



MAJOR SOURCE OPERATING PERMIT APPLICATION
 STORAGE TANKS

1. FACILITY NAME:	2. STORAGE TANK IDENTIFICATION:	3. PROCESS EMISSION SOURCE (IDENTIFY):
4. LOCATION OF THE STORAGE TANK OR TANK FARM (UTM VERTICAL AND HORIZONTAL COORDINATES): UTM VERTICAL: _____ UTM HORIZONTAL: _____		
5. STORAGE TANK CAPACITY: (GALLONS)	6. YEAR OF INSTALLATION:	7. TANK HEIGHT (FEET)
8. TANK DIAMETER: (FEET)		
9. COLOR OF TANK: _____ WHITE _____ OTHER SPECIFY _____		
10. IS THIS TANK EQUIPPED WITH SUBMERGED FILL PIPE? _____ YES _____ NO		
11. TYPE OF STORAGE TANK: _____ OPEN TOP TANK _____ FIXED ROOF _____ FIXED ROOF W/ INTERNAL FLOATING ROOF _____ OTHER (SPECIFY) _____ PRESSURIZED TANK _____ EXTERNAL FLOATING ROOF _____ VARIABLE VAPOR SPACE _____		
12. FOR FIXED ROOF TANKS: A. TANK CONFIGURATION (CHECK ONE) : _____ VERTICAL (UPRIGHT CYLINDER) _____ HORIZONTAL B. TANK ROOF TYPE: _____ CONE ROOF-INDICATE TANK ROOF HEIGHT _____ (FT) (CHECK ONE) _____ DOME ROOF-INDICATE TANK ROOF HEIGHT _____ (FT) INDICATE SHELL RADIUS _____ (FT)		
13. FOR FLOATING ROOF TANKS (BOTH INTERNAL AND EXTERNAL) - SHELL CONDITION (CHECK ONE) : _____ LIGHT RUST _____ DENSE RUST _____ GUNITE LINED		
14. FOR EXTERNAL FLOATING ROOF TANKS: A. TANK CONSTRUCTION (CHECK ONE) : _____ WELDED TANK _____ RIVETED TANK B. RIM SEAL SYSTEM DESCRIPTION (CHECK ONE) : _____ SHOE MOUNTED PRIMARY _____ VAPOR MOUNTED PRIMARY _____ LIQUID MOUNTED PRIMARY _____ SHOE PRIMARY, RIM SECONDARY _____ VAPOR PRIMARY RIM SECONDARY _____ LIQUID PRIMARY, RIM SECONDARY _____ LIQUID PRIMARY W/WEATHER SHIELD _____ SHOE PRIMARY AND SECONDARY _____ VAPOR PRIMARY W/WEATHER SHIELD C. ROOF TYPE (CHECK ONE) : _____ PONTOON ROOF _____ DOUBLE DECK ROOF D. ROOF FITTING TYPES (INDICATE THE NUMBER OF EACH TYPE): ACCESS HATCH (24" DIAMETER WELL) UNSLOTTED GUIDE-POLE WELL GAUGE-FLOAT WELL (20" DIAMETER) _____ BOLTED COVER, GASKETED (8" DIAMETER UNSLOTTED POLE, 21"DIA WELL) _____ UNBOLTED COVER, UNGASKETED _____ UNBOLTED COVER, GASKETED _____ UNGASKETED SLIDING COVER _____ UNBOLTED COVER, GASKETED _____ UNBOLTED COVER, UNGASKETED _____ GASKETED SLIDING COVER _____ BOLTED COVER, GASKETED GAUGE-HATCH/SAMPLE WELL (8" DIA) VACUUM BREAKER (10" DIA WELL) ROOF DRAIN _____ WEIGHTED MECHANICAL _____ WEIGHTED MECHANICAL _____ OPEN _____ ACTUATION GASKETED _____ ACTUATION GASKETED _____ 90% CLOSED _____ WEIGHTED MECHANICAL _____ WEIGHTED MECHANICAL _____ _____ ACTUATION UNGASKETED _____ ACTUATION UNGASKETED _____ SLOTTED GUIDE-POLE/SAMPLE WELL ROOF LEG (3" DIA) ROOF LEG (2-1/2" DIA) (8" DIA SLOTTED POLE, 21"DIA WELL) _____ ADJUSTABLE, PONTOON AREA _____ ADJUSTABLE, PONTOON AREA _____ UNGASKETED SLIDING COVER, WITHOUT FLOAT _____ ADJUSTABLE, CENTER AREA _____ ADJUSTABLE, CENTER AREA _____ UNGASKETED SLIDING COVER, WITH FLOAT _____ ADJUSTABLE, DOUBLE-DECK _____ ADJUSTABLE, DOUBLE-DECK _____ GASKETED SLIDING COVER, WITHOUT FLOAT ROOF ROOFS _____ GASKETED SLIDING COVER, WITH FLOAT _____ FIXED _____ FIXED		

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15. FOR INTERNAL FLOATING ROOF TANKS:

A. RIM SEAL SYSTEM DESCRIPTION:

LIQUID MOUNTED PRIMARY LIQUID MOUNTED PRIMARY PLUS SECONDARY SEAL
 VAPOR MOUNTED PRIMARY VAPOR MOUNTED PRIMARY PLUS SECONDARY SEAL

B. NUMBER OF COLUMNS: _____ D. DECK TYPE (CHECK ONE): WELDED BOLTED

C. EFFECTIVE COLUMN DIAMETER _____ (FEET) E. TOTAL DECK SEAM LENGTH: _____ (FEET)

F. DECK AREA: _____ (SQUARE FEET)

G. DECK FITTING TYPES (INDICATE THE NUMBER OF EACH TYPE):

ACCESS HATCH (24" DIA)	AUTOMATIC GAUGE FLOAT WELL	COLUMN WELL
<input type="checkbox"/> BOLTED COVER, GASKETED	<input type="checkbox"/> BOLTED COVER, GASKETED	<input type="checkbox"/> BUILT-UP COLUMN-SLIDING COVER, GASKETED
<input type="checkbox"/> UNBOLTED COVER, GASKETED	<input type="checkbox"/> UNBOLTED COVER, GASKETED	<input type="checkbox"/> BUILT-UP COLUMN-SLIDING COVER, UNGASKETED
<input type="checkbox"/> UNBOLTED COVER, UNGASKETED	<input type="checkbox"/> UNBOLTED COVER, UNGASKETED	<input type="checkbox"/> PIPE COLUMN-FLEXIBLE FABRIC SLEEVE SEAL
		<input type="checkbox"/> PIPE COLUMN-SLIDING COVER, GASKETED
		<input type="checkbox"/> PIPE COLUMN-SLIDING COVER, UNGASKETED

LADDER WELL	SAMPLE PIPE OR WELL	ROOF LEG OR HANGER WELL
<input type="checkbox"/> SLIDING COVER, GASKETED	<input type="checkbox"/> SLOTTED PIPE-SLIDING COVER, GASKETED	<input type="checkbox"/> ADJUSTABLE
<input type="checkbox"/> SLIDING COVER, UNGASKETED	<input type="checkbox"/> SLOTTED PIPE-SLIDING COVER, UNGASKETED	<input type="checkbox"/> FIXED
	<input type="checkbox"/> SAMPLE WELL-SLIT FABRIC SEAL, 10% OPEN AREA	
	<input type="checkbox"/> STUB DRAIN, 1 INCH DIAMETER	

VACUUM BREAKER

WEIGHTED MECHANICAL ACTUATION, GASKETED
 WEIGHTED MECHANICAL ACTUATION, UNGASKETED

16. FOR VARIABLE VAPOR SPACE TANKS:

VOLUME EXPANSION CAPACITY _____ (GALLONS)

17. COMPLETE THE FOLLOWING TABLE FOR MATERIALS TO BE STORED IN THIS TANK:

MATERIAL OR COMPONENT STORED	WT %	MATERIAL ANNUAL THROUGHPUT (GAL/YR)	MATERIAL STORED-DAILY AVERAGE (GALLONS)	COMPONENT MOLECULAR WEIGHTS (LB/LB.MOLE)	COMPONENT VAPOR PRESSURES (PSIA)	MATERIAL STORAGE PRESSURE (PSIA)	MATERIAL AVERAGE STORAGE TEMP. (DEG. F)

MULTIPURPOSE TANK WITH VARIABLE COMPOSITION:

_____ YES _____ NO

18. DESCRIBE THE OPERATION THIS TANK WILL SERVE:

19. PAGE NUMBER:

REVISION NUMBER:

DATE OF REVISION:

INSTRUCTIONS FOR APC FORM V.6
STORAGE TANKS

SOURCES THAT ARE REQUIRED TO OBTAIN A PERMIT UNDER PARAGRAPH 1200-3-9-.02(11) OF TENNESSEE AIR POLLUTION CONTROL REGULATIONS, MUST COMPLETE AND RETURN THIS FORM, IF APPLICABLE. APPLICATIONS ARE INCOMPLETE UNLESS ALL APPLICABLE INFORMATION REQUESTED HEREIN IS SUPPLIED. FAILURE TO SUPPLY ANY ADDITIONAL INFORMATION REQUESTED BY THE TECHNICAL SECRETARY TO ENABLE HIM TO ACT ON THE APPLICATION MAY RESULT IN DENIAL OF THIS APPLICATION. IF THERE IS ADDITIONAL INFORMATION THAT WILL NOT FIT ON A FORM, PLEASE DECLARE THE INFORMATION ON ADDITIONAL SHEET(S) AND ATTACH IT TO THE BACK OF THE ORIGINAL.

ONE FORM MUST BE COMPLETED FOR EACH STORAGE TANK FOR WHICH AN AIR POLLUTION CONTROL PERMIT IS REQUIRED.

IF YOU WISH TO PROVIDE ADDITIONAL INFORMATION TO DEFINE ALTERNATIVE OPERATING SCENARIOS OR DEFINE PERMIT TERMS AND CONDITIONS ALLOWING EMISSIONS TRADING UNDER A FEDERALLY ENFORCEABLE EMISSIONS CAP TO BE ESTABLISHED IN THE PERMIT, PLEASE DECLARE THE INFORMATION ON AN APC FORM(S) OR ON ADDITIONAL SHEET(S). UNLESS OTHERWISE REQUESTED AS A LIMITING CONDITION, PERMIT IS BASED ON 8,760 HRS/YR.

ITEM 2 ASSIGN AN IDENTIFICATION CODE TO THIS STORAGE TANK (e.g., T1, T2, etc.).

ITEM 7 IF THE TANK ROOF IS SLOPED, PROVIDE THE AVERAGE TANK HEIGHT.

ITEM 10 A SUBMERGED FILL PIPE IS ANY FILL PIPE WITH A DISCHARGE OPENING WHICH IS ENTIRELY SUBMERGED WHEN THE LIQUID LEVEL IS SIX INCHES ABOVE THE TANK BOTTOM.

ITEM 12 ANSWER ONLY IF YOU HAVE A FIXED ROOF TANK.

THE FOLLOWING EQUATION CAN BE USED TO CALCULATE THE TANK ROOF HEIGHT OF A CONE ROOF TANK:

$$H = S \times R$$

WHERE H IS THE TANK ROOF HEIGHT, FT

S IS THE TANK CONE ROOF SLOPE, IF UNKNOWN A STANDARD VALUE OF 0.0625 FT/FT CAN BE USED, FT/FT

R IS THE TANK SHELL RADIUS, FT

THE FOLLOWING EQUATION CAN BE USED TO CALCULATE THE TANK ROOF HEIGHT OF A DOME ROOF TANK:

$$H = R_R - (R_R^2 - R_S^2)^{0.5}$$

WHERE H IS THE TANK ROOF HEIGHT, FT

R_R IS THE TANK DOME ROOF RADIUS, FT

R_S IS THE TANK SHELL RADIUS, FT

ITEM 13 ANSWER ONLY IF YOU HAVE AN INTERNAL OR EXTERNAL FLOATING ROOF TANK. CHECK THE SHELL CONDITION.

ITEM 14 ANSWER ONLY IF YOU HAVE AN EXTERNAL FLOATING ROOF TANK

ITEM 14B CHECK THE APPROPRIATE RIM SEAL TYPE.

ITEM 14C CHECK THE APPROPRIATE ROOF TYPE.

ITEM 14D INDICATE THE TOTAL NUMBER OF EACH APPROPRIATE ROOF FITTING TYPE IN THE SPACE PROVIDED.

ITEM 15 ANSWER ONLY IF YOU HAVE AN INTERNAL FLOATING ROOF TANK.

ITEM 15A CHECK THE APPROPRIATE RIM SEAL TYPE.

ITEM 15B INDICATE THE NUMBER OF FIXED ROOF SUPPORT COLUMNS. ENTER "0" IF THE FIXED ROOF IS SELF SUPPORTED.

ITEM 15C INDICATE THE EFFECTIVE COLUMN DIAMETER (FT). USE THE COLUMN PERIMETER (FT)/3.14 OR 1.1 FT FOR A 9-INCH BY 7-INCH BUILT-UP COLUMN, 0.7 FT FOR 8-INCH DIAMETER PIPE COLUMNS, AND 1.0 IF COLUMN DIMENSIONS ARE NOT KNOWN.

ITEM 15D CHECK THE APPROPRIATE DECK TYPE.

ITEM 15E INDICATE THE TOTAL DECK SEAM LENGTH.

ITEM 15F INDICATE THE DECK AREA.

ITEM 15G INDICATE THE TOTAL NUMBER OF EACH APPROPRIATE DECK FITTING TYPE IN THE SPACE PROVIDED.

ITEM 16 ANSWER ONLY IF YOU HAVE A VARIABLE VAPOR SPACE TANK. INDICATE THE VOLUME EXPANSION CAPACITY OF THE VARIABLE VAPOR SPACE ACHIEVED BY ROOF LIFTING OR DIAPHRAGM FLEXING.

ITEM 17 COMPLETE THIS TABLE FOR ALL MATERIALS WHICH ARE STORED IN THIS TANK AND GIVE THE WEIGHT PERCENT OF EACH COMPONENT. IF THE TANK IS USED FOR MORE THAN ONE MATERIAL OR PRODUCT, CLEARLY SPECIFY EACH SEPARATE MATERIAL AND GIVE THE PERCENT BY WEIGHT OF THE COMPONENTS OF EACH. VAPOR PRESSURES SHOULD BE GIVEN AS REAL VAPOR PRESSURES AT THE TANK CONDITIONS GIVEN.
MOLECULAR WEIGHT, VAPOR PRESSURE, AND STORAGE PRESSURE ARE NOT REQUIRED FOR GASOLINE AND DIESEL.

ITEM 18 ALSO INDICATE HERE IF THIS TANK WILL SERVE OPERATIONS AT: A BULK TERMINAL WHICH RECEIVES GASOLINE FROM REFINERIES, A BULK GASOLINE PLANT WHICH RECEIVES GASOLINE FROM BULK GASOLINE TERMINALS FOR SUBSEQUENT DISTRIBUTION TO DISPENSING FACILITIES.

ITEM 19 PAGE NUMBER MUST BE FILLED IN. REVISION NUMBER AND DATE OF REVISION ARE TO BE FILLED IN ONLY IF THE INFORMATION ON THIS FORM IS BEING REVISED.

IF ANY ITEM ON THIS APPLICATION IS NOT APPLICABLE TO THIS FACILITY, THE ITEM MUST BE FILLED IN WITH "NOT APPLICABLE" OR "N/A".

