ALABAMA A&M UNIVERSITY

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4)
ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY
NORMAL, MADISON COUNTY, ALABAMA

2018-2019 ANNUAL REPORT

NPDES PERMIT NO. ALR040061
GEO SOLUTIONS PROJECT NO.: 17-0350

PREPARED BY:
GEO SOLUTIONS, LLC

GEO SOLUTIONS, L.L.C.
Geotechnical Engineering and Materials Testing Services

TABLE OF CONTENTS

1.0 INTRODUCTION

GEO Solutions has prepared the 2018-2019 Annual Report for Alabama Agricultural and Mechanical University's Municipal Separate Storm Sewer System (MS4) per the requirements of the Alabama Department of Environmental Management's (ADEM) National Pollutant Discharge Elimination System Permit (ALR040061). This report summarizes the programs accomplishments, events, monitoring and on-going storm water management.

1.1 Permit History

The United States Environmental Protection Agency (EPA) requires that all operators of small MS4s, as defined in 40 CFR Part 122.26(b)(16), maintain coverage for all storm water discharges. A Notice of Intent was submitted to ADEM in 2017 and MS4 Permit ALR040061 was issued on July 7, 2017.

1.2 MS4 Area

Alabama Agricultural and Mechanical University is located in Normal, Alabama and is considered an entity within the City of Huntsville's city limits. The campus includes 2,300 acres with facilities for classrooms, student residences and athletic complexes. A map outlining the approximate boundary of the Alabama Agricultural and Mechanical University campus is included in Appendix A. There is one outfall located at 34°46'15.64"N, 86°34'56.72"W.

1.3 Hydrologic Units

The ultimate receiving water for Alabama Agricultural and Mechanical University MS4 is the Tennessee River (Region 06). The Subregion and Basin is Middle Tennessee Elk (06-03-00). The Subbasin is Wheeler Lake (06030002). The Watershed is Indian Creek (06030002-05) and the Subwatershed is Huntsville Spring Branch (060300020502). The onsite receiving water is Normal Branch which traverses the property from north to south.

1.4 Water Quality Concerns

The area that is covered under Alabama Agricultural and Mechanical University's MS4 Permit discharges at one single outfall, Normal Branch. Under Section 303(d) of the Clean Water Act, the State of Alabama is required to identify waterbodies that are not in compliance with the water quality standards for that particular use classification. Normal Branch does not discharge directly to an impaired waterbody. The stormwater layout for the MS4 permitted area can be found in Appendix B.

2.0 CONTACTS

The following personnel are directly responsible for the MS4 Program:

Mr. Brian Shipp
Director of Facilities and Administration
P.O. Box 1837
Normal, Alabama 35762
256-372-4276

Mr. Greg Bryant
Hazardous Environmental Manager
453 Buchanon Way NE
Normal, Alabama 35762
256-372-4090
Gregory.bryant@aamu.edu

Ms. Barbara R. Lehman, P.E.
Consultant
GEO Solutions, LLC
7201 Opportunity Boulevard
Huntsville, Alabama
256-837-6708
blehman@geo-solutions.net

3.0 EVALUATION OF STORM WATER MANAGEMENT PROGRAM

3.1 Major Accomplishments

Alabama Agricultural and Mechanical University was issued its first MS4 permit in July 2017 and is recognized as a small MS4 entity outside the City of Huntsville. The Department of Facilities and Administration was designated to oversee the storm water management program for the University.

In Winter 2018, Alabama A&M University made improvements to a parking lot adjacent to the School of Business. In this project prior to construction a large drainage ditch area between the parking lot and the business school had seen massive amount of soil erosion (picture below).

Concrete culvert were installed and the area was backfilled with soil. Grass seed and sod was placed over the area to prevent topsoil erosion.

Improvements was also made to the exit drainage area of the culvert. Pavers were installed to prevent soil erosion. The pavers also allow grass to eventually to grow through them to further strengthen soil retention and also allowed to be mowed.

3.2 Overall Program Strengths and Weaknesses

Since the implementation of the MS4 permit, the Storm Water Management Program continues to add programs. One of the strengths is the students and faculty involvement in trash pick-up and stewardship of the campus.

The main weakness of the program continues to be the number of staff that is responsible for overseeing the Storm Water Management Program. There is one staff member who recruits the assistance from the Environmental Department Advisor and her students to aid in the public outreach and education portions of the program. Additional staff may be needed in the future to continue to maintain the Storm Water Program. There is also a financial strain regarding completing some of the goals.

3.3 Future Direction of the Program

During the upcoming year, Alabama Agricultural and Mechanical University plans to implement the following:

- There will be a modification to the existing outfall from the campus. There will be annual inspections of the outfall. This is an ongoing goal.
- There will be improvements to the fueling system that is located on the campus. The improvements include the addition of a fuel tank as well as an increase to the containment area and an updated SPCC Plan.

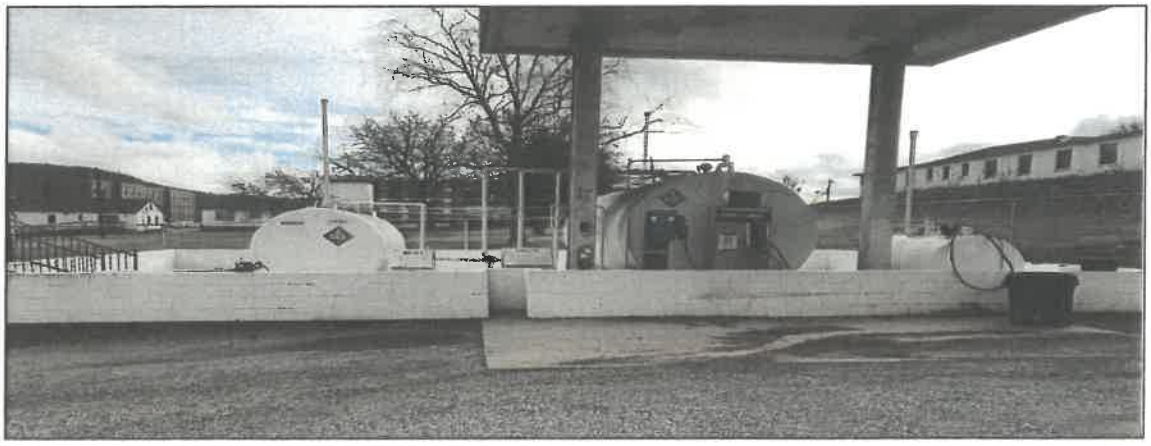
- The Alabama Agricultural and Mechanical University's website is still under construction and will include links to tips and guidelines for storm water management on campus.
- Financial restraints prevented the improvements to all of the drainage ditches. The Nationwide Permit and Construction Stormwater Permit through the U.S. Army Corps of Engineers and the NPDES program of ADEM to stabilize one of the main ditches leading to Normal Branch is going to be modified and re-submitted.
- A Bus Wash Facility and charging station for new electrical buses has been proposed. The buses are to be funded through a grant. The Bus Wash Facility will be a recirculating system to assist with saving water costs. The closed loop system will not have any discharge into the storm sewer system.

4.0 MINIMUM STORMWATER CONTROL MEASURES

4.1 Public Education and Outreach

- Water Wheels – Alabama Agricultural and Mechanical University's Environmental Department participated with the Water Wheels Outdoor Water Conservation Lab again this year. The mobile lab is used to teach the public about water conservation. The lessons included activities that provided information about watersheds, water pollution and runoff. There is also a lesson on how to make a rainwater collection system.

- Training - The Facilities Department conducted a training for Spill Prevention Control and Countermeasures for the Maintenance Department. The training included Standard Operating Procedures in the Maintenance Shed as well as around campus. The trainees reviewed the types of spills, how to identify a spill, how to clean up spills and how to avoid them. Several scenarios were presented for the trainees to demonstrate their understanding of the plan. The Power Point Presentation for the training is included in Appendix C.



4.2 Public Involvement and Participation

- Signs and Posters - Alabama Agricultural and Mechanical University continues to utilize posted signs around campus to discourage littering on campus. Copies of the posters can be found in Appendix D.
- Student Involvement – The Alabama Agricultural and Mechanical University Students participate in the Annual Day of Service. The students volunteer in the communities that surround the university and help with home improvements, yard care and trash pick-up.

- The Environmental Science students are involved with a Research Program involving the Stormwater Management and Flood Management across the Campus. They are also updating the GIS Mapping for the campus.

4.3 Illicit Discharge Detection and Elimination

- Aerators - There are two ponds on the Alabama Agricultural and Mechanical University Campus. Both of the ponds have aerators to increase the oxygen saturation.
- Hazardous Materials – Mr. Greg Bryant is the Hazardous Environmental Manger and conducts routine inspections looking for and documenting hazardous material on campus.
- SPCC – A Spill Prevention Control and Countermeasures Plan was developed for the Alabama Agricultural and Mechanical University Campus. There are two above-ground storage tanks located at the Maintenance Shed, as well as used oil containers. Several of the buildings on campus have back-up generators. The maintenance staff has received training on the Standard Operating Procedures when there is a spill.

4.4 Construction Site Storm Runoff Control

- Construction Storm Water Permits – There are no active Construction Storm Water Permits.

4.5 Post-Construction Storm Water Management in New Development and Redevelopment

- Landscape Management - Aramark Higher Education Services is subcontracted by Alabama Agricultural and Mechanical University to provide landscape services to the campus. They ensure that the drainage ways remain unblocked to prevent unnecessary ponding or backing up of storm water. Due to the highly erodible soils located on the campus, Aramark is responsible for stabilizing the bare areas.

4.6 Post-Construction and Good Housekeeping

- Aramark collects and removes all of the trash on a daily basis around campus. They also are responsible for major maintenance and managing the interior roadways.
- Regular inspections are performed across the campus to monitor trash pick-up and general maintenance.

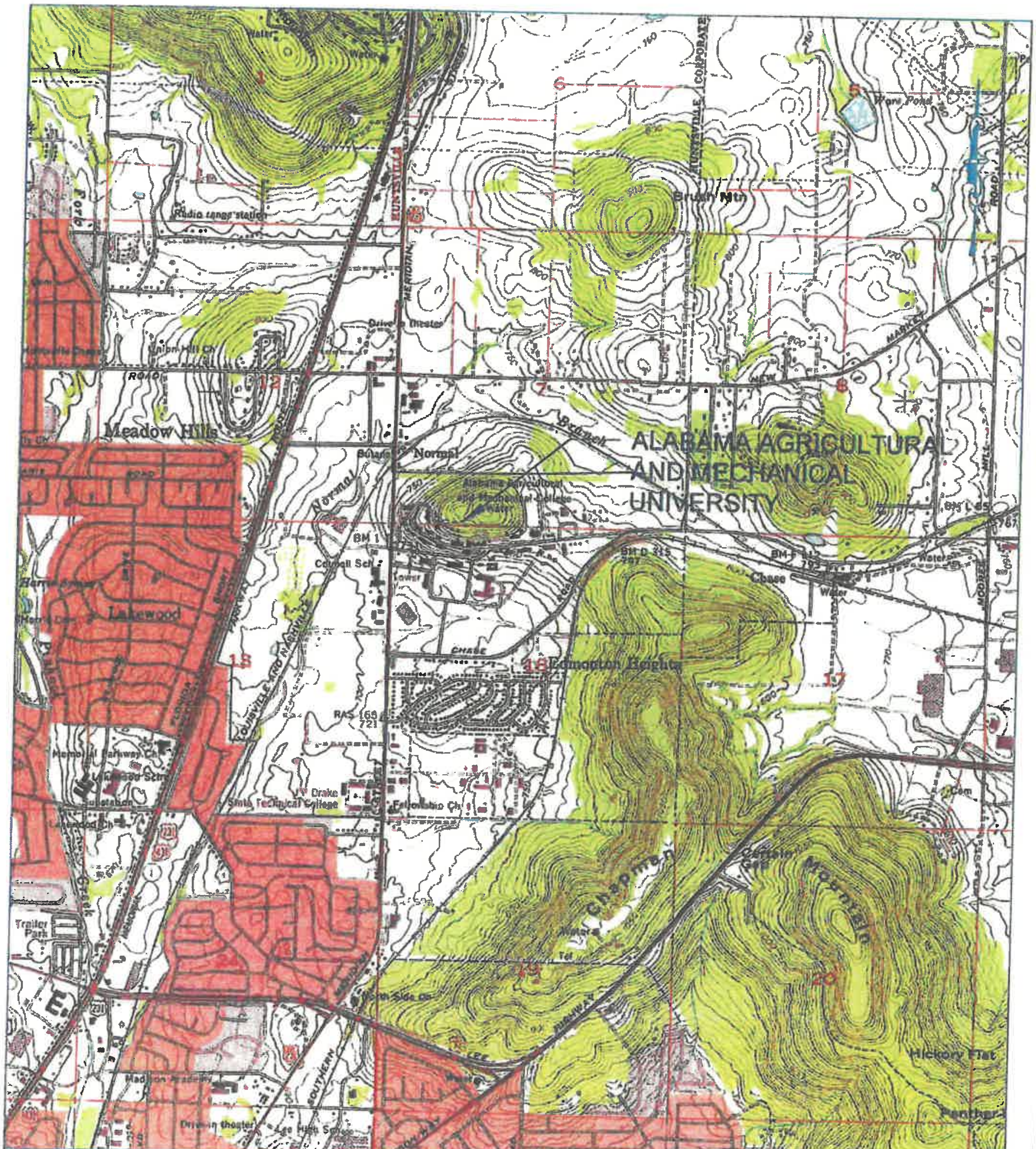
5.0 CERTIFICATION

I certify under penalty of law that this Annual Report and all attachments pertaining to the Alabama Agricultural and Mechanical University's Municipal Separate Storm Sewer System were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment for knowing violations.

Mr. Brian Shipp, Director
Facilities and Administrative
Alabama Agricultural and Mechanical University

5/30/19
Date

APPENDIX A



ALABAMA AGRICULTURAL AND MECHANICAL UNIVERSITY
NORMAL, ALABAMA

FIGURE 1

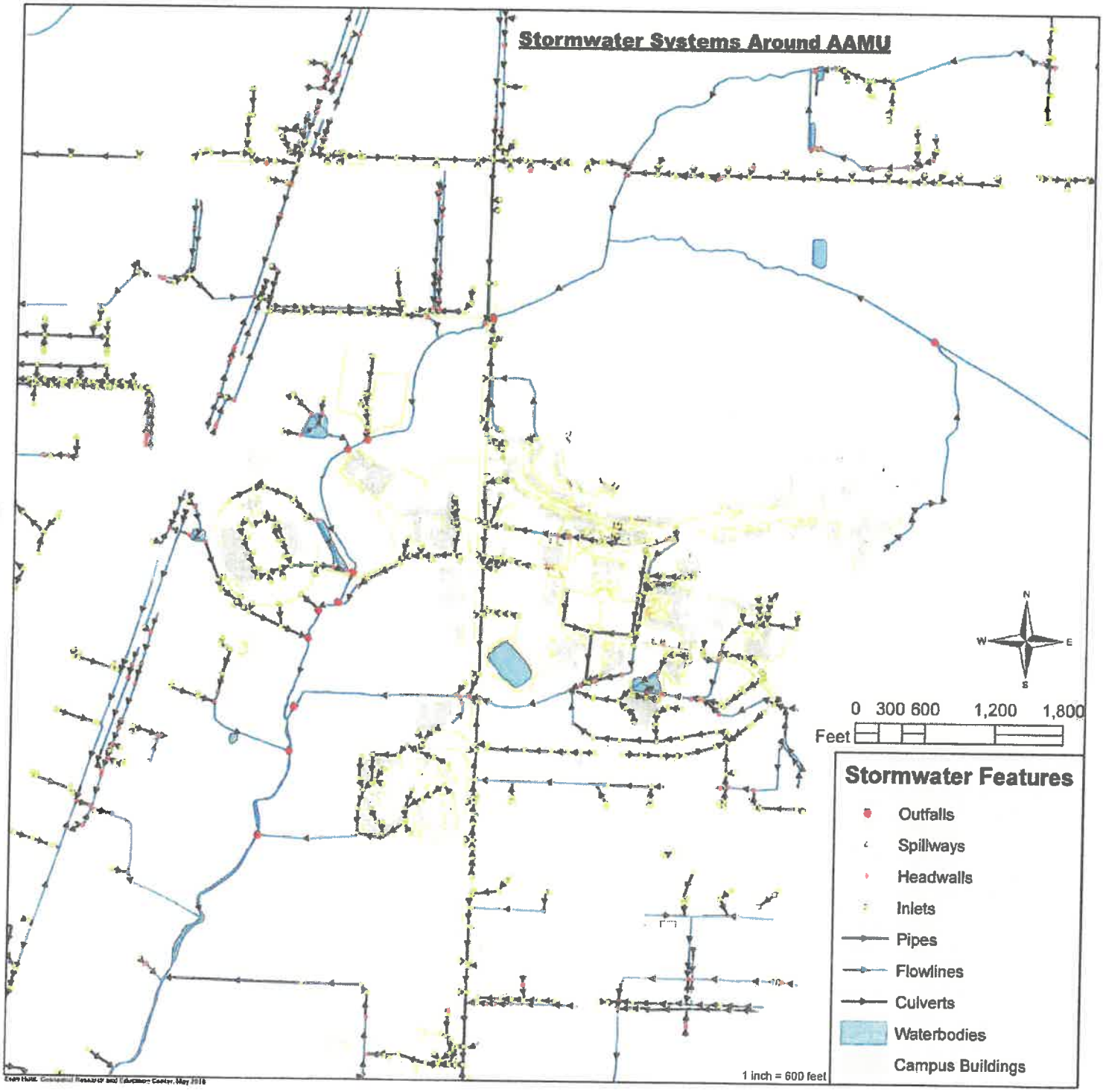
SITE LOCATION PLAN

GEO-SOLUTIONS, L.L.C.

7201 Opportunity Boulevard
Huntsville, Alabama 35810
PH (256)837-6708 FX (256)837-6702

SCALE:	1" = 2500'
PROJ:	17-0350
DATE:	5/26/20178
# 1 OF 1	

APPENDIX B


Stormwater Systems Around AAMU
N
W
E
S
0 300 600 1,200 1,800
Feet
Stormwater Features
Outfalls
Spillways
Headwalls
Inlets
Pipes
Flowlines
Culverts
Waterbodies
Campus Buildings
1 inch = 600 feet

APPENDIX C

Spill Prevention Control and Countermeasures

SPCC Federal Requirements

SPCC Federal Requirements

The Federal Clean Water Act specifies the requirements for SPCC Plans

The Code of Federal Regulations 40 CFR 112 details requirements of the SPCC Plan

The SPCC regulations establish procedures, methods, and equipment needed to prevent oil discharges into waters of the United States

SPCC Federal Requirements

A facility is required to have a SPCC Plan if it has:

- Total above ground oil storage of more than 1,320 gallons; AND
- There is the potential for oil to reach streams or other water bodies

Alabama A&M University meets these requirements and therefore is required to have a SPCC Plan

Alabama A&M University
SPCC Plan

Alabama A&M University SPCC Plan

The Alabama A&M University SPCC Plan is kept on file at the Environmental Health & Safety Office located at Physical Facilities Building.

The document was prepared and certified by a Registered Professional Engineer.

Alabama A&M University SPCC Plan

The Alabama A&M University SPCC Plan includes:

- Description of oil storage locations
- Description of secondary containment for oil storage
- Locations of spill clean-up and containment materials
- Maps or other information to indicate where a release will migrate
- Spill history, potential spill sources, and spill prevention techniques
- Spill Response/Clean-Up plan
- Other applicable guidelines

Training Requirements for Spill Prevention Control and Countermeasures (SPCC) 40 CFR Part 112

ALABAMA A&M UNIVERSITY

Goals of SPCC Training

To familiarize employees with the written SPCC Plan

To help employees identify oil storage locations and loading procedures

To assist in identifying spill pathways

To provide a discussion of spill prevention procedures

To familiarize the employee with appropriate spill response procedures and use of spill response equipment.

Types of Oil Which May Be Regulated Under the SPCC

All petroleum based oils.

Fuel Oil, Gasoline, Hydraulic Fluid, Motor Oil, etc.

Animal fats and oils.

Fish and marine mammal oils

Vegetable oils

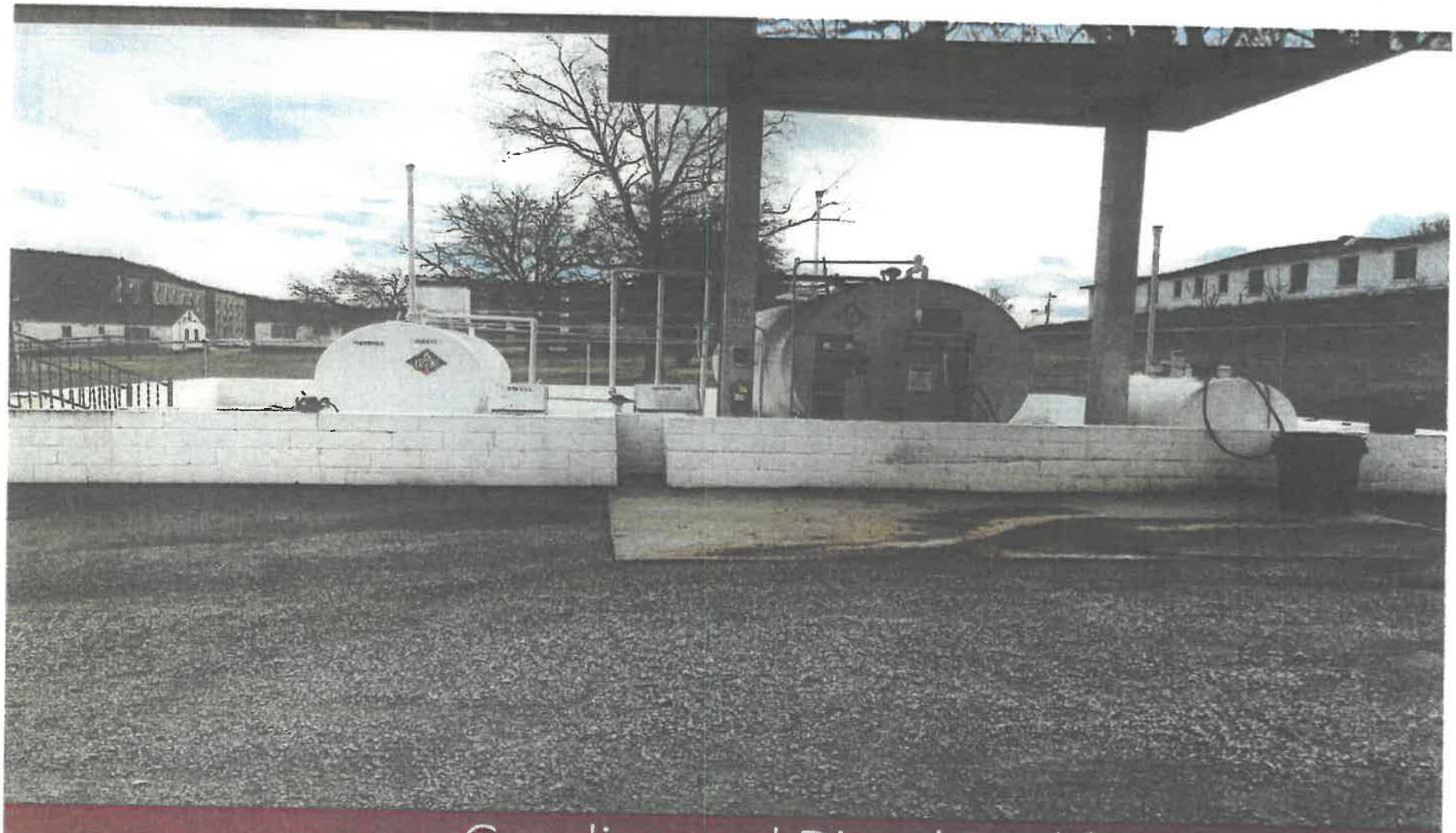
All the above oils mixed with wastes

Never mix used oil with other wastes

Oil Storage at Alabama A&M University Included in SPCC Plan

Oil Storage at Marquette University includes;

- Aboveground Storage Tanks (ATS)
- Waste Oil Collection Station
- 55 Gallon Drums in various locations



Gasoline and Diesel Fuel for Vehicles and Equipment

Used Oil Storage

Diesel Back-Up Generators

Main Elements of the SPCC Plan

Operating Procedures implemented to prevent oil spills.

Examples: Regular inspections, SPCC On-Site Coordinator observing tank filling procedures.

Control Measures installed to prevent oil from reaching navigable waters.

Example: Secondary containment.

Countermeasures to contain, cleanup, and mitigate the effects of an oil spill.

Examples: Cleanup and spill equipment availability on site, available list of contacts and phone numbers for employee use during spills.

SPCC Program Goals

Spill Prevention

Installation of proper equipment, repair of malfunctioning systems, inspections, and good fueling and handling practices

Spill Control

Monitoring of leak detection, proper reporting, inspection of containment and piping systems.

Spill Countermeasures

Quick, proper, and safe response to spills.

Potential Spill Pathways

In some areas, oil can enter the "Navigable Waters or adjoining shorelines" by:

Direct spillage into a storm drain.

Never allow oil to drain into an open drain or into a ditch or waterway.

Oil containing equipment (i.e. a vehicle) is never to be rinsed or washed near a storm drain or waterway.

Spill Scenarios (Large Release)

Damage to or accidental release from oil delivery equipment during loading or unloading of oil at fill ports of storage tanks.

Catastrophic Tank Failure and Leaving Secondary Containment

Fuel tanker failure during delivery

Motor vehicle accident involving oil delivery equipment.

Spill Scenarios (Small Release)

Small overfill at fill port of fuel tanks.

Spillage of oil during transfer to or from drums and tanks.

Leaking and or failure of pipes and pumps.

Leaking and or failure of drums.

Spill Prevention

Routine Inspections

Our site specific SPCC plan includes the frequency schedule and checklist necessary for proper inspection.

Ensure that necessary maintenance and repairs are completed as scheduled and recorded.

SPCC specific inspections are conducted on a Monthly basis.

Inspection records must be kept for a minimum of three years

Secondary Containment

Definition of proper containment

All bulk storage containers of oil must be located in containment sufficient for the entire capacity of the largest container and sufficient have sufficient freeboard to contain an additional 10% volume.

Secondary containment must be impervious material

Secondary containment is **NOT** required for Qualified Oil-Filled Operational Equipment such as transformers or electrical switches currently in use.

Secondary Containment

Routine Inspection

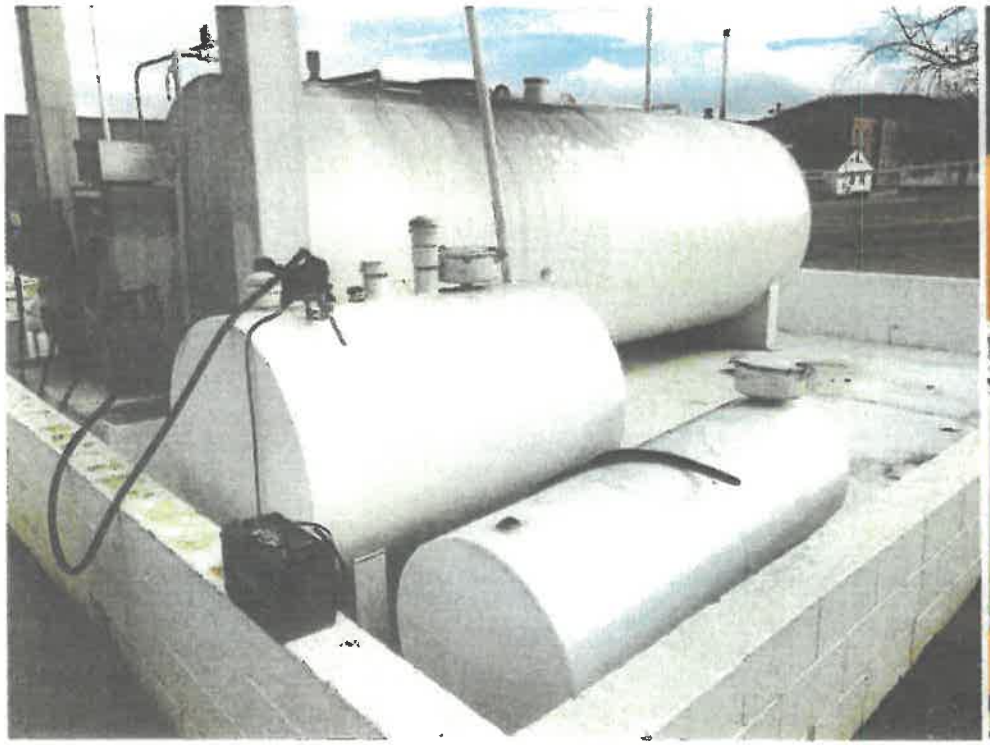
Can be performed by any SPCC On-site Coordinator.

Check for indication of oil leaks on floors, pallets, dikes, retaining walls, and berms.

Water must be able to drain out ONLY if there is no noticeable sheen.

Refer to your site specific SPCC plan for specific details regarding your site's secondary containment inspection.

Secondary Containment



Spill Response

Discovery of Release

Contact EHS or Aramark Manager

Alabama A&M EHS Contact is

Gregory A. Bryant

Office Phone 256-372-4090

Cell Phone 256-924-0249

Extinguish or remove any source of ignition.

Identify the material and its point of release.

Attempt to **stop the release** at its source if it is safe to do so.

Spill Response

Discovery of Release cont.

- Contain material to prevent release into the environment
- Initiate the spill reporting procedure as specified in your site specific SPCC plan
- Recover or clean up spilled material
- Decontaminate tools and equipment
- Arrange for disposal of waste materials through EH&S
- EH&S is responsible for reporting to outside agencies.

Spill Response

For **"large spills"** that can't be controlled by in-house personnel and materials contact:

Tradebe Environmental Services

EMERGENCY RESPONSE

1-888-276-0887

Spill Reporting

For a spill over 25 gallons that occurs the Service Manager (Aramark) or EHS will have to report to the following agencies NOTE : EHS will do the reporting unless unavailable.

ADEM – Decatur Field Ops (7AM – 5PM) 256-353-1713

Dept. of Public Safety (5PM – 7AM) 256-242-4378

Spill Reporting

Documentation

The following information will need to be provided when reporting

Name of person reporting release/spill

Company

Mailing Address

Telephone Number

Location of Spill

Description of what is release (ex diesel fuel)

Spill Reporting

Documentation cont.

Estimated amount

Source or the spill (where it came from)

Cause of the spill

Nearest receiving water way

After a Spill

A Spill Report will be completed by EHS and filed with the EHS office

Relevant information such as initial information, pictures, clean up information

Be sure to include information on:

- How to prevent another occurrence
- Effectiveness of the response

Remember to restock your spill kit with any used items and/or add items that may be useful in the future if warranted.

Spill Response Supplies

Floor (Oil) Dry

Shovels, brooms, and dust pans

Spill Kit:

- Absorbent booms, pads, and socks
- Protective gloves and safety goggles
- Caution tape
- Collection bags
- Labels

Location of Spill Response Supplies

Spill response equipment will be located at fueling location in a water proof container.

EHS will help provide replenishment of clean up supplies.

SPCC Resources

EPA SPCC Management Guidelines

http://www.epa.gov/emergencies/content/spcc/index.htm

Questions?

Alabama A&M University Department of Environmental, Health & Safety

Please contact me at 256-372-4090 with any questions or concerns that you may have.

APPENDIX D

KEEP OUR CAMPUS CLEAN!

Litter!

Pointless Personal Pollution

IT KEEPS OUR WATER CLEAN

Storm Drains Are Not Trash Cans

Trash thrown in storm drains travels into our streams and disturbs aquatic life. Trash can also clog storm drains and cause flooding. Dispose of your trash properly, not in the storm drain.

Healthy Stream Habits!