MISSOURI DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL REMEDIATION PROGRAM

CLOSURE REPORT FOR PETROLEUM RELEASES AT UNDERGROUND STORAGE TANK SITES

Return completed form to:
Missouri Department of Natural Resources
Environmental Remediation Program/Tanks Section
PO Box 176
Jefferson City, MO 65102

SITE NAME	SITE NUMBER	RELEASE NUMBER

SITE ADDRESS

CITY	STATE	ZIP CODE

PREPARED BY	REVIEWED BY	SUBMITTAL DATE

FACILITY INFORMATION

NAME

ADDRESS

CITY	STATE	ZIP CODE

TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS

DATE OF PROJECT INITITATION	DATE OF PROJECT COMPLETITION

UNDERGROUND STORAGE TANK (UST) OWNER INFORMATION

NAME

ADDRESS

CITY	STATE	ZIP CODE

TELEPHONE NUMBER WITH AREA CODE	CONTACT PERSON	E-MAIL ADDRESS

PARTY PERFORMING CLOSURES

NAME

ADDRESS

CITY	STATE	ZIP CODE

TELEPHONE NUMBER WITH AREA CODE	CONTACT PERSON	E-MAIL ADDRESS

CERTIFICATION OF PROPER CLOSURE

I certify that the information in this report is true and complete.

SIGNATURE OF PARTY PERFORMING CLOSURE	DATE

SIGNATURE OF OWNER/OPERATOR	DATE

UNDERGROUND STORAGE TANK DISPOSAL INFORMATION

Fate of tank: ☐ Recycle/Savage ☐Landfill ☐ Unregulated (explain)

FINAL DESTINATION OF TANKS			
ADDRESS OF FINAL DESTINATION	CITY	STATE	ZIP CODE

SOIL DISPOSAL INFORMATION

CUBIC YARDS OF SOIL EXCAVATED	CUBIC YARDS OF NON-CONTAMINATED SOIL RETURNED TO PIT	CUBIC YARDS OF CONTAMINATED SOIL DISPOSED OR RETURNED

DISPOSAL OF PETROLEUM-CONTAMINATED WATER

GALLONS OF WASTEWATER GENERATED

Check disposable method and explain:

☐ Hazardous waste disposal firm:

☐ On-site discharge under general permit limits:

☐ Discharge to wastewater treatment plant:

DISPOSAL OF SLUDGE/RINSATE

GALLONS OF SLUDGE/RINSATE DISPOSED

HAZARDOUS WASTE DISPOSAL FIRM			
HAZARDOUS WASTE DISPOSAL FIRM ADDRESS	CITY	STATE	ZIP CODE

UNDERGROUND STORAGE TANKS CLOSED

Tank Number	Capacity (gallons)	Year Installed	Date removed from service (use)	Underground Storage Tank Construction Material	Product Stored	Method of Closure*

* R=Removal, I=In-place

USER REGISTRATION

Are Underground Storage Tanks registered? ☐ Yes ☐ No

MANDATORY ATTACHMENTS

1. Attach a map or multiple maps of the site which includes:
   a) Size and contents of all Underground Storage Tanks.
   b) Locations and lengths of all fuel lines.
   c) Locations of all pump islands.
   d) Location of the excavation pit boundaries.
   e) Locations of all required samples using the specified labeling format.
   f) Location of all above ground tanks and associated piping, plus the size and contents of each.
   g) Depth to the bottom of each tank and depth of all excavations.
   h) Direction and degree of slope on the site.
   i) Scale of the sketch in feet.
   j) Properties immediately adjacent to the site.
2. Attach color photographs of the following:
   a) All sides of the removed Underground Storage Tanks.
   b) Each wall and floor of the excavation pit, if USTs are removed.
   c) All sealed vent or pipe lines (if applicable).
   d) The sealed Underground Storage Tanks, if closed in-place.
   e) The site before the initiation of the closure and after the completion of the closure.
3. Attach appropriate documentation of soil disposal or treatment.
4. Attach copy of "Virgin Product Disposal Form" or "Special Waste Form" if applicable.
5. Attach bills of sale/certificate of disposal.

RESULTS OF SOIL ANALYSIS

SITE NUMBER	SUBMITTAL DATE	PREPARED BY

Select one:	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-site ☐ Off-site ☐	On-Site		Off-Site	
MW / SB No.														Arithmetic Average	Maximum	Arithmetic Average	Maximum
Sampling Date														Only for review purposes, not necessarily used as representative concentrations.			
Sample Depth (feet)																	
Organics (all concentrations must be in mg/kg)																	
Benzene																	
Toluene																	
Ethyl benzene																	
Xylenes (mixed)																	
Ethylene Dibromide (EDB)																	
Ethylene Dichloride (EDC)																	
Methyl-tert-butyl-ether (MTBE)																	
Acenaphthene																	
Anthracene																	
Benzo(a)anthracene																	
Benzo(a)pyrene																	
Benzo(b)fluoranthene																	
Benzo(k)fluoranthene																	
Chrysene																	
Dibenzo(a,h)anthracene																	
Fluoranthene																	
Fluorene																	
Naphthalene																	
Pyrene																	
TPH-GRO																	
TPH-DRO																	
TPH-ORO																	
Tertiary-amyl-methyl-ether (TAME)																	

RESULTS OF SOIL ANALYSIS (CONTINUED)																	
Tertiary-butyl- alcohol (TBA)																	
Ethyl-tert-butyl-ether (ETBE)																	
Di-isopropyl ether (DIPE)																	
Ethanol																	
Methanol																	
Metals (all concentrations must be in mg/kg)																	
Arsenic																	
Barium																	
Cadmium																	
Chromium (III)																	
Chromium (VI)																	
Lead																	
Selenium																	

Note: Non-detects must be entered as <detection limit (for example: <0.005).
Maximum is the greater of (i) the detected values, and (ii) one-half of the detection limit.
Mandatory Attachments: 1. Site map showing location(s) of surficial soil samples.
2. Any laboratory analytical datasheets and chain of custody forms not previously submitted to the department.
N/A: Not applicable

RESULTS OF GROUNDWATER ANALYSIS			
SITE NUMBER	SUBMITTAL DATE	PREPARED BY	

MW / SB Number														Arithmetic Average	Maximum
Sampling Date														Only for review purposes, not necessarily used as representative concentrations.	
Sample Depth (ft)															
Organics (all concentrations must be in mg/L)															
Benzene															
Toluene															
Ethyl benzene															
Xylenes (mixed)															
Ethylene Dibromide (EDB)															
Ethylene Dichloride (EDC)															
Methyl-tert-butyl-ether(MTBE)															
Acenaphthene															
Anthracene															
Benzo(a)anthracene															
Benzo(a)pyrene															
Benzo(b)fluoranthene															
Benzo(k)fluoranthene															
Chrysene															
Dibenzo(a,h)anthracene															
Fluoranthene															
Fluorene															
Naphthalene															
Pyrene															
TPH-GRO															
TPH-DRO															
TPH-ORO															
Tertiary-amyl-methyl-ether (TAME)															
Tertiary-butyl- alcohol (TBA)															

RESULTS OF GROUNDWATER ANALYSIS (CONTINUED)															
Ethyl-tert-butyl-ether (ETBE)															
Di-isopropyl ether (DIPE)															
Ethanol															
Methanol															
Metals (all concentrations must be in mg/L)															
Arsenic															
Barium															
Cadmium															
Chromium (III)															
Chromium (VI)															
Lead															
Selenium															

Note: Non-detects must be entered as <detection limit (for example: <0.005).
Maximum is the greater of (i) the detected values, and (ii) one-half of the detection limit.
Mandatory Attachments: 1. Site map showing location(s) of surficial soil samples.
2. Any laboratory analytical datasheets and chain of custody forms not previously submitted to the department.
N/A: Not applicable

TANK CLOSURE CHECKLIST

Use this checklist to ensure the information necessary for a complete Tank Closure Report is included in the report. Be aware that, as each site is different, the following may not address all issues at a particular site. The checklist includes most of the items that need to be addressed.

Missouri Risk-Based Corrective Action, or MRBCA, Forms and Notifications

- ☐ Submittal of Closure Notice (780-2121) 30-days prior to underground storage tank closure. This form is available online at www.dnr.mo.gov/forms/780-2121-f.pdf.
- ☐ Provide notification to the department's Tanks section three days prior to beginning closure activities. Phone number for the section is 573-751-6822.
- ☐ Call the spill hotline at 573-634-2436 if contamination is confirmed (e.g., staining, odor).
- ☐ Submittal of a Closure Report Form (780-2120) as part of closure report. The Closure Report Form needs to contain signature of underground storage tank owner or operator. This form is available online at www.dnr.mo.gov/forms/780-2120-f.pdf.
- ☐ Submittal of closure report within 60 days of the completion of closure activities.

Narrative

- ☐ Timeline of site activities.
- ☐ Cleanup target levels clearly stated.
- ☐ Reusable product recovered and its fate?
- ☐ Number of tanks removed and their observed condition.
- ☐ Number of tanks left in place.
- ☐ Planned future use of site.
- ☐ Are new tanks to be installed on-site?
- ☐ Amount of backfill and native soil removed and its fate.
- ☐ Concrete pad in pit and its condition?
- ☐ Groundwater in pit? Removed? Recharge within 12 hours?
- ☐ Bedrock present?

TANK CLOSURE CHECKLIST

Site Maps

- ☐ Drawn to scale.
- ☐ Current on-site buildings are identified.
- ☐ All adjacent property use is detailed.
- ☐ Location of tanks, excavation boundaries, product lines, dispenser islands.
- ☐ Depth of excavation.
- ☐ Underground utilities.
- ☐ Downgradient direction and degree of slope.
- ☐ North arrow.
- ☐ Locations of all obtained soil samples.

Color Photos

- ☐ Pictures before excavation.
- ☐ Ends and sides of all tanks.
- ☐ Cleaned interior of tanks.
- ☐ Tank pit floor and sidewalls.
- ☐ Product line and dispenser trenches.
- ☐ Tank pad if present.
- ☐ Bedrock if exposed.
- ☐ Sealed underground storage tanks and lines that are closed in place.
- ☐ Pictures after completion of closure.
- ☐ Description of photos.

Laboratory Data

- ☐ Sample results from appropriately obtained samples (Section 4.4.2 of the MRBCA guidance for petroleum storage tanks).
- ☐ *Sample results for the appropriate contaminants of concern, or COCs, (Table 5-1).*
- ☐ If total petroleum hydrocarbons - diesel or oil range organics are detected, 25% (or a minimum of two, whichever is greater) of samples with highest concentrations must be analyzed for polynuclear aromatic hydrocarbons. See the fact sheet *MO Risk-Based Corrective Action for Petroleum Storage Tank Sites - Sampling for Polynuclear Aromatic Hydrocarbons* (PUB2160) available online at www.dnr.mo.gov/pubs/pub2160.pdf.

- ☐ Sufficient sample results from all soil returned to the pit to establish it was below clean up target levels for the site.
- ☐ Sufficient sample results for disposed soil.
- ☐ Background sample results for waste oil sites and pre-1980 gasoline tanks.
- ☐ Quality assurance or quality control documentation.
- ☐ A complete chain of custody with all signatures, as well as the dates and times the samples were obtained and subsequently relinquished to the laboratory and the temperature of the samples as they were received by the laboratory.
- ☐ Laboratory reporting limits must meet the required reporting limits as outlined in Table 5-3 of the Missouri Risk-Based Corrective Action for petroleum storage tanks guidance document.

Tanks and Tank Cleaning

- ☐ Photographic documentation and a signed statement by the party performing tank cleaning activities attesting to the proper cleaning of the tanks.
- ☐ A signed statement by the underground storage tank owner or the owner or operator of the receiving facility attesting to the fate of the underground storage tanks.
- ☐ Documentation about the fate of any usable product recovered from the underground storage tanks.
- ☐ Proper characterization of the sludge or rinsate generated during tank cleaning activities as well as the appropriate manifests signed by the generator, transporter and receiving facility of the waste.

Soil and Water Disposal

- ☐ Documentation of the proper disposal of contaminated soil (e.g. landfill disposal receipts, weight tickets).
- ☐ Documentation of the proper disposal of contaminated pit water, including:
  - Signed statement of permission from the publicly owned treatment works prior to disposal.
  - Documentation of wastewater characterization required by the publicly owned treatment works.
  - Appropriate documentation that the wastewater was accepted by the publicly owned treatment works.

Other Possible Inclusions

- ☐ If bedrock is encountered in the excavation, a geologic assessment performed by a registered geologist or a qualified professional engineer is necessary.
- ☐ If the soil type at the site is declared to be Soil Type 2 or 3, a soil type determination must be made by a registered geologist or a qualified professional engineer. More information on this is found in the March 18, 2005 Soil Type Determination Guidelines of the MRBCA guidance for petroleum storage tanks.
- ☐ If the cleanup target levels are above the default target levels, the domestic use of groundwater pathway must be evaluated in strict accordance with Section 6-3 and Figure 6-2 of the MRBCA guidance for petroleum storage tanks.

- ☐ If the cleanup target levels are for non-residential use, documentation on the reasonably anticipated future use of the site must be submitted.
- ☐ Sample results below default target levels? If above, ecological receptor checklist should be completed. These checklists are available as attachments to chapter five of the MRBCA guidance for petroleum storage tanks.
- ☐ Sample results within established Tier 1 (Tier 2 if applicable) cleanup levels.
- ☐ Sample results within appropriate groundwater use column Table 4-1.
- ☐ Tank(s) "Closed-In-Place"? If so, a Statement of Closure may be used to record the existence of the tank(s) on the property.

Closure Contact Information

Closure Main Phone Line: 573-751-6822

References and Forms

Missouri Risk-Based Corrective Action Guidance Document
www.dnr.mo.gov/env/hwp/tanks/mrbca-pet/mrbca-pet-tanks.htm

Missouri Risk-Based Corrective Action Closure Forms
www.dnr.mo.gov/env/hwp/tanks/ustclosure.htm

MO Risk-Based Corrective Action for Petroleum Storage Tank Sites - Sampling for Polynuclear Aromatic Hydrocarbons, Fact Sheet (Pub2160) (PAH analysis). www.dnr.mo.gov/pubs/pub2160.pdf

Soil Type Determination Guidelines

The above is available on the Department's website at:
www.dnr.mo.gov/env/hwp/tanks/mrbca-pet/mrbca-pet-tanks.htm

For More Information

Missouri Department of Natural Resources
Environmental Remediation Program/Tanks Section
P.O. Box 176
Jefferson City, MO 65102-0176

800-361-4827 or 573-751-6822
573-526-8922 fax

www.dnr.mo.gov/env/hwp/tanks/tanks.htm
www.dnr.mo.gov/env/hwp/index.html