SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN

BALL STATE UNIVERSITY

2000 W. University Avenue (Main Campus) and 3401 North Tillotson Avenue (Physical Plant--Facilities Area)

Muncie, Indiana 47306
Delaware County

March 2023 Version

Prepared by the:

Environmental Health and Safety Office
321 North College Avenue
Muncie, Indiana 47303

TABLE OF CONTENTS

Part 5: Discharge Response

Tables

Appendices

LIST OF ACRONYMS AND ABBREVIATIONS

API	American Petroleum Institute
AST	Aboveground Storage Tank
BSU	Ball State University (or *University*)
CSA	Container Storage Area
CRDM	Continuous Release Detection Monitoring
DW	Double Walled (with integral interstitial monitoring)
EHS	BSU Environmental Health and Safety Office
EPA	U.S. Environmental Protection Agency
FPM	BSU Facilities Planning and Management
IDEM	Indiana Department of Environmental Management
MBWQ	City of Muncie Bureau of Water Quality
MS4	Municipal Separate Storm Sewer System (General Permit)
NPDES	National Pollutant Discharge Elimination System
NRC	National Response Center
OSHA	Occupational Safety and Health Administration
PE	Professional Engineer
POTW	Publicly Owned Treatment Works
PPE	Personal Protection Equipment
RPB	Release Prevention Barrier
SPCC	Spill Prevention, Control, and Countermeasure
SWQMP	Storm Water Quality Management Plan (under BSU MS4 Permit)
STI	Steel Tank Institute
SV	BSU Service and Stores Building (includes Bus Garage)
UL	Underwriters Laboratory
UST	Underground Storage Tank

INTRODUCTION

Purpose

The purpose of this *Spill Prevention, Control, and Countermeasure* (SPCC) Plan is to describe measures implemented by *Ball State University* (University, or BSU) to ensure the safe handling and storage of oil, to prevent oil discharges from occurring, and to prepare Ball State University to respond in a safe, effective, and timely manner to mitigate the impacts of any oil discharge that may occur.

This SPCC Plan has been prepared to meet the requirements of Title 40, *Code of Federal Regulations,* Part 112 (40 CFR part 112), and supersedes and wholly replaces the former BSU SPCC Plan. The organization, overall format, and much of the standard wording of the Plan, is adopted from a sample SPCC Plan included by the EPA in their SPCC *Guidance for Regional Inspectors* (EPA 550-B-13-002, December 16, 2013).

The SPCC Plan has also been developed in concert with BSU's Storm Water Quality Management Plan and other planning and response document related to our status as a permitted (General Permit) *Municipal Separate Sewer System* (MS4) entity. As such, the required personnel training, preparedness, and response measures under both programs (oil pollution prevention and storm water quality protection) may be considered concurrently.

In addition to fulfilling requirements of 40 CFR Part 112, this SPCC Plan is used as a reference for oil 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, and as a resource during emergency response. **Appendix A** includes the BSU facility location and drawings showing pertinent features of the campus.

Ball State University management has determined that this facility does not pose a risk of substantial harm under 40 CFR part 112, as demonstrated and recorded in the *Substantial Harm Determination* included in **Appendix B** of this Plan.

This Plan provides guidance on key actions that Ball State University should perform to comply with the SPCC rule:

- Complete monthly, quarterly, and annual site inspections as outlined in the *Inspection, Tests, and Records* section of this Plan (Section 3.6) 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 (**Appendix D and G**).
- Conduct annual employee training as outlined in the *Personnel, Training, and Spill Prevention Procedures* section of this Plan (Section 3.7) and document them on

the log included in **Appendix E** or by means of training rosters or electronic tracking systems for personnel training.

- ❑ Retain digital copies of all inspection forms, maintenance records, and employee training documents which will be available upon request.

- ❑ If either of the following occurs, submit the SPCC Plan to the EPA Region 5 Regional Administrator (RA) and the Indiana Department of Environmental Management (IDEM), along with other information as detailed in **Section 5.4** of this Plan and illustrated in **Appendix K**.

    - ❑ 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 reportable spill events within any 12-month period.

- ❑ 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. If such substantive changes occur, the revised Plan must then be re-certified by a Professional Engineer (PE).

- ❑ 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 as discussed below, must be recertified by a Professional Engineer on the certification page in **Section 1.2** of this Plan. Notable facility improvements since the previous version of this SPCC Plan include the construction of a concrete pad with containment vault and an overhead canopy to house the bus fueling tanks west of the HazMat shed on the north (physical) campus, and the provision of secondary containment pallets for the drum storage area just to the north of the HazMat shed.

Part 1: Plan Administration

1.1 Management Approval and Designated Person (40 CFR 112.7)

Ball State University (BSU) 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 Ball State University officials and management. Ball State University has committed the necessary resources to implement the measures described in this Plan.

The Associate Vice President, Facilities Management and Planning, is the Designated Person (Facility Response Coordinator) accountable for Oil Spill Prevention at Ball State University and has the authority to commit the necessary resources to implement this Plan.

Authorized Facility Representative (Facility Response Coordinator):

Signature: _____
Title: James Lowe, Assoc. Vice President, Facilities Planning & Management

Date: _____, 20___

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 Spill Prevention, Control, and Countermeasure 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. [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.

_____ *Indiana Professional Engineer*
Signature *Registration Number:*_____

Name: James Lowe *Title:* Assoc. V.P., Facilities Planning & Management, BSU

Entity: Ball State University *Date:*_____, 20___

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, along with associated reports and logs, is maintained at the facility in the BSU Environmental Health and Safety Office. Electronic versions of the Plan are also available online at the following web address: https://www.bsu.edu/about/administrativeoffices/riskmanagement/ehs/envhealth/envprotection

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), Ball State University 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 or tanks;
- 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 or administrative amendments can be accomplished (but must be documented in this section) by the facility owner and/or operator. Non-technical amendments are administrative in nature and include items such as 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.

Ball State University must make the needed revisions to the SPCC Plan as soon as possible, but no later than six months after the change occurs. The Plan must be implemented as soon as possible following any technical amendment, but *no later than six months* from the date of the amendment. The BSU EHS Environmental Specialist 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), Ball State University 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).

1.4.3 Record of Plan Reviews

Scheduled reviews and Plan amendments are recorded in the Plan Review Logs (**Table 1-1**). These logs must be completed even if no amendment is made to the Plan as a result of the review.

Table 1-1(A): SPCC Plan Review Logs

Five Year SPCC Plan Review Log			
Review Date	Plan Amendment		Name and Signature of Person Authorized to Review and Evaluate This Plan
	Will Amend	Will Not Amend	

Table 1-1(B) Technical Amendment Log

Any technical amendments to this Plan will be re-certified by a P.E.

Description and Certification of Technical Amendments		
Review Date	Description of Technical Amendment	Name and signature of P.E. certifying this technical amendment

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

The 175-gallon AST at the Noyer Complex serving an emergency generator is not provided with passive secondary containment. The tank is located adjacent to a building sub-level access grate and is upgradient of yard drains in a location which obstructs routing observation. Replacement of this vessel with a double-walled fuel storage tank is planned.

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

This SPCC Plan does not follow the exact order of the requirements as presented in 40 CFR Part 112. Therefore, and as allowed under the subject regulations, Section headings identify, where appropriate, the relevant section(s) of the SPCC rule. Furthermore, and as required, **Table 1-2** presents a cross-reference of Plan sections relative to the applicable sections of 40 CFR Part 112.

Table 1-2: SPCC Cross-Reference

Provision	Plan Section	Page
112.3(d)	1.2 Professional Engineer Certification	3
112.3(e)	1.3 Location of SPCC Plan	4
112.5	1.4 Plan Review	4 5, Table 1-1 A and B
112.7	1.1 Management Approval	3
112.7	1.6 Cross-Reference with SPCC Rule	6 and Table 1-2
112.7(a)(3)	Part 2: General Facility Information Appendix A: Figures and Inventory tables	8 Appendix A
112.7(a)(4)	5.4 Discharge Notification	32 Appendix I Appendix K
112.7(a)(5)	Part 5: Discharge Response	28
112.7(b)	3.3 Potential Discharge Volumes and Direction of Flow	17 and Table(s) 3-1
112.7(c)	3.4 Containment and Diversionary Structures	17
112.7(d)	3.5 Practicability of Secondary Containment	18
112.7(e)	3.6 Inspections, Tests, and Records	19 Appendix C
112.7(f)	3.7 Personnel, Training and Discharge Prevention Procedures	20

Provision	Plan Section	Page
112.7(g)	3.8 Security	21
112.7(h)	3.9 Tank Truck Loading/Unloading	21
112.7(i)	3.10 Brittle Fracture Evaluation	22
112.7(j)	3.11 Conformance with Applicable State and Local Requirements	23
112.8(b)	2.2 Evaluation of Discharge Potential 4.1 Facility Drainage	10, 24
112.8(c)(1)	4.2.1 Construction	25
112.8(c)(2)	4.2.2 Secondary Containment	25
112.8(c)(3)	4.2.3 Drainage of Diked Areas	25 Appendix D
112.8(c)(4)	4.2.4 Corrosion Protection	26
112.8(c)(5)	4.2.5 Partially Buried and Bunkered Storage Tanks	26
112.8(c)(6)	4.2.6 Inspection Appendix B - Facility Inspection Checklists	26 Appendix C
112.8(c)(7)	4.2.7 Heating Coils	27
112.8(c)(8)	4.2.8 Overfill Prevention System	27
112.8(c)(9)	4.2.9 Effluent Treatment Facilities	27
112.8(c)(10)	4.2.10 Visible Discharges	27
112.8(c)(11)	4.2.11 Mobile and Portable Containers	28
112.8(d)	4.3 Transfer Operations, Pumping and In-Plant Processes	28
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: Ball State University

Address: 2000 West University Avenue
Muncie, Indiana 47306

Telephone: (765) 285-5000 (BSU Campus Information Center)

Type: Post-Secondary Education (university).

Date of Initial Operations: 1918, as the *Indiana State Normal School-Eastern Division*

Owner/Operator: Geoffrey Mearns, President (effective May 15, 2017)
Ball State University

Facility Response Coordinator: James Lowe, Associate Vice President, Facilities Planning and Management

Alternate Response Coordinator: Mike Planton, Director of Landscape Services

Primary Contact: Sean Coats, Environmental Specialist
Environmental Health and Safety Office
Risk Management & Insurance
321 North College Avenue
Muncie IN 47303
Work Phone: (765) 285-2827
Cell Phone (765) 730-5522
Radio: Safety Channel, Radio # 60

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

2.1.1 Location and Activities

Ball State is a state-assisted, residential university in Muncie, Indiana, a midsized Midwestern city of approximately 66,000 residents located one hour northeast of Indianapolis. The main campus of the university covers approximately 731 acres on the northwest side of Muncie (see map in **Appendix A**) with a total of 113 buildings including academic, housing, and support structures. Around 7.8 million square feet are under roof on the campus. Approximately 22,000 undergraduate and graduate students enroll each year in diverse academic programs on and off campus. An additional perhaps 2,500 faculty and staff are employed at the university.

Ball State is ranked a "high" research institution by the Carnegie Foundation and is fully accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. Individual programs are accredited by various regional and national organizations.

The University is open year-round and emergency occurrences, including oil releases, are to be reported 24 hours per day through the University Public Safety (Police) Department at (28)5-1111 or 911. The appropriate BSU maintenance or emergency response personnel will then be notified for response. Outside emergency response authorities (City of Muncie and Delaware County Emergency Management Agency, the IDEM, NRC, or private contractors) will be contacted for assistance when necessary.

The ***Site Plan*** included in **Appendix A** of this Plan shows the location and layout of the University and structures. The ***Facility Diagram*** (**Figure A-2**) shows the location of the facilities, appurtenances, tanks, container storage areas, or equipment subject to this SPCC Plan through use of the included building key. Any minor or incidental oil storage or handling locations that are not included in the Table would normally involve the use of small quantities of oil in containers of less than 55-gallon capacity, or containers similar to those common for residential use. Regardless, any spillage of oil, regardless of the source, will be addressed through the response procedures established in this *SPCC Plan* or the associated *BSU Spill Response Plan*. Similarly, outside contractors, when working on BSU grounds, are to notify BSU of their oil storage and handling practices to ensure they are consistent with the protections afforded by this SPCC Plan.

Ball State University is located adjacent to predominantly residential areas, with some nearby retail, and light commercial activities. Ball Memorial Hospital is located adjacent to the university on the southwest area of the campus. The site has been in educational use since early in the last century.

The following provides general information on the Campus:

BSU Acreage, Buildings, and Space Utilization		
Campus Acreage	Main Campus and Remote Areas	
	Total Acreage	**1,193**
Buildings		
	Academic / Administrative Buildings	52
	Auxiliary Buildings	43
	Residence Hall Complexes	16
	Apartment Complexes	2
	Total Buildings	**113**
Classrooms / Labs		
	General Purpose Classrooms	181
	Teaching Labs	168
	Research Labs / Open Labs	409
	Total Classrooms	**751**
Square Footage		
	Total On-Campus Square Footage	**7,797,241**

2.1.2 Oil Storage

Oil storage at the university (including used oil) occurs at numerous locations on the campus and associated locations.

The locations of the major oil storage facilities are shown on the facility diagrams in **Figure A-2** by building location. The potential volume of all containers with a capacity of 55 gallons or more are included, although the numbers of 30-gallon drums, 5-gallon containers, pails, or cans stored in several areas are variable and not specifically itemized here. Regardless, the total oil quantities listed for each area can be considered the maximum.

In accordance with the requirements of 40 CFR 112.7(a)(3), bulk and portable oil containers with capacity of 55 gallons or more as well as oil-filled equipment which contain reservoirs with the capacity to hold equal to or greater than 55 gallons are included in **Table 2-1** through **Table 2-4** in **Appendix A**.

As summarized in **Table 2-1** through **Table 2-4**, the total oil storage capacity for the university is as follows:

- Bulk Oil Tanks, Containers, and Equipment – 205,535 gallons;
- Electrical (Fluid-Filled) Transformers – 49,650 gallons;
- Emergency Generators with Oil Storage Tanks – 21,816;
- Hydraulic Elevators – 8,000

2.2 Evaluation of Discharge Potential

2.2.1 Distance to Navigable Waters and Adjoining Shorelines and Flow Paths

Surface Waters: Muncie and Ball State University are located within the Upper White River Water Shed that covers roughly 2,271 square miles in central Indiana. The West Fork of the White River from Farmland to its confluence with the Wabash River, is on the Outstanding Rivers List for Indiana, as having outstanding ecological, recreational, or scenic importance.

Local surface water drainage on the “main” BSU Campus is largely accommodated by Cardinal Creek which traverses much of the campus. The Creek starts as a developed spring just north of Park Hall that impounds, or ponds, at that location. The Park Hall pond and other storm water drainage then proceeds to the north/northwest beneath Neely Road and beyond the Health Center, after which it maintains a surface flow until reaching the Worthen Arena parking lots. It is then conveyed subsurface through a large box culvert heading to the north/northwest which is joined on its route by catch basin drains serving the paved parking areas around Worthen Arena and other structures. The Creek again surfaces at the outlet to the impoundment called the “Duck Pond” on the north and east sides of McKinley Avenue, just south of the tennis courts. This impoundment serves as a reservoir for other surface and subsurface drainage from the campus. The pond overflow is then channeled beneath the road to the other (west) side of McKinley Avenue where another impoundment (*Duck Pond 2 or two*) is maintained. The discharge from these serial impoundments is to Yorktown-Prairie Creek which proceeds west/southwest,

eventually discharging to the White River on the west side of Yorktown, Indiana. Numerous storm water catch basins, curbside drain grates, and drainage swales on the campus direct precipitation to the Cardinal Creek surface water drainage system throughout its course across the campus. It must be noted that storm water flows originating from off the BSU premises, for which the City of Muncie Bureau of Water Quality are responsible, also join the storm water flow discharging to the Duck Pond storm water control system through several outlets and overland flow discharge. Duck Pond 1 receives a large City of Muncie discharge through an outfall, while other City outfalls discharge directly to Duck Pond 2.

The far northern and noncontiguous portions of the Ball State campus (north of McGalliard Avenue), including the physical plant Service and Stores (SV) building and the Heath Farm, drain to unnamed ditches heading to the northwest to receiving waters named Eagle Branch of Jakes Creek. Jakes Creek later joins with Killbuck Creek before its confluence with the White River near Anderson, Indiana.

The south portion of the main Ball State University campus (vicinity of Riverside Avenue and south), as well as this general vicinity of Muncie, is served by the City of Muncie sanitary and storm sewerage system. A portion of the surface water flow in the vicinity of Riverside and McKinley Avenues flows via dedicated storm sewers to the Park Hall pond to join the storm water conveyance serving the north part of campus as described above. This storm water collection and drainage system conveys surface water to the north and east to the Park Hall Pond where it then discharges to Cardinal Creek and the related surface impoundments or “Duck Ponds” described above.

Other surface water drainage in the southern area of the campus, including the vicinity of University Avenue and south, drains via overland flow and catch basins to the City of Muncie storm sewer system to the south/southwest to discharge to the White River along with those storm or waters from residential and commercial areas south of the campus.

Accordingly, the possibility of oil reaching a surface waterway from a release or spill--either directly or through storm sewers is present. The threat of an oil release accessing a sanitary or combined sewer, being transported to the Muncie POTW, and passing through the treatment works to the White River discharge point is also a possibility.

The Ball State University Campus is designated as a Municipal Separate Sanitary Sewer (MS4) facility by the IDEM under its General Permit program and storm water drainage and quality is controlled through a Storm Water Quality Management Plan (SWQMP).

Ground (Subsurface) Waters: The Ball State University campus lies in the Tipton Till Plain physiographic unit of the State of Indiana with the unconsolidated natural deposits in the vicinity of the campus being glacial tills. Tills consist of a heterogeneous mixture of clay, silt, sand and some gravel with scattered cobbles and boulders. Lenses or deposits of sand and gravel interbedded within the tills is common. The glacial drift thickness is approximately 70 feet in this area, with limestone and dolomite bedrock at an elevation of approximately 875 feet mean sea level (MSL). The topographic elevation of the main BSU campus varies from 930 feet MSL to 945 feet MSL.

Studies and excavations have shown a "perched" water table or saturated soils across the campus at an approximate depth of 10 feet below the surface with a second, lower aquifer, at depths generally greater than 20 feet. Topsoil is of the Blount Silt Loam series. The Blount series consists of very deep soils that are moderately deep or deep to dense till. They are somewhat poorly drained, slowly permeable soils. These soils are on till plains and have slopes ranging from 0 to 6 percent.

The BSU Campus is not located within a Wellhead Protection Zone, and the relatively low overall permeability of the overlying soils above the low-yield and discontinuous shallow ground water lenses, generally 8 to 18 feet below ground surface, would not lend themselves to direct or rapid contamination of ground water from oil releases at the surface. Sustained or significant releases could, however, impact the subsurface water quality--if not promptly addressed through cleanup and remediation.

2.2.2 Discharge History

Table 2-5 summarizes the facility's history of reportable oil discharges (most recent 5 year period). The Table will be updated should reportable or other significant releases of oil occur.

Table 2-5: Reportable Oil Discharge History

Description of Discharge	Corrective Actions Taken	Plan for Preventing Recurrence
No reportable incidents in the past 5 year period	N/A	N/A

PART 3: Discharge Prevention - General SPCC Provisions

The following equipment is provided, or measures implemented, to prevent oil discharges during the handling, use, or transfer of oil products at BSU. Employees involved in the storage, use, or handling of oil have received training in the proper implementation of these measures.

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

Aboveground Storage Tanks:

The **vehicle fueling ASTs** (see **Table 2-1** in **Appendix A**) all have double-wall construction and are inspected following a regular schedule in accordance with the applicable Steel Tank Institute (STI) SP-001, UL 142, or American Petroleum Institute (API) 653 tank inspection standards as described in this Plan. Any leakage from the primary container would be detected through the continuous electronic or gauge monitoring of the interstitial space with associated alarms, or through observation of the visible gauges. Any leakage from the secondary shell, piping, or valves would be detected visually during scheduled visual inspections by facility personnel. The Bus (Diesel) Fueling station is covered with a canopy, and has two (2) independent sloped concrete fueling areas each served with an additional containment vault. The total retaining volume of the vault and slab, for each side, is 2,086 gal. This capacity can accommodate the maximum volume of the bus fuel tanks, as well as precipitation based on the 24 hour/25 year storm.

Emergency Generator Day Tanks:

In addition to the above ASTs, the university also maintains 43 emergency generators (gensets) that are associated with above-ground diesel fuel **emergency generator day tanks** (see **Table 2-3** in **Appendix A**). All but one of these (the aforementioned Bracken Library UST) are above-ground installations supporting generators at many campus buildings or complexes. The tanks may be located outside, under cover, in enclosures, or inside annexes to the buildings served. The EPA has clarified that fuel storage tanks serving generators are bulk storage tanks rather than oil filled operational equipment; accordingly, this tankage must be provided with passive secondary containment (double-walled tank, vault, etc.).

With a single exception, all emergency generator day tanks are equipped with secondary containment of some means (double-walled tank or containment vault). While not provided with secondary containment, the Noyer Phone generator fuel storage tank is surrounded by buildings and located on a concrete pad in a grassed area that would contain any release from the fuel tank and prevent drainage to any waterways. The closest concern is a storm water catch basin located approximately 100 feet away across the grassed area. In most cases, the diesel fuel storage tanks are integral components of the emergency generators themselves and are not free-standing bulk storage tanks; rather, they comprise a generator set or “genset”. BSU electricians perform test runs weekly on the generators. At that time, they also check the fuel levels and check for any fuel leakage around the gensets. These inspections are recorded on a log sheet kept in the generator enclosure or room. The staff servicing the generators are trained to check for any signs of diesel or oil releases and report any concerns to the BSU Environmental Specialist. A contracted fuel vendor is notified if the genset fuel tanks need replenishing.

Regulated Underground Storage Tanks:

The **BSU Garage USTs** (see **Table 2-1** in **Appendix A**) are both equipped with automatic tank gauging (ATG), with leak detection tests being automatically performed weekly. The ATG systems are manufactured by Veeder-Root and are maintained by Jim Allen Maintenance, a local vendor. The vehicle fueling USTs are operated in compliance with 40 CFR 280 and the parallel IDEM standards. These USTs are provided with catchment basins, drop-tube type overfill prevention valves, and auditory and visual overfill alarms.

The small UST serving the Bracken Library emergency generator is provided with a catchment basin and drop-tube type overfill prevention valve. The tank is of fiberglass construction and double walled. This tank is also equipped with an ATG that performs leak detection tests weekly.

Unregulated Underground Storage Tanks:

The six (6) 30,000-gallon **USTs at the Heat Plant** (see **Table 2-1** in **Appendix A**) contain fuel oil intended for on-site consumption and are not, therefore, subject to the UST standards. However, they are installed and monitored in accordance with those standards and in a manner to prevent releases to the soil or waters of the state. These tanks are fiberglass (FRP) clad, double wall, fabricated of A36 carbon steel in accordance with the requirements of UL-58. The primary containment shell is 3/8-inch steel. An interstitial monitoring system is provided. Each tank is clad with a coating of resin and chopped strand glass fibers applied to a thickness of 100 mils minimum, over 100% of the tank's surfaces. Cladding conforms to the STI Permatank® procedure (UL-1746). The tank system is equipped with a Veeder-Root console providing fuel management functions with inventory control, interstitial space leak monitoring, tank leak sensing, and fuel line leak detection.

Transformers:

The numerous **electric transformers** serving the campus (see **Table 2-2** in **Appendix A**), with the exception of several at the Bethel and Christy Woods substations, are not provided with physical secondary containment. Secondary containment is not a practical means of spill control due to the electrical hazards presented by impounding oils and water around live transformers and switching equipment. Electrical transformers are "oil-filled operating equipment" under 40 CFR 112 and are not, therefore, required to have full secondary containment equipment. In most cases, however, the transformers are installed on concrete pads allowing observation for any leakage, and are surrounded by gravel at an approximate 4-inch thickness that would serve to contain or retard any release of dielectric fluid from the transformers. Active secondary containment would also be employed in the event of any weepage, leakage, or significant release from the transformers. A significant fluid release would result in overheating and failure of the transformer resulting in a power loss that would be quickly reported.

The BSU High Voltage staff has been informed to contact the University Police or the EHS Office to report any release of dielectric fluid from these units. The High Voltage staff thoroughly inspects each transformer quarterly for operation, thermal condition, dielectric oil level, and any leakage

or damage. These inspections are recorded on inspection logs that are maintained by the High Voltage Department.

Hydraulic Elevators:

The **hydraulically operated passenger and freight elevators** (see **Table 2-4** in **Appendix A**) are installed with sub-grade concrete slab shafts (vaults) that serve as secondary containment in the event of a hydraulic line or valve leak. Hydraulic elevator reservoirs are generally located in rooms separate from the elevator shaft (which usually resides in a pit). Oil reservoirs sometimes have the potential to leak to subsurface soils or into floor drains leading to ejector pumps and henceforth to sewers. However, the hydraulic elevators are "oil-filled operating equipment" under 40 CFR 112 and are not, therefore, required to have full secondary containment. However, because the recirculation piping systems associated with the elevator hydraulic systems are mechanical process/distribution systems, it is not practical to provide secondary containment in areas proximate to the elevator installations. If a leak were to occur in an elevator system or reservoir, FPM would be immediately notified by occupants of the building since it would affect the operation of the elevator. The University FPM oversees the maintenance of elevators across campus through the use of outside contractors that perform monthly inspections and maintenance of the elevators. These inspections include monitoring of the hydraulic pressure and hydraulic fluid levels in the elevator reservoirs and related systems to determine any leakage of oils from the systems. If a leak or drip is identified within one of the elevator systems, the recirculation pump and any elevator sump or ejector pump will be shut down and the situation investigated. Further, BSU FPM staff will be notified, and the procedures outlined in ***Part 5 - Discharge Response*** of this Plan will be implemented.

Used Oil Containers:

The facility generates "used oil" subject to the requirements of 40 CFR 279, the *Used Oil Management Standard*. These used oils are stored in a separate container storage area consisting of several drums adjacent to the hazardous materials storage shed on the north campus, or in dedicated tanks and containers inside the University garage at the northwest corner of the Service and Stores Building. Minor amounts of used oil may also be collected in containers so labeled in the other container storage areas pending their consolidation in the used oil storage area. Containers of 55-gallon capacity or more used for used oil storage are provided with secondary containment and counted towards the facility oil storage capacity. Oily rags generated by maintenance and art activities are deposited in red "oily rag" containers, or placed directly into containers with covers for storage pending recycling or disposal in the Bus Garage and North and South Grounds locations.

Vegetable Oils:

The **food service facilities** on campus utilize grease canisters to temporarily store waste oil associated with cooking processes. These containers are 20-gallons in capacity to accumulate fats, grease, and cooking oils and are typically staged under roof at the rear loading dock of the BSU food service buildings, in the building basements, or in storage rooms pending removal by the private vendor.

The canisters are picked up weekly by the vendor and any container spill would most likely solidify or congeal before reaching nearby storm sewers. Grease interceptors are also installed on the wastewater drains from most of the significant campus buildings that house food service establishments. These vary in capacity of 500 to 3,600 gallons. These interceptors are considered wastewater treatment or flow-through process tanks and are not subject to this SPCC Plan. The interceptors are cleaned at least quarterly by an IDEM licensed wastewater hauler for proper off-site disposal as required by the Muncie BWQ.

Portable Containers:

Totes or 55-gallon containers (drums) of oil may be stored at several campus locations. Most significant are the north waste shed and the container storage area (CSA) adjacent to it, the hazardous waste accumulation area in the Foundational Science Building (occasionally stores oil-contaminated wastes), and the BSU Bus Garage. Normally, perhaps two (2) drums of dielectric oil are stored in the electric shop shed at the Heath Farm north of the campus proper. There are also six (6) large dining facilities on the Campus, each of which utilize vegetable oils in their food preparation activities which also entails handling of non-petroleum based oils and portable containers for their off-site reclamation by private vendors. The fresh and used oils are stored in 20-gallon mobile containers on wheeled dollies provided by the vendor. Grease interceptors associated with the dining halls are part of the wastewater collection system and are pumped out routinely. These interceptors are operated and maintained in accordance with permits issued by the Muncie Bureau of Water Quality under the Fats, Oil, and Grease (FOG) program.

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

The discharge notification form included in **Appendix I** will be completed, at least in part, upon detection of a discharge and prior to reporting a spill to the proper notification contacts. However, full completion of the form will not delay the required reporting to regulatory or response agencies. Spill incidents may first be reported through the University Police Department, to BSU Facilities Planning and Management, or to the BSU EHS Office. The Facility Response Coordinator or Alternate may then be contacted by Police Dispatch, FPM Work Control, or the assigned staff in possession of the “Emergency Cell Phone”. Regardless, the BSU Environmental Specialist will ensure that any required reporting to regulatory agencies or response entities is completed when required or advisable. Two-way portable radios and cell phones are carried by all personnel who may need to respond to an oil release or potential concern and their home, office, and cell numbers are listed on the BSU FPM Emergency Call List.

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

Table 3-1, in **Appendix A**, presents the potential volume, discharge rate, general direction of flow in the event of equipment failure, and the means of secondary containment for different vessels or areas at the university where oil is stored, used, or handled. Where oil-containing equipment or each tank or container is not always discussed separately (e.g., transformers, emergency generators, hydraulic elevators) a representative or worst-case scenario is presented for that category of oil-containing equipment or bulk storage vessel.

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

As described in **Section 3.1** for particular bulk storage tanks, containers, and equipment: Methods of secondary containment at the university include predominantly passive physical structures (e.g., double-walled tanks, built-in secondary containment, sub-grade storage rooms, concrete vault, concrete docks), and active containment and land-based spill response (e.g., drain covers, sorbents) to prevent any oil releases from reaching the sanitary sewerage system, storm water sewers, surface drainage ways, or any surface or ground waters.

- **Double-wall tank construction.** All vehicle fueling ASTs are of double-wall construction with a secondary shell designed to contain the inner tank capacity. The interstitial spaces of each tank are monitored either manually or electronically. Approximately one-half of the day tanks serving the emergency generators have double wall construction;

- **Secondary containment.** Approximately one-half of the generator day tanks are provided with secondary containment. All tanks with containment vaults are protected from precipitation entry;

- **USTs.** A number of fuel tanks are installed underground to prevent the possibility of a catastrophic release directly to a waterway or sewer. All underground storage tanks are of fiberglass construction or cladding. The Heat Plant and vehicle fueling USTs are of double-wall construction provided with spill buckets and automatic (Veeder-Root) tank gauging and overfill alarms. Overfill prevention drop valves have recently been installed in the vehicle fuel tanks and spill buckets are provided at the fill pipes. The SV Bus Garage USTs are operated in accordance with the 40 CFR 280 standards. The Bracken Library UST has ATG system with alarms, overfill prevention drop valve, and spill bucket and is operated in compliance with the 40 CFR 280 UST standards. While the Heat Plant USTs are not actually subject to the 40 CFR 280 UST standards, the construction, installation, protective features, inspection, and operation of these tanks are all designed and maintained in conformance with those standards;

- **Active Containment Devices and Equipment.** Spill cleanup kits that include absorbent material (loose, mats, and socks), booms, and other portable barriers are located at several locations, as shown on a Facility Diagram in **Appendix A**. The spill kits are located within close proximity of the oil product storage,

dispensing, and handling areas for rapid deployment should a spill occur. Sorbent material, booms, drain covers, and other portable barriers are staged for quick deployment in the event of a discharge during oil transfer activities or any other accidental discharges. The response equipment inventory for the facility is listed in **Appendix J** of this Plan. The inventory is checked monthly to ensure that used material is replenished. The BSU *Spill Response Plan* relates the response capabilities and procedures for spills or releases of oil and other substances on the BSU campus;

- **Drainage system.** Cardinal Creek comprises the main surface drainage waterway serving the Ball State University campus. All separate storm drains are directed to the either the ponds and creek, or interceptors or box culverts that drain to the ponds or creek. Drain covers are available for any interior drains, yard drains or curb inlets to the storm sewers that may be in the vicinity of oil storage and handling operations. Oil absorbent booms are available to retain and recover any oil spillage to the surface waterways or ponds on the campus in order to prevent its migration to York Prairie Creek, the receiving waterway; and,

- **Transformer containment.** The individual pad-mounted transformers are normally installed on elevated concrete slabs that do not afford containment for any dielectric oil spillage. Releases will be contained by deploying sorbent material and other portable spill barriers upon discovery of the spill. Any storm sewer catch basins or drains near the transformers or electric substations will be covered in the event of a transformer spill or explosion in order to prevent released oils accessing the storm drainage system. The transformers installed in transformer banks or electrical substations are normally afforded secondary containment or partial containment by a gravel bed that surrounds the concrete slabs on which the transformers are mounted.

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

Ball State University Facilities Management has determined that the use of oil storage vessels with integral secondary containment, active and passive secondary containment devices and protocols, preparedness and response training and inspection procedures, along with readily available equipment to prevent discharge of oil from reaching navigable waters, is practical and effective at this facility.

All above-ground bulk storage containers are provided with secondary containment (double-walls, vaults, or dikes) with the exception of the following:

- The 175-gallon diesel fuel storage tank serving the Noyer Phone emergency generator at Noyer complex;

- The used oil (55-gallon drum) and waste container storage area adjacent to the waste shed north of the Service and Stores building; and,

It is the university's intention to provide passive secondary containment (double-walled tank, vaults, berms, containment pallets, or dikes) for the above vessels or container storage areas as soon as practicable. In the meantime, adequate spill response equipment (absorbents, drain seals, booms, etc.) and training are provided to ensure that our active containment measures will be protective and serve as secondary containment.

Those oil storage vessels or oil handling activities that are not provided with passive secondary containment are afforded active secondary containment through the provision of adequate sorbent materials and other response equipment.

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

As required by the SPCC rule, Ball State University performs the inspections, tests, and evaluations listed in **Table 3-2** (**Appendix A**). 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). The inspection forms to be utilized may be found in **Appendix C**. Electronic copies of the completed inspection forms will be stored digitally and will be made available upon request.

3.6.1 Weekly Inspection

A Ball State University employee (Environmental Specialist, supervisor, or a designated employee) normally performs a walk-through of, or visit to, major oil storage and handling areas at least weekly. This weekly visual survey involves: (1) looking for tank/piping or container damage or leakage, stained or discolored soils; (2) checking for signs of oil leakage from containers and tanks and on floors or ground surface; and (3) verifying that the containment mechanisms or capabilities remain adequate. While not formally recorded or reported unless problems are observed, all oil-handling personnel are trained to be alert to potential problems or deficiencies during their work around the ASTs, USTs, and CSAs.

3.6.2 Monthly Inspection

The checklist provided in **Appendix C** is used for monthly UST inspections by Ball State University personnel. The monthly inspections are designed to incorporate all applicable elements under 40 CFR 280.36.

All potential problems regarding tanks, piping, containment, or response equipment must immediately be reported to the BSU Environmental Specialist. Visible leaks from tanks, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge to the combined sewer. Pooled oil, contained liquids with an oil sheen, or stained soil is to be reported and removed immediately upon discovery.

Written monthly inspection records are signed by the Environmental Specialist, or the BSU designee, and maintained with this SPCC Plan for a period of three years.

3.6.3 Quarterly Inspection

The checklist provided in **Appendix C** is used for quarterly AST inspections by Ball State University personnel. The monthly inspections are designed to incorporate all applicable elements under the STI SP001 monthly inspection form.

All potential problems regarding tanks, piping, containment, or response equipment must immediately be reported to the BSU Environmental Specialist. 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 the combined sewer. Pooled oil, contained liquids with an oil sheen, or stained soil is to be reported and removed immediately upon discovery.

Written quarterly inspection records are signed by the Environmental Specialist, or the BSU designee, and maintained with this SPCC Plan for a period of three years.

3.6.4 Annual Inspection

Facility personnel perform a more thorough inspection of facility equipment on an annual basis. This annual inspection complements the monthly inspection described above 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 functioning of drainage control systems and to verify the direction and fate of the site drainage that may serve to transport any oil spills or releases.

Written annual inspection records are signed by the Environmental Specialist, or his designee, and maintained with this SPCC Plan for a period of three years.

3.6.5 Periodic Integrity Testing

In addition to the above monthly and annual inspections by facility personnel, the ASTs may 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, or in accordance with API 653, as described here and in **Section 4.2.6** of this Plan.

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

BSU Facilities Planning and Management is the party responsible for oil discharge prevention, control, and response preparedness activities at this facility. The Environmental Specialist is responsible for routine and day-to-day maintenance and operational activities to prevent the release of oil or other chemicals.

Ball State University management has instructed 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 are provided with this same training prior to being involved in any unsupervised oil handling operations or activities.

Annual discharge prevention briefings are held by the Environmental Specialist, or his designee, for all facility supervisors and personnel involved in oil storage and handling operations. These briefings may be performed through online or web-based training classes. The briefings are aimed at ensuring continued understanding and adherence to the discharge prevention procedures presented in the SPCC Plan. The briefings also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best management practices. Facility operators and other personnel will have the opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Records of the briefings and discharge prevention training are kept on the form shown in **Appendix E,** a similar form, or in an electronic format**,** and are maintained with this SPCC Plan for a period of at least three years.

3.8 Security (40 CFR 112.7(g))

For the BSU Campus facility as a whole, security is the full-time responsibility of University Public Safety Department (University Police). Public Safety maintains a round the clock vigil of the campus, using squad cars and walking patrolmen. The campus is well lit for illumination after dark. Area lighting is located in such positions as to illuminate the storage tank, container, transformer, generator, and other oil handling areas. Consideration and instruction were given to the University Police and maintenance supervisors regarding awareness of spills and discouraging fuel theft or possible sabotage. The University Police are provided with access to this SPCC Plan and have a copy of the associated *BSU Spill Response Plan*.

3.9 Oil Transfer Procedures (40 CFR 112.7(h)(2) and (3))

The BSU facility does not maintain a loading/unloading rack - as defined or intended by EPA under section 112.7(h) of the regulations. Regardless, the potential for discharges during tanker truck unloading operations is of concern at this facility. Ball State University management is committed to ensuring the safe transfer of material to and from all oil storage tanks.

All suppliers must meet the minimum requirements and regulations for tank truck loading/unloading established by the U.S. Department of Transportation. Ball State University 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. Similar precautions are undertaken during the removal of used oils from the facility.

The AST and UST filling operations are overseen by supplier personnel trained in proper discharge prevention procedures. Larger deliveries, to any tank with over a 1,000 gallon capacity, will be observed by a trained BSU employee. The delivery truck driver and university representative are to remain with the vehicle at all times while fuel is being transferred. Transfer

operations are performed in accordance with the following minimum procedures and the more specific protocols outlined in **Table 3-3** in **Appendix A**:

- All oil transfer operations occur above ground and in plain sight;
- All facility oil transfer operations occur during daylight hours, or under sufficient illumination to be capable of observing any spillage;
- For fuel transfers of significant quantities or at sensitive locations, at least one trained, BSU individual is present and observes the transfer of oil during the entire transfer process;
- Where oil transfer is to occur near a storm drain drop inlet, the trained facility individual present during product transfer shall cover the storm drain drop inlet with a close-sealing, impermeable mat. Following successful transfer of the product or waste, the mat seal shall be removed;
- Where oil transfer is to occur near a surface drain or waterway, the trained facility individual present during product transfer shall ensure that adequate spill containment, diversion, or absorption equipment is readily available at the location to prevent any spillage from reaching the drainage way;
- The driver and/or university representative are to immediately report any size release of oil to a waterway or sewer, or a ground spill or spill to the tarmac, gravel surface, or soil to the University Police and the BSU EHS Office;
- Drivers are not to leave the location where the spillage occurred until approved for departure by the University Police or EHS Department;
- Any release of oil must be prevented from reaching a storm or sanitary sewer or waterway and cleanup begun as soon as practicable;
- Any spillage must be contained as soon as it occurs and be reported to the BSU EHS Office as soon as practicable. All oil spills, regardless of quantity involved, are to be cleaned up – any releases not promptly addressed must be reported to the IDEM under the Indiana Spill Rule.

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

No field-constructed oil storage tanks are present at the university. All oil storage tanks were shop-built.

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

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

3.12 Contractor/Vendor Responsibilities

BSU bid specifications and contracts for work to be performed on university premises are to include provisions that if any fuels and petroleum products are to be stored or used, such is to be done only in accordance with this SPCC Plan. At a minimum, the contractor must receive approval from the SPCC Coordinator regarding the type of containers, secondary containment, and location of any fuel or petroleum compound storage to be allowed on university property. At a minimum, the following must be provided:

1. Secondary containment for any fuel or petroleum substance storage tanks or vessels. This may include double-walled tanks;
2. A spill catchment basin or containment at any fuel dispensing apparatus serving the tankage;
3. Adequate protection of the tank system from vehicular traffic or pedestrian traffic;
4. Required NFPA or other hazard symbols and common name of tank or container contents;
5. The petroleum storage location must be pre-approved by the BSU SPCC Coordinator or MS4 Coordinator and meet the following minimum standards:
    a. The tank system may not be located up-gradient or near any storm or sewer inlets –catch basins, curb drains, or sewer manholes;
    b. The storage may not be up-gradient or within 50 feet of any surface waterway or drainage way;
6. The contractor must have a written SPCC or oil spill prevention plan describing and governing their activities on campus;
7. The contractor personnel must be trained in spill response procedures;
8. Adequate spill control equipment must be provided at the fuel or petroleum storage location including absorbents, drain covers, berms, and PPE.

In the event of a release of fuel or petroleum substances, the SPCC and/or MS4 coordinator must be immediately contacted. Call University Police at 765-285-1111 or Work Control at 765-285-5081.

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

4.1 Facility Drainage (40 CFR 112.8(b))

As noted previously in **Section 2.2.1**, all surface water drainage across the BSU campus is directed either overland or through a network of catch basins, storm sewers, and box culverts to one of several surface water impoundments (ponds) and the interconnecting Cardinal Creek, which flows subsurface for part of its northwesterly route, to the York Prairie Creek. The south area of the campus is served by City of Muncie sanitary and storm sewer systems. Separate storm sewers discharge to the White River farther south of the campus property and combined sewers discharge to the City of Muncie POTW. The north campus area and the Heath Farm are both served by a series of subsurface and surface drainage ways that drain west/northwest to Eagle Branch and Jake's Creek and then to Killbuck Creek before eventually joining with the White River near Anderson, Indiana. The BSU SPCC and *Storm Water Quality Management Plan*, as well as the BSU *Spill Response Plan*, are designed to prevent the release of oil to the waters of the State either overland or through the storm drainage network.

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

Section 2.1.2 summarized the construction, volume, and content of the regulated bulk storage containers at BSU. Oil containing vessels that are integral to operational equipment (electric transformers, elevator hydraulic systems) would not be considered "bulk storage" under the regulations at the Ball State University facility, but were also listed and described in **Section 2** and the associated **Tables**. That equipment or other oil handling operations are subject to only the general secondary containment requirements under the SPCC standards. The gasoline USTs located at the Service and Stores garage, and the UST at Bracken Library are operated in compliance with federal UST regulations at 40 CFR 280 and are therefore not covered by these requirements under 40 CFR 112.

Passive (Physical) Containment

Section 2 of this SPCC Plan identified the bulk fuel storage tanks that are subject to the specific secondary containment provisions under this section of the SPCC requirements. With the exception of the small tank serving the phone generator at Noyer complex, and the CSA on the north grounds of the campus, all bulk storage tanks and containers of 55-gallon or greater capacity are provided with secondary containment through one or more means including double-walls, containment vaults, or spill containment pallets or platforms.

Active (Response) Containment

Each of the bulk storage tanks for fueling vehicles identified in **Section 2** are also provisioned with spill response equipment for deployment and use by trained BSU personnel. At least one *Fuel Spill Response* equipment container (55-gallon open head drum with label) is provided immediately adjacent to each of the above-ground fuel dispensing tanks.

Overpack containers (95-gallon drums) with additional quantities of absorbents are provided in the BSU physical plant (Heat and Chill plants and the salt yard) that are available for any spills at the USTs, from hydraulic systems, or other potential oil release sources in or around the physical plant facilities.

The spill response supplies and equipment provided at the bulk storage tanks, as well as other locations, are itemized in **Appendix J** of this SPCC Plan.

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

All above-ground bulk oil tanks used at this facility are shop-constructed of steel, in accordance with industry specifications (UL-142). All oil storage portable containers are constructed of steel or plastic and meet U.S. DOT requirements for shipping containers. All steel tanks and containers are inspected in accordance with the Steel Tank Institute Standard (STI) SP001, 4th edition, including containers as small as 55 gallons. 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. The underground fuel oil and gasoline tanks are all of fiberglass construction in compliance with current design and installation standards under the either the 40 CFR 280, or 40 CFR 112 requirements, or both.

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

This section of the SPCC regulations relates to only the “bulk oil storage” facilities at BSU and therefore includes only the AST, UST, and container storage areas where “bulk storage” of oils may occur. The USTs storing fuel oil for the BSU Heat Plant are double-walled and of fiberglass construction with automatic tank gauging for leak detection. All above ground vehicle fueling tanks have integral secondary containment in the form of a double-walled tank or a single steel tank with integral secondary containment in the form of a concrete vault with interstitial monitoring gauges. With the exception of the tank serving the Noyer phone generator, all other bulk containers are double-walled or provided with a containment vault.

With the exception of the north campus CSA adjacent to the waste shed, other portable and 55-gallon containers are in locations with concrete containment or prefabricated containment pallets or platforms.

The tank systems and the areas surrounding the tank and container locations are visually inspected during the monthly facility inspections to detect any cracks, signs of heaving or settlement, or other structural damage that could affect the ability of the tank to contain oil. Any damage is promptly corrected to prevent migration of oil into the ground, or out of the tanks to the ground surface.

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

The only "diked" bulk oil storage areas are the concrete or prefabricated vaults serving the used oil storage tanks at the SV Bus Garage, the north campus waste shed, the Foundational Science Building waste accumulation room, and the genset locations that do not have double-walled tanks. As these units are located under roof or other protective enclosure there is no routine precipitation that would require draining, and any liquid removal from the vault would require pumping as no passive drain exists to serve the units. Regardless, any secondary containment drainage events will be recorded on the form included in **Appendix D** of this Plan. It is also possible that portable containers may be temporarily stored on prefabricated containment pallets or platforms outside that may require drainage. Records are maintained at the facility for at least three years.

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

All underground storage tanks on the premises are of fiberglass construction or coated steel, and the above-ground bulk fuel storage tanks are not in contact with the ground surface. Any portable containers, if stored on the ground surface, are not at such locations for more than 90 days which limits the progress of any potential corrosion.

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))

Facility personnel perform visual inspections of the ASTs according to the procedures described in **Section 3.1** of this SPCC Plan. Leaks from tank valves, dispensers, seams, gaskets, rivets, and bolts are promptly corrected. Records of inspections and tests are 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 AST are specified in STI Standard SP-001. The external inspection may include ultrasonic testing of the shell, if specified in the standard, or if recommended by the certified tank inspector to assess the integrity of the tank for continued oil storage.

The underground fuel oil and gasoline tanks are all of fiberglass or coated steel construction and are tested weekly and automatically by the Veeder-Root automatic tank gauging, overfill, and leak detection systems.

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

Table 3-2 in **Appendix A** summarizes inspections and tests performed on bulk storage containers as discussed in **Section 3.1** of this Plan.

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

There are no internal heating coils installed in any of the oil tanks or containers and there are no external heat sources associated with any of the vessels.

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

Facility personnel are present throughout the filling operations of bulk storage tanks to monitor the product level in the tanks and to ensure that no leakage occurs from flexible hoses or fixed piping, couplings, or valves at the tank, or the delivery vehicle. All the bulk ASTs and USTs for vehicle fuel storage and dispensing, as well as the Heat Plant fuel oil tanks, are provided with catchment basins or spill buckets. Additionally, the fuel dispensing USTs, and the Bracken Library UST, are provided with overfill prevention drop tubes in the fill pipes. The fuel USTs at the Service and Stores building are also provided with visual and audible alarms to warn of an impending overfill. The other bulk storage tanks are of small capacity and visually gauged and observed during the addition of fuel to prevent overfills.

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

The campus is covered under a General NPDES Permit for storm water discharges as a municipal separate sanitary sewer (MS4) entity. The university maintains and implements a *Storm Water Quality Management Plan* (SWMQP) to eliminate or control the release of contaminants to the waters of the state.

BSU has submitted permit applications to the City of Muncie Bureau of Water Quality (June of 2011) for all food service establishments operating on the campus. These applications are for fats, oils, and grease (FOG) permit coverage under the City's industrial wastewater permit program authority. Details of the grease interceptors serving several of the food service establishments were provided in those applications.

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

Visible discharges from any tank, container, equipment, or appurtenances – including seams, gaskets, piping, pumps, valves, bungs, rivets, and bolts – are quickly corrected upon discovery, or the oil is transferred to another container.

Contained precipitation and any incidental oil spillage is promptly removed from the area of any tanks or containers and disposed of according to the waste disposal method described in **Section 5** of this Plan. Similarly, any spillage or contents are routinely disposed if revealed during inspections of the spill containment pallets or sumps provided in the container storage areas in order to maintain adequate secondary containment capacity for those units.

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

Fuel delivery trucks serving Ball State University generally depart the facility immediately upon completing the fuel delivery and after ensuring that all valves are properly closed and capped and the hoses secured. They do not remain at the facility while full (or empty) overnight or for an extended period of time.

Portable oil containers of 55-gallon capacity or greater must meet DOT requirements for shipping containers and be stored closed except when adding or removing oil.

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

Subsurface service piping is limited to the USTs containing oil on the campus and those are short runs. The dispenser lines serving the SV Bus Garage tanks are the European Suction type.

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 are visually inspected during the monthly inspection of the facility.

Brightly painted bollards or barriers are placed where needed to prevent vehicular collisions with the tanks or ancillary equipment.

Part 5: Discharge Response

This section describes the response and cleanup procedures in the event of an oil discharge. The uncontrolled release of oil to groundwater, surface water, or soil, is prohibited by state and federal laws or regulations. Immediate action must be taken to control, contain, and recover any released or spilled petroleum product or used oil. The BSU *Spill Response Plan* provides more detailed response procedures for both oils and other materials that may be released.

In general, the following steps are taken:

- Eliminate potential spark sources;
- If possible and safe to do so, identify and shut down the source of the release or discharge to stop the flow;
- Contain the discharge with sorbents, berms, trenches, sandbags, or other material;
- Obstruct the discharge from accessing surface waterways or storm or sanitary sewers by covering catch basins or curb drains, trenching, or creating diversion ditches with sorbents or soil;
- Notify University Police to contact the Facility Response Coordinator, his/her alternate, or the BSU Environmental Specialist;

- Contact regulatory authorities and the appropriate response organization (if required or necessary – See **Appendices H and I**); and
- Collect and dispose of recovered product and contaminated debris according to applicable regulations.
- Restock any spill control equipment expended;
- Make any necessary follow-up reports, and evaluate the incident and response to determine if any changes or improvements are needed to personnel training, response procedures, or equipment

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** and who must be contacted is established in **Appendix I**--depending on the quantity and circumstances of the oil spill. The list is also posted at prominent locations throughout the facility. A list of spill response materials kept at the facility is included in **Appendix J** and their location is shown on **Figure A-2** to this Plan.

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 release is contained within or adjacent to the secondary containment device or structure and the quantities are relatively small. Characteristics of a *minor* discharge include the following:

- The quantity of product discharged outside of the secondary containment is small (e.g., less than 55 gallons of oil released; and oil does not reach or threaten to reach a waterway, drain, or sewer inlet);
- Spilled material is easily stopped, contained, and controlled at the time of the discharge;
- The spill is localized near the source;
- Discharged material is not likely to reach water (or sewer drains), or migrate off university property in a quantity exceeding 55 gallons;
- 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 Ball State University personnel, and normally reporting to the IDEM, City authorities, or the EPA is not required or necessary. The following guidelines apply:

- Immediately notify your supervisor, the Facility Response Coordinator or Environmental Specialist through Work Control at 765-285-5081, or after 4 PM, or if in doubt as to the severity of the release--contact the University Police at 765-

285-1111 or 911. The University Police serve as the central notification point for these, and other emergencies and they will notify the necessary parties;
- Determine whether available response personnel have received training under the University Hazard Communication program, and this SPCC Plan, for the response;
- Don any necessary personal protective equipment and retrieve the necessary spill control materials or devices;
- Under the direction of the supervisor, Facility Response Coordinator, or Environmental Specialist, locate and stop the source of the release;
- Contain the discharge with the appropriate discharge response materials and equipment;
- Place discharge debris in properly labeled waste containers. The material disposal arrangements will be made by the BSU Environmental Specialist and determine the needs for post-cleanup environmental assessment of the location;
- The Environmental Specialist, or his designee, will complete the discharge notification form (**Appendix I**), or an incident report, and attach a copy to this SPCC Plan or place it in an associated office file.

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, or when reporting to regulatory agencies is required, such as when:

- The release quantity is large enough to spread beyond the immediate discharge area and cannot be rapidly or safely controlled;
- The quantity discharged exceeds 55 gallons and may discharge or flow beyond the BSU property boundary;
- The quantity released exceeds 1,000 gallons total, even though it remains on the BSU property;
- The discharged material enters or will enter a surface waterway, drain, or sewer;
- The discharge requires special equipment or training to clean up;
- The discharged material poses a hazard to human health or safety; or
- There has been or is a danger of fire or explosion.

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

- All persons, other than response personnel, must immediately vacate the discharge location via the established exit routes and move to designated staging areas at a safe distance from the discharge. Emergency notification and response procedures for students and employees are part of the *BSU Crisis Management Plan*;

- The supervisor, senior staff or faculty, or any other party, should contact the University Police (765-285-1111 or 911) and Work Control (765-285-5081) for notification of the appropriate response parties;

- The Facility Response Coordinator, a designee, or the Environmental Specialist 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 or combined sewer, the publicly owned treatment works (Muncie BWQ) should be notified immediately. A discharge that migrates beyond the BSU facility boundary may require notification to the affected property owner;

- Spill response will be initiated using university resources in accordance with the *BSU Spill Response Plan*;

- The Facility Response Coordinator, Environmental Specialist (or senior on-site person) will call the spill response and cleanup contractor listed in the Emergency Contacts list in **Appendix H** if their assistance will be needed;

- The Facility Manager (or senior on-site person) must promptly (within 2 hours) contact the Indiana Department of Environmental Management Emergency Response Branch (888-233-7745) if the release was over 1,000 gallons on the property or 55 gallons beyond the facility boundary. The IDEM, as well as the National Response Center (888-424-8802), and Muncie BWQ, must also be contacted if the petroleum spill reaches surface water and creates a sheen, sludge, or emulsion or threatens to reach any waterway or body of water;

- The Facility Response Coordinator, Environmental Specialist (or senior on-site person) coordinates cleanup with assistance from a cleanup contractor or other response organization as necessary; and,

- The Environmental Specialist (or senior on-site person) will record the incident on the Discharge Notification form in **Appendix I** and attach a copy to this SPCC Plan. Alternatively, a *BSU Incident Report* may be completed for the event.

If the Facility Response Coordinator, his designee, or the Environmental Specialist is not available at the time of the discharge, then the next highest person in seniority assumes responsibility for coordinating response activities. University Police maintain the necessary call lists in order to contact the appropriate person(s) to evaluate and address the release.

5.3 Waste Disposal

Wastes resulting from a minor discharge response, including used absorbents will be containerized in impervious bags, drums, buckets, or covered rolloff containers. The Environmental Specialist, or his designee, will characterize the waste for proper disposal and ensure that it is removed from the facility for off-site treatment, disposal, or recycling at an approved facility. In the interim, the wastes should be stored in a secure location that is afforded secondary containment or controls.

Wastes resulting from a major discharge response will normally be removed and disposed of by the cleanup contractor.

5.4 Discharge Notification

Any size discharge (i.e., one that creates an oil sheen, emulsion, or sludge) that affects or threatens to affect navigable waters (basically any waterway or body of water) 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 separate notification must be made to the IDEM's 24-hour spill reporting number (888-233-7745). Additionally, the Muncie Bureau of Water Quality must be immediately contacted in the event of a release reaching waterways or storm or sanitary sewers.

A summary sheet is included in **Appendix I** to facilitate reporting. The person reporting the discharge must provide the following information and should try to obtain this information during initial assessment of the spill. However, any required reporting of the spill to government entities should not be delayed while attempting to accurately obtain all of this 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.**

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 reportable discharge incidents within a 12-month period.* Reportable events would be those oil spills that did, in fact, cause a sheen, emulsion, sludge, or other water quality violation on or in a waterway or body of water. The following information must then be submitted to the EPA Regional Administrator and to the IDEM 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 format for submitting the information to the EPA Regional Administrator and to the IDEM 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 may affect a waterway through a release to combined or sanitary sewers in the vicinity, or for other major spills.

Spill kits are available at the following locations as shown on the facility diagram:

- The SV Bus Garage UST Fueling Area
- The North Campus Bus (Diesel) AST Fueling Area;
- The North Container Storage Area (HM shed);
- The South Grounds Building and AST;
- The North Grounds Building and AST;
- The Heat Plant;
- The Salt Storage Yard; and,
- The Foundation Science Building waste accumulation room

Spill response supplies are also carried in a number of BSU vehicles for prompt response to minor releases of oil or other materials.

An inventory of response supplies and equipment provided at each of the above locations is provided in **Appendix J** of this Plan. A ready supply of spill response equipment and absorbents is also maintained in the BSU Environmental Specialist's university vehicle to allow quick response. The inventory is verified on a monthly basis. Additional supplies and equipment may be ordered from the following sources:

New Pig Customer Service One Pork Avenue, P.O. Box 304 Tipton, PA 16684-0304	(855) 493-4647 1-800-621-621-7447 (fax) hothogs@newpig.com
Grainger 9210 Corporation Drive Indianapolis, IN 46256	1-800-472-4643 www.grainger.com

G&G Oil Company (765) 288-7795
220 East Centennial Avenue
Muncie IN

Appendix A
Figures and Inventory Tables

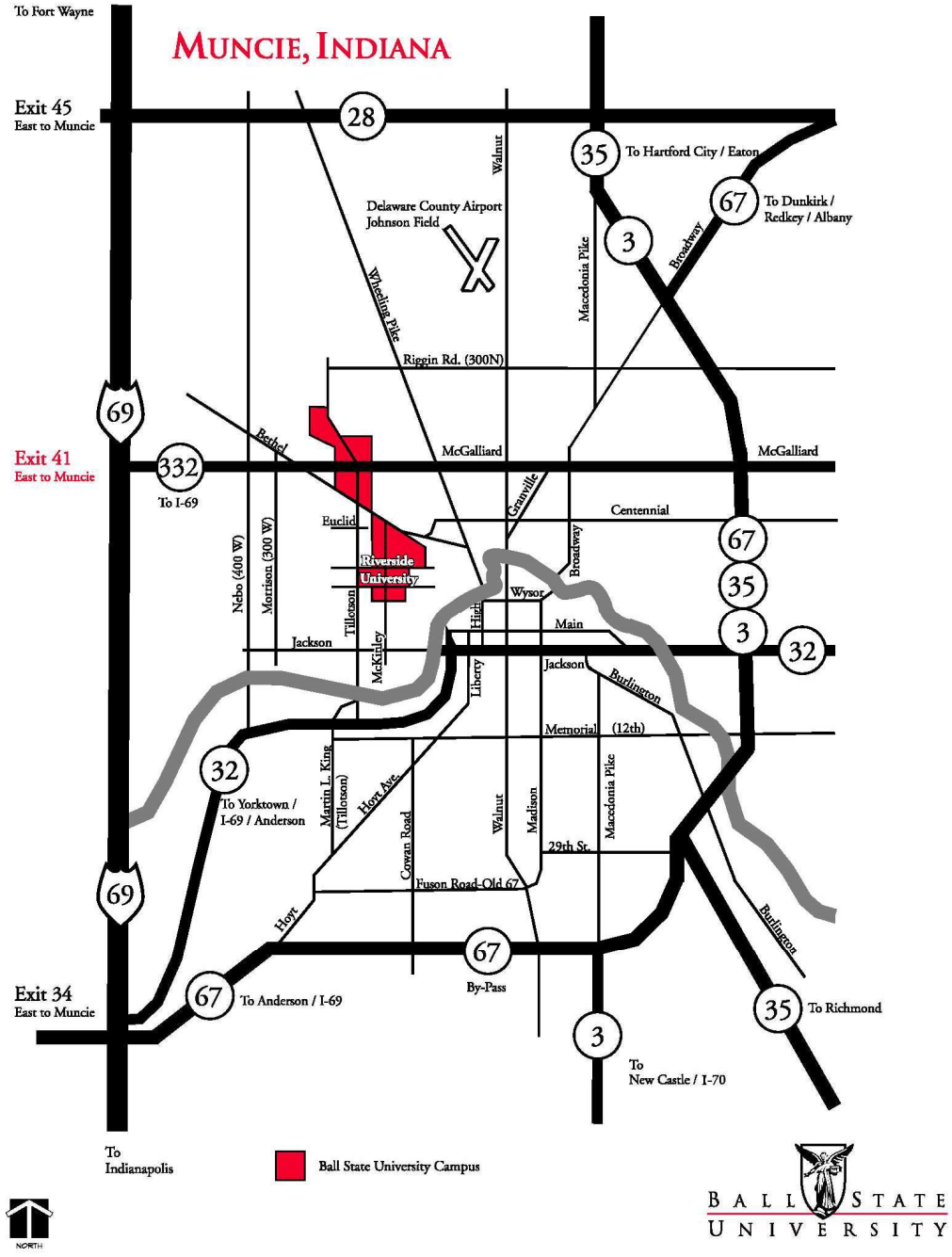


Figure A-1: Site Location

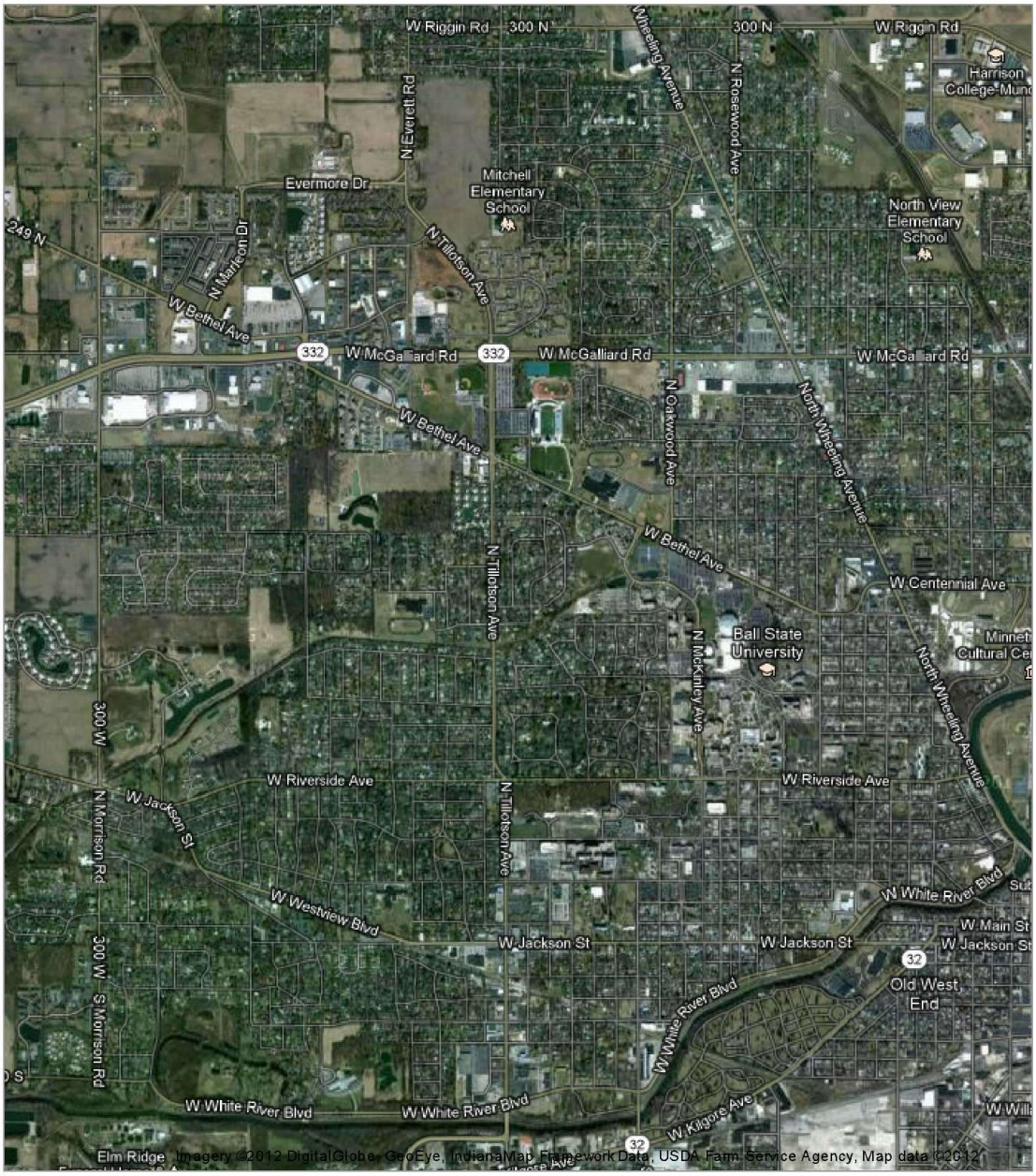
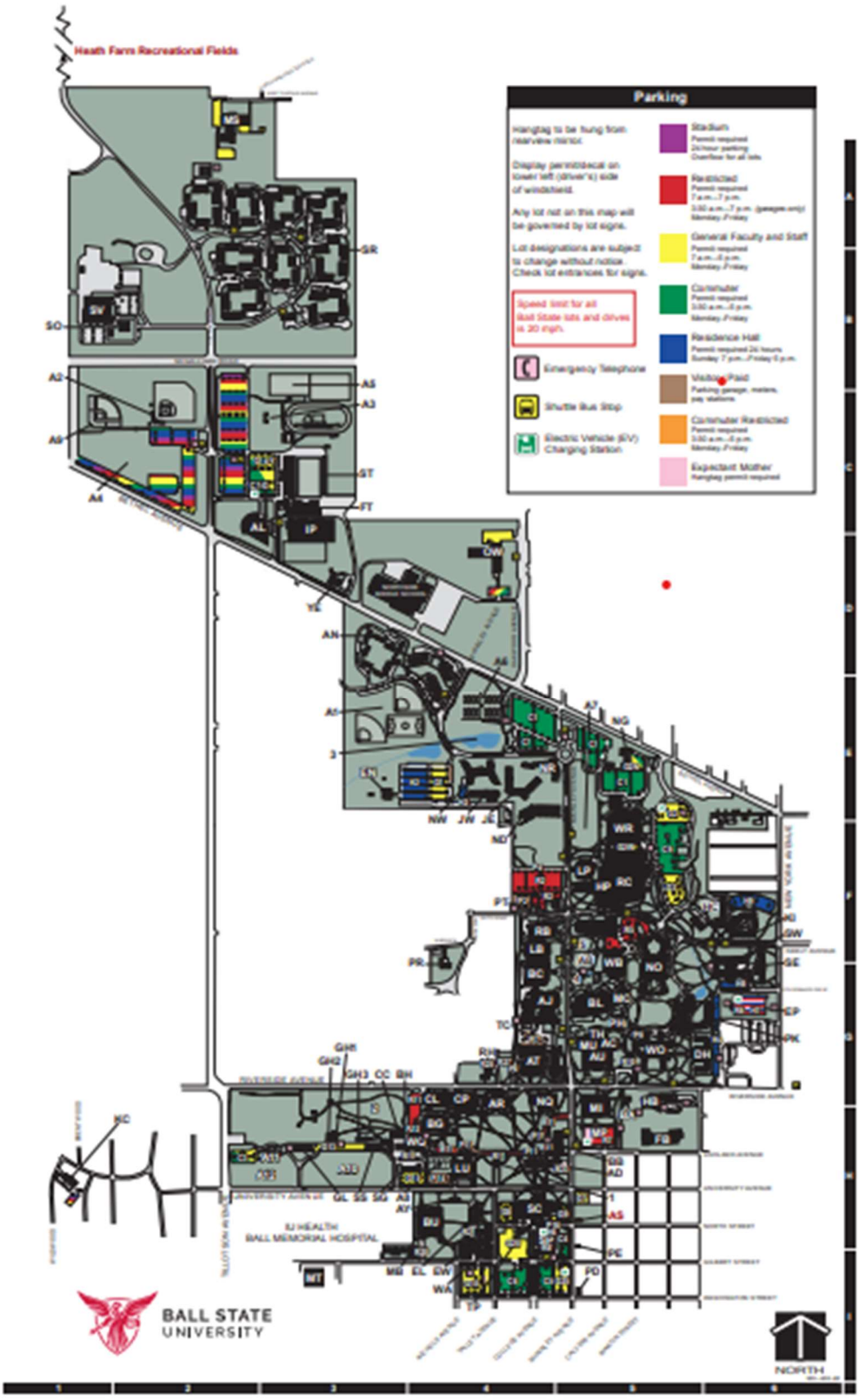


Figure A-2: Facility Diagram(s)



ACADEMIC, ADMINISTRATIVE, AND SERVICE BUILDINGS

AD	Administration Building, Frank A. Bracken	H4
AL	Alumni Center	C2
AT	Applied Technology Building	G4
AB	Architecture Building	F5
AJ	Art and Journalism Building	G4
AC	Arts and Communications Building	G5
BC	Ball Communication Building	G4
PR	Bracken House	F4
BB	Burkhardt Building	H5
BU	Burris Laboratory School/Indiana Academy	H4
WB	Business Building, Whitinger	F5
PT	CAP Design Build Lab	F4
CL	Cooper Life Science Building and Charles W. Brown Planetarium	G4
CP	Cooper Physical Science Building	G4
EN	District Energy Station North	E3
ES	District Energy Station South	H3
AU	Emens Auditorium	G5
SO	Facilities Planning and Management Building, Showalter	B2
AR	Fine Arts Building and David Owsley Museum of Art	G4
FB	Foundational Sciences Building	H5
GL	Glick Center for Glass, Marilyn K.	H3
	Graduate School, see West Quadrangle Building	
GH1	Greenhouse, Dr. Joe and Alice Rinard Orchid	H3
GH2	Greenhouse	H3
GH3	Greenhouse, Teaching and Research	H3
NG	Grounds Building (North)	E5
SG	Grounds Building (South)	H3
HP	Health and Physical Activity Building	F5
HC	Health Center, Amelia T. Wood	F5
HB	Health Professions Building	G5
BH	Heat Plant	H3
BA	Honors House, Edmund F. and Virginia B. Ball	G5
	Human Performance Lab, see Health and Physical Activity Building	
AY	Indiana Academy House	H4
	International Education and Programs, see Student Center	
KC	Kitselman Center	H1
LB	Letterman Communication and Media Building, David	F4
BL	Library, Bracken	G5
LU	Lucina Hall and Ball State Welcome Center (Admissions, Career Center, Counseling Center, Financial Aid and Scholarships, Registrar, Student Financial Services, and Transfer Center)	H4
MB	Maria Bingham Hall	I3
MT	Medical Education Building, E.F. Ball	I3
	Miller College of Business, see Business Building	
MS	Mitchell Early Childhood Development	A2
MC	Multicultural Center	G5
	Museum of Art, David Owsley, see Fine Arts Building	
MU	Music Building, Hargreaves	G5
MI	Music Instruction Building and Sursa Performance Hall	H5
NQ	North Quadrangle Building	G4
OW	Oakwood Building	D4
	Online and Strategic Learning, Division of, see Letterman Communication and Media Building	
PE	Peace and Conflict Studies, Center for	H5
	Planetarium, Charles W. Brown, see Cooper Life Science Building	
PH	Pruis Hall	G5
RB	Robert Bell Building	F4
SV	Service and Stores (Central Mailing, Central Receiving, Central Stores, Trade Shops, Key Control, Printing Services, Purchasing, and Transportation)	B1
SS	South Service/Christy Woods Office	H3
RH	Sponsored Projects Administration (Contracts and Grants)	G4
SC	Student Center, L.A. Pittenger	H4
	Sursa Performance Hall, see Music Instruction Building	
TC	Teachers College Building	G4
TP	Temporary Office Space	H4
AS	Transfer Indiana Group	H5
	University College, see North Quadrangle Building	
TH	University Theatre	G5
	Virginia B. Ball Center for Creative Inquiry, see Kitselman Center	
	Welcome Center, see Lucina Hall	
WQ	West Quadrangle Building	H4

HOUSING AND DINING

AN	Anthony Apartments	D3
JE	Botsford/Swinford Hall	E4
DH	DeHority Complex	G5
EL	Elliott Hall	H4
EW	Elliott/Wagoner Dining	I4
	Housing and Residence Life, see North Dining Hall	
KI	Kinghorn Hall	F6
ND	North Dining Hall	E4
NR	North Residence Hall	E4
NW	North West Hall	E4
NO	Noyer Complex: Howick/Williams and Baker/Klipple halls	G5
PK	Park Hall	G5
SR	Scheidler Apartments	A3
JW	Schmidt/Wilson Hall	E4
SE	Studebaker East Complex	G6
SW	Studebaker West Complex: Palmer/Davidson and Painter/Whitcraft halls	G6
	University Dining, see North Dining Hall	
WO	Woodworth Complex: Brady/Wood and Crosley/Rogers halls	G5

ATHLETICS AND RECREATION

A1	Anthony Recreation Fields	E3
BG	Ball Gymnasium	H4
A3	Benadum Woods Picnic Shelter	C3
A4	Bethel Recreation Fields	C2
A5	Briner Sports Complex	B3
A6	Cardinal Creek Tennis Center	E4
FT	Fisher Complex, Venderly Center	C3
A7	LaFollette Recreation Field	F5
LP	Lewellen Pool and Aquatic Center	F5
A8	Lucina Tennis Courts	H4
IP	Scheumann Family Indoor Practice Facility	C3
ST	Scheumann Stadium	C3
A10	South Campus Recreation Fields	H3
A11	Southwest Picnic Shelter	H3
A12	Southwest Recreation Field	H3
RC	Student Recreation and Wellness Center, Jo Ann Gora	F5
A2	Varsity Baseball Complex	C2
A9	Varsity Softball Complex	C1
WR	Worthen Arena and Shondell Practice Center	E5/F5
YE	Yestingsmeier Golf Center	D3

CAMPUS LANDMARKS

1	Beneficence	H4
2	Christy Woods	H3
3	Duck Ponds	E4
4	Frog Baby Fountain	G5
5	Shafer Bell Tower	F5

PARKING GARAGES AND PUBLIC SAFETY

MP	Parking Garage, McKinley Avenue	H5
EP	Parking Garage, New York Avenue	G6
SP	Parking Garage, Student Center	H4
	Parking Services, see Student Center	
PD	Police, Public Safety	I5

TABLES

Table 2-1: Summary Table of Bulk Oil Tanks, Containers, or Equipment				
Map Key	**Oil Storage Area or Unit ID**	**Total Storage Capacity**	**Contents (Oil type)**	**Description of Oil Storage Unit or Equipment**
Bulk Storage Containers (Tanks)				
BH	Fuel Oil USTs (Heat Plant)	180,000 gallons	Fuel Oil (back-up for natural gas fired boilers)	Six (6), 30,000-gallon steel double-walled underground storage tanks with protective coatings, catchment basins, and electronic tank gauging (ATG).
SV	Gasoline USTs (SV Garage)	16,000 gallons	Unleaded gasoline.	Two (2), 8,000-gallon fiberglass underground storage tanks with (ATG), catchment basin, and overfill prevention drop tubes and visual/audible overfill alarms.
BL	Generator Fuel UST (Bracken Library)	550 gallon	Diesel fuel	One (1) 550-gallon fiberglass underground storage tank with overfill prevention drop tube, catchment basin, and electronic tank gauging (ATG).
SV	E-85 fuel AST (SV Garage)	1,000 gallons	Unleaded gasoline with ethanol	Steel, double-walled tank and dispenser under canopy on Garage concrete fuel dispenser island
SV	SV Garage-- used oil, ATF, and engine oil tanks	1,100 gallons	Used and virgin engine oil	Four (4) 275-gallon steel tanks, located in concrete vault containment on west side of SV Garage
SV	SV Garage – Engine oil AST	275 gallons	Engine oil/lubricant	Steel, double-walled tank with interstitial space gauge on concrete floor slab (interior)
SV	SV Biodiesel AST – north yard	1,000 gallons	Biodiesel (B20)- buses	Concrete, double-walled tank with interstitial leak detection and overfill alarm
SV	SV Biodiesel AST – north yard	1,000 gallons	Biodiesel (B2) - buses	Steel, double-walled tank with interstitial monitoring gauge
NG	AST – North Grounds	1,000 gallons (dual 500 gallon tank system)	Gasoline / Diesel	North Grounds – Steel tank with integral secondary containment and interstitial electronic leak detection

Map Key	Oil Storage Area or Unit ID	Total Storage Capacity	Contents (Oil type)	Description of Oil Storage Unit or Equipment
SG	AST – South Grounds	1,000 gallons (dual 500 gallon tank system)	Gasoline / Diesel	South Grounds - Steel tank with integral secondary containment and interstitial electronic leak detection
SV	AST	300 gallons	Biodiesel	Salt Yard—Steel double-walled steel tank with interstitial space gauge
Oil Container Storage*				
SV	HazMat shed – exterior	880 gallons (16 drums	Used oils – way, compressor, elevator, lubricating oils, antifreeze	55-gallon containers (drums) of used oil on containment pallets next to north waste shed
SV	HazMat shed – interior	1,100 gallons	Waste solvents, chemical wastes & oils	1 gallon up to twenty (20) 55-gallon containers inside waste shed – full containment
SV	Bus Garage	220 gallons	Used oil / lubricants	Up to four 55- gallon containers inside shop
N/A	Heath Farm Electric Shed	110 gallons	Transformer oil	Two (2) 55-gallon containers
Electrical Transformers (Oil-Filled Operational Equipment)				
-	Transformers (197)	49,650 total gallons - Capacities vary from 17 to 3,510 gallons	Dielectric, mineral, or other heat-resistant oil types	See **Table 2-2** below for locations and information on the 197 “wet” transformers
Emergency Generators (with diesel fuel storage) – Bulk Oil Storage				
-	ASTs (41)	21,816 total gallons - Capacities vary from 77 to 2,000 gallons	Diesel Fuel	See **Table 2-3** for locations of the 43 liquid-fueled generators
Elevators (Oil-filled Operational Equipment)				
-	Elevators with hydraulic systems (50)	8,000 total gallons – Based on average of 160 gallons each	Hydraulic fluid	Elevator hydraulic fluid in vessels, hydraulic lines and valves. See following **Table 2-4** for locations

***** Refer to the BSU *Chemical Hygiene Plan*, *Hazardous Waste Management Plan*, and *Spill Response Plans* for information on the storage, handling, release prevention, and response procedures for smaller containers of chemicals in science, technology, and art departments, some of which may contain “oils”.

Total Oil Storage: **285,001 gallons** (maximum capacity): bulk storage and operational equipment.

TABLE 2-2: ELECTRICAL (FLUID-FILLED) TRANSFORMERS

Map Key	Building Location	Manufacturer	No. of Gallons	Fluid Type	KVA	Inside	Containment	Cons. Number
AY	Academy House	RTE	180	Oil	300		No	1.
AD	Admin Bldg.	Maloney	38	Oil	100	X	No	2.
AD	Admin. Bldg.	Maloney	38	Oil	100	X	No	3.
AD	Admin. Bldg.	Maloney	38	Oil	100	X	No	4.
AL	Alumni Bldg.	Cooper	425	R-Temp	750		No	5.
AN	Anthony Bldg. 1,2,3,4	Cooper	66	Oil	100		No	6.
AN	Anthony Bldg. 5,6	Cooper	35	Oil	50		No	7.
AN	Anthony Bldg. 7,8,9	Cooper	36	Oil	75		No	8.
AN	Anthony Bldg. 10,11	Cooper	66	Oil	100		No	9.
AN	Anthony Bldg. 12	Cooper	66	Oil	100		No	10.
AT	Applied Tech	Cooper	434	R-Temp	750		No	11.
AB	Architecture Bldg.	Cooper	356	Oil	750		No	12.
AB	Architecture Bldg.	Cooper	356	Oil	750		No	13.
WR	Worthen Arena	RTE	468	Oil	1,500		No	14.
AJ	Art & Journalism	Cooper	557	R-Temp	1,500		No	15.
AJ	Art & Journalism	Cooper	557	R-Temp	1,500		No	16.
BC	Ball Bldg.	G.E.	345	Oil	1,500		No	17.
BC	Ball Bldg.	G.E.	345	Oil	1,500		No	18.
RB	Bell Bldg.	RTE	363	R-Temp	1,000		No	19.
RB	Bell Bldg.	RTE	383	R-Temp	1,000		No	20.
BG	Ball Gym	Cooper	195	Oil	500		No	21.
N/A	Bethelsub North	Pauwells	2,100	Oil	10,000		Yes	22.
N/A	Bethelsub North tc	ABB	100	Oil			Yes	23.
N/A	Bethel Sub South	Pau Wells	2,100	Oil	10,000		Yes	24.
N/A	Bethel Sub South Tc	ABB	100	Oil			Yes	25.
N/A	Bethel Station Power North	ABB	18.5	Oil	25		No	26.
N/A	Bethel Station Power South	Cooper	23	Oil	50		No	27.
N/A	Bethel Station Power Spare	ABB	18.5	Oil	25		No	28.
BL	Bracken Lib.	Westinghouse	654	Oil	3000	X	No	29.
BL	Bracken Lib.	Westinghouse	385	Oil	2500	X	No	30.
BB	Burkhardt	GE	115	Oil	300		No	31.
BB	Burkhardt	GE	115	Oil	300		No	32.
BU	Burris	Cooper	345	R-Temp	1,000		No	33.
SV	Bus Parking Lot	Cooper	183	VegOil	300		No	34.
PT	CAP Design Lab	Cooper	131	Oil	150		No	35.
EN	Chiller Aux 1	Allis Chalmers	392	Oil	1,500		No	36.
EN	Chiller Aux 2	GE	300	Oil	1,500		No	37.

Map Key	Building Location	Manufacturer	No. of Gallons	Fluid Type	KVA	Inside	Containment	Cons. Number
2	Christy Woods North	Westinghouse	3,510	Oil	7,500		Yes	38.
2	Christy Woods North	Westinghouse	146	Oil	N/A		Yes	39.
2	Christy Woods south	Westinghouse	146	Oil	N/A		Yes	40.
2	Christy Woods sub	Westinghouse	3,510	Oil	7,500		Yes	41.
2	Christy Woods Sub T1	Delta Star	3,225	Oil	20,000		No	42.
2	Christy Woods Sub T1 TC	Reinhausen	280	Oil	N/A		No	43.
2	CW Station Power	Cooper	56	Oil	100		No	44.
CP	Cooper Nursing	GR	140	Oil	750	X	No	45.
CP	Cooper Nursing	GE	140	Oil	750	X	No	46.
CL	Cooper Life	GE	180	Oil	1,000	X	No	47.
CL	Cooper Life	GE Alsthom	231	Oil	750		No	48.
DH	Dehority	Cooper	157	R-Temp	300		No	49.
DH	Dehority	Cooper	157	R-Temp	300		No	50.
EN	DESN T3	ABB	1,893	Oil	7,500		No	51.
EN	DESN T4	ABB	1,893	Oil	7,500		No	52.
EN	DESN 3A	Cooper	534	Oil	2,500		No	53.
EN	DESN 4A	Cooper	534	Oil	2,500		No	54.
EL	Elliot	Westinghouse	150	Oil	300		No	55.
SO	Facilities Planning	GE	150	Oil	500		No	56.
AR	Fine Arts	Cooper	223	R-Temp	500		No	57.
ST	Football Stadium	Cooper	425	R-Temp	750		No	58.
FB	FSB East	ELSCO	376	Oil	1,500		No	59.
FB	FSB West	ELSCO	375	Oil	1,500		No	60.
GL	Glick ctr	Cooper	219	VegOil	500		No	61.
HP	H.P.A.B.	RTE	468	Oil	1,500		No	62.
HC	Health Ctr.	Cooper	142	Oil	150		No	63.
HB	Health Professions Bldg.	ABB	307	Oil	750		No	64.
BH	Heat Plant	Cooper	409	VegOil	750		No	65.
BH	Heat Plant	Cooper	385	R-Temp	750		No	66.
IP	Indoor Practice Facility	Cooper	222	Oil	750		No	67.
JE	Johnson A NW	Cooper	126	Oil	500		No	68.
JE	Johnson A SE	Cooper	126	Oil	500		No	69.
JE	Johnson B E	ABB	220	Oil	500		No	70.
JE	Johnson B W	ABB	220	Oil	500		No	71.
KI	Kinghorn Hall	ABB	300	Veg Oil	500		No	72.
KI	Kinghorn Hall	ABB	300	Veg Oil	500		No	73.
KI	Kinghorn Hall	ABB	308	Veg Oil	750		No	74.
ST	Kozel TX-1	Copper Power	376	Veg Oil	1,000		No	75.
LB	Letterman Cmb	Cooper	543	Veg Oil	1,500		No	76.
LP	Lewellen Pool	Niagar	163	Oil	500	X	No	77.
LU	Lucina	Cooper	213	R-Temp	300		No	78.
N/A	McKinley Street Lighting	Cooper	19	Oil	10		No	79.

Map Key	Building Location	Manufacturer	No. of Gallons	Fluid Type	KVA	Inside	Containment	Cons. Number
N/A	McKinley Lighting Spare	Cooper	19	Oil	10		No	80.
N/A	McKinley Street Lighting	Cooper	19	Oil	10		No	81.
MP	McKinley Parking Facility	Olsun	N/A	Oil	300		N/A	82.
MI	M.I.B.	Cooper	380	Veg Oil	1,000		No	83.
AU	MEA AC	Cooper	66	Oil	167	X	No	84.
AU	MEA AC	Cooper	66	Oil	167	X	No	85.
AU	MEA AC	Cooper	66	Oil	167	X	No	86.
AU	MEA AC	Cooper	17	Oil	25	X	No	87.
AU	MEA AC	Cooper	17	Oil	25	X	No	88.
AU	MEA AC	Cooper	17	Oil	25	X	No	89.
AU	MEA Dock (OOS)	Cooper	17	Oil	167	X	No	90.
AU	MEA Dock (OOS)	Cooper	17	Oil	167	X	No	91.
AU	MEA Dock (OOS)	Cooper	17	Oil	167	X	No	92.
AU	MEA Dock (OOS)	Cooper	66	Oil	25	X	No	93.
AU	MEA Dock (OOS)	Cooper	66	Oil	25	X	No	94.
AU	MEA Dock (OOS)	Cooper	66	Oil	25	X	No	95.
AU	MEA Dock (OOS)	Cooper	66	Oil	167	X	No	96.
AU	MEA Dock (OOS)	Cooper	66	Oil	167	X	No	97.
AU	MEA Dock (OOS)	Cooper	66	Oil	167	X	No	98.
AU	MEA Dock (OOS)	Cooper	66	Oil	167	X	No	99.
AU	MEA Dock (OOS)	Cooper	66	Oil	167	X	No	100.
AU	MEA Dock (OOS)	Cooper	66	Oil	167	X	No	101.
MU	MEA Dock	ABB	289	Oil	300		No	102.
MU	MEA Dock	ABB	386	Oil	500		No	103.
MU	MEA Music	Cooper	153	R-Temp	225		No	104.
MU	MEA Music	Cooper	153	R-Temp	225		No	105.
EP	New York Parking Garage	ABB	139	Oil	225		No	106.
EN	North Chiller	Cooper	425	R-Temp	750		No	107.
ND	North Dining Hall	ABB	510	Oil	1000		No	108.
NR	North Residence East	ABB	235	Oil	500		No	109.
NR	North Residence West	ABB	235	Oil	500		No	110.
NQ	North Quad	Westinghouse	40	Oil	100	X	No	111.
NQ	North Quad	Westinghouse	40	Oil	100	X	No	112.
NQ	North Quad	Westinghouse	40	Oil	100	X	No	113.
NQ	North Quad	Westinghouse	40	Oil	100	X	No	114.
NQ	North Quad	Westinghouse	40	Oil	100	X	No	115.
NQ	North Quad	Westinghouse	40	Oil	100	X	No	116.
NQ	North Quad	GE	40	Oil	167	X	No	117.
NQ	North Quad	GE	40	Oil	167	X	No	118.
NQ	North Quad	Ge	40	Oil	40	X	No	119.
NQ	North Quad	Cooper	300	Oil	300	X	No	120.

Map Key	Building Location	Manufacturer	No. of Gallons	Fluid Type	KVA	Inside	Containment	Cons. Number
NW	NW Residence	ABB	240	Oil	500		No	121.
NW	NW Residence	ABB	240	Oil	500		No	122.
NO	Noyer North	Cooper	204	R-Temp	204		No	123.
NO	Noyer South #1	Cooper	176	R-Temp	176		No	124.
NO	Noyer South #2	Cooper	204	R-Temp	204		No	125.
NO	Noyer South #3	Cooper	168	R-Temp	168		No	126.
GH1	Orchid House	Cooper	140	R-Temp	225		No	127.
PK	Park Hall	Cooper	358	VegOil	1,000		No	128.
PK	Park Hall	Cooper	358	VegOil	1,000		No	129.
CL	Planetarium	Cooper	126	Oil	150		No	130.
AR	Practical Arts	Cooper	434	Oil	750		No	131.
PH	Pruis	Cooper	157	R-Temp	300		No	132.
N/A	Satellite Farm	Cooper	25	R-Temp	75		No	133.
SR	Scheidler Bldg. 3436 C11	Westinghouse	56	Oil	100		No	134.
SR	Scheidler Bldg. 3428 C12	GE	56	Oil	100		No	135.
SR	Scheidler Bldg. 3448 C10	GE	56	Oil	100		No	136.
SR	Scheidler Bldg. 3460 A4	Howard	36	Oil	75		No	137.
SR	Scheidler Bldg. 3476 A3	Howard	36	Oil	75		No	138.
SR	Scheidler Bldg. 3480 A2	Howard	36	Oil	75		No	139.
SR	Scheidler Bldg. 3484	Howard	36	Oil	75		No	140.
SR	Scheidler Bldg. 3488 A6	Howard	35	Oil	50		No	141.
SR	Scheidler Bldg. 3492 A5	Howard	36	Oil	75		No	142.
SR	Scheidler Bldg. 3556 C8	Howard	36	Oil	75		No	143.
SR	Scheidler Bldg. 3552 C9	Howard	30	Oil	25		No	144.
SR	Scheidler Bldg. 3572 C5	Howard	36	Oil	75		No	145.
SR	Scheidler Bldg. 3568 C4	Howard	36	Oil	75		No	146.
SR	Scheidler Bldg. 3564 C6	Howard	30	Oil	37.5		No	147.
SR	Scheidler Bldg. 3560 C7	Howard	35	Oil	50		No	148.
SR	Scheidler Bldg. 3580 A8	Howard	36	Oil	75		No	149.
SR	Scheidler Bldg. 3576 A9	Howard	30	Oil	50		No	150.
SR	Scheidler Bldg. 3596 A10	Howard	36	Oil	75		No	151.

Map Key	Building Location	Manufacturer	No. of Gallons	Fluid Type	KVA	Inside	Containment	Cons. Number
SR	Scheidler Bldg. 3592 A12	Howard	30	Oil	37.5		No	152.
SR	Scheidler Bldg. 3584 A7	Howard	35	Oil	50		No	153.
SR	Scheidler Bldg. Laundry A13	Howard	30	Oil	37.5		No	154.
SR	Scheidler Bldg. 3776 A14	Howard	35	Oil	50		No	155.
SR	Scheidler Bldg. 3796 A16	Howard	36	Oil	75		No	156.
SR	Scheidler Bldg. 3784 A17	Howard	36	Oil	75		No	157.
SR	Scheidler Bldg. 3780 A15	Howard	36	Oil	75		No	158.
SR	Scheidler Bldg. 3788 A18	Howard	30	Oil	25		No	159.
SR	Scheidler Bldg. 3792 A19	Howard	35	Oil	50		No	160.
SR	Scheidler Bldg. 3764 B2	Howard	36	Oil	75		No	161.
SR	Scheidler Bldg. 3768	Howard	35	Oil	50		No	162.
SR	Scheidler Bldg. 3772 B6	Howard	36	Oil	75		No	163.
SR	Scheidler Bldg. 3752 B4	Howard	36	Oil	75		No	164.
SR	Scheidler Bldg. 3756 B5	Howard	30	Oil	37.5		No	165.
SR	Scheidler Bldg. 3760 B3	Howard	35	Oil	50		No	166.
SR	Scheidler Bldg. 3528 C1	Howard	56	Oil	100		No	167.
SR	Scheidler Bldg. 3536 C2	GE	56	Oil	100		No	168.
SR	Scheidler Bldg. 3544 C3	GE	56	Oil	100		No	169.
SR	Scheidler Bldg. 3736 B8	GE	56	Oil	100		No	170.
SR	Scheidler Bldg. 3740 B7	Howard	35	Oil	50		No	171.
SR	Scheidler Bldg. 3728 B9	GE	56	Oil	100		No	172.
SR	Scheidler Bldg. 3716 B10	GE	56	Oil	100		No	173.
SR	Scheidler Bldg. 3700 B11	GE	56	Oil	100		No	174.
SR	Scheidler Bldg. 3704 B12	GE	56	Oil	100		No	175.
SR	Scheidler Bldg. Housing Shop	Howard	56	Oil	100		No	176.
A5	Soccer Field	Cooper	157	Oil	300		No	177.
SE	Studebaker East	Cooper	216	R-Temp	500		No	178.
SE	Studebaker East	Cooper	216	R-Temp	500		No	179.

Map Key	Building Location	Manufacturer	No. of Gallons	Fluid Type	KVA	Inside	Containment	Cons. Number
SW	Studebaker West	Cooper	176	R-Temp	176		No	180.
SW	Studebaker West	Cooper	364	R-Temp	364		No	181.
SC	Student Ctr	Cooper	419	Oil	750	X	No	182.
SC	Student Ctr	Cooper	419	Oil	750	X	No	183.
TC	Teachers Coll.	Westinghouse	126	Oil	750	X	No	184.
TC	Teachers Coll.	Westinghouse	159	Oil	750	X	No	185.
A6	Tennis Court East Power	Cooper	66	Oil	100		No	186.
A6	Tennis Court West Lighting	Cooper	81	Oil	167		No	187.
N/A	Tunnel Pump 1	Vantran Electric	60	Oil	25		No	188.
N/A	Tunnel Pump 2	Vantran Electric	60	Oil	25		No	189.
N/A	Tunnel Pump 3	Vantran Electric	60	Oil	25		No	190.
EW	Wagner Dining	Cooper	360	R-Temp	360		No	191.
EL	Wagner Hall	Cooper	77	R-Temp	77	X	No	192.
EL	Wagner Hall	Cooper	77	R-Temp	77	X	No	193.
EL	Wagner Hall	Cooper	77	R-Temp	77	X	No	194.
WQ	West Quad	Westinghouse	415	Oil	415		No	195.
WB	Whittinger	Westinghouse	200	Oil	500		No	196.
WO	Woodworth	Cooper	409	Veg Oil	750		No	197.

Total Transformer Fluid Capacity (Calculated based on average)
49,650 Gallons

TABLE 2-3
Emergency Generators with Oil Storage Tanks

Map Key	Generator	Size	Tank Size Gal.	Release Protection	Tank Material	Engine Mfr.	Generator Mfr.	Location
-	Portable	350KW	200	Double Wall	Steel	Caterpillar	Caterpillar	Inside Enclosure
EN	District Energy Station North	100KW	225	Diversion Dike	Steel	John Deere	Kohler	Inside Enclosure
JE	Johnson A	505KW	660	Secondary Containment	Steel	Volvo	Kohler	In Basement
JE	Johnson B	500KW	850	Secondary Containment	Steel	Cummins	Cummins	Inside Enclosure
HP	HPAB	125KW	200	Double Wall	Steel	John Deere	Kohler	Inside Enclosure
WR	Worthen Arena	250KW	300	Double Wall	Steel	Detroit	Kohler	Inside Enclosure
KI	Kinghorn	750KW	2,000	Secondary Containment	Steel	Caterpillar	Caterpillar	Inside Enclosure
HC	Health Center	125KW	278	Secondary Containment	Steel	Caterpillar	Caterpillar	Outside
NO	Noyer North	100KW	100	Double Wall	Steel	John Deere	Kohler	Inside Enclosure
NO	Noyer Phone	62KW	175	None	Steel	John Deere	Kohler	Outside
NO	Noyer South	200KW	250	Double Wall	Steel	Detroit	Kohler	Inside Enclosure
BL	Bracken Library	250KW	300	Underground Tank	Fiberglass	John Deere	Kohler	In Basement
AU	Emens Auditorium	300KW	250	Secondary Containment	Steel	John Deere	Kohler	In Basement
SE	Studebaker East	400KW	850	Secondary Containment	Steel	Cummins	Cummins	Inside Enclosure
SW	Studebaker West	350KW	300	Double Wall	Steel	Detroit	Kohler	Inside Enclosure
PK	Park Hall	350KW	670	Double Wall	Steel	Caterpillar	Caterpillar	Outside
DH	Dehority	420KW	898	Double Wall	Steel	Detroit	Kohler	Inside Enclosure
WO	Woodworth	250KW	300	Double Wall	Steel	Detroit	Kohler	Inside Enclosure
HB	Health Professions	450KW	800	Secondary Containment	Steel	Cummins	Cummins	Inside Enclosure
MI	Music Instruction Building	150KW	366	Double Wall	Steel	Cummins	Onan	In Garage
NQ	North Quad	350KW	660	Secondary Containment	Steel	Cummins	Onan	Outside
LU	Lucina	62KW	130	Secondary Containment	Steel	John Deere	Kohler	Outside
SC	Student Center	475KW	1,850	Secondary Containment	Steel	Volvo	Kohler	Inside Enclosure

Map Key	Generator	Size	Tank Size Gal.	Release Protection	Tank Material	Engine Mfr.	Generator Mfr.	Location
PD	ATO Police	60KW	150	Double Wall	Steel	John Deere	Kohler	Outside
WA	Wagoner	150KW	150	Double Wall	Steel	Cummins	Onan	Inside Enclosure
BU	Burris	300KW	546	Secondary Containment	Steel	John Deere	Kohler	Outside
BH	Heat Plant	600KW	1,100	Secondary Containment	Steel	Detroit	Spectrum	Inside Enclosure
CP	Cooper	400KW	700	Secondary Containment	Steel	Detroit	Kohler	Inside Enclosure
AR	Fine Arts	150KW	274	Double Wall	Steel	Intl Harvester	Olympian	Inside Enclosure
BC	Ball Comm	55KW	85	Diversion Dike	Steel	Perkins	Spectrum	Outside
AJ	Arts & Journalism	160KW	150	Secondary Containment	Steel	John Deere	Kohler	Inside Enclosure
AT	Applied Tech	217KW	250	Secondary Containment	Steel	Caterpillar	Caterpillar	Inside Enclosure
TC	Teacher's College	400KW	774	Secondary Containment	Steel	John Deere	Kohler	Outside
RB	Robert Bell	505KW	925	Secondary Containment	Steel	DDC-MTU	Kohler	Inside Enclosure
ST	Stadium East	34KW	77	Secondary Containment	Steel	John Deere	Kohler	Outside
ST	Stadium West	34KW	77	Secondary Containment	Steel	John Deere	Kohler	Outside
ST	Kozel Media	200KW	453	Double Wall	Steel	Intl Harvester	Olympian	Inside Enclosure
SO	Facilities	275KW	564	Diversion Dike	Steel	Cummins	Kohler	In Building
NW	Dining/North Res	600KW	914	Closed Top Dike	Steel	Volvo	Kohler	Inside Enclosure
NW	NW Res Hall	500KW	800	Secondary Containment	Steel	Caterpillar	Caterpillar	Inside Enclosure
IP	Indoor Practice	100KW	215	Secondary Containment	Steel	John Deere	Kohler	Outside
FB	FSB	600KW	1,000	Secondary Containment	Steel	Caterpillar	Caterpillar	Inside Enclosure
	Total Oil Volume in Generator Storage Tanks:							**21,816 gallons**

TABLE 2-4: BSU Hydraulic Elevators

Building	Map Key	Type	Mfr.	No.
Recreation & Wellness Center	RC	Passenger Hydraulic	Thyssen	1.
Alumni Center	AL	Passenger Hydraulic	Dover	2.
Applied Tech	AT	Passenger Hydraulic		3.
Architect Building AB 4	AB	Passenger Hydraulic	Otis	4.
Architect Building AB3	AB	Passenger Hydraulic	Esco	5.
Arena	WR	Passenger Hydraulic	Abell	6.
Arena	WR	Passenger Hydraulic	Dover	7.
Arts & Journalism	AJ	Passenger Hydraulic	Dover	8.
Arts & Journalism	AJ	Freight Hydraulic	Dover	9.
Ball Building	BC	Passenger Hydraulic	Amco	10.
Ball Gym	BG	Passenger Hydraulic	Dover	11.
Ball Gym	BG	Passenger Hydraulic	Dover	12.
Burkhardt Building	BB	Passenger Hydraulic	Meco	13.
Burris	BU	Passenger Hydraulic	Dover	14.
Cooper Physical 1	CP	Mla Hydraulic	Whi Ev	15.
Cooper Physical 2	CP	Passenger Hydraulic	We	16.
Cooper Science	CL	Passenger Hydraulic	Schind	17.
Dehority Complex	DH	Passenger Hydraulic	Mid-America	18.
Dehority Complex Girls D	DH	Passenger Trc	Murphy	19.
EB Ball Center	*	Passenger Hydraulic	Whi Ev	20.
Fine Arts Building	AR	Passenger Hydraulic	Dover	21.
Foundational Sciences Bldg.	FB	Passenger Hydraulic	Dover	22.
Foundational Sciences Bldg.	FB	Passenger Hydraulic	Dover	23.
Foundational Sciences Bldg.	FB	Freight Hydraulic	Dover	24.
Health Center	HC	Passenger Hydraulic	Apple	25.
Hpab	HP	Passenger Hydraulic	Dover	26.
Hpab	HP	Passenger Hydraulic	Dover	27.
Hpab	HP	Passenger Hydraulic	Dover	28.
Johnson A (Botsford)	JE	Passenger Hydraulic	Otis	29.
Johnson A (Schwinford)	JW	Passenger Hydraulic	Otis	30.
Letterman Communication Bldg	LB	Passenger Hydraulic	Dover	31.
Lucina	LU	Passenger Hydraulic	Dover	32.

Building	MapKey	Type	Mfr.	No.
MEA Ticket Office	MU	Passenger Hydraulic	Meco	33.
MEA-Dock	MU	Freight Hydraulic	Plung	34.
Music Hall	MU	Passenger Hydraulic	Abell	35.
North Dining 1	ND	Passenger Hydraulic	Dover	36.
North Dining 2	ND	Passenger Hydraulic	Dover	37.
North Quad 1	NQ	Pass Hydraulic	Wht Ev	38.
North Quad 2	NQ	Pass Hydraulic	W Evan	39.
North Quad 3	NQ	Pass Hydraulic	Otis	40.
Noyer Building Dock	NO	Freight Hydraulic	Millar	41.
Pruis Hall	PH	Pass Hydraulic	Meco	42.
Robert Bell Building	RB	Pass Hydraulic	Esco	43.
Stadium	ST	Pass Hydraulic	Dover	44.
West Quad	WQ	Freight Hydraulic	Dover	45.
Whittinger	WB	Pass Hydraulic	Schind	46.
Woodworth Hall 1 E	WO	Pass Hydraulic	Dover	47.
Woodworth Hall 2	WO	Pass Hydraulic	Dover	48.
McKinley Parking Garage #1 NW	MP	Pass Hydraulic	Schindler	49.
Music	MU	Pass Hydraulic	Schindler	50.
Total Oil Volume in Gallons (160 gallon each average)				**8,000 gallons**

* - EB Ball Center building located off-campus at 400 W Minnetrista Boulevard, Muncie, IN 47303

Table(s) 3-1: Potential Discharge Volumes and Direction of Flow
(By tank, container, or oil-handling equipment)

Tank storage area: Fuel Oil USTs at Heat Plant (Boiler feed)			
Containment and Diversionary Structure-40 CFR 112.7(b): Double walled tanks, overfill protection; ATG monitor			
Security-40 CFR 112.7(e)(9): Area is lighted and adjacent physical plant attended at all times			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	30,000 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 30,000 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	37.5 gallons	Reasonably expected to drain across asphalt surface to low areas to south or storm drain to the west.	150 gallons per minute
Pipe failure	Up to 20 gallons	Contained in fill housing	Up to 5 gallons per minute
Leaking pipe or valve packing	Several ounces to several gallons	Drain across asphalt surface to low areas	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while filling tank	N/A	N/A	N/A

Tank storage area: Gasoline USTs at SV Garage			
Containment and Diversionary Structure-40 CFR 112.7(b): Double walled tanks, overfill protection			
Security-40 CFR 112.7(e)(9): Area is lighted and adjacent garage is attended at all times			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	8,000 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 8,000 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	37.5 gallons	Drain across asphalt surface to adjacent drainage ditch	150 gallons per minute
Pipe failure	Up to 20 gallons	Drain to tank or dispenser pit	Up to 5 gallons per minute
Leaking pipe or valve packing	Several ounces to several gallons	N/A	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while filling tank or fueling vehicles	1 to 2 gallons	Drain across asphalt surface to adjacent drainage ditch	6 gallons per minute

Tank storage: Diesel UST at Bracken Library			
Containment and Diversionary Structure-40 CFR 112.7(b): Fiberglass-double wall, overfill prevention valve on drop pipe			
Security-40 CFR 112.7(e)(9): Area is lighted			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	550 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 550 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	1 to 10 gallons	Drain onto concrete slab and then to grassed area	40 gallons per minute
Pipe failure	Up to 20 gallons	Contained in conduit or drain to generator room in Bracken Library	Up to 5 gallons per minute
Leaking pipe or valve packing	Several ounces to several gallons	N/A	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while filling tank or fueling vehicles	N/A	N/A	N/A

Tank: E-85 AST West of Garage			
Containment and Diversionary Structure-40 CFR 112.7(b): Double walled tank, nozzle shutoffs			
Security-40 CFR 112.7(e)(9): Area is lighted and key fob restriction on gas pump activation. The area is attended at most time by garage mechanics or personnel.			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	1,000 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 500 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	1 to 40 gallons	Drain across asphalt surface to adjacent drainage ditch	20 gallons per minute
Pipe failure	Up to 20 gallons	Contained in fill housing	Up to 5 gallons per minute
Leaking pipe or valve packing	Several ounces to several gallons	N/A	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while fueling vehicles	1 to 2 gallons	Drain across asphalt surface to adjacent drainage ditch	5 gallons per minute

Tank storage area: Used Oil, Engine Oil, and AT Fluid Tanks West Side of Garage (Interior)			
Containment and Diversionary Structure-40 CFR 112.7(b): Concrete vault in enclosed room			
Security-40 CFR 112.7(e)(9): Enclosed room is locked when not in use			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	275 gallons	Contained in concrete vault	Instantaneous
Partial failure of full tank	1 to 275 gallons	Contained in concrete vault	Gradual to instantaneous
Tank overfill	1 to 5 gallons	Contained in concrete vault	20 gallons per minute
Pipe failure	Up to 20 gallons	Contained in concrete vault	Up to 5 gallons per minute
Leaking pipe or valve packing	Several ounces to several gallons	Contained in concrete vault	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while removing used oil	1 to 10 gallons	Contained on asphalt surface outside of vault room. Release would not be expected to reach drainage ditch	Slow to instantaneous

Tank storage area: Biofuel UST (1) North of Garage by HazMat Shed			
Containment and Diversionary Structure-40 CFR 112.7(b): double walled Convault tank, automatic nozzle shutoffs			
Security-40 CFR 112.7(e)(9): Area is lighted and fuel pumps locked when not in use			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	1,000 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 1,000 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	1 to 10 gallons	Contained in sloped and curbed concrete containment	20 gallons per minute
Pipe failure	Up to 20 gallons	Contained in sloped and curbed concrete containment	Up to 5 gallons per minute
Leaking pipe or valve packing	Several ounces to several gallons	Contained in sloped and curbed concrete containment	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while filling tank or fueling vehicles	1 to 2 gallons	Contained in sloped and curbed concrete containment	5 gallons per minute

Tank storage area: Biofuel UST (2) North of Garage by HazMat Shed			
Containment and Diversionary Structure-40 CFR 112.7(b): Double walled steel tank, automatic nozzle shutoffs			
Security-40 CFR 112.7(e)(9): Area is lighted and fuel pumps locked when not in use			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	1,000 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 1,000 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	1 to 10 gallons	Contained in sloped and curbed concrete containment	20 gallons per minute
Pipe failure	Up to 5 gallons	Contained in sloped and curbed concrete containment	Up to 5 gallons per minute
Leaking pipe or valve packing	Several ounces to several gallons	Contained in sloped and curbed concrete containment	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while filling tank or fueling vehicles	1 to 2 gallons	Contained in sloped and curbed concrete containment	5 gallons per minute

Tank storage: Gasoline/Diesel UST (dual 500-gal tank) - North Grounds – 1,000 gallon capacity total			
Containment and Diversionary Structure-40 CFR 112.7(b): Double walled ConVault tank, automatic nozzle shutoffs			
Security-40 CFR 112.7(e)(9): Area is lighted and area fenced and locked when not in use			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	500 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 500 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	1 to 5 gallons	Reasonably expected to drain to gravel/soil surface, impound, and not reach sewer or waterway	20 gallons per minute
Pipe failure	Several ounces to gallons	Reasonably expected to drain to gravel/soil surface, impound, and not reach sewer or waterway	Gradual to instantaneous
Leaking pipe or valve packing	Several ounces to gallons	Reasonably expected to drain to gravel/soil surface, impound, and not reach sewer or waterway	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while filling tank or fueling vehicles	1 to 2 gallons	Reasonably expected to drain to gravel/soil surface, impound, and not reach sewer or waterway	5 gallons per minute

Tank storage area: Gasoline/Diesel AST (Dual 500-gal tank) - South Grounds – 1,000 gallon capacity total			
Containment and Diversionary Structure-40 CFR 112.7(b): Double walled ConVault tank, automatic nozzle shutoffs			
Security-40 CFR 112.7(e)(9): Area is lighted and fuel pumps disabled when not in use			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	1,000 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 1,000 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	1 to 5 gallons	Reasonably expected to drain to asphalt surface reach nearby storm sewer inlet	20 gallons per minute
Pipe failure	Several ounces to gallons	Reasonably expected to drain to gravel/soil surface, impound, and not reach sewer or waterway	Gradual to instantaneous
Leaking pipe or valve packing	Several ounces to several gallons	Reasonably expected to drain to asphalt surface and reach storm water drain	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while filling tank or fueling vehicles	1 to 2 gallons	Reasonably expected to drain to asphalt surface and reach storm water drain	5 gallons per minute

Tank Storage: Diesel AST – Salt Yard – 300-gallon Biodiesel tank			
Containment and Diversionary Structure-40 CFR 112.7(b): Double walled steel tank, automatic nozzle shutoffs			
Security-40 CFR 112.7(e)(9): Security fence is locked when staff not present in area. Lighting available.			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	300 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 300 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	1 to 5 gallons	Expected to drain to concrete bermed containment and not reach drain or waterway	20 gallons per minute
Pipe failure	N/A	N/A	N/A
Leaking pipe or valve packing	Several ounces to several gallons	Expected to drain to concrete bermed containment and not reach drain or waterway	Gradual to instantaneous

Drain plug removed from containment and tank fails or leaks	Up to 300 gallons	Expected to drain to concrete bermed containment and not reach drain or waterway	Gradual to instantaneous
Spillage while filling tank or fueling vehicles	1 to 2 gallons	Expected to drain to concrete bermed containment and not reach drain or waterway	5 gallons per minute

Tank Storage: Diesel AST – SV Garage – 275-gallon engine oil tank			
Containment and Diversionary Structure-40 CFR 112.7(b): Double walled steel tank, automatic line feed			
Security-40 CFR 112.7(e)(9): Area is interior; locked if not occupied			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	275 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	1 to 300 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	1-2 gallons	Reasonably expected to drain to interior concrete slab and not reach floor drain	10 gallons per minute
Pipe failure	N/A	N/A	N/A
Leaking pipe or valve packing	Several ounces to several gallons	Reasonably expected to drain to interior concrete slab and not reach floor drain	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while lubricating vehicles through overhead supply lines	1 gallon	Reasonably expected to drain to interior concrete slab or service pits and not reach floor drain	2 gallons per minute

Container Storage Area: North Hazmat Shed Area - Shed Exterior			
Containment and Diversionary Structure-40 CFR 112.7(b): None			
Security-40 CFR 112.7(e)(9): Area is lighted			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full container	55 gallons	Contained in secondary containment pallet. Possible release of contents to adjacent gravel surface.	Instantaneous
Partial failure of full container	1 to 55 gallons	Contained in sloped and curbed concrete containment	Gradual to instantaneous
Overfill	1 gallon	Contained in sloped and curbed concrete containment	Instantaneous
Pipe failure	N/A	N/A	N/A

Leaking container	Several ounces to 55 gallons	Contained in sloped and curbed concrete containment.	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while removing wastes	1 to 55 gallons	Contained in sloped and curbed concrete containment. Possible release to gravel surface and waterway (roadside ditch)	Gradual to instantaneous

Container Storage Area: North Waste Accumulation Area - Shed Interior – 1,100 gallon capacity			
Containment and Diversionary Structure-40 CFR 112.7(b): None			
Security-40 CFR 112.7(e)(9): Area is lighted and access doors kept locked			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full container	55 gallons (1 drum)	Retained in containment sump (inside)	Instantaneous
Partial failure of full container	1 to 55 gallons	Retained in containment sump (inside)	Gradual to instantaneous
Overfill	1 gallon	Retained in containment sump (inside)	5 gallons per minute
Pipe failure	N/A	N/A	N/A
Leaking container	Several ounces to 55 gallons	Retained in containment sump (inside)	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while removing wastes	1 to 55 gallons	Reasonably expected to drain to gravel surface and impound around shed perimeter	Gradual to instantaneous

Container Storage Area: Campus Waste Accumulation Area - CP 94 Waste Accumulation Room			
Containment and Diversionary Structure-40 CFR 112.7(b): Concrete vault (floor with curbing)- 225 Gallon capacity in safety cabinets and on carts			
Security-40 CFR 112.7(e)(9): Room is maintained locked and access is only through building interior			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full container	30 gallons	Retained in concrete vault (inside)	Instantaneous
Partial failure of full container	1 oz. to 30 gallons	Retained in containment vault (inside)	Gradual to instantaneous
Overfill	1 oz. to 1 gallon	Retained in containment vault (inside)	Instantaneous

Pipe failure	N/A	N/A	N/A
Leaking container	Several ounces to 55 gallons	Retained in containment vault (inside)	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while removing wastes	1 to 30 gallons	Retained in concrete vault containment	Instantaneous

Container Storage Area: SV Garage			
Containment and Diversionary Structure-40 CFR 112.7(b): Small tanks and 55-gallon containers in Garage			
Security-40 CFR 112.7(e)(9): Area is inside and attended at all times garage is open			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full container	55 gallons	Into containment pallet or platform – 62-gal capacity	Instantaneous
Partial failure of container	1 to 55 gallons	Into containment pallet or platform – 62-gal capacity	Gradual to instantaneous
Container overfill	1 to 2 gallons	Into containment pallet or platform – 62-gal capacity	20 gallons per minute
Pipe failure	N/A	N/A	N/A
Leaking pipe or valve packing	N/A	N/A	N/A
Drain plug removed from containment and container fails or leaks	1 to 55 gallons	Onto concrete floor and to drain openings in center of garage floor to sewer	Gradual to instantaneous

Tank Storage: Electric Transformers (197): total capacity of 49,650 gallons of dielectric fluid (non-PCB): Locations throughout campus and inside buildings			
Containment and Diversionary Structure-40 CFR 112.7(b): Normally none. Christy Woods and Bethel Ave. substations have several large transformers with secondary containment. See Table 2-2 for details.			
Security-40 CFR 112.7(e)(9): Substations are fenced, many locations are lighted, several are inside buildings			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b)			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	17 to 3,510 gallons	In many cases the oil would be reasonably expected to reach a storm drain or Creek	Instantaneous
Partial failure of full tank	1 to 3,510 gallons	In many cases the oil would be reasonably expected to reach a storm drain or waterway	Gradual to instantaneous
Tank overfill	1 to 5 gallons	Reasonably expected to drain only to gravel surface, building floor, or walkway and not reach drain or waterway	20 gallons per minute

Pipe failure	N/A	N/A	N/A
Leaking pipe or valve packing	Several ounces to several gallons	Reasonably expected to drain only to gravel surface, building floor, or walkway and not reach drain or waterway	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	N/A	N/A	N/A
Spillage while filling tank or fueling vehicles	N/A	N/A	N/A

Emergency Generators – 21,316 gallon capacity in total – 41 units on and around campus			
Containment and Diversionary Structures-40 CFR 112.7(b): Variety of double wall tanks, secondary containment, or diversion dikes – See Table 2-3 for details			
Security-40 CFR 112.7(e)(9): Areas are normally lighted. Fuel system accessible only to authorized personnel – generators and fuel tanks are normally integral as a single unit			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b) [Generic]			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	77-2,000 gallons	Contained in secondary tank shell	Instantaneous
Partial failure of full tank	77-3,510 gallons	Contained in secondary tank shell	Gradual to instantaneous
Tank overfill	1 to many gallons	Reasonably expected to drain to storm sewer inlet, ditch, or waterway	20 gallons per minute
Pipe failure	Up to 20 gallons	Reasonably expected to drain to storm sewer inlet, ditch, or waterway	Up to 5 gallons per minute
Leaking pipe or valve packing	Several ounces to several gallons	Reasonably expected to drain to storm sewer inlet, ditch, or waterway	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	Up to 2,000 gallons	Reasonably expected to drain to storm sewer inlet, ditch, or waterway	Gradual to instantaneous
Spillage while filling tank	1 to 10 gallons	Reasonably expected to drain to storm sewer inlet, ditch, or waterway	Gradual

Elevator Hydraulic Fluid Systems – 8,000 gallon capacity in total – 50 units on and around campus			
Containment and Diversionary Structures-40 CFR 112.7(b): Hydraulic fluid leakage would be contained in concrete elevator shaft. See Table 2-4 for details			
Security-40 CFR 112.7(e)(9): Units are inside; Hydraulic systems accessible only to authorized personnel.			
Potential Release Volumes, Rates, and Pathways: 40 CFR 112.7(b) [Generic]			
Type of Failure	***Possible Quantity Released***	***Pathway of Flow***	***Rate of Flow***
Complete failure of full tank	160 gallons	Contained in concrete elevator shaft	Instantaneous
Partial failure of full tank	1-160 gallons	Contained in concrete elevator shaft	Gradual to instantaneous
Tank overfill	1 to 4 gallons	Contained in concrete elevator shaft	20 gallons per minute
Pipe or hose failure	Up to 20 gallons	Reasonably expected to drain to storm sewer inlet, ditch, or waterway	Up to 5 gallons per minute
Leaking pipe or valve packing	Several ounces to several gallons	Contained in concrete elevator shaft	Gradual to instantaneous
Drain plug removed from containment and tank fails or leaks	Up to 160 gallons	Contained in concrete elevator shaft	Gradual to instantaneous
Spillage while filling tank	1 to 10 gallons	Contained in concrete elevator shaft	Gradual

Table 3-2 Tank and Container Inspections		
Inspection and Testing Program Facility Component	**Action**	**Frequency / Circumstances**
Aboveground Bulk Storage Tanks (AST)s – Category 1 and 2	Periodic inspections (tanks ≤1,100 gallon capacity, Category 1 or 2; 1,101-5,000 gallon capacity, Category 1) are conducted in accordance with STI SP-001 standards for the UL 142 tanks, and repairs and maintenance are completed in accordance with API 653.	Periodic inspections (quarterly and annual), and whenever material repairs are made.
Aboveground Bulk Storage Tanks (AST)s – Category 3	Periodic Inspections (tanks ≤ 1,100 gallon capacity, Category 3) conducted in accordance with STI SP-001 standards for the UL 142 tanks, and repairs and maintenance are completed in accordance with API 653.	Periodic inspections (quarterly and annual), and whenever material repairs are made. Formal external inspection (E) by certified inspector and leak test (L) at least every 10 years.
Underground Storage Tanks (UST)s	Inspections are conducted in accordance with UST Regulations under 40 CFR 280.	Monthly automatic tank gauge testing, inspection of above-ground and accessible tank components and equipment.
Portable Containers (55 gallon or more)	Inspections (mobile containers ≥ 55 gallon capacity) are conducted in accordance with SP-001 standards for portable containers. Containers are to meet U.S. DOT shipping container packaging specifications.	Following a regular schedule (monthly). Testing and recertification of containers if age is beyond DOT shipping container schedule: *Plastic – every 7 years* *Steel – every 12 years* *St. Steel – every 17 years*

Note the following:
P – Periodic AST inspection
E – Formal External Inspection by certified inspector
I – Formal Internal Inspection by certified inspector
L – leak test by owner or owner's designee

Category 1 - ASTs with spill control, and with CRDM (continuous release detection method)
Category 2 - ASTs with spill control and without CRDM
Category 3 - ASTs without spill control and without CRDM

Table 3-3: General 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. ❑ Verify that nearby downgradient storm drains or waterways are protected from any spillage (drain covers, sorbent supply). ❑ 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. ❑ Park the tanker truck as close as safely possible to the storage tank to minimize the length of exposed flexible piping and utilize the vault containment capacity to the extent possible. ❑ Establish adequate bonding/grounding prior to connecting to the fuel transfer point. ❑ Turn off any cell phones, radios, or other non-essential electronic devices.
During loading/ unloading	❑ Driver must stay with the vehicle at all times during loading/unloading activities to observe the process. ❑ 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 (flashpoint $\leq$ 141°F), shut off the vehicle engine unless it is used to operate a pump. ❑ Maintain visual 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. ❑ Verify that no spillage has occurred. If a release has occurred, notify the BSU Police Department or EHS Department, commence cleanup, and do not depart the location.

Appendix B: Substantial Harm Determination

Facility Name: **Ball State University Company**
Facility Address: **2000 West University Avenue**
Muncie, Delaware County, Indiana

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 **x**

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 ○ No **x**

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 ○ No **x**

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 ○ No **x**

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 ○ No **x**

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.

_____
Signature

Associate Vice President,
Facilities Planning and Management,
Ball State University
Title

James Lowe
Name

_____, 20__
Date

APPENDIX C
Facility Inspection Checklists

The following checklists are to be used for monthly, quarterly, 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.

BALL STATE UNIVERSITY
WE FLY

UST Monthly Walkthrough Inspection

FOR OFFICIAL USE ONLY –
DO NOT WRITE IN THIS SPACE

1. UST Facility Information

Facility ID Number:	**25190**		
UST Owner Entity Number:	**1260**		
UST Facility Physical Address	**Street Address:** 1100 North McKinley Avenue		
Bracken Library	**City:** Muncie	**County:** Deleware	**Zip Code:** 47306

2. Monthly Inspection Checklist

40 C.F.R. 280.36(a)(1)(i) – UST systems receiving deliveries at intervals greater than every 30 days shall conduct an inspection prior to each delivery.

			/ /	/ /	/ /	/ /	/ /	/ /
Monthly Inspection Date								
Spill Prevention								
Covers & Lids *(Spill Buckets)*	**1.** Present, in good condition, seated firmly on correct tank	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Spill Containment Manhole *(Spill Buckets)*	**2.** Bucket walls, plunger, plugs, gauges, in good condition	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
	3. Free of water and product	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
	4. Free of trash or debris	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Drop Tubes	**5.** Check for and remove obstructions	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
	6. Fill cap fits securely	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Release Detection								
Automatic Tank Gauge *(ATG)*	**7.** Passing tank test results	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Continuous Interstitial Monitoring	**8.** Sensor status normal	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Statistical Inventory Reconciliation *(SIR)*	**9.** Previous months results obtained with passing result	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
	10. Data being collected for current month	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Monthly Piping Leak Test	**11.** Passing piping leak test results	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Manual Interstitial Monitoring for Piping	**12.** Tank-top sumps inspected, free of liquid	☐ N/A	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N

I certify that I have personally examined and performed the walkthrough inspections as described above for this UST facility as established in 40 C.F.R. 280.36. I further certify that the information in this document is true, accurate and complete.

Walkthrough Certification *(Initial)* *(Must be completed by the owner, operator, or Combined Class Operators)*						

Monthly Inspection Checklist *(continued from Section 2)*

40 C.F.R. 280.36(a)(1)(i) – UST systems receiving deliveries at intervals greater than every 30 days shall conduct an inspection prior to each delivery.

Monthly Inspection Date			/ /		/ /		/ /		/ /		/ /	
Spill Prevention												
Covers & Lids *(Spill Buckets)*	**1.** Present, in good condition, seated firmly on correct tank	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Spill Containment Manhole *(Spill Buckets)*	**2.** Bucket walls, plunger, plugs, gauges, in good condition	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
	3. Free of water and product	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
	4. Free of trash or debris	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Drop Tubes	**5.** Check for and remove obstructions	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
	6. Fill cap fits securely	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Release Detection												
Automatic Tank Gauge *(ATG)*	**7.** Passing tank test results	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Continuous Interstitial Monitoring	**8.** Sensor status normal	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Statistical Inventory Reconciliation *(SIR)*	**9.** Previous months results obtained with passing result	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
	10. Data being collected for current month	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Monthly Piping Leak Test	**11.** Passing piping leak test results	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N
Manual Interstitial Monitoring for Piping	**12.** Tank-top sumps inspected, free of liquid	☐ N/A	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N	☐ Y	☐ N

I certify that I have personally examined and performed the walkthrough inspections as described above for this UST facility as established in 40 C.F.R. 280.36. I further certify that the information in this document is true, accurate and complete.

Walkthrough Certification *(Initial)* *(Must be completed by the owner, operator, or Combined Class Operator)*						

In accordance with Ball State University's Spill Prevention, Control and Countermeasures Policy, spills or releases that cannot be contained must be immediately reported to emergency services and to EHS. EHS will determine the scope and contact IDEM, U.S. EPA, or proper reporting authorities.

3. Problem and Solution / Repair Log

(Corresponds to Section 2 – attach additional pages if necessary)

Inspection Date	Description Item	Describe Problem	Describe Solution or Repair	Solution or Repair Date	Initials
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In accordance with Ball State University's Spill Prevention, Control and Countermeasures Policy, spills or releases that cannot be contained must be immediately reported to emergency services and to EHS. EHS will determine the scope and contact IDEM, U.S. EPA, or proper reporting authorities.

GENERAL INSTRUCTIONS
UST Monthly Walkthrough Inspection

Instructions provided are for the UST Monthly Walkthrough Inspection form. For any questions regarding any section of this form, please call the EHS office at (765)285-2807. This form must be completed either by typing or by printing legibly with black ink.

Walkthrough inspections shall be completed by the owner, operator, or combined Class operators. The walkthrough inspections are to be completed and retained at the UST facility, or made available upon request.

Section	**1.**	**UST Facility Information:** • **Agency Interest Number (AI) –** Enter the agency interest number for the UST facility. • **UST Facility Name –** Enter the UST facility name. • **UST Facility Physical Address –** Enter the UST facility physical address including a street address, city, county, and zip code. A PO Box will not be accepted.
Section	**2.**	**Monthly Inspection Checklist:** • **Monthly Inspection Date –** Enter date the walkthrough inspection was performed. • Each monthly walkthrough inspection shall be indicated in a separate column. • The first six (6) months of walkthrough inspections shall be entered on page 1. • The remaining six (6) months of walkthrough inspections shall be entered on page 2. • During each walkthrough inspection, answer questions 1 through 12 by checking the appropriate box for each corresponding question for the UST facility. o If a condition is observed select Y (yes). o If the condition is not present select N (no). If N is selected for any question, comments are required in Section 3 of this form. o If the question does not pertain to the particular UST facility select N/A (not applicable). • Certify the walkthrough inspection by initialing the column for the month performed.
Section	**3.**	**Problem and Solution / Repair Log:** • Complete this section for any condition observed during the walkthrough inspection with N in Section 2 of this form. • Enter the walkthrough inspection date the condition was observed from Section 1 of this form. • Indicate the corresponding question number (1 through 12). • Describe the problem. • Describe the solution or repair that was preformed to correct the problem. • Enter the date the problem was corrected. • Initials of the owner, operator, or combined Class operators.

Ball State University - Environmental Health & Safety Office

Quartley Aboveground Storage Tank Inspection

Tank ID No.:		**Facility Name:**	
Tank Capacity:	gallons	**Tank Location:**	
Product Stored:		**Registration #:**	

Compliance Item	Yes	No	N/A	Notes/Comments
1. Is the exterior paint on the tank in good condition, with no signs of cracking, bulging, or corrosion?				
2. Are there any signs of spills or leaks on or around the tank?				
3. Is the tank on saddles, legs, stilts, rack or cradle and not in immediate contact with soil, or floor, or foundation pad?				
4. Are the tank's supports and foundation in good condition, with no signs of cracking, settling, or corrosion?				
5. For tanks that have a secondary containment area built around the base of the tank, is the containment area in good condition and free of liquid and debris?				
6. Is the tank's product level gauge and/or automatic tank gauge system functioning properly and indicating an accurate fuel level for the product in the tank?				
7. Is the tank's high level alarm functioning properly?				
8. Is the tank's primary vent pipe in good condition and free of visible obstructions?				
9. Is the tank's electronic leak detection system functioning properly, with all warning lights and audible alarms in good working condition?				
10. Are there any active alarms on the tank's electronic monitoring system?				
11. For tanks with manually monitored interstitial spaces, is the interstitial space free of liquid and debris?				
12. Is the tank's fill port or fill port containment closed and locked?				
13. Is the tank's fill port containment in good condition and free of all liquids and debris?				
14. Is all of the visible piping in good condition, with no signs of cracking, bulging, or corrosion?				
15. Are there any signs of spills or leaks on or around any of the piping?				
16. Are all product dispenser components in good condition and functioning properly? (e.g., pumps, dispenser hoses, nozzles, etc)				
17. Is the University's petroleum transfer procedure followed during all product transfers?				
18. Are transfer area protection equipment/supplies available and present during product transfers? (e.g., drain covers)				
19. Is emergency spill equipment/supplies readily available at or near tank? (e.g., speedy dry, absorbent pads, etc)				

Comments:

Reviewed by: **Date:**

Ball State University - Environmental Health & Safety Office

Annual Aboveground Storage Tank Inspection

Tank ID No.:	
Tank Capacity:	gallons
Product Stored:	

Facility Name:	
Tank Location:	
Registration #:	

Compliance Item	Yes	No	N/A	Notes/Comments
1. Is the exterior paint on the tank in good condition, with no signs of cracking, bulging, or corrosion?				
2. Are there any signs of spills or leaks on or around the tank?				
3. Is the tank on saddles, legs, stilts, rack or cradle and not in immediate contact with soil, or floor, or foundation pad?				
4. Are the tank's supports and foundation in good condition, with no signs of cracking, settling, or corrosion?				
5. For tanks that have a secondary containment area built around the base of the tank, is the containment area in good condition and free of liquid and debris?				
6. Is the tank's product level gauge and/or automatic tank gauge system functioning properly and indicating an accurate fuel level for the product in the tank?				
7. Is the tank's high level alarm functioning properly?				
8. Is the tank's primary vent pipe in good condition and free of visible obstructions?				
9. Is the tank's electronic leak detection system functioning properly, with all warning lights and audible alarms in good working condition?				
10. Are there any active alarms on the tank's electronic monitoring system?				
11. For tanks with manually monitored interstitial spaces, is the interstitial space free of liquid and debris?				
12. Is the tank's fill port or fill port containment closed and locked?				
13. Is the tank's fill port containment in good condition and free of all liquids and debris?				
14. Is all of the visible piping in good condition, with no signs of cracking, bulging, or corrosion?				
15. Are there any signs of spills or leaks on or around any of the piping?				
16. Are all product dispenser components in good condition and functioning properly? (e.g., pumps, dispenser hoses, nozzles, etc)				
17. Is the University's petroleum transfer procedure followed during all product transfers?				
18. Are transfer area protection equipment/supplies available and present during product transfers? (e.g., drain covers)				
19. Is emergency spill equipment/supplies readily available at or near tank? (e.g., speedy dry, absorbent pads, etc)				

Comments:

Reviewed by: **Date:**

APPENDIX D
Record of Containment Dike Drainage

This record must be completed when precipitation from any containment or diked area where oil storage or handling occurs is to be drained. The contained water must first be examined to determine if there is any evidence of oil release in the area or an oil sheen on the water. If not, it may be pumped out or allowed to drain onto the surrounding surfaces, or into the combined sewer drain. If there is evidence of an oil release in the containment area, or a sheen is apparent on the water, the water may be discharged to the sanitary / process wastewater sewer, if in compliance with the facility industrial discharge permit from the City, or it must be removed by a used oil transporter. The examination and drainage must be performed only under responsible supervision.

CONTAINMENT AREA DRAINAGE APPROVAL / RECORD

Date	Containment Area	Water Clear? (Y / N)	Approved By (initials)	Estimated Quantity (gal)	Start Time	Finish Time	Signature (Pump inlet removed / valve closed)

APPENDIX E
Record of Annual Discharge Prevention Briefings and Training

Ball State University management has instructed 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.

Briefings to reinforce discharge prevention will be scheduled and conducted by Ball State University for operating personnel involved in oil handling or use activities at regular intervals (at least annually) as necessary to ensure continued familiarity with 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.

The form illustrated on the next page, or an electronic tracking format containing similar information, will be maintained to document and assure that all necessary employees receive such briefings at least once a year.

Annual Oil Handler Briefing* Record: BSU SPCC Plan			
Date	***SPCC Oil Spill Prevention Subjects Covered***	***Employees in Attendance (or signatures)***	***Instructor(s)***

Briefings to be conducted at least once per year** ***Page ____ of ____

Period Covered: _____ to _____

APPENDIX F
Calculation of Secondary Containment Capacity

The design 24-hour, 25-year storm at this location (Muncie, Indiana) is 4.65 inches.

This Appendix relates the secondary containment capacity of the significant bulk oil storage locations on the BSU campus where vaults are used for containment purposes:

Used Oil and Lubricant Tanks (SV Bus Garage):

Four (4) 275-gallon oil tanks are located in the enclosed annex structure to the SV Building. The structure is completely enclosed.

Calculations:
Capacity of Tanks within the Vault Area:
Tanks = 275 gallons each = 1,100 gallons

Concrete Vault Dimensions:
Vault slab footprint = 17 feet x 7.5 feet = 127.5 ft^2
Vault wall height = 2 feet (curb at door)
Vault volume = 127.5 ft^2 x 2 ft = 255 ft^3 x 7.48 gal/ft^3 = 1,907 gallons

Total Containment Volume: 1,907 gallons

Displacement Volume of Tanks (elliptical – assume a cuboid for conservative approach:
Tank length = 5 feet; Tank end diameter = 27 inches
2 feet X 2.25 feet x 5 feet = 22.5 ft^3 x 7.48 gal/ft^3 = 169 gallons x 4 tanks = 676 gallons

Displacement Volume for piping, supports, etc.: 1 ft^3 X 7.48 gallons/ ft^3 = 7.5 gallons

Total Displacement Volume: 676-7.5 = 668.5 gallons

Available Containment Capacity *for Precipitation or Spill Containment*: 1,907 gallons – 143.5 gallons = 1,223 gallons.

Conclusion: The vault therefore provides 1,223 gallons of available liquid storage capacity. This far exceeds the capacity necessary to contain the volume that would result from the complete failure of the largest tank in the containment (275 gallons). The tanks and containment are completely enclosed and under roof so no accommodation for precipitation is necessary.

HazMat Shed (North campus):

The maximum storage volume of the roofed and fully enclosed waste shed is twenty (20) 55-gallon drums for a total of 1,100 gallons. The shed is 8 foot x 22 foot in dimension with a grated containment floor that is 7 inches deep.

Calculations:
8 feet x 22 feet x 0.583 feet = 103 ft^3 x 7.48 gallons/ft^3 = 770 gallons of total containment capacity. No displacement is involved as all storage is above the elevation of the containment sump grating. Therefore, the available containment capacity remains at 770 gallons.

Conclusion:
The required containment volume is 10% of the total storage capacity or that of the largest container which, in this instance, would be 110 gallons. The available 770 gallons of available containment far exceeds that volume.

Container Storage Area North of HazMat Shed

Four (4) containment pallets are available for container storage at this location. Each has a drum storage capacity of four (4) drums and a liquid containment capacity of 66 gallons. The drums are a maximum of 55-gallon capacity.

Conclusion

As containment is only required for the capacity of the largest container, the containment capacity of each of the individual pallets of 66 gallons is ample for the largest container size of 55-gallons. The pallets are arranged in two (2) rows of eight (8) drums each with an aisle in between to facilitate visual inspection for any leakage.

Generator Day Tank Containment (<u>example</u> – Service and Stores generator room):

This 564-gallon capacity steel tank is located inside an enclosed annex with a roof and a concrete floor slab elevation that is slightly lower than the surrounding terrain. The containment vault floor slab is 15 feet by 17 feet in dimension with an effective containment wall of 8 inches (0.66 feet) height at its lowest point. A small blind collection sump that is 6 inches deep and 12 inches in diameter is present near the tank. The fuel storage tank is elevated on a pad with dimensions of 3.5 feet x 6 feet, and the generator is on an elevated pad of 5 feet x 12 feet, both with a height of 8 inches above the floor slab top elevation.

Calculations:
Total containment capacity: 15 feet x 17 feet x 0.66 feet = 168 $feet^3$ x 7.48 gallons/$feet^3$ = 1,256 gallons. The sump has an additional capacity of: $(0.5 \text{ feet})^2$ x 0.5 feet x 3.14 = 0.39 $feet^3$ x 7.48 gallons/$feet^3$ = 2.92 gallons. The total containment capacity is then 1,259 gallons.
Displacement: Tank pad: 3.5 feet x 6 feet x 0.66 feet = 13.8 $feet^3$ x 7.48 gallons/$feet^3$ = 104 gallons Generator pad: 5 feet x 12 feet x 0.66 feet = 39.6 x 7.48 gallons/$feet^3$ = 296 gallons, so the total displacement is 104+296 = 400 gallons.

Conclusion:
The total available containment capacity = 1,259 - 400 = 859 gallons. Since this available capacity exceeds the required 564-gallon capacity of the tank, the containment capacity is adequate.

[The above is an example of the containment capacities of the gensets using vaults as containment for the fuel tanks.]

Bus (Diesel) Fueling Station

The Bus (Diesel) Fueling area is located under a canopy to divert precipitation and consists of two fuel storage tanks on an elevated concrete island located between the two (2) sloped concrete bus filling pads on either side--both equipped with an additional containment sump. Each of the fuel tanks are double-walled tanks providing full secondary containment. The island on which the fuel tanks are mounted is at an elevation higher than the bus containment areas so no displacement of the containment volume occurs due to the tanks themselves.

Calculations:
Each of the bus filling pads are 12 feet wide by 50 feet in length with a maximum depth of 6-inches to the top of the concrete curbing. The effective minimum containment area of the pad (ignoring the ramped area at the ends) averages 5.5 inches deep by 12 foot wide by 32 feet in length. Therefore, 0.46 feet x 12 feet x 32 feet = 177 ft^3 = 1,324 gallons. In addition, a sump with the inside dimensions of 2 feet x 3 feet x 3 feet = 18 CF = 135 gal is present on each of the 2 bays. Accordingly, then, a total capacity of 1,459 gallons on each side for a cumulative containment total of 2,918 gallons.

Conclusions: As there are no fixtures or obstacles within the bus filling bays, there is no effective displacement to be considered and the total containment capacity is 2,918 gallons at a minimum. This is more than adequate to accommodate any spillage during bus or other vehicle filling operations.

APPENDIX G

Records of Certified Tank Inspections, Tank Integrity and Pressure Tests

Copies are attached here, or located in a separate file in the office where this SPCC Plan is maintained, of records of tank integrity and pressure tests, repairs or modifications, and records of tank inspections and findings by independent certified tank inspectors. The following Table provides an index to the records or certifications maintained.

Index of Tank Inspection, Repair, or Test Records

Date	Tank	Performed by (vendor or firm name)	Description of Record, Inspection, or Test

APPENDIX H
Emergency Contacts

Designated person responsible for spill prevention: ***Jim Lowe, Assoc. V.P., Facilities Planning and Management, BSU***

EMERGENCY TELEPHONE NUMBERS:

Local Emergency Response	
University Police	765-285-1111 (911)
Emergency Medical or Fire	911
Delaware County Emergency Management Agency	765-747-4888
Facility	
Sean Coats, Environmental Specialist, EHS Office	765-285-2827
Mike Planton, Dir., Landscape Services, Facilities Planning & Mgt	765-285-5092
Response/Cleanup Contractors	
Environmental Remediation Services, Inc., Fort Wayne IN	1-866-489-7062
Spill / Release Notifications	
Muncie Bureau of Water Quality	765-747-4896
Indiana Department of Environmental Management, Emergency Response Branch	888-233-7745
National Response Center (NRC)	800-424-8802
United States Environmental Protection Agency, Region 5	800-621-8431
Other Assistance	
State Emergency Management Agency (SEMA)	800-669-7362
IDNR NRGQ (Department of Natural Resources, North Region)	765-473-9722
Indiana State Department of Health (ISDH)	317-233-1325

APPENDIX I
Discharge Notification Form

Part A: Discharge Information	
General information when reporting a spill to outside authorities: Name: Ball State University Address: 2000 West University Avenue Muncie, Indiana 47306 Telephone: 765-289-1241 or 800-383-8540 (main switchboard) Owner/Operator: Ball State University, State of Indiana Primary Contact: Sean Coats, Environmental Specialist Work: 765-285-2827 Cell: 765-730-5522 Secondary Contact: Mike Planton, Dir. Landscape Services, Facilities Planning & Mgt Work: 765-285-5092 Cell: 765-717-4725	
Type of oil:	Discharge Date and Time:
Quantity released:	Discovery Date and Time:
Quantity released to a water body:	Discharge Duration:
Location/Source:	
Actions taken to stop, remove, and mitigate impacts of the discharge:	
Affected media: ❑ Air ❑ Water ❑ Soil ❑ Storm water sewer/POTW ❑ Dike/berm/oil-water separator ❑ 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
1. Discharge or spill of oil in any amount less than 55 gallons* and *not affecting a sewer, water body, and not leaving the facility property boundary – Contact:		
Sean Coats, Environmental Specialist (765) 285-2827 (desk) / (765) 730-5522 (cell) **or**		
University Police 765-285-1111 or 911		

2. Discharge or spill of oil in an amount greater than 55 gallons that leaves the university property, or a quantity of 1,000 gallons or more on the BSU property - neither of which affect a water body or reach a sewer - Contact the following:		
University Police 765-285-1111 or 911 **or**		
Sean Coats, Environmental Specialist (765) 285-2827 (desk) / (765) 730-5522 (cell)		
Indiana Department of Environmental Management, Emergency Response Branch (888) 233-7745		
3. Discharge of oil in any amount and affecting (or threatening to affect) a water body or sewer – Contact the following:		
University Police 765-285-1111 or 911		
Sean Coats, Environmental Specialist (765) 285-2827 (desk) / (765) 730-5522 (cell)		
Indiana Department of Environmental Management, Emergency Response Branch (888) 233-7745		
National Response Center[1] (800) 424-8802		
Muncie Bureau of Water Quality[2] 765-747-4896 (Rick Conrad, Director)		
Delaware County Emergency Management Agency 765-747-7719		
SET Environmental, Inc. 1-847-537-9221 (Spill Response)[3]		

[1]The NRC (and the IDEM) must be notified whenever an oil spill, of any quantity, causes a sheen, sludge, emulsion or other water quality violation (discoloration, odor, fish kill) in or on a waterway, or threatens to do so (spill to a sewer, shoreline, or drainage way).
[2]The City BWQ should be notified of a discharge if oil has reached or threatens a waterway or sewer drains that connect to the City sewerage system (storm, sanitary, or combined sewers).
[3]The spill response contractor should be called if necessary to conduct a cleanup or to prevent the migration of the oil release or spill.

APPENDIX J
Discharge Response Equipment Inventory

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

***Vehicle Fueling Locations* (SV Bus Garage, Diesel Bus Fueling, North Grounds, North and South Grounds Buildings, Salt Yard)**

Number	Item	Description
1	Container (Drum)	55-gallon plastic, open-top container, with lid and with signage as follows: "*Fuel Spill Response Kit*"
3	Absorbent Socks*	3" diameter x 10" length oil sorbent (blue)
1 roll	Absorbent Sheets*	14" x 150' (serrated) petroleum sorbent (on bottom of drum)
6	Absorbent Pillows*	10" x 10" oil absorbent pillows
1	Bag of Absorbent (granular)	40 pound bag of oil dry (on bottom of drum)
1	Drain Seal	24"x24" synthetic seal for drain cover (in cardboard box)
1	Shovel	Polypropylene - 2 piece (~14"x11" blade)
4	HM Disposal Bags	6 mil, 38"Wx68"L (fits 55 gal drum)
1	Pail	5-gallon yellow/black pail with lid (holds gloves, suits, etc.)
4	Pairs of Gloves	Ultraflex II Neoprene Gloves – 14" length 2 pair large and 2 pair of extra-large
2	Pairs of Work Gloves	Rubber coated palm/fingers work gloves – 1 large, 1 X Large
6	Coveralls	Tyvek coveralls – 2 Large, 2 X Large, and 2 XX Large
2	Pairs of Overboots	Black over boots – 1 Large, a X-Large
2	Pairs of Goggles	Chemical Splash Goggles (over prescription glasses) type
3	"Stop Leak" tubes	Epoxy stop leak putty** (to be kneaded for application)
1 roll	Duct tape	Silver Duck (Duct) Tape

***** These absorbents include white "oil only" – absorb oil, but not water, and/or blue for water, solvents, and fuels –
****** Mix desired amount of putty to uniform color – apply to leak – hardens in minutes even if wet.

On Board (Vehicle) Spill Response Supplies

Vehicle Description	Supplies (oil absorption capacity)
Environmental Specialist Van	Absorbent pads, socks, tools (55 gallon)
MS4 Coordinator SUV	Absorbent pads, socks (20 gallon)
Wrecker Vehicles	Spill kit (10 gallon)
Passenger Buses	Spill kits (6-1/2 gallon)

Heat Plant, Salt Yard, North CSA and Waste Shed

Heat Plant -1 Oil Only and 1 MRO (oils, solvents, coolants, and water) Wheeled Overpack Spill Kit
Chill Plant - 1 Oil Only, 1 MRO, and 1 HazMat (acids and bases) Wheeled Overpack Spill Kit
Salt Yard – 1 Oil Only Wheeled Overpack Spill Kit
Waste Shed – 1 MRO Wheeled Overpack Spill Kit; 1 HazMat Refill Kit, and 1 Oil Only Refill Kit

Oil Only (no water absorbing)	MRO (absorbs oil, water, solvents, coolants)	HazMat (acids and bases)
(3) 5”x10’ booms	(16) 3”x48” socks	(12) 3”x46” socks
(3) 3”x10’ booms	(10) 3”x10’ socks	(6) 3” x 10’ socks
(60) 20”x15” absorbents	(60) 15”x20” pads	(2) 5”x10’ socks
(10) Disposal bags and ties	(8) 21”x17” pillows	(75) 20”x15” pads
ERG Guidebook	(50) wipers	(7) 16”x17” pillows
Instructions	(10) Disposal bags and ties	(10) Disposal bags and ties
	ERG Guidebook	ERG Guidebook
	Instructions	Instructions

Note: *The above kits are contained in 95-gallon wheeled overpack containers that can then be used for disposal purposes.*

Foundational Science Building Waste Accumulation Room

Number	Item	Description
1	Container (Drum)	30-gallon plastic drum with screw lid
2	Absorbent socks - blue	For oils, coolants, solvents, and water
2	Absorbent socks - pink	For acids and bases
1	Absorbent pillows - blue	For oils, coolants, solvents, and water
1	Absorbent pillows - pink	For acids and bases
1	Epoxy putty	Tube of Stop-leak
1	Trash Bag	Yellow hazardous waste bag
6	Absorbent pads - blue	For oils, coolants, solvents, and water
6	Absorbent pads - pink	For acids and bases
10	Absorbent pads-gray/white	For any liquids or unknowns
1	Pair of over-boots	Nitrile boots for over shoes
1	Tyvek suit	Particulate resistant coveralls
2	Pairs chemically resistant gloves	“Silver Shield” chemically resistant gloves
1	Pair goggles	Chemical splash protective goggles
3	Corrosive neutralizers	Containers for hydrofluoric, formaldehyde neutralization

Other Supplies and Locations: North Grounds Building and/or Waste Shed

Number	Item	Description
2	Container (Drum)	30-gallon plastic drum with screw lid
5	55-gallon drums	Open and closed head steel and plastic drums
50	Absorbent sheets	For oils, coolants, solvents, and water
40	Absorbent pillows	Oils, coolants, and solvents
25	Tyvek suits	Particulate resistant coveralls – assorted sizes
4	Drain covers	Assorted sizes: Liquid tight sealing drain covers for drains
10	Bags of absorbent	40-pound bags of absorbents and oil dry
36	Oil booms	8-inch x 10 foot oil-only absorbent booms -12 gal capacity (North Grounds)
6	Pairs of boots	Assorted sizes
25	Disposable gloves	Pairs of disposable nitrile gloves

APPENDIX K
Agency Notification Standard Report

Information contained in this report, and any supporting documentation, must be submitted to the EPA Region 5 Regional Administrator, and to the IDEM, within 60 days of the qualifying discharge incident (see Introduction and Part 5.4 of the BSU SPCC Plan) along with a copy of the most recent SPCC Plan. This report need only be submitted under the following circumstances:

If either of the following occurs:

- ❑ 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 reportable spill events within any 12-month period.

Facility Identity:	*Ball State University*
Owner/operator:	*Ball State University* *2000 West University Avenue* *Muncie, Indiana 47306*
Name of person filing report:	
Location of Facility:	*2000 West University Avenue (near McKinley Ave and University Avenue intersection)* *Muncie, Delaware County, Indiana*
Maximum oil storage capacity:	*284,501 gallons*
Daily throughput:	*N/A*
Nature of qualifying incident(s): ❑ Discharge to navigable waters or adjoining shorelines exceeding 1,000 gallons ❑ Second discharge exceeding 42 gallons within a 12-month period.	

Description of facility (attach maps, flow diagrams, and topographical maps):

Ball State University is a state sponsored institution of higher learning located in Muncie, Delaware County, Indiana (see location and facility maps).

The facility's total oil storage capacity is 284,501 gallons in underground and aboveground storage tanks or equipment. The facility's most significant storage of oil is for fueling of university vehicles, including buses and maintenance equipment; as well as standby fuel oil for our powerhouse. Oil is also maintained in electrical transformers and storage tanks associated with emergency generators serving university buildings and operations. The facility also handles, stores, and uses, a variety of other petroleum products in the form of hydraulic oil, gear oil, lubricating oil, way oils, and similar petroleum compounds for lubricating and maintenance purposes. These facilities and features are as described in the BSU SPCC Plan.

Ball State University *is located within a predominantly residential area. The site has been in educational use since early in the 1900s.*

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:

Signed: _____ Date: _____

Title: _____
Ball State University