This form is now available for electronic submittal using the Alabama Environmental Permitting and Compliance System or AEPACS.

[Note: The program encourages the use of an electronic form submittal rather than a paper form submittal.]

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https://aepacs.adem.alabama.gov/nviro/ncore/external/home

ADEM UST CLOSURE
SITE ASSESSMENT REPORT

(Use a Separate form for a group of tanks in each tank pit)

FACILITY I.D. NO.: _____ DATE OF THIS REPORT: _____

INCIDENT NO. (If applicable). UST __ __ - __ __ - __ __ UST OWNER: _____

FACILITY COUNTY: _____ ADDRESS: _____

FACILITY NAME: _____ CONTACT NAME: _____

LOCATION: _____ CONTACT PHONE #: _____

ADDRESS: _____ COUNTRY:_____

_____ LATITUDE:_____ LONGITUDE:_____

NAME OF ALPEC CERTIFIED CONTRACTOR USED TO CLOSE (REMOVE) TANK _____

NAME OF CONSULTANT CONDUCTING ASSESSMENT: _____

NAME OF LABORATORY USED: _____

PRIOR TO BEGINNING CLOSURE, THE CONTRACTOR SHOULD BECOME FAMILIAR WITH ALL CLOSURE PROCEDURES IN AMERICAN PETROLEUM INSTITUTE (API) BULLETIN 1604, "REMOVAL AND DISPOSAL OF USED UNDERGROUND PETROLEUM STORAGE TANKS" AND API BULLETIN 2015 "CLEANING PETROLEUM STORAGE TANKS". THESE API BULLETINS ARE AVAILABLE FROM THE AMERICAN PETROLEUM INSTITUTE.

NUMBER OF TANKS CLOSED: _____

NUMBER OF TANKS REMAINING AT SITE: _____

CLOSURE DATE: _____

UNIQUE TANK #:					
TANK SIZE:					
TANK CAPACITY:					
TANK AGE:					
DATE TANK LAST USED:					
SUBSTANCE STORED:					
TYPE OF PRODUCT PIPING:					
(Pressurized/Suction)					
FARM TANK:	☐	☐	☐	☐	☐
HEATING OIL TANK:	☐	☐	☐	☐	☐

1. COMPLETE THE FOLLOWING SECTION FOR ALL CLOSURES:

a. Provide the results of a 500 ft. survey for domestic water supply wells in the following table and place their locations on the attached site map:

Name of Owner of Domestic Water Supply Well	Distance from UST Site	Depth of Well	Status: Active or Inactive?

b. Provide the results of a 1,000 ft. survey for public water supply wells in the following table and place their locations on the attached site map:

Name of Owner of Public Water Supply Well	Distance from UST Site	Depth of Well	Status: Active or Inactive?

c. Is the UST site located in a delineated wellhead protection or source water area?

YES ☐ **NO** ☐

d. Are there any public water supply surface water intakes within 500 ft. of the UST site?

YES ☐ **NO** ☐

If yes, locate the intake on the attached site map.

NOTE: If an active domestic water supply well or an active public water supply well is located within 500 ft. or 1,000 ft. respectively of the UST site, or if the answer to 1c. or 1d. is Yes, the Department may require groundwater sampling to occur at the UST site. If the groundwater sampling is not performed by the owner/operator during the closure site assessment, the Department may require that groundwater sampling occur as part of a Preliminary Investigation.

Groundwater sampling remains a requirement of the closure site assessment when shallow groundwater is present or when performing an in-place closure site assessment.

e. Indicate the current on-site land use and the most likely future land use:

Current On-Site Land Use			Most Likely Future On-Site Land Use	
Residential	☐		Residential	☐
Commercial	☐		Commercial	☐
Other	☐		Other	☐
Describe:			Describe:	

f. Describe the current off-site land use within 500 ft of the UST site. State whether the area, in general, is residential, commercial, mixed residential/commercial or other:

North:		
	Northeast:	
	Northwest:	
South:		
	Southeast:	
	Southwest:	
West:		
East:		

g. For sites where there is any evidence of a release, provide the names and addresses of the property on which the tank system is/was located and the adjacent property owners. The property owner names and addresses should be indicated on a site map attached to this form.

Name and Address of Onsite Property Owner:

Name	Address	City	State	Zip

Name and addresses of Adjacent Property Owners:

Name	Address	City	State	Zip

COMPLETE THE FOLLOWING SECTIONS AS APPROPRIATE BASED ON THE TYPE OF CLOSURE CONDUCTED:

2. TANK CLOSURE BY REMOVAL:

a. Attach a topographic map showing the location of the facility and a general site map showing the area surrounding the UST site.

b. Attach plan and sectional views of the excavation and include the following:

1. All appropriate excavation dimensions.
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.
4. Former location of tank(s), including depth, with tank Identification Number.

c. Is the groundwater more than 5 feet below the bottom of the excavation? YES ☐ NO ☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:

	YES	NO
1. Excavation extended 5 feet below base of pit:	☐	☐
2. Boring or monitoring well:	☐	☐
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

d. Was there a notable odor found in the excavation? YES ☐ NO ☐

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline)(diesel) (waste oil) (kerosene) (other) describe: _____

e. Was there water in the excavation? YES ☐ NO ☐

If yes, how was it handled?

	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐
3. Hauled to local POTW with local approval?	☐	☐
4. Treated on-site with NPDES approved discharge?	☐	☐

5. Other? Explain: _____

f. Was free product found in the excavation? YES ☐ NO ☐

If yes,

1. How was free product handled? Describe: _____
2. What was the measured thickness of free product? _____

g. Were visible holes noted in the tank(s)? YES ☐ NO ☐

If yes,
Indicate which tanks(s) by the Unique Tank Number: _____

Also, describe the location(s) and provide general description as to the size and number of holes for above noted tanks, (Example: 3 square feet of pinholes or 3 inch diameter hole):

_____

_____

_____

_____

h. Describe the soil type and thickness of all soil layers encountered in the excavation:

_____

_____

i. Was the excavation backfilled? YES ☐ NO ☐

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

3. TANK CLOSURE WITHOUT REMOVAL (CLOSED IN-PLACE):

a. Attach a topographic map showing the location of the facility and a general site map showing the area surrounding the UST site.

b. Attach plan and sectional views of the site and include the following:

1. Location of the tank(s) including depth,
2. Location of tank(s) with respect to other tanks, if applicable,
3. Soil boring locations and depths at which soil samples were taken,
4. Boring logs.

c. **Groundwater sample(s) must be collected as part of an in-place closure assessment**. Attach groundwater sampling data, as required based on depth to groundwater.
Refer to Closure Site Assessment Guidance for further details regarding requirements for groundwater sampling.

d. Is the groundwater more than 5 feet below the bottom of the tank? YES ☐ NO ☐

Provide the depth from the ground surface to the groundwater table. Feet: _____

Refer to Closure Site Assessment Guidance (page 11) for further details regarding requirements for determining groundwater elevation.

e. Was there a notable odor found in the bore holes? YES ☐ NO ☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

f. Was free product found in the bore holes? YES ☐ NO ☐

If yes,
1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

g. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

h. Specify the inert solid material used to fill the tank(s):

i. Provide the date the tank(s) were filled: _____

	YES	NO
j. Were the bore holes properly sealed with bentonite/soil?	☐	☐

If yes, provide the date: _____

4. PRODUCT PIPING CLOSURE BY REMOVAL:

a. Attach a topographic map showing the location of the facility and a general site map showing the area surrounding the UST site.

b. If the piping was longer than 10 feet, attach plan and sectional views of the piping trench and include the following:

1. All appropriate excavation dimensions and length of piping,
2. All soil sample locations and depths using an appropriate method of identification.
3. Location of areas of visible contamination.

	YES	NO
c. Was the piping purged of product prior to closure?	☐	☐
If yes, was the product properly disposed of?	☐	☐
d. Is the groundwater more than 5 feet below the bottom of the piping trench?	☐	☐

If no, provide the depth from the ground surface to the groundwater table. Feet: _____

Indicate method used to determine water table depth:	YES	NO
1. Excavation extended 5 feet below base of trench:	☐	☐
2. Boring or monitoring well:	☐	☐
3. Topographic features (Method must be approved by ADEM prior to use):	☐	☐

	YES	NO
e. Was there a notable odor found in the piping trench?	☐	☐

If yes,

(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

	YES	NO
f. Was there water in the piping trench?	☐	☐

If yes, how was it handled?	YES	NO
1. One time discharge to sanitary sewer with local approval?	☐	☐
2. Hauled to facility capable of treating constituents of petroleum products in water?	☐	☐

3. Hauled to local POTW with local approval? ☐ ☐
4. Treated on-site with NPDES approved discharge? ☐ ☐
5. Other? Explain:

_____

_____

_____

g. Was free product found in the piping trench? YES ☐ NO ☐

If yes,

1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

h. Were visible holes noted in the piping? YES ☐ NO ☐

If yes, indicate the location(s) and provide a general description as to the size and number of holes:

_____

_____

i. Describe the soil type and thickness of all soil layers encountered in the piping trench:

_____

_____

_____

_____

j. Was the piping trench backfilled? YES ☐ NO ☐

If yes, provide the date of backfilling: _____

DO NOT BACKFILL WITH MATERIAL THAT HAS OR POTENTIALLY HAS A TPH OF GREATER THAN 100 PPM!

5. PRODUCT PIPING CLOSURE WITHOUT REMOVAL (CLOSED IN-PLACE)*:

*Includes piping removed from a chase pipe.

a. Attach a topographic map showing the location of the facility and a general site map showing the area surrounding the UST site.

b. Attach plan and sectional views of the site and include the following:

1. Location of the piping including depth,
2. Location of piping with respect to tank(s), if applicable.
3. Soil boring locations and depth at which soil samples were taken,
4. Boring logs.

c. **<u>Groundwater sample(s) must be collected as part of an in-place closure assessment</u>**. Attach groundwater sampling data, as required based on depth to groundwater.
Refer to Closure Site Assessment Guidance for further details regarding requirements for groundwater sampling.

	YES	NO
d. Was the piping purged of product prior to closure?	☐	☐
If yes, was product properly disposed of?	☐	☐
e. Was the piping capped?	☐	☐
f. Is the groundwater more than 5 feet below the bottom of the excavation?	☐	☐

Provide the depth from the ground surface to the groundwater table. Feet: _____

Refer to Closure Site Assessment Guidance (page 11) for further details regarding requirements for determining groundwater elevation.

	YES	NO
g. Was there a notable odor found in the bore holes?	☐	☐

If yes,
(1) The odor strength was (mild) (strong) (other) describe: _____

(2) The odor indicates what type of product: (gasoline) (diesel) (waste oil) (kerosene) (other) describe: _____

	YES	NO
h. Was free product found in the bore holes?	☐	☐

If yes,
1. How was free product handled? Describe: _____

2. What was the measured thickness of free product? _____

i. Describe the soil type and thickness of all soil layers encountered in the bore holes and provide boring logs:

_____

_____

_____

_____

	YES	NO
j. Were the bore holes properly sealed with bentonite/soil?	☐	☐

If yes, provide the date: _____

6. GROUNDWATER SAMPLING (If required by the closure guidelines):

a. Indicate the following on the plan and section views required by Section 2.b., 3.b, 4.b, or 5.b. above:

1. The location and depth of the borings or monitoring wells. (Monitoring wells in lieu of borings are not required, but may be desirable in certain situations.)

2. The most probable direction of groundwater flow. State basis for determining direction:

_____

_____

_____

b. Was a monitoring well used? YES ☐ NO ☐

If yes, attach a schematic drawing of the well(s) and all boring logs.

c. **SUMMARY OF GROUNDWATER SAMPLING RESULTS:**

Date of Sampling: _____

Boring or MW #:							
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Benzene							
Ethylbenzene							
Toluene							
Xylenes							
MTBE							
Anthracene							
Benzo(a)anthracene							
Benzo(a)pyrene							
Benzo(b) fluoranthene							
Benzo(k)fluoranthene							
Benzo(g,h,i)perylene							
Chrysene							
Fluoranthene							
Fluorene							
Naphthalene							
Phenanthrene							
Pyrene							
Lead							

Note: Attach additional tables as needed based on number of groundwater samples or variations in sampling dates.

d. Attach the original chain of custody record (**copies are not acceptable**) and the original laboratory data sheet (**copies are not acceptable**) for each sample.

7. SUMMARY OF SOIL ANALYTICAL DATA

a. Provide the analytical data obtained from the site in the following tables:

TANK PIT SAMPLES:

Date of Sampling: _____

Sample #:							
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TPH OPTION:							
TPH							
Lead							
COC OPTION:							
Benzene							
Ethylbenzene							
Toluene							
Xylenes							
MTBE							
Anthracene							
Benzo(a)anthracene							
Benzo(a)pyrene							
Benzo(b) fluoranthene							
Benzo(k)fluoranthene							
Benzo(g,h,i)perylene							
Chrysene							
Fluoranthene							
Fluorene							
Naphthalene							
Phenanthrene							
Pyrene							
Lead							

Note: Attach additional tables as needed based on number of soil samples or variations in sampling dates.

PIPING & DISPENSER SAMPLES:

Date of Sampling: _____

Sample #:							
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
TPH OPTION:							
TPH							
Lead							
COC OPTION:							
Benzene							
Ethylbenzene							
Toluene							
Xylenes							
MTBE							
Anthracene							
Benzo(a)anthracene							
Benzo(a)pyrene							
Benzo(b) fluoranthene							
Benzo(k)fluoranthene							
Benzo(g,h,i)perylene							
Chrysene							
Fluoranthene							
Fluorene							
Naphthalene							
Phenanthrene							
Pyrene							
Lead							

Note: Attach additional tables as needed based on number of soil samples or variations in sampling dates.

b. Attach the original chain of custody record (**copies are not acceptable**) and the original laboratory data sheet (**copies are not acceptable**) for each sample.

8. EXCAVATED SOIL

ALL EXCAVATED SOIL REQUIRES ANALYSIS PRIOR TO DISPOSAL UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. TANK CLOSURE SAMPLES FROM THE EXCAVATION MAY NOT BE REPRESENTATIVE OF THE LEVEL OF CONTAMINATION IN THE EXCAVATED SOIL.

For safety and other considerations, it is recommended that open pits and piping trenches should be backfilled as soon as possible with **clean backfill**. **Soils which have TPH levels greater than 100 ppm or soils for which the level of contamination has not been determined shall <u>not</u> be returned to the excavation pit(s) or piping trenches**.

a. If tank was closed by removal, provide an estimate of the volume of soil removed: _____ cubic yds

b. Provide a summary of analytical results for the excavated soil:

Date of Sampling: _____

Sample #	TPH Results	Lead Results (If applicable)
	mg/kg	mg/kg

Note: Attach additional tables as needed based on number of soil sample or variations in sampling dates.

c. Attach the original chain of custody record (**copies are not acceptable**) and the original laboratory data sheet (**copies are not acceptable**) for each sample.

d. Attach the "Total Potential VOC Emissions Calculations" for soil removed.

e. Indicate current method/location of soil disposal:

f. Check the method of soil disposal used or to be used:

- ☐ Return to the excavation pit only when TPH is less than or equal to 100 ppm and depth of groundwater is greater than 5 feet from the base of the pit.
- ☐ Spread in a thin layer (6" or less) on site only when TPH is less than or equal to 100 ppm
- ☐ Disposal in a lined landfill (See attached "Guidelines for the Disposal of Non-Hazardous Petroleum Contaminated Wastes").
- ☐ Incineration.
- ☐ Thermal volatilization.
- ☐ Recycling facility
- ☐ Other _____

g. If soil was disposed of prior to the submittal of this form, indicate the final destination below and attach copies of invoices, receipts, and "certificate of burn" (if soil was incinerated):

9. TANK CLEANING

	YES	NO
a. The tank(s) were cleaned in accordance with American Petroleum Institute (API) Bulletin 2015 "Cleaning Petroleum Storage Tanks"?	☐	☐

If no, describe how tank(s) were cleaned:

b. Provide an estimate of the volume of sludge removed from the tank: _____ Gallons

c. Indicate the final destination of the sludge and attach invoices or receipts:

10. ATTACHMENTS

Attach the following to the closure form in the following order as applicable to the type of closure site assessment performed. Check each box to indicate that a particular map or information is attached to the closure site assessment form. The section of the closure site assessment form that indicates the required attachment is shown.

☐	Topographic Map showing location of site (Section 2.a., 3.a., 4.a., & 5.a.)	
☐	Area map showing general location of the site. Include land use on-site and within 500' of site. Indicate property owner names and addresses if a release has occurred. (Section 1)	
	☐	Include locations of domestic and public water supply wells, and surface water intakes (Section 1)
☐	Plan and sectional views of the site including the following: (Section 2.b., 3.b., 4.b., & 5.b.)	
	☐	Location of the closed tanks and piping including depth. Include any remaining tanks or piping at site. Include tank identification numbers.
	☐	Excavation dimensions of the tank system
	☐	Locations of soil samples taken for piping and tank which includes the analytical results.
	☐	Location of areas of visible contamination
	☐	Location of any stockpiled excavated soil
	☐	Location of soil borings for an in-place closure
☐	The location and depth of the one up-gradient and 3 down-gradient borings or monitoring wells (Section 6.a.)	
☐	Map illustrating the most probable direction of groundwater flow (Section 6.a.)	
☐	Schematic diagrams of the monitoring wells installed (Section 6.b.)	
☐	Boring logs of soil borings (Section 3.b., 5.b. &6.b.)	
☐	Site Classification Checklist	
☐	**Invoices and/or receipts for sludge disposal (Section 9.c.)**	
☐	Invoices, manifests and certificates of burn or disposal for soil disposal (Section 8.f.)	

☐	Attach the **original** chain of custody record (copies are not acceptable) for each sample which includes at least the following: (Sections 6.d., 7.b., & 8.c.)	
	☐	Sample identification number,
	☐	Date and time sample was taken,
	☐	Name and title of person collecting sample (see certification requirement on page 15 of this form),
	☐	Type of sample (soil or water),
	☐	Type of sample container,
	☐	Method of preservation,
	☐	Date and time sample was relinquished,
	☐	Person relinquishing sample,
	☐	Date and time sample was received by lab,
	☐	Person receiving sample at lab.

☐	Attach the **original** laboratory data sheet (**copies are not acceptable**) which includes at least the following: (Sections 6.d., 7.b., & 8.c.)	
	☐	A sample identification number which can be cross referenced with the soil sample locations indicated on the plan and sectional views required by Section 2.b., 3.b., 4.b., or 5.b. above
	☐	The sample analytical results with appropriate units,
	☐	The method used to analyze each sample,
	☐	The date and time the sample was analyzed,
	☐	The person analyzing the sample.

11. SIGNATURES

This form should be completed, signed, and returned, along with any other pertinent information, to the following address:

The Alabama Department of Environmental Management
Groundwater Branch
Post Office Box 301463
Montgomery, AL 36130-1463

INCOMPLETE FORMS WILL BE RETURNED FOR CORRECTION.

Name of person taking soil and/or groundwater samples: _____

Company: _____
Telephone Number: _____

I certify under penalty of law that I have obtained representative soil and/or groundwater samples using accepted sampling procedures.

Signature: _____ Date: _____
Print Name: _____

Either an Alabama Licensed Professional Geologist or an Alabama Registered Professional Engineer must sign this form:

I certify under penalty of law that I have performed this closure site assessment in accordance with accepted soil and groundwater investigation practices; I am either an Alabama Licensed Professional Geologist or an Alabama Registered Professional Engineer; I am experienced in soil and groundwater investigations; and the information I have submitted, to the best of my knowledge and belief, is true, accurate, and complete.

Signature of Alabama Licensed Professional Geologist:		Date:
Print Name:		
Alabama P.G. License Number:		

Signature of Alabama Registered Professional Engineer:		Date:
Print Name:		
Alabama P.E. Registration Number:		

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

Signature of Tank Owner: _____ Date: _____

Print Name: _____

FOR ADEM USE ONLY:

Reviewed By: _____ Date: _____

COMMENTS:

FOR ADEM OFFICE USE ONLY	
TO: _____	FROM: _____
Air Division	UST Compliance Section

MEMORANDUM January 28, 1991

ADEM UST CLOSURE
TOTAL POTENTIAL VOC EMISSIONS CALCULATIONS

FACILITY I.D. NO.: _____ DATE OF THIS REPORT: _____

INCIDENT NO. (If applicable). UST __ __ - __ __ - __ __ UST OWNER: _____

FACILITY COUNTY: _____ ADDRESS: _____

_____

FACILITY NAME: _____ CONTACT NAME: _____

LOCATION: _____ CONTACT PHONE #: _____

ADDRESS: _____

_____

Name of Consultant who performed calculations: _____

Consultant's Phone Number: _____

	a	ppm x	b	cyds x .002 =	c	lbs. VOC emissions
Sample 1		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 2		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 3		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 4		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 5		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 6		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 7		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 8		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 9		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 10		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 11		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 12		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 13		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 14		ppm x		cyds x .002 =		lbs. VOC emissions
Sample 15		ppm x		cyds x .002 =		lbs. VOC emissions

TOTAL POTENTIAL EMISSIONS = _____ lbs. VOC emissions

*** NOTE - If more samples are taken than indicated on this form, please attach additional pages as necessary.**
This form must be completed and submitted with the ADEM UST Closure Site Assessment Report Form.

ADEM FORM #492 8/02