

APPENDIX B
OPERATIONAL REQUIREMENTS OF SPCC RULE

OPERATIONAL REQUIREMENTS OF SPCC RULE

GENERAL:

- DESIGNATED PERSON who reports to line management should be designated for each facility to be accountable for oil spill prevention. [112.7(e)(10)(ii)]
- GOOD ENGINEERING PRACTICE shall be conformed with (i.e., relevant industry standards and practices, such as API, ASTM, NFPA, UL, and ASME). [112.7]
- APPROPRIATE CONTAINMENT AND/OR DIVERSIONARY STRUCTURES OR EQUIPMENT including one or more of the following should be provided to prevent a spill from reaching navigable waters: dikes, berms, retaining walls, curbing, culverting, gutters, weirs, booms, diversion ponds, retention ponds, sorbent materials, other drainage system, or other barriers. [112.7(c)]
 - (Note: if providing such structures is demonstrably impractical, certain measures including a strong oil spill contingency plan or a written commitment of manpower, equipment, and material required to expeditiously control and remove spilled oil, can be substituted; see 112.7(d).)
- APPROPRIATE CONTAINMENT OR DRAINAGE CONTROL STRUCTURES, specifically dikes, berms, and retaining walls, should be sufficiently impervious to oil. [112.7(c)]

INSPECTIONS AND TESTS:

- INSPECTIONS should be performed on:
 - ACCUMULATED RAINWATER IN DIKED AREAS of bulk storage tanks (if drainage is directly to storm drains or navigable waters) (before draining). [112.7(e)(2)(iii)]
 - AST SUPPORTS/FOUNDATIONS (at time of integrity testing). [112.7(e)(2)(vi)]
- EXAMINATIONS should be performed on:
 - BURIED PIPING (when exposed for any reason) [112.7(e)(3)(i)]
 - ABOVEGROUND VALVES AND PIPELINES (regular) [112.7(e)(3)(iv)]
 - LOWER-MOST DRAIN AND ALL OUTLETS OF TANK TRUCKS AND CARS (before filling and before departure) [112.7(e)(4)(iv)]
- TESTS should (unless otherwise stated) be performed on/for:
 - LIQUID LEVEL SENSING DEVICES (regularly). [112.7(e)(2)(viii)(E)]
 - METALLIC UST PRESSURE TESTING (regularly). [112.7(e)(2)(iv)]
 - AST INTEGRITY (periodic). [112.7(e)(2)(vi)]
 - PIPING PRESSURE TESTING (may be warranted, periodic) [112.7(e)(3)(iv)]
- WRITTEN PROCEDURES developed for the facility should be used in performing inspections. [112.7(e)(8)]
- RECORDS of all inspections and procedures, signed by the appropriate supervisor or inspector, should be maintained for at least 3 years. [112.7(e)(8)]
- RECORDS AND WRITTEN PROCEDURES should be made part of the SPCC plan. [112.7(e)(8)]

SPILL PREVENTION TRAINING:

- SPILL PREVENTION INSTRUCTION on operation and maintenance of equipment, and in applicable pollution control laws, rules, and regulations, is the responsibility of the owner or operator. [112.7(e)(10)(i)]
- SPILL PREVENTION BRIEFINGS should be conducted for operating personnel at intervals frequent enough to assure understanding of the SPCC plan and to discuss recent spill events, equipment failures, malfunctioning components, and recently developed spill precautionary measures. [112.7(e)(10)(iii)]

SECURITY:

- FENCING should be used to completely surround oil handling, processing, and storage areas. [112.7(e)(9)(i)]
- ENTRANCE GATES should be locked and/or guarded when the facility is not in production or is unattended. [112.7(e)(9)(i)]
- MASTER FLOW AND DRAIN VALVES and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status. [112.7(e)(9)(ii)]
- PUMP STARTER CONTROLS should be locked in the "off" position or located in an area accessible only to authorized personnel when the pumps are not in operating or standby status. [112.7(e)(9)(iii)]
- LOADING/UNLOADING CONNECTIONS OF OIL PIPELINES (and pipelines that are emptied of liquid content either by draining or by inert gas pressure) should be securely capped or blank-flanged when not in service or standby service for an extended time. [112.7(e)(9)(iv)]
- LIGHTING of oil handling and storage areas should be appropriate for the type and location of the facility; consideration should be given to the need to discover spills after dark and to prevent vandalism that could result in spills. [112.7(e)(9)(v)]

LOADING/UNLOADING RACKS FOR TANK TRUCKS AND CARS:

- LOADING/UNLOADING PROCEDURES at racks should meet the minimum requirements and regulation established by the Department of Transportation. [112.7(e)(4)(i)]
- QUICK DRAINAGE SYSTEM, CATCHMENT BASIN, OR TREATMENT UNIT designed to handle spills should be used for any rack. [112.7(e)(4)(ii)]
- CONTAINMENT, whether quick drainage system, catchment basin, or treatment unit, should hold at least the capacity of the largest single compartment ever loaded/unloaded at the rack. [112.7(e)(4)(ii)]
- INTERLOCKED WARNING LIGHT/PHYSICAL BARRIER/SIGNS should be provided to prevent departure from the rack before complete disconnection of transfer lines. [112.7(e)(4)(iii)]
- LOWER-MOST DRAIN and all outlets of tank trucks and cars should be closely examined at the rack for leakage before filling and before departure, and if necessary, repairs made to prevent leakage during transit. [112.7(e)(4)(iv)]

DRAINAGE FROM DIKED AREAS:

- VALVES OR OTHER POSITIVE MEANS should be used to restrain drainage from diked storage areas (unless the facility systems are designed to handle leakage). [112.7(e)(1)(i)]
- PUMPS OR EJECTORS, if used to drain diked areas, should be manually activated and the accumulation should be examined before starting. [112.7(e)(1)(i)]
- FLAPPER-TYPE DRAIN VALVES should NOT be used to drain diked areas. [112.7(e)(1)(ii)]
- MANUAL, OPEN-AND-CLOSED VALVES should be used to drain diked areas whenever practical. [112.7(e)(1)(ii)]
- INSPECTION OF RETAINED STORM WATER should be performed if facility drainage drains directly to water courses and not into wastewater treatment plants. [112.7(e)(1)(ii)]
- DRAINAGE DIVERSION SYSTEM meeting the following criteria should be provided if facility drainage isn't engineered to meet all the requirements for diked or undiked areas: 1) located at the final discharge point of facility drainage (i.e., where it leaves the facility's

drainage system), and 2) return oil to the facility in the event of an uncontrolled spill. [112.7(e)(1)(iv)]

- DRAINAGE TO STORM DRAINS OR NAVIGABLE WATERS from diked areas may be acceptable if: 1) the bypass valve is normally sealed closed, 2) the storm water is inspected before draining, 3) the bypass valve is opened and sealed after draining under responsible supervision, and 4) adequate records are kept of drainings. [112.7(e)(2)(iii)]

DRAINAGE FROM UNDIKED AREAS:

- PONDS, LAGOONS, OR CATCHMENT BASINS should, if possible, be provided to retain spills or return oil to the facility from undiked areas. [112.7(e)(1)(iii)]
- CATCHMENT BASINS for retaining spills from undiked areas should be in areas not subject to periodic flooding. [112.7(e)(1)(iii)]
- DRAINAGE DIVERSION SYSTEM meeting the following criteria should be provided if facility drainage isn't engineered to meet all the requirements for diked or undiked areas: 1) located at the final discharge point of facility drainage (i.e., where it leaves the facility's drainage system), and 2) returns oil to the facility in the event of an uncontrolled spill. [112.7(e)(1)(iv)]

TREATMENT UNITS FOR DRAINAGE WATERS:

- GRAVITY FLOW should be used for multiple-unit treatment systems. [112.7(e)(1)(v)]
- TWO LIFT PUMPS should be provided if gravity flow isn't used at multiple-unit treatment systems, and at least one should be permanently installed if treatment is continuous. [112.7(e)(1)(v)]
- FAIL-SAFE ENGINEERING should have been engineered into all facility drainage systems to prevent oil from reaching navigable waters in the event of equipment failure or human error. [112.7(e)(1)(v)]
- DISPOSAL FACILITIES for plant effluents which are discharged to navigable waters should be observed frequently enough to detect system upsets that could result in a spill. [112.7(e)(2)(ix)]

ALL TANKS:

- FLOW AND DRAIN VALVES and any other valves that could allow a tank to discharge to the surface should be locked closed unless they are in operating or standby status. [112.7(e)(9)(ii)]
- TANK MATERIAL AND CONSTRUCTION should be compatible with the oil stored and conditions of storage (temperature, pressure, etc.). [112.7(e)(2)(i)]
- SECONDARY CONTAINMENT (being dikes, containment curbs, culverting, pits, drainage trench to a holding pond, etc.) should be provided for all tank installations and be: 1) sufficiently impervious to contain a spill, and 2) sufficiently large to hold the capacity of the largest single tank plus sufficient freeboard to allow for precipitation. [112.7(e)(2)(ii)]
- FAIL-SAFE ENGINEERING should, as far as is practical, be utilized on tanks. [112.7(e)(2)(viii)]
- OVERFILL PROTECTION should be provided for tanks, such as one or more of the following: 1) high liquid level alarms with audible or visual signal at a constantly manned operation or surveillance station (larger operations), 2) audible air vent (smaller operations), 3) automatic high liquid level pump cutoff (larger, more complex operations), 4) direct audible or code signal communication between the tank gauger and the pumping station, 5) 'automatic' liquid level sensing (visible gauges, computers, telepulse, etc.). [112.7(e)(2)(viii)]
- LIQUID LEVEL SENSING DEVICES used in overfill protection should be regularly tested. [112.7(e)(2)(viii)]

ABOVEGROUND TANKS:

- INTEGRITY TESTING of ASTs should be performed periodically, and comparison records kept where appropriate. [112.7(e)(2)(vi)]

- SUPPORTS/FOUNDATIONS of ASTs should be inspected in conjunction with integrity testing. [112.7(e)(2)(vi)]
- TANK EXTERIORS AND DIKED AREAS should be observed frequently by operating personnel to detect leaks, deterioration, and accumulation of oil in diked areas. [112.7(e)(2)(vi)]
- VISIBLE LEAKS that result in oil loss from tank seams, gaskets, rivets and bolts large enough to cause accumulation in diked areas should be promptly corrected. [112.7(e)(2)(x)]
- PARTIALLY BURIED metallic tanks should be avoided, unless the tank has adequate coating to prevent corrosion. [112.7(e)(2)(v)]

UNDERGROUND TANKS:

- REGULAR PRESSURE TESTING is should be performed for all metallic USTs. [112.7(e)(2)(iv)]
- CATHODIC PROTECTION, COATING, or other effective corrosion protection methods compatible with local soil conditions should protect all new metallic USTs. [112.7(e)(2)(iv)]

MOBILE/PORTABLE TANKS:

- LOCATION/POSITIONING should minimize the possibility of spills reaching navigable waters. [112.7(e)(2)(xi)]
- SECONDARY CONTAINMENT (dikes, catchment basins, etc.) sufficient to hold the largest single tank or compartment should be used. [112.7(e)(2)(xi)]
- LOCATING OUTSIDE OF FLOOD-PRONE AREAS should be done. [112.7(e)(2)(xi)]

TANKS HEATED BY INTERNAL COILS:

- STEAM RETURN OR EXHAUST LINES from internal heating coils which discharge to navigable waters should be monitored for contamination or be passed through a separation or retention system. [112.7(e)(2)(vii)]
- REPLACEMENT OF INTERNAL COILS with external heating should be considered. [112.7(e)(2)(vii)]

ALL PIPING:

- EXPOSED PIPE CORRIDORS OR GALLERIES is recommended wherever possible. [112.7(e)(3)(i)]
- TERMINAL CONNECTIONS at transfer points should be capped or blank-flanged and marked as to origin when a pipeline is not in service or when on standby for an extended time. [112.7(e)(3)(ii)]
- PIPING LOADING/UNLOADING CONNECTIONS AND DRAINS should be capped or blank-flanged when not in service or when on standby for an extended time. [112.7(e)(9)(iv)]
- PRESSURE TESTING may be warranted periodically for areas where drainage is such that a failure would lead to a spill event. [112.7(e)(3)(iv)]

ABOVEGROUND PIPING:

- PIPE SUPPORTS should be designed to minimize abrasion and corrosion and to allow for expansion and contraction. [112.7(e)(3)(iii)]
- REGULAR EXAMINATION by operating personnel should be performed on aboveground piping, valves, and appurtenances. [112.7(e)(3)(iv)]
- VEHICULAR TRAFFIC should be warned verbally or by signs to ensure aboveground piping is not endangered. [112.7(e)(3)(v)]

BURIED PIPING:

- PROTECTIVE WRAPPING, COATING, AND CATHODIC PROTECTION should all be provided if soil conditions warrant. [112.7(e)(3)(i)]

- EXAMINATION OF EXPOSED PIPING for deterioration should be performed whenever buried piping is exposed for any reason. [112.7(e)(3)(i)]
- CORROSION DAMAGE should receive additional examination and corrective action when found during examination of exposed buried piping. [112.7(e)(3)(i)]