-2: Recommended Inspection and Testing Program

Facility Component	Action	Frequency/Circumstances
Above ground container	Test container integrity. Combine visual inspection with another testing technique (non-destructive shell testing). Inspect outside of container for signs of deterioration and discharges.	Following a regular schedule (monthly, annual, and during scheduled inspections) and whenever material repairs are made.
Container supports and foundation	Inspect container's supports and foundations.	Following a regular schedule (monthly, annual, and during scheduled inspections) and whenever material repairs are made.
Liquid level sensing devices (overfill)	Test for proper operation.	Monthly
Diked area	Inspect for signs of deterioration, discharges, or accumulation of oil inside diked areas.	Monthly
	Visually inspect content for presence of oil.	Prior to draining
Lowermost drain and all outlets of tank truck	Visually inspect.	Prior to filling and departure
All above ground valves, piping, and appurtenances	Assess general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces.	Monthly
Buried metallic storage tank	Leak test.	Annually

Facility Component	Action	Frequency/Circumstances
Buried piping	Inspect for deterioration.	Whenever a section of buried line is exposed for any reason.
	Integrity and leak testing.	At the time of installation, modification, construction, relocation, or replacement.

3.7.1 Daily Inspection

No current daily inspection is warranted of the UNLV facilities. Inspections should be performed on a monthly basis, and preferably after major rain storm events throughout the year.

3.7.2 Monthly Inspection

The checklist provided in Appendix C is used for monthly inspections by UNLV Risk Management and Safety Department personnel. The monthly inspections should cover the following key elements:

- Observing the exterior of aboveground storage tanks, pipes, and other equipment for signs of deterioration, leaks, corrosion, and thinning.
- Observing the exterior of portable containers for signs of deterioration or leaks.
- Observing tank foundations and supports for signs of instability or excessive settlement.
- Observing the tank fill and discharge pipes for signs of poor connection that could cause a discharge, and tank vent for obstructions and proper operation.
- Verifying the proper functioning of overfill prevention systems.
- Checking the inventory of discharge response equipment and restocking as needed.
- Observing and measuring the quantity of accumulated oil within the oil/water interceptor.

All problems regarding tanks, piping, containment, or response equipment must immediately be reported to the Facility Manager. Visible oil leaks from tank walls, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge to navigable waters or adjoining shorelines. Pooled oil must be removed immediately upon discovery.

Written monthly inspection records should be signed by the Facility Manager and maintained with this SPCC Plan for a period of three years.

3.7.3 Annual Inspection

Facility personnel should perform a more thorough inspection of facility equipment on an annual basis. This annual inspection complements the monthly inspection described above and is performed in June of each year using the checklist provided in Appendix C of this Plan.

The annual inspection is preferably performed after a large storm event in order to verify the imperviousness and/or proper functioning of drainage control systems such as the dike, rollover berm, control valves, and the oil/water interceptor.

Written annual inspection records are signed by the Facility Manager and maintained with this SPCC Plan for a period of three years.

3.7.4 Periodic Integrity Testing

In addition to the above monthly and annual inspections by facility personnel, all tanks should be periodically evaluated by an outside certified tank inspector following the Steel Tank Institute (STI) *Standard for the Inspection of Aboveground Storage Tanks*, SP-001, 2005 version, as described in Section 4.2.6 of this Plan.

3.8 Personnel, Training, and Discharge Prevention Procedures (40 CFR 112.7(f))

The Facility Manager is the facility designee and is responsible for oil discharge prevention, control, and response preparedness activities at this facility.

UNLV Risk Management and Safety Department management should develop instruction to oil-handling facility personnel in the operation and maintenance of oil pollution prevention equipment, discharge procedure protocols, applicable pollution control laws, rules and regulations, general facility operations, and the content of this SPCC Plan. Any new facility personnel with oil-handling responsibilities should be provided with this same training prior to being involved in any oil operation.

Annual discharge prevention briefings should be held by the Facility Manager for all facility personnel involved in oil operations. The briefings should be aimed at ensuring continued understanding and adherence to the discharge prevention procedures presented in the SPCC Plan. The briefings should highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Facility operators and other personnel should have the opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

A simulation of an on-site vehicular discharge should be conducted, and future training exercises should be periodically held to prepare for possible discharge responses.

Records of the briefings and discharge prevention training should be kept on the form shown in Appendix E and maintained with this SPCC Plan for a period of three years.

3.9 Security (40 CFR 112.7(g))

Most facilities at UNLV are surrounded by a minimum of 6-ft tall steel security fencing, or block wall, or are completely contained inside a utility room. The 2000 gallon tank at the south side of the Lied Library is surrounded by walls and steel fencing.

All drain valves for containment areas should be locked in the closed position to prevent unauthorized opening. Water draw valves on the storage tanks should be maintained in the closed position to prevent unauthorized opening via locks, and are required to be locked. Keys for all locked valves should be kept in the appropriate office for each facility. Copies of all keys should be made and provided to Risk Management and Safety.

Tank #4 at BEH will require security fencing, whereas Tank #31 at the Thomas & Mack will require both security fencing and improvements.

Lights are in place at various locations throughout the UNLV campus.

The electrical starter controls for the oil pumps, including the fuel dispenser, are located in the secure area adjacent all the tanks. The closet is locked when the pumps are not in use. The maintenance shop is locked when the facility is unattended.

The facility should securely cap or blank-flange the loading/unloading connections of facility piping when not in service or when in standby service for an extended period of time, or when piping is emptied of liquid content either by draining or by inert gas pressure.

3.10 Tank Truck Loading/Unloading Rack Requirements (40 CFR 112.7(h))

The potential for discharges during tank truck loading and unloading operations is of particular concern at this facility. UNLV Risk Management and Safety Department management is committed to ensuring the safe transfer of material to and from storage tanks. The following measures should be implemented to prevent oil discharges during tank truck loading and unloading operations.

3.10.1 Secondary Containment (40 CFR 112.7(h)(1))

The Motor Pool area should be surrounded with a 6-inch rollover asphalt berm that provides secondary containment in the event of a discharge during transfer operations. The secondary containment berm should be designed to address the more stringent rack containment requirements of 40 CFR 112.7(h), which requires that the berm be sufficient to contain the capacity of the largest compartment, plus freeboard for precipitation. The curbed area should provide a catchment capacity of 5000 gallons, which is capable of containing the largest volume of the largest UST at the Motor Pool site.

To minimize direct exposure to rain, and facilitate the cleanup of small spills that may occur during loading/unloading operations, the Motor Pool area is partially covered by a roof.

The area should be graded to direct the flow of oil or water away from the vehicle, and the low point of the curbed area is fitted with a gate valve that is normally kept closed and locked. The key for that lock is kept in the main office. The berm should be drained by UNLV personnel after verifying that the retained water is free of oil. The accumulated water should be released to the onsite storm drain system and the oil/water interceptor. The drain valve should be closed and locked following drainage.

3.10.2 Loading/Unloading Procedures (40 CFR 112.7(h)(2) and (3))

All suppliers must meet the minimum requirements and regulations for tank truck loading/unloading established by the U.S. Department of Transportation. UNLV Risk Management and Safety Department ensures that the vendor understands the site layout, knows the protocol for entering the facility and unloading product, and has the necessary equipment to respond to a discharge from the vehicle or fuel delivery hose.

The Facility Manager or his/her designee supervises oil deliveries for all new suppliers, and periodically observes deliveries for existing, approved suppliers.

All loading and unloading of tank vehicles takes place only in the designated loading rack/unloading area.

Vehicle filling operations should be performed by facility personnel trained in proper discharge prevention procedures. The truck driver or facility personnel remain with the vehicle at all times while fuel is being transferred. Transfer operations are performed according to the minimum procedures outlined in Table 3-3. This table is also posted next to the loading/unloading point.

Table 3-3: Fuel Transfer Procedures

Stage	Tasks
Prior to loading/ unloading	• Visually check all hoses for leaks and wet spots. • Verify that sufficient volume (ullage) is available in the storage tank or truck. • Lock in the closed position all drainage valves of the secondary containment structure. • Secure the tank vehicle with wheel chocks and interlocks. • Ensure that the vehicle's parking brakes are set. • Verify proper alignment of valves and proper functioning of the pumping system. • If filling a tank truck, inspect the lowermost drain and all outlets. • Establish adequate bonding/grounding prior to connecting to the fuel transfer point. • Turn off cell phone.
During loading/ unloading	• Driver must stay with the vehicle at all times during loading/unloading activities. • Periodically inspect all systems, hoses and connections. • When loading, keep internal and external valves on the receiving tank open along with the pressure relief valves. • When making a connection, shut off the vehicle engine. When transferring Class 3 materials, shut off the vehicle engine unless it is used to operate a pump. • Maintain communication with the pumping and receiving stations. • Monitor the liquid level in the receiving tank to prevent overflow. • Monitor flow meters to determine rate of flow. • When topping off the tank, reduce flow rate to prevent overflow.
After loading/ unloading	• Make sure the transfer operation is completed. • Close all tank and loading valves before disconnecting. • Securely close all vehicle internal, external, and dome cover valves before disconnecting. • Secure all hatches. • Disconnect grounding/bonding wires. • Make sure the hoses are drained to remove the remaining oil before moving them away from the connection. Use a drip pan. • Cap the end of the hose and other connecting devices before moving them to prevent uncontrolled leakage. • Remove wheel chocks and interlocks. • Inspect the lowermost drain and all outlets on tank truck prior to departure. If necessary, tighten, adjust, or replace caps, valves, or other equipment to prevent oil leaking while in transit.

3.11 Brittle Fracture Evaluation (40 CFR 112.7(i))

In the event that any tank undergoes a repair, alteration, reconstruction, or change in service that might affect the risk of a discharge or failure, the container will be evaluated for risk of discharge or failure, following API-653 or an equivalent approach, and corrective action will be taken as necessary.

All UNLV organizations that conduct repairs on tanks will notify RMS who will ensure that those repairs are accomplished and done with full consideration for and attention to the requirements to ensure there are no spills. RMS will ensure that all Local and Applicable requirements are met for bulk storage and UST's.

3.12 Conformance with State and Local Applicable Requirements (40 CFR 112.7(j))

All bulk storage tanks at this facility are registered with local authorities and have current certificates of registration and special use permits required by the local fire code.

Both USTs at the Motor Pool meet all requirements of NDEP UST regulation, including cathodic protection, double-wall construction, and monitoring systems.

PART 4: Discharge Prevention – SPCC Provisions for Onshore Facilities (Excluding Production Facilities)

4.1 Facility Drainage (40 CFR 112.8(b))

Drainage from the UNLV campus is generally from west to east. An onsite storm drain intercepts storm flows and drains to Maryland Parkway. Potential releases of oil from most parts of campus generally do not have the potential to be captured by the storm drain system because of the distance of overland flow to the nearest drop inlet. The proposed location of the oil/water interceptor is designed to intercept diesel fuel from the Lied Library tank before being captured by the onsite storm drains system before reaching Maryland Parkway.
The proposed oil/water interceptor downstream of Tank #10 at the Lied Library should intercept spills before reaching the drop inlet outside the block wall south of the tank location. Drainage events are recorded in the log included in Appendix D to this SPCC Plan.

A proposed dike at OM3 should be restrained by a manually-operated gate valve to prevent a discharge from leaving the portable generator site. The gate valve should normally be sealed closed, except when draining the secondary containment structure. The content of the secondary containment dike is inspected by facility personnel prior to draining to ensure that only oil-free water is allowed to enter the facility storm water drainage system. The bypass valve should be opened and resealed under direct personnel supervision. Drainage events are recorded in the log included in Appendix D to this SPCC Plan.

A proposed rollover berm at the Motor Pool is restrained by a manually-operated gate valve to prevent a discharge from leaving the Motor Pool site. The gate valve should normally be sealed closed, except when draining the secondary containment structure. The content of the secondary containment dike is inspected by facility personnel prior to draining to ensure that only oil-free water is allowed to enter the facility storm water drainage system. The bypass valve should be opened and resealed under direct personnel supervision. Drainage events are recorded in the log included in Appendix D to this SPCC Plan.

Any potential discharge from ASTs should be restrained by secondary containment structures or sorbent material. Discharges at the Motor Pool occurring during loading/unloading operations should be restrained by the rollover berm. The Lied Library includes an oil/water interceptor, which is used as containment for spill of the existing 2000 gallon tank. Discharges outside the Motor Pool, Lied Library area, or other areas, should be intercepted by other methods such as sorbent materials. pumped out.

4.2 Bulk Storage Containers (40 CFR 112.8(c))

Table 4-1 summarizes the construction, volume, and content of bulk storage containers at UNLV facility.

Table 4-1a: List of Oil Containers

Tank No	Location	Type (Construction Standard)	Capacity	Content	Discharge Prevention and Containment
1	ARC	AST with horizontal construction, diesel tank below generator	115 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
2	BEH	AST with horizontal construction, diesel tank below generator	300 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
3	BEH	AST with vertical construction, diesel tank	100 Gallons	Diesel	Secondary containment shell around primary tank, leak detection
4	BEH	AST with horizontal construction	~1100 Gallons	Diesel	Rectangular, concrete, secondary containment structure with relief valve at base
5	BHS	AST with vertical construction	100 Gallons	Diesel	Secondary containment shell around primary tank, with leak detection
6	BPB	AST with vertical construction	100 Gallons	Diesel	Secondary containment shell around primary tank, with leak detection
7	CBC	AST with horizontal construction, diesel tank below generator	1000 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
8	FND	AST with horizontal construction, diesel tank below generator	100 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
9	Greenspun	AST with horizontal construction, diesel tank below generator	1000 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
10	LLB	AST with horizontal construction	2000 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
11	LLB	AST with horizontal construction	300 Gallons	Red Dye	Secondary, rectangular, concrete containment structure with relief valve at base
12	LLB	AST with vertical construction	50 Gallons	Diesel Cooling Pump	Secondary containment shell around primary tank. Inside Lied Library utility room, also protected by curbing at doorway. Drain is plugged.
	LLB	Raised AST with horizontal construction,	2000 Gallons	Diesel Emergency	Secondary containment shell around primary tank. Inside Lied Library

13		on pipe supports, attached to tank		Generator	utility room, also protected by curbing at doorway. Drain is plugged.
14	MSM/HRC	AST with horizontal construction, diesel tank below generator	50 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
15	OM3	AST with horizontal construction, portable	100 Gallons	Diesel Portable Generator	No secondary containment
16	OM3	AST with horizontal construction on trailer, portable	500 Gallons+ 129 Gallons	Diesel Portable Generator	Dual wall construction with annular space, liquid level alarm
17	OM3	AST with horizontal construction, portable	? Gallons	Diesel Portable Light	No secondary containment
18	OM3	AST with horizontal construction, portable	41 Gallons	Diesel Portable Generator	No secondary containment
19	PSP	AST with horizontal construction, diesel tank below generator	85 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
20	SCS	AST with vertical construction	100 Gallons	Diesel	Secondary containment shell around primary tank, with leak detection
21	Science and Engineering Building	AST with horizontal construction, diesel tank below generator	------	Diesel Emergency Generator	Dual wall construction with annular space
22	TBE	AST with horizontal construction, diesel tank below generator	150 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
23	WHI	AST with horizontal construction, diesel tank below generator	500 Gallons	Diesel Emergency Generator	Dual wall construction with annular space, liquid level control and alarm
24	WHI	AST with horizontal construction, diesel tank below generator	300 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
25	WRI	AST with horizontal construction, diesel tank below generator	400 Gallons	Diesel Emergency Generator	Dual wall construction with annular space

Table 4-1b: List of Oil Containers

Tank No	Location	Type (Construction Standard)	Capacity	Content	Discharge Prevention and Containment
26	MSU	AST with horizontal construction, diesel tank below generator	366 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
27	TON	Raised AST with horizontal construction on pipe supports, attached to tanks	75 Gallons	Diesel for Fire Pump	Secondary containment is rectangular, concrete containment structure, inside building
28	TON	AST with horizontal construction, diesel tank below generator	366 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
29	KRH	AST with horizontal construction, diesel tank below generator	60 Gallons	Fire Pump	Dual wall construction with annular space
30	DAY	AST with horizontal construction, diesel tank below generator	500 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
31	RWC	AST with horizontal construction, diesel tank below generator	400 Gallons	Diesel Emergency Generator	Dual wall construction with annular space

Table 4-1c: List of Oil Containers

Tank No	Location	Type (Construction Standard)	Capacity	Content	Discharge Prevention and Containment
32	TMC	AST with horizontal construction, diesel tank below generator	500 Gallons	Diesel Emergency Generator	Dual wall construction with annular space
33	TMC	AST with vertical construction	100 Gallons	Diesel Emergency Generator	Leak detection, 4-inch metal curbing as secondary containment
34	COX	AST with horizontal construction, diesel tank below generator	380 Gallons	Diesel Emergency Generator	Dual wall construction with annular space

4.2.1 Construction (40 CFR 112.8 (c)(1))

All oil tanks used at this facility are constructed of steel, in accordance with industry specifications as described above. The design and construction of all bulk storage containers are compatible with the characteristics of the oil product they contain, and with temperature and pressure conditions.

Piping between fixed aboveground bulk storage tanks is made of steel and placed aboveground on appropriate supports designed to minimize erosion and stress.

4.2.2 Secondary Containment (40 CFR 112.8(c)(2))

A dike should be provided around portable Tanks #15, 16, 17, and 18. Tanks #15, 16, and 18, have a 100-gallon, 629-gallon, and 41-gallon capacity, respectively. Tank #17 is of unknown capacity. The dike has a total containment capacity of all the tanks combined and adequate freeboard for precipitation. The floor and walls of the containment dike should be constructed of poured concrete reinforced with steel. The concrete dike should be built under the supervision of a civil engineer and in conformance with his specifications to be impervious to oil for a period of 72 hours. The facility is unattended for a maximum of 40 hours (Saturday evening through Monday morning) and therefore any spill into the diked area would be detected before it could escape the diked area. The surface of the concrete floor, the inside and outside of the walls, and the interface of the floor and walls, should be visually inspected during the monthly facility inspection to detect any crack, signs of heaving or settlement, or other structural damage that could affect the ability of the dike to contain oil. Any damage is promptly corrected to prevent migration of oil into the ground, or out of the dike.

The 629-gallon portable AST tank is of double-wall construction and provides intrinsic secondary containment for 110 percent of the tank capacity. Since the secondary containment is not open to precipitation, this volume is sufficient to fully contain the product in the event of a leak from the primary container. The interstitial space between the primary and secondary containers is inspected on a monthly basis to detect any leak of product from the primary container. The container, however, is not equipped to prevent overfills as required by EPA policy in its memorandum on double-walled tanks. Therefore, general containment is required for potential tank overfills. This containment is accomplished through the facility drainage system and the oil/water interceptor, which provide environmentally equivalent protection as described in Section 3.1 of this Plan.

The proposed location of the oil/water interceptor is designed to intercept diesel fuel from the Lied Library tank before being captured by the onsite storm drains system before reaching Maryland Parkway. The proposed oil/water interceptor downstream of Tank #10 at the Lied Library should intercept spills before reaching the drop inlet outside the block wall south of the tank location. Drainage events are recorded in the log included in Appendix D to this SPCC Plan.

A rollover berm should be provided adjacent the Motor Pool at the Operation and Maintenance 3. The rollover berm should have a total containment capacity to allow sufficient volume for the 5000 gallon UST tank and freeboard for precipitation. The freeboard is sufficient to contain a rainfall corresponding to Section 1500 of the Clark County Regional Flood Control District's Hydrologic Criteria and Drainage Design Manual, as documented in Appendix F of this Plan. The rollover berm should be built under the supervision of a civil engineer and in conformance with his specifications to be impervious to oil for a period of 72 hours. The facility is unattended for a maximum of 40 hours (Saturday evening through Monday morning) and therefore any spill into the rollover berm area would be detected before it could escape the area. The rollover berm should be visually inspected during the monthly facility inspection to detect any cracks, signs of heaving or settlement, or other structural damage that could affect the ability of the rollover berm to contain oil. Any damage is promptly corrected to prevent migration of oil into the ground, or out of the rollover berm area.

USTs are of double-wall construction and provide intrinsic secondary containment for 110 percent of the tank capacity. The interstitial space between the primary and secondary containers is inspected on a monthly basis to detect any leak of product from the primary container 55-gallon drums are not being used to store petroleum products. Future 55-gallon drums should be placed on spill pallets. Each spill pallet should provide 75 gallons of containment capacity, which is more than the required 55 gallons for any single drum since the drums are not exposed to precipitation.

4.2.3 Drainage of Diked Areas (40 CFR 112.8(c)(3))

The concrete dikes should be drained under direct supervision of facility personnel. The accumulated water is observed for signs of oil prior to draining. The gate valves should be normally kept in a closed position and locked except when draining the dike. Dike drainage

events are recorded on the form included in Appendix D of this Plan; records are maintained at the facility for at least three years.

4.2.4 Corrosion Protection (40 CFR 112.8(c)(4))

Both metallic underground storage tanks, which is subject to the requirements of 40 CFR part 112, should be coated and cathodically protected to prevent corrosion and leakage into the ground. Pressure testing should be performed on both buried storage tanks every two years following the requirements of 40 CFR part 280. The cathodic protection system should be tested annually to verify its efficacy.

Cathodic protection should be provided for both tanks in accordance with 40 CFR part 280 and meets the requirements of 40 CFR part 112.

Records of pressure tests should be kept for at least three years.

4.2.5 Partially Buried and Bunkered Storage Tanks (40 CFR 112.8(c)(5))

This section is not applicable since there are no partially buried or bunkered storage tanks at this facility.

4.2.6 Inspections and Tests (40 CFR 112.8(c)(6))

Visual inspections of ASTs by facility personnel should be performed according to the procedure described in this SPCC Plan. Leaks from tank seams, gaskets, rivets, and bolts should be promptly corrected. Records of inspections and tests should be signed by the inspector and kept at the facility for at least three years.

The scope and schedule of certified inspections and tests performed on the facility's ASTs are specified in STI Standard SP-001. The external inspection should include ultrasonic testing of the shell, as specified in the standard, or if recommended by the certified tank inspector to assess the integrity of the tank for continued oil storage.

Records of certified tank inspections are kept at the facility for at least three years. Shell test comparison records are retained for the life of the tanks.

Table 4-2 summarizes inspections and tests performed on bulk storage containers ("EE" indicates that an environmentally equivalent measure is implemented in place of the inspection/test, as discussed in Section 3.1 of this Plan).

Table 4-2: Scope and Frequency of Bulk Storage Containers Inspections and Tests

Inspection/Test	All Tanks	Future Drums
Visual inspection by facility personnel (as per checklist of Appendix C)	M A	M A
External inspection by certified inspector (as per STI Standard SP-001)	20 yr	EE
Internal inspection by certified inspector (as per STI Standard SP-001)	†	EE
Tank tightness test meeting requirements of 40 CFR 280	2 yr	

Legend: M: Monthly
A: Annual
EE: Inspection not required given use of environmentally equivalent measure (refer to Section 3.1 of this Plan).
*
† Internal inspection may be recommended by the certified inspector based on findings from the external inspection.

The frequency above is based on implementation of a scheduled inspection/testing program. To initiate the program, all ASTs will be inspected by the following dates: December 31, 2008.

4.2.7 Heating Coils (40 CFR 112.8(c)(7))

There are no exhaust lines from internal heating coils.

4.2.8 Overfill Prevention Systems (40 CFR 112.8(c)(8))

Most diesel generators with horizontal AST's below the generator are equipped with a direct-reading level gauge. Additionally, most vertical AST's are equipped with liquid level gages. Tank #23 is equipped with a liquid level alarm. General secondary containment is provided in the event of overfills, as described in this Plan.

Storage drums are not currently being used, and therefore overfill prevention systems do not apply.

All tanks equipped with liquid level gauges and overfill protection systems should be tested on a monthly basis during the monthly inspection of the facility, following manufacturer

recommendations. Venting capacity is suitable for the fill and withdrawal rates.

Facility personnel should be present throughout the filling operations to monitor the product level in the tanks.

4.2.9 Effluent Treatment Facilities (40 CFR 112.8(c)(9))

There are no effluent treatment facilities onsite.**4.2.10**

4.2.10 Visible Discharges (40 CFR 112.8(c)(10))

Visible discharges from any container or appurtenance – including seams, gaskets, piping, pumps, valves, rivets, and bolts should be quickly corrected upon discovery.

Oil should be promptly removed from all diked areas and disposed of according to the waste disposal method described in Part 5 of this Plan.

4.2.11 Mobile and Portable Containers (40 CFR 112.8(c)(11))

Tank #16 is of double-wall design, which provides for adequate secondary containment in the event of leaks in the primary container shell. The interstitial space will be monitored monthly for signs of leakage.

Small portable generators should be stored inside OM3 in a containment dike. Any discharged material is quickly contained and cleaned up using sorbent pads and appropriate cleaning products.

4.3 Transfer Operations, Pumping, and In-Plant Processes (40 CFR 112.8(d))

Transfer operations at this facility include:

- The transfer of diesel fuel to the 5,000-gallon and 2,000-gallon UST's at the UNLV Motor Pool, and
- The transfer of diesel fuel to the various other AST's located throughout the UNLV campus.

All buried piping at this facility should be cathodically protected against corrosion and should be provided with a protective wrapping and coating. When a section of buried line is exposed, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action must be taken as deemed appropriate considering the magnitude of the damage. Additionally, UNLV Risk Management and Safety Department should conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement. Records of all tests are kept at the facility for at least three years.

Lines that are not in service or are on standby for an extended period of time are capped or blank-flanged and marked as to their origin.

All pipe supports are designed to minimize abrasion and corrosion and to allow for expansion and contraction. Pipe supports should be visually inspected during the monthly inspection of the facility.

All aboveground piping and valves are examined monthly to assess their condition. Inspection includes aboveground valves, piping, appurtenances, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. Observations are noted on the monthly inspection checklist provided in this Plan.

Warning signs should be posted at appropriate locations throughout the facility to prevent vehicles from damaging aboveground piping and appurtenances. Most of the aboveground piping should be located within areas that are not accessible to vehicular traffic (e.g., inside diked area). Brightly painted bollards should be placed where needed to prevent vehicular collisions with equipment.

Part 5: Discharge Response

This section describes the response and cleanup procedures in the event of an oil discharge. The uncontrolled discharge of oil to groundwater, surface water, or soil is prohibited by state and possibly federal laws. Immediate action must be taken to control, contain, and recover discharged product.

In general, the following steps should be taken:

- Eliminate potential spark sources;
- If possible and safe to do so, identify and shut down source of the discharge to stop the flow;
- Contain the discharge with sorbents, berms, fences, trenches, sandbags, or other material;
- Contact the Facility Manager or his/her alternate;
- Contact regulatory authorities and the response organization; and
- Collect and dispose of recovered products according to regulation.

For the purpose of establishing appropriate response procedures, this SPCC Plan classifies discharges as either “minor” or “major,” depending on the volume and characteristics of the material released.

A list of Emergency Contacts is provided in Appendix H. The list should be posted at prominent locations throughout the facility. A list of discharge response material kept at the facility is included in Appendix J.

5.1 Response to a Minor Discharge

A “minor” discharge is defined as one that poses no significant harm (or threat) to human health and safety or to the environment. Minor discharges are generally those where:

- The quantity of product discharged is small (e.g., may involve less than 25 gallons of oil);
- Discharged material is easily stopped and controlled at the time of the discharge;
- Discharge is localized near the source;
- Discharged material is not likely to reach water;
- There is little risk to human health or safety; and
- There is little risk of fire or explosion.

Minor discharges can usually be cleaned up by UNLV Risk Management and Safety Department personnel. The following guidelines apply:

- Immediately notify the Facility Manager.
- Under the direction of the Facility Manager, contain the discharge with discharge response materials and equipment. Place discharge debris in properly labeled waste containers.
- The Facility Manager will complete the discharge notification form (Appendix I) and attach a copy to this SPCC Plan.
- If the discharge involves more than 25 gallons of oil, the Facility Manager will call the Nevada Division of Environmental Protection (NDEP)

5.2 Response to a Major Discharge

A "major" discharge is defined as one that cannot be safely controlled or cleaned up by facility personnel, such as when:

- The discharge is large enough to spread beyond the immediate discharge area;
- The discharged material enters the onsite storm drain system;
- The discharge requires special equipment or training to clean up;
- The discharged material poses a hazard to human health or safety; or
- There is a danger of fire or explosion.

In the event of a major discharge, the following guidelines apply:

- All workers must immediately evacuate the discharge site via the designated exit routes and move to the designated staging areas at a safe distance from the discharge. Exit routes are included on the facility diagram and posted in the maintenance building, in the office building, and on the outside wall of the outside shed that contains the spill response equipment.
- If the Facility Manager is not present at the facility, the senior on-site person notifies the Facility Manager of the discharge and has authority to initiate notification and response. Certain notifications are dependent on the circumstances and type of discharge. For example, if oil reaches a sanitary sewer, the publicly owned treatment works (POTW) should be notified immediately. A discharge that threatens Flamingo Wash may require immediate notification to downstream users such as the Clark County Regional Flood Control District.The Facility Manager (or senior on-site person) must call for medical assistance if workers are injured.
- The Facility Manager (or senior on-site person) must notify the Fire Department or Police Department.
- The Facility Manager (or senior on-site person) must call the spill response and cleanup contractors listed in the Emergency Contacts list in Appendix H.
- The Facility Manager (or senior on-site person) must immediately contact the Nevada Division of Environmental Protection and the National Response Center (1-800-424-8802).

- The Facility Manager (or senior on-site person) must record the call on the Discharge Notification form in Appendix I and attach a copy to this SPCC Plan.
- The Facility Manager (or senior on-site person) coordinates cleanup and obtains assistance from a cleanup contractor or other response organization as necessary.

If the Facility Manager is not available at the time of the discharge, then the next highest person in seniority assumes responsibility for coordinating response activities.

5.3 Waste Disposal

Wastes resulting from a minor discharge response should be containerized in impervious bags, drums, or buckets. The facility manager should characterize the waste for proper disposal and ensure that it is removed from the facility by a licensed waste hauler within two weeks.

Wastes resulting from a major discharge response should bel be removed and disposed of by a cleanup contractor.

5.4 Discharge Notification

Any size discharge (i.e., one that creates a sheen, emulsion, or sludge) that affects or threatens to affect navigable waters or adjoining shorelines must be reported immediately to the National Response Center (1-800-424-8802). The Center is staffed 24 hours a day.

A summary sheet is included in Appendix I to facilitate reporting. The person reporting the discharge must provide the following information:

- Name, location, organization, and telephone number
- Name and address of the party responsible for the incident
- Date and time of the incident
- Location of the incident
- Source and cause of the release or discharge
- Types of material(s) released or discharged
- Quantity of materials released or discharged
- Danger or threat posed by the release or discharge
- Number and types of injuries (if any)
- Media affected or threatened by the discharge (i.e., water, land, air)
- Weather conditions at the incident location
- Any other information that may help emergency personnel respond to the incident

Contact information for reporting a discharge to the appropriate authorities is listed in Appendix H and is also posted in prominent locations throughout the facility (e.g., in the office building, in the maintenance building, and at the loading rack/unloading area).

In addition to the above reporting, 40 CFR 112.4 requires that information be submitted to the United States Environmental Protection Agency (EPA) Regional Administrator and the appropriate state agency in charge of oil pollution control activities (see contact information in Appendix H) whenever the facility discharges (as defined in 40 CFR 112.1(b)) *more than 1,000 gallons of oil in a single event,* or discharges (as defined in 40 CFR 112.1(b)) *more than 42 gallons of oil in each of two discharge incidents within a 12-month period.* The following information must be submitted to the EPA Regional Administrator and to MADEP within 60 days:

- Name of the facility;
- Name of the owner/operator;
- Location of the facility;
- Maximum storage or handling capacity and normal daily throughput;
- Corrective action and countermeasures taken, including a description of equipment repairs and replacements;
- Description of facility, including maps, flow diagrams, and topographical maps;
- Cause of the discharge(s) to navigable waters and adjoining shorelines, including a failure analysis of the system and subsystem in which the failure occurred;
- Additional preventive measures taken or contemplated to minimize possibility of recurrence; and
- Other pertinent information requested by the Regional Administrator.

A standard report for submitting the information to the EPA Regional Administrator and to NDEP is included in Appendix K of this Plan.

5.5 Cleanup Contractors and Equipment Suppliers

Contact information for specialized spill response and cleanup contractors is provided in Appendix H. These contractors have the necessary equipment to respond to a discharge of oil that affects drainage to the onsite storm drain that ultimately drains toward Flamingo Wash. Spill kits should be located at various locations around the UNLV campus. The inventory of response supplies and equipment is provided in Appendix J of this Plan. The inventory is verified on a monthly basis. Additional supplies and equipment may be ordered from the following sources:

H2O Environmental	(702) 396-4148

Appendix A
Site Plan and Facility Diagram

Figure A-1: Site Plan.

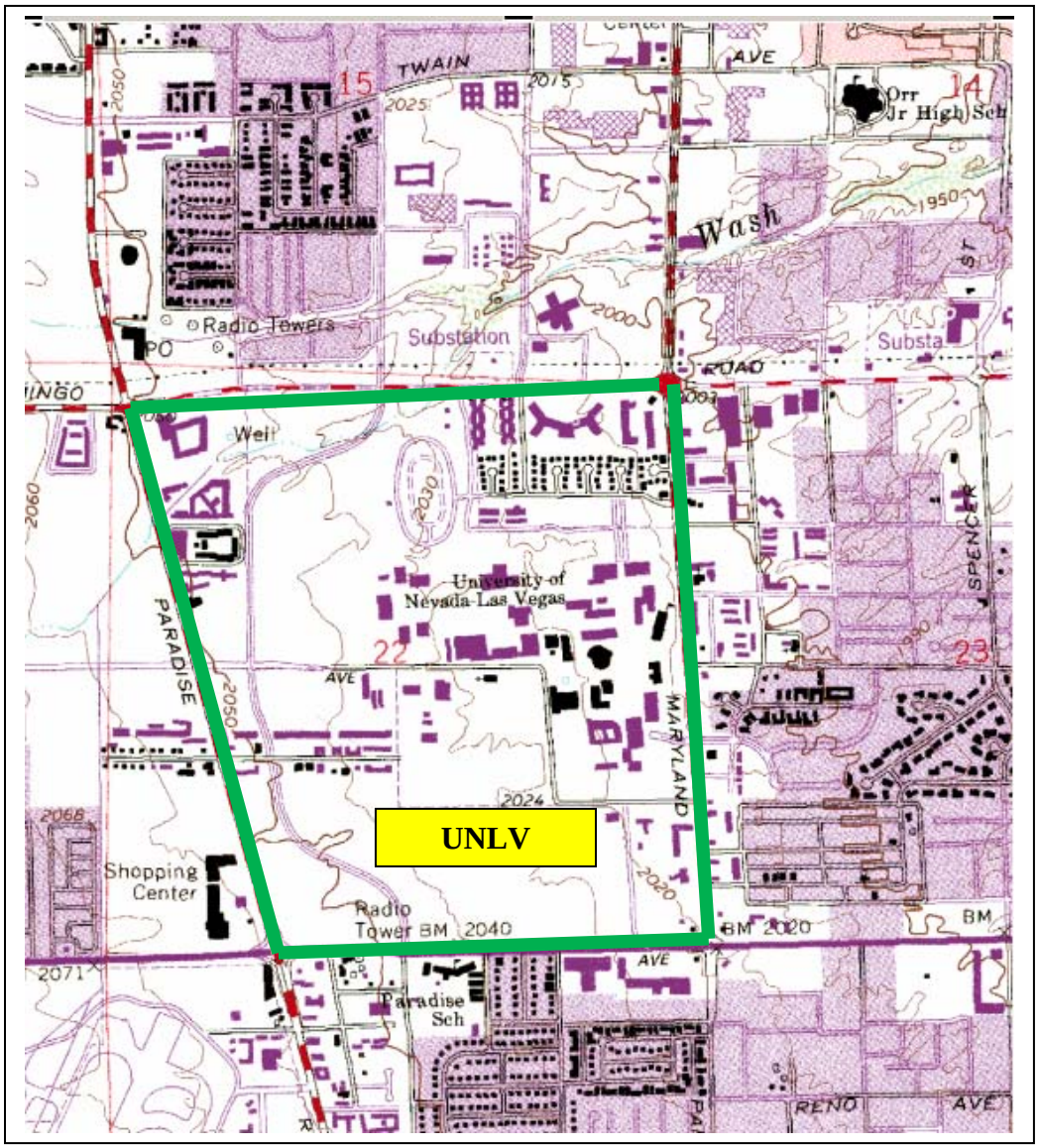
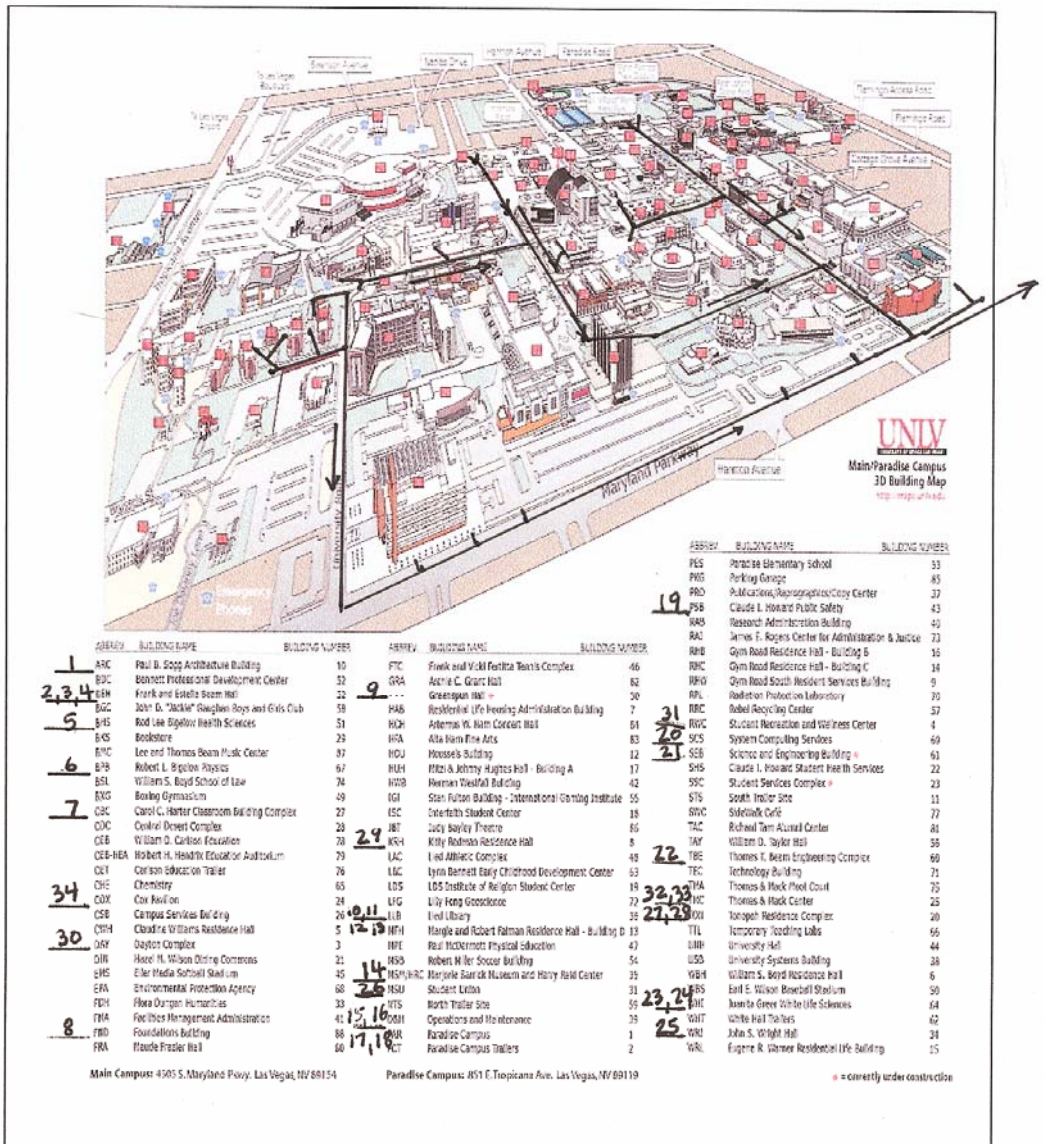


Figure A-2: Facility and Drainage Map.

University of Nevada, Las Vegas *Spill Prevention, Control, and Countermeasure (SPCC) Plan*

Figure A-2: Facility Map.



ABBREV	BUILDING NAME	BUILDING NUMBER
ABC	Paul B. Sogg Architecture Building	10
BDC	Bennett Professional Development Center	52
BEH	Frank and Estella Beam Hall	22
BGC	John D. "Jackie" Vaughan Boys and Girls Club	58
BHS	Rod Lee Bigelow Health Sciences	51
BKS	Bookstore	29
BMC	Lee and Thomas Beam Music Center	87
BPB	Robert L. Bigelow Physics	67
BSL	William S. Boyd School of Law	74
BXG	Boxing Gymnasium	49
CBC	Carol C. Harter Classroom Building Complex	27
CDC	Central Desert Complex	28
CEB	William D. Carlson Education	78
CEB-HEA	Hobert H. Hendrix Education Auditorium	79
CET	Carlson Education Trailer	76
CHE	Chemistry	65
COX	Cox Pavilion	24
CSB	Campus Services Building	26
CWH	Claudine Williams Residence Hall	5
DAY	Dayton Complex	3
DIN	Hazel M. Wilson Dining Commons	21
EHS	Ellen Hardy Shell Softball Stadium	45
EPA	Environmental Protection Agency	68
FDH	Flora Dungan Humanities	33
FMA	Facilities Management Administration	41
FND	Foundations Building	88
FRA	Maude Frazier Hall	60
FTC	Frank and Vicki Fertitta Tennis Complex	46
GRA	Annie C. Grant Hall	82
GRE	Greenspun Hall *	50
HAB	Residential Life Housing Administration Building	7
HCH	Artemus W. Ham Concert Hall	84
HFA	Alta Ham Fine Arts	83
HOU	Housels Building	12
HUH	Mike & Jolhnny Hughes Hall - Building A	17
HWB	Herman Westfall Building	42
IGI	Stan Fulton Building - International Gaming Institute	55
ISC	Interfaith Student Center	18
JBT	Judy Bayley Theatre	86
KRH	Kitty Redman Residence Hall	8
LAC	Lied Athletic Complex	48
LDC	Lynn Bennett Early Childhood Development Center	63
LDS	LDS Institute of Religion Student Center	19
LFG	Lilly Fong Geoscience	72
LLB	Lied Library	35
MFH	Margie and Robert Falman Residence Hall - Building D	13
MPE	Paul McDermott Physical Education	47
NSB	Robert N. Ber Soccer Building	54
NSM/BRC	Marjorie Barrick Museum and Harry Reid Center	35
NSU	Student Union	31
NTS	North Trailer Site	59
OSM	Operations and Maintenance	39
PAR	Paradise Campus	1
PCT	Paradise Campus Trailers	2
PES	Paradise Elementary School	53
PKG	Parking Garage	85
PRO	Publications/Reprographics/Copy Center	37
PSB	Claude I. Howard Public Safety	43
RAB	Research Administration Building	40
RAJ	James F. Rogers Center for Administration & Justice	73
RHB	Gym Road Residence Hall - Building B	16
RHC	Gym Road Residence Hall - Building C	14
RHO	Gym Road South Resident Services Building	9
RPL	Radiation Protection Laboratory	70
RRC	Rebel Recycling Center	57
RWC	Student Recreation and Wellness Center	4
SCS	System Computing Services	69
SEB	Science and Engineering Building *	61
SHS	Claude I. Howard Student Health Services	22
SSC	Student Services Complex *	23
STS	South Trailer Site	11
SWC	Sidewalk Café	77
TAC	Richard Tam Alumni Center	81
TAY	William D. Taylor Hall	56
TBE	Thomas T. Beam Engineering Complex	60
TEC	Technology Building	71
THA	Thomas & Mack Pool Court	75
THC	Thomas & Mack Center	25
TOH	Tonopah Residence Complex	20
TTL	Temporary Teaching Labs	66
UHH	University Hall	44
USS	University Systems Building	38
WBH	William S. Boyd Residence Hall	6
WBS	Earl E. Wilson Baseball Stadium	50
WMC	Juanita Greer White Life Sciences	64
WMT	White Hall Trailers	62
WRI	John S. Wright Hall	34
WRL	Eugene R. Warner Residential Life Building	15

Main Campus: 4505 S. Maryland Pkwy. Las Vegas, NV 89154

Paradise Campus: 851 E. Tropicana Ave. Las Vegas, NV 89119

* = currently under construction

Figure A-3: Facility Diagrams

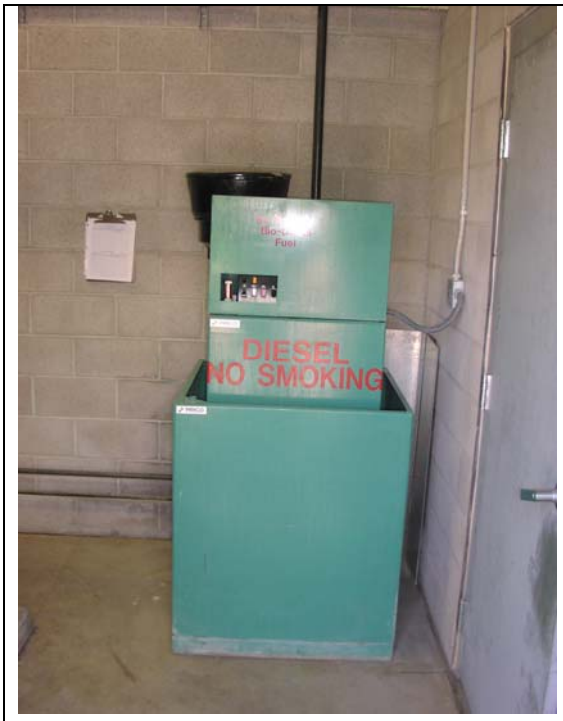
Tank #1 – Paul B. Sogg Architecture Building (ARC)

Tank #2 – Frank and Estelle Beam Hall (BEH)

Tank #3 – Frank & Estelle Beam Hall (BEH)

Tank #4 – Frank and Estelle Beam Hall (BEH)

Tank #5 – Bigelow Health Sciences (BHS)



Tank #6 – Bigelow Physics Building (BPB)

Tank #7 – Classroom Building Complex (CBC)

Tank #8 – Foundation Building (FND)

Tank #9 – Greenspun Building

Tank #10 – Lied Library (LLB)

Tank #11 – Lied Library (LLB)

Tank #12 – Lied Library

Plugged drain inside Lied Library

Tank #13 – Lied Library (LLB)

Curbing inside Lied Library

Tank #14 – Marjorie Barrack Museum (MSM)

Tank #15 – Portable Generator (OM3)

Tank #16 – Portable Generator, OM3

Tank #17 – Portable Light OM3

Tank #18 – Portable Generator (OM3)

Tank #19 – Claude I Howard Public Safety (PSP)

Tank #20 – System Computing Services (SCS)

Tank #22 – Thomas T. Beam Engineering Complex (TBE)

Tank #23 – Juanita Greer White (WHI)

Tank #24 – Juanita Greer White (WHI)

Tank #25 – John S. Wright (WRI)

Tank #26 – Memorial Student Union (MSU)

Tank #27 – Tonopah Residence Hall (TON)

Tank #28 – Tonopah Residence Hall (TON)

Tank #29 – Kitty Rodham Residence Hall (KRH)

Tank #30 – Dayton Complex (DAY)

Tank #31 – Sunset Recreation and Wellness Hall (RWC)

Tank #32 – Thomas & Mack (TMC)

Tank #32 – Thomas and Mack (TMC)

Tank #33 – Thomas and Mack (TMC)

Tank #34 –Cox Pavilion (COX)

Appendix B
Substantial Harm Determination

Facility Name: UNLV
Facility Address: 4505 South Maryland Parkway, LV, NV, 89154

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?
Yes No 0

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?
Yes G No 0

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?
Yes G No 0

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?
Yes G No 0

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?
Yes G No 0

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

	Facility Manager
Signature	Title
Gary Snodgrass	May 31, *2008*
Name (type or print)	Date

APPENDIX C
Facility Inspection Checklists

The following checklists are to be used for monthly and annual facility-conducted inspections. Completed checklists must be signed by the inspector and maintained at the facility, with this SPCC Plan, for at least three years.

Monthly Inspection Checklist

This inspection record must be completed *each month* except the month in which an annual inspection is performed. Provide further description and comments, if necessary, on a separate sheet of paper and attach to this sheet. *Any item that receives "yes" as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
Tank surfaces show signs of leakage			
Tanks are damaged, rusted or deteriorated			
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Vents are obstructed			
Secondary containment is damaged or stained			
Water/product in interstice of double-walled tank			
Dike drainage valve is open or is not locked			
Piping			
Valve seals, gaskets, or other appurtenances are leaking			
Pipelines or supports are damaged or deteriorated			
Joints, valves and other appurtenances are leaking			
Buried piping is exposed			
Loading/unloading and transfer equipment			
Loading/unloading rack is damaged or deteriorated			
Connections are not capped or blank-flanged			
Secondary containment is damaged or stained			
Berm drainage valve is open or is not locked			
Oil/water interceptor			
Oil/water interceptor > 2 inches of accumulated oil			
Oil/water interceptor effluent has a sheen			
Security			
Fencing, gates, or lighting is non-functional			
Pumps and valves are locked if not in use			
Response Equipment			
Response equipment inventory is complete			

Date: _____ **Signature:** _____

Annual Facility Inspection Checklist

This inspection record must be completed *each year.* If any response requires further elaboration, provide comments in Description & Comments space provided. Further description and comments, if necessary, must be provided on a separate sheet of paper and attached to this sheet. *Any item that receives "yes" as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
Tank #1-34			
Tank surfaces show signs of leakage			
Tank is damaged, rusted or deteriorated			
Bolts, rivets or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Vents are obstructed			

	Y*	N	Description & Comments
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Leakage in exhaust from heating coils			
Concrete dike			
Secondary containment is stained			
Dike drainage valve is open or is not locked			
Dike walls or floors are cracked or are separating			
Dike is not retaining water (following large rainfall)			
Piping			
Valve seals or gaskets are leaking			
Pipelines or supports are damaged or deteriorated			
Joints, valves and other appurtenances are leaking			
Buried piping is exposed			
Out-of-service pipes are not capped			
Warning signs are missing or damaged			
Loading/unloading and transfer equipment			
Loading/unloading rack is damaged or deteriorated			
Connections are not capped or blank-flanged			
Rollover berm is damaged or stained			
Berm drainage valve is open or is not locked			
Drip pans have accumulated oil or are leaking			
Oil/water interceptor			
Oil/water interceptor > 2 inches of accumulated oil			
Oil/water interceptor effluent has a sheen			
Security			
Fencing, gates, or lighting is non-functional			
Pumps and valves are not locked (and not in use)			
Response equipment			
Response equipment inventory is incomplete			

Annual reminders:

- Hold SPCC Briefing for all oil-handling personnel (and update briefing log in the Plan);
- Check contact information for key employees and response/cleanup contractors and update them in the Plan as needed;

Additional Remarks:

Date: _____ Signature: _____

APPENDIX D
Record of Containment Dike Drainage

This record must be completed when rainwater from diked areas is drained into a storm drain or into an open watercourse, lake, or pond, and bypasses the water treatment system. The bypass valve must normally be sealed in closed position. It must be opened and resealed following drainage under responsible supervision.

Date	Diked Area	Presence of	Time	Time	Signature

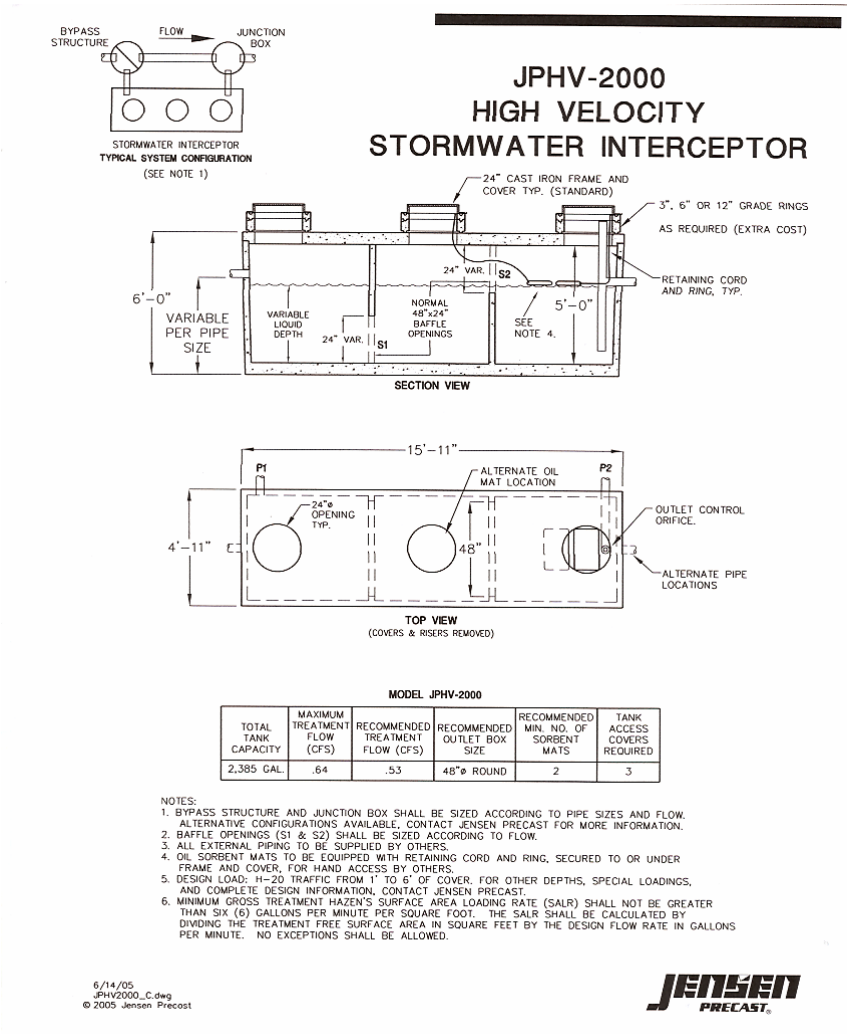
APPENDIX E
Record of Annual Discharge Prevention Briefings and Training

Briefings will be scheduled and conducted by the facility owner or operator for operating personnel at regular intervals to ensure adequate understanding of this SPCC Plan. The briefings will also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Personnel will also be instructed in operation and maintenance of equipment to prevent the discharge of oil, and in applicable pollution laws, rules, and regulations. Facility operators and other personnel will have an opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Date	Subjects Covered	Employees in Attendance	Instructor(s)

APPENDIX F
Calculation of Secondary Containment Capacity

The following oil/water interceptor is recommended to be installed in the storm drain system immediately downstream of the Lied Library. This interceptor is designed for 2000 gallons, the same volume as the Lied Library 2000 gallon tank. This design is merely conceptual and is not a final design.



MODEL JPHV-2000

TOTAL TANK CAPACITY	MAXIMUM TREATMENT FLOW (CFS)	RECOMMENDED TREATMENT FLOW (CFS)	RECOMMENDED OUTLET BOX SIZE	RECOMMENDED MIN. NO. OF SORBENT MATS	TANK ACCESS COVERS REQUIRED
2,385 GAL.	.64	.53	48"ø ROUND	2	3

NOTES:
1. BYPASS STRUCTURE AND JUNCTION BOX SHALL BE SIZED ACCORDING TO PIPE SIZES AND FLOW. ALTERNATIVE CONFIGURATIONS AVAILABLE, CONTACT JENSEN PRECAST FOR MORE INFORMATION.
2. BAFFLE OPENINGS (S1 & S2) SHALL BE SIZED ACCORDING TO FLOW.
3. ALL EXTERNAL PIPING TO BE SUPPLIED BY OTHERS.
4. OIL SORBENT MATS TO BE EQUIPPED WITH RETAINING CORD AND RING, SECURED TO OR UNDER FRAME AND COVER, FOR HAND ACCESS BY OTHERS.
5. DESIGN LOAD: H-20 TRAFFIC FROM 1' TO 6' OF COVER. FOR OTHER DEPTHS, SPECIAL LOADINGS, AND COMPLETE DESIGN INFORMATION, CONTACT JENSEN PRECAST.
6. MINIMUM GROSS TREATMENT HAZEN'S SURFACE AREA LOADING RATE (SALR) SHALL NOT BE GREATER THAN SIX (6) GALLONS PER MINUTE PER SQUARE FOOT. THE SALR SHALL BE CALCULATED BY DIVIDING THE TREATMENT FREE SURFACE AREA IN SQUARE FEET BY THE DESIGN FLOW RATE IN GALLONS PER MINUTE. NO EXCEPTIONS SHALL BE ALLOWED.

6/14/05
JPHV2000_C.dwg

JENSEN PRECAST®

For the UNLV Motor Pool area:

The conceptual design calls for a 6-inch rollover curb that is at least 45 feet by 45 feet in dimension. This will allow 1-inch of freeboard, should contain a 5000 gallon spill, and contain the 2-yr, 6-hour storm of 0.72 inches. The following is a conceptual size of a gate that could be used to drain the Motor Pool area.

UNLV Motor Pool

Project Description

Solve For	Headwater Elevation

Input Data

Discharge	0.50	ft^3/s
Crest Elevation	0.00	ft
Weir Coefficient	3.00	US
Crest Length	1.00	ft

Results

Headwater Elevation	0.30	ft
Headwater Height Above Crest	0.30	ft
Flow Area	0.30	ft^2
Velocity	1.65	ft/s
Wetted Perimeter	1.61	ft
Top Width	1.00	ft

For the OM3 Area:

The conceptual design calls for a 4-inch dike that is at least large enough to contain the single walled tanks. This will allow 1-inch of freeboard, should contain a 500 gallon spill, and contain the 2-yr, 6-hour storm of 0.72 inches. The following is a conceptual size of a gate that could be used to drain the OM3 Pool area.

UNLV OM3

Project Description

Solve For	Headwater Elevation

Input Data

Discharge	0.33	ft^3/s
Crest Elevation	0.00	ft
Weir Coefficient	3.00	US
Crest Length	1.00	ft

Results

Headwater Elevation	0.23	ft
Headwater Height Above Crest	0.23	ft
Flow Area	0.23	ft^2
Velocity	1.44	ft/s
Wetted Perimeter	1.46	ft
Top Width	1.00	ft

APPENDIX G
Records of Tank Integrity and Pressure Tests

Attach copies of official records of tank integrity and pressure tests.

APPENDIX H
Emergency Contacts

Designated person responsible for spill prevention: ***Gary Snodgrass Facility Manager 702-895-0463***

EMERGENCY TELEPHONE NUMBERS:

Facility	
Gary Snodgrass, Manager, Risk Management and Safety Department	702-895-0463
Local Emergency Response	
Fire Department – Station 18, 575 East Flamingo Rd, LV, NV 89119	911 or 702-455-7311
Desert Springs Hospital 2075 East Flamingo Road Las Vegas, NV 89119	702-733--8800
Response/Cleanup Contractors	
H2O Environmental	702-396-4148
Notification	
Nevada Division of Environmental Protection (NDEP)	775-687-9494
National Response Center	800-424-8802
United States Environmental Protection Agency, Region 9	(415) 947-8000

APPENDIX I
Discharge Notification Form

Part A: Discharge Information	
General information when reporting a spill to outside authorities: Name: UNLV Address: Telephone: Owner/Operator: Primary Contact:	
Type of oil:	Discharge Date and Time:
Quantity released:	Discovery Date and Time:
Quantity released to a waterbody:	Discharge Duration:
Location/Source:	
Actions taken to stop, remove, and mitigate impacts of the discharge:	
Affected media: G air G water G soil	G storm water sewer/POTW G dike/berm/oil-water interceptor G other: _____
Notification person:	Telephone contact: Business: 24-hr:
Nature of discharges, environmental/health effects, and damages: Injuries, fatalities or evacuation required?	

Part B: Notification Checklist		
	Date and time	Name of person receiving call
Discharge in any amount		
Discharge in amount exceeding 10 gallons and *not affecting a waterbody or groundwater*		
Discharge in any amount and affecting (or threatening to affect) a waterbody		

National Response Center (800) 424-8802		

* The POTW should be notified of a discharge only if oil has reached or threatens sewer drains that connect to the POTW collection system.

APPENDIX J
Discharge Response Equipment Inventory

The discharge response equipment inventory is verified during the monthly inspection and must be replenished as needed.

At various locations to be determined

o	Empty 55-gallons drums to hold contaminated material	4
o	Loose absorbent material	200 pounds
o	Absorbent pads	3 boxes
o	Nitrile gloves	6 pairs
o	Neoprene gloves	6 pairs
o	Vinyl/PVC pull-on overboots	6 pairs
o	Non-sparking shovels	3
o	Brooms	3
o	Drain seals or mats	2
o	Sand bags	12

APPENDIX K
Agency Notification Standard Report

Information contained in this report, and any supporting documentation, must be submitted to the EPA Region 1 Regional Administrator, and to MADEP, within 60 days of the qualifying discharge incident.

Facility:	*UNLV*
Owner/operator:	
Name of person filing report:	
Location:	
Maximum storage capacity:	
Daily throughput:	
Nature of qualifying incident(s): G Discharge to navigable waters or adjoining shorelines exceeding 1,000 gallons G Second discharge exceeding 42 gallons within a 12-month period.	
Description of facility (attach maps, flow diagrams, and topographical maps):	

Agency Notification Standard Report (cont'd)
Cause of the discharge(s), including a failure analysis of the system and subsystems in which the failure occurred:
Corrective actions and countermeasures taken, including a description of equipment repairs and replacements:
Additional preventive measures taken or contemplated to minimize possibility of recurrence:
Other pertinent information: