Application for the Construction or Installation of Aboveground Storage Tank (AST) Systems or Associated Underground or Over-water Piping Systems

New Hampshire Department of Environmental Services
Waste Management Division, Oil Remediation and Compliance Bureau
P.O. Box 95, 29 Hazen Drive
Concord, New Hampshire 03302-0095
(603) 271-3899, FAX (603) 271-2181

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APPLICANT INSTRUCTIONS AND GUIDANCE	DES USE ONLY
- Per Env-Or 307.01, application materials are required to be submitted at least 45 days prior to commencing the construction or installation of an AST system having an oil storage capacity of more than 660 gallons, or underground or over-water piping systems associated with an AST system that is subject to the AST rules. Return completed application and engineering plans (stamped by a New Hampshire licensed professional engineer) to the above address. There is no application fee. - Refer to the attached "Plan Guidance" to ensure plan submittals include the requested information to facilitate the review process and minimize potential delays. - Per Env-Or 307.05, the department will respond within 45 days of receipt of a complete application submittal. As needed, revisions or clarifications will be requested until the plans satisfactorily demonstrate compliance with applicable requirements of the AST Rules, Env-Or 300. - Construction or installation shall not commence without written notice of plan approval by the department.	Date Received _____ DES Site # _____ AST Facility # _____ Comments:

CERTIFICATION OF MUNICIPAL NOTIFICATION

To meet the requirements of RSA 485-C:14 and/or 541-A:39, the undersigned certifies that on _____ (date), a copy of this completed application was mailed to the Town/City Clerk of _____ (where the facility is located) and _____ (as applicable, any other municipalities which may be affected by the facility). As deemed appropriate, the Town/City Clerk may forward the completed application to the local Fire Chief for consideration.

Signed:_____ Date:_____
(Applicant)

AST SYSTEM OWNER

Owner Name _____

Mailing Address_____

City, State, Zip_____

Phone Number_____

E-Mail Address_____

Alt. Ownership Contact (Name) _____

AST FACILITY

Facility Name _____

Facility Address _____

City, State, Zip _____

Facility Contact Person _____

Phone Number _____

E-Mail Address _____

IF THIS IS AN EXISTING AST FACILITY, PLEASE PROVIDE (IF KNOWN) THE AST FACILITY NO. # _____ .

I. ABOVEGROUND STORAGE TANKS

TANKS SHALL COMPLY WITH Env-Or 305.01, TANK STANDARDS FOR AST SYSTEMS.

	TANK #:	TANK #:	TANK #:	TANK #:
Capacity in Gallons (nominal/actual)				
Horizontal or Vertical tank?				
Is Tank New or Used? Used tanks require certification per Env-Or 308.03				
Shop-fabricated or Field-erected?				
Tank diameter				
Tank height/length				
Product to be stored				
Tank Manufacturer				
Foundation Type				
Is tank double walled?				
UL (or API) Standard of Construction				
Is tank in contact with the soil or concrete?				
Is tank installed in a below grade vault?				

II. CATHODIC PROTECTION

TANKS AND STEEL PIPING IN CONTACT WITH SOIL SHALL BE CATHODICALLY PROTECTED PURSUANT TO Env-Or 305.06, CORROSION PROTECTION FOR TANKS AND PIPING.

A. Type of Cathodic Protection System (circle one):

None (CP Not Required) Sacrificial Anodes Impressed Current Other (Describe Below)

_____

B. Brief Description of Cathodic Protection System (e.g., structures to be protected, types of anodes, spacing, rectifier power, etc)

_____

_____

_____

_____

_____

C. Designer of Cathodic Protection System:

Name: _____ Company: _____

Address / City / State / Zip: _____

Phone Number: _____ E-Mail Address: _____

Certifying Organization (NACE, P.E.): _____ Certification Number / Expiration: _____

III. PIPING INFORMATION

PIPING SHALL COMPLY WITH Env-Or 305.04, PIPING STANDARDS FOR AST SYTEMS.

A. ABOVEGROUND PIPING

Material of Construction: _____

Pipe Size (give range if more than one size): _____

Pipe Schedule: _____

Method of assembly (type of joints):_____

Type of pipe support and average spacing: _____

Type of valves to be installed: _____

How will tank be protected from siphoning? _____

B. UNDERGROUND OR OVER-WATER PIPING

PIPING IN CONTACT WITH THE GROUND, UNDERGROUND, OR OVER-WATER SHALL ALSO COMPLY WITH APPLICABLE REQUIREMENTS OF Env-Or 305.05, ADDITIONAL REQUIREMENTS FOR UNDERGROUND PIPING, AND Env-Or 305.09, SECONDARY CONTAINMENT FOR AST PIPING SYSTEMS.

1. PIPING

	PRIMARY	SECONDARY
Manufacturer Name		
Manufacturer Model Number		
Material of Construction		
Pipe Size (give range if more than one size):		
Pipe Schedule		

Check as applicable: ☐ Pressurized Piping ☐ Suction Piping

For Pressurized Piping, Line Leak Detector Manufacturer / Model: _____ / _____

For Over-Water Piping, Type of pipe support and average spacing: _____

2. CONTAINMENT SUMP(S)

PER Env-Or 305.09(c), PIPING SYSTEMS WITH SECONDARY CONTAINMENT SHALL BE CONTINUOUSLY PITCHED TO DIRECT ANY LEAKAGE FROM PRIMARY PIPING TO A LIQUID-TIGHT CONTAINMENT SUMP WITH LEAK MONITORING.

Material of Construction: _____

Manufacturer Name: _____ Manufacturer Model No.:_____

Sump Sensor Manufacturer : _____ Sump Sensor Model No. :_____

3. DISPENSER SUMP(S)

PER Env-Or 305.09(d), DISPENSING SYSTEMS SUPPLIED BY UNDERGROUND OR OVER-WATER PIPING SHALL BE EQUIPED WITH A LIQUID- TIGHT CONTAINMENT SUMP WITH LEAK MONITORING.

Material of Construction: _____

Manufacturer Name: _____ Manufacturer Model No.:_____

Sump Sensor Manufacturer : _____ Sump Sensor Model No. :_____

IV. TANK SECONDARY CONTAINMENT

TANKS SHALL COMPLY WITH Env-Or 305.08, SECONDARY CONTAINMENT FOR ASTs.

A. Type of Secondary Containment (e.g. Portland cement concrete dike, steel dike, double-walled tank, etc…)

_____

B. For double-walled tanks, what kind of interstitial leak monitoring system will be installed?

Manufacturer Name: _____ Model Number: _____

C. Will tanks be constructed in a manifolded configuration? (Circle one) NO YES (if yes, explain below)

_____

D. Is secondary containment covered to prevent the collection of precipitation? (Circle one) YES NO

E. What is the required secondary containment volume? (In gallons) _____

F. What is the actual secondary containment volume? (In gallons) _____

V. OVERFILL PROTECTION

TANKS SHALL COMPLY WITH Env-Or 305.11, OVERFILL PROTECTION.

A. TANK GAUGE. What kind of gauge(s) will be installed on the tank system(s)?

Manufacturer Name: _____ Model Number: _____

Units of Measure: ☐ - feet / inches ☐ - inches ☐ - gallons ☐ - Other-_____

B. HIGH LEVEL ALARM. What kind of high level alarm system(s) will be installed on the tank(s)?

Manufacturer Name: _____ Model Number: _____

At what height from the bottom of the tank will the high level alarm be activated? (include reading / units of tank gauge)

TANK #:	TANK #:	TANK #:	TANK #:

The high level alarm shall be activated at no greater than:

1. 90% full - for tanks with a capacity of 12,000 gallons or less; or
2. 3% less than "calculated maximum safe fill height" – for tanks with a capacity greater than 12,000 gallons.

C. AUTOMATIC OVERFILL SHUT-OFF. (as applicable)

As required by Env-Or 305.08(h) for double walled tank(s) and Env-Or 305.08(l) for tank(s) which have a vent located such that an overfill would not be contained within secondary containment, please identify the mechanism that will automatically prevent the flow of oil to the tank.

☐ - Overfill Shut-Off Valve ☐ - Transfer Pump Shutoff Sensor ☐ - Other - _____

Manufacturer Name: _____ Model Number: _____

At what height from the bottom of the tank will the fill shut off system be activated? (include reading / units of tank gauge)

TANK #:	TANK #:	TANK #:	TANK #:

The automatic fill shut-off shall be activated at no greater than:

1. 95% full - for tanks with a capacity of 12,000 gallons or less; or
2. 1% less than "calculated maximum safe fill height" – for tanks with a capacity greater than 12,000 gallons.

VI. SETBACK DISTANCES FROM WATER SUPPLY WELLS AND SURFACE WATERS

IN ACCORDANCE WITH Env-Or 307.10(e) through (h)

Indicate the closest distance from any new or substantially modified AST system component (tanks and piping)		Minimum Separation Distance Required per Env-Or 307.10(e)	
		Gasoline Systems	Other Regulated Systems
Distance from a public water supply well.		At Least 500 ft	At Least 400 ft
Distance from a non-public water supply well.		At Least 250 ft	At Least 75 ft
Distance from "surface waters of the state". (As defined by RSA 485-A:2, XIV)		At Least 75 ft	At Least 75 ft

The AST rules allow for the following exceptions to the minimum setbacks:

- Non-gasoline AST systems using oil only for on-premise heating or emergency electrical generation may be located closer than 400 feet from public water supply wells as long as they are located outside the public well's corresponding "sanitary protective area".
- AST systems at a marina, hydro-electric facility, or facility that receives oil by way of waterborne transportation are not subject to the surface water setback.

☐ - Check this box and proceed to the following questions ONLY if any of the above setback distances are NOT MET.

Was this an AST facility location which existed prior to January 21, 2009? (YES / NO) ☐

If "NO", the AST system location does not meet setback requirements and will needs to be reconfigured.

If "YES", a new, substantially modified, or replacement AST system may only be installed where the separation distance is not decreased to less than that for an existing AST system [per Env-Or 307.10(h)]. If this is the basis for not meeting any of the above setbacks, please describe below (and show on the plans) the existing AST system and corresponding minimum well separation distance.

VII. ENGINEER AND CONTRACTOR / INSTALLER

NH Licensed Professional Engineer
Name
Company
Address
City, State, Zip
Phone Number
E-mail Address
NHPE Number and Expiration Date

AST Installation Contractor (ICC Certified)
Name
Company
Address
City, State, Zip
Phone Number
E-mail Address
ICC Certification Number and Expiration Date

---------- PLAN GUIDANCE ATTACHMENT ----------

PLEASE REMOVE THESE "PLAN GUIDANCE" SHEETS FROM THE COMPLETED APPLICATION PRIOR TO RETURNING TO NH DES. TO MINIMIZE DELAYS AND FACILITATE THE REVIEW PROCESS, PLEASE ENSURE THAT PLAN SUBMITTALS INCLUDE THE REQUESTED INFORMATION.

PLAN GUIDANCE:

PLAN INFORMATION SHALL COMPLY WITH APPLICABLE REQUIREMENTS OF Env-Or 300 "ABOVEGROUND PETROLEUM STORAGE TANK FACILITIES" AND Env-Or 500 "RECOVERY OF GASOLINE VAPORS".

A. GENERAL PLAN INFORMATION -

1. Submittal on 22" X 34" sheets. When possible, please limit submittal to only that required to demonstrate compliance with Env-Or 300 and Env-Or 500. Only one set of plans needs to be submitted.
2. NH licensed PE stamp with signature and date on all sheets.
3. AST Facility ID number on all sheets (for existing facilities).
4. Site location (locus) map with sufficient detail for inspector to readily locate facility. Include sufficient geographic reference points / information to position the site and AST system for evaluation of water well and surface water setback requirements.

B. SITE PLAN *(Plan View)* -

1. North arrow and drawing scale.
2. Location of buildings / structures / property lines for evaluation of applicable NFPA requirements and setbacks.
3. Water wells and surface waters within 500 feet of the proposed work. If unable to show on the site plan (due to scale), include a bearing line showing the distance from the nearest AST system component. Distinguish existing / anticipated water wells with a classification of either "public" or "non-public".
4. Location of tank(s) and piping system(s). With a clear depiction of "proposed" versus "existing to remain" equipment.
5. Location of bollards / protection for tank(s) and aboveground piping.
6. Location of tank appurtenances. (fill connection, vent / emergency vent(s), Stage I, tank level gauge, overfill protection equipment, etc… as applicable.)
7. Location of underground (or overwater) piping containment sumps and transitions between aboveground and underground piping.
8. Location of the high level visual and audible overfill alarms.
9. Location and dimension of secondary containment structures.
10. Location of emergency "pump shut-off" control for dispensing facilities, as applicable, per NFPA requirements.
11. Location and dimension of concrete pads for oil transfer areas and configuration of positive limiting barrier on dispenser area pads.
12. Location of dispensers with statement that nozzles shall not extend beyond positive limiting barrier.
13. For heating oil facilities, indicate the location of any daytanks connected by piping to the AST system.

C. AST SYSTEM DIAGRAMS / DETAILS *(Include Manufacturer / Model Information, as applicable)* -

1. Tank specifications (manufacturer, standard of design, dimensions, volume, and product stored).
2. Cross sectional diagram of tanks (showing tank appurtenances / equipment, primary vent and emergency vent specs, overfill protection device setting dimensions, fill drop tube clearance dimension from tank bottom).
3. Tank foundation information (pad and cradle/spacing information, as applicable).
4. Tank secondary containment structure information. (material and dimensions, reinforcement, expansion and contraction joint information, joint water-stops and/or sealant, details on any containment penetrations, stormwater management sump construction detail, etc… as applicable).
5. Tank fill connection information. (fill connection adaptor and cap, check valve / block valve, spill containment, Stage I vapor recovery, etc… as applicable).
6. Required tank markings.
7. Piping information (size, material of construction, schedule, method of assembly, supports). As applicable for underground or overwater piping: manufacturer, model no., bend radius/flexibility, and any relevant trench or installation details (bedding / backfill material, minimum cover, minimum pipe separation requirements, etc…).
8. Expansion relief requirements for aboveground piping.
9. Underground or overwater piping containment sumps (equipment within, pipe penetration / termination information, as applicable.)
10. Coating requirements for tanks and piping.
11. Line leak detector information for pressurized underground or overwater fuel dispensing systems.

---------- *PLAN GUIDANCE ATTACHMENT* ----------

PLAN GUIDANCE (continued):

***C. AST SYSTEM DIAGRAMS / DETAILS** (continued) -*

12. Cathodic Protection Information – (for tanks and piping in contact with soil, as applicable).
13. Daytanks - Relevant information and detail for any daytanks connected by piping to the AST system. (tank capacity, standard of design, overfill protection controls, overflow piping, venting, ...as applicable).

D. AST SYSTEM PLAN NOTES –

1. Name and contact information for the contractor ICC-certified for AST installation. Or, a statement that the work shall be supervised by a contractor ICC-certified for AST installation.
2. Relevant closure and site assessment requirements associated with the removal or replacement of tanks or piping, as applicable.
3. Indicate whether the tanks are located in a FEMA designated 100-year floodplain area. If so, elaborate on any special provisions for tank anchoring.
4. Separation distances from nearest water supply wells (both public and non-public) and from nearest surface water. For a new AST facility, indicate what water supply will be utilized to serve the facility (as applicable) and discuss how compliance with relevant setbacks will be achieved. For an existing AST facility where a separation distance is not met, documentation showing that the separation distance will not be decreased.
5. Testing requirements (as applicable) for tanks, piping systems, sumps, spill containment equipment and line leak detectors. For air tests, specify minimum pressures and durations. For hydrostatic tests, specify minimum water levels and durations.
6. Calculations for required secondary containment volume and actual secondary containment volume (on plan or as an attachment to application). Calculations not required for double-wall tanks.
7. Handling
8. Overfill protection dimension setting calculations (on plan or as an attachment to application), including tank manufacturer calibration charts and manufacturer instructions for proper setting of overfill protection devices.
9. Positive limiting barrier calculations (on plan or as an attachment to application).
10. Underground or over-water secondary containment pipe slope calculations (on plan or as an attachment to application).
11. A description of how stormwater from secondary containment structures will be managed.

PLEASE NOTE: A SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN, IF REQUIRED PURSUANT WITH ENV-OR 306.02, SHALL BE IN PLACE PRIOR TO THE DEPARTMENT AUTHORIZING USE OF THE FACILITY.

THERE IS NO APPLICATION FEE REQUIRED TO BE SUBMITTED WITH THE APPLICATION.

IF THERE ARE ANY QUESTIONS, PLEASE CALL (603) 271-3899 AND ASK TO SPEAK WITH A DESIGN REVIEWER WITHIN THE OIL COMPLIANCE SECTION.