Spill Prevention, Control, and Countermeasures (SPCC)

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SPCC – What Is It?

- 40 CFR Part 112
- Spill *prevention* is key, is the priority, and is the focus of this requirement –
  - Inventory of oil storage containers
  - Containment
  - Regular inspections of those containers
  - Training
  - Develop / Implement a written plan
- It's not just a 'clean-up' plan!

SPCC's #1 Priority –

prevent oil spills from reaching navigable waters of the U.S.

SPCC – Do You Need a Plan?

Question: Add up the capacity (in gallons) of all *aboveground* *storage* of oil, diesel, gasoline, hydraulic oil, etc., containers equal to and greater than 55 gallons.

Does this exceed 1,320 gallons?

Answer: If the answer is yes, a plan is required.

NOTE: You must count capacity, not actual volume, of containers.

SPCC – Do You Need a Plan?

Question: Add up the capacity (in gallons) of all *completely underground storage* of oil, diesel, gasoline, hydraulic oil, etc., tanks (regardless of the tank capacity).

Does this exceed 42,000 gallons?

Answer: If the answer is yes, a plan is required.

NOTE: Again, you must count capacity, not actual volume, of containers.

SPCC – Do You Need a Plan?

"Reasonable expectation of an oil discharge" into waters or shorelines –

- May consider proximity to water, land contours, and drainage
- Must exclude manmade structures, containment, and impoundments
- Not required, but should document determination / explanation if conclusion that oil discharges could not occur

SPCC Plan – Getting Started

#1 – Inventory of oil storage containers; required info:

- Container capacity, including fixed and mobile containers
- Oil Type

- Best approach – a table of all oil containers including type of container, capacity, and type of oil
  - Consider adding *all* containers, tanks, UST's, etc., as a good inventory of all containers

No Release Oil & Manufacturing Corporation

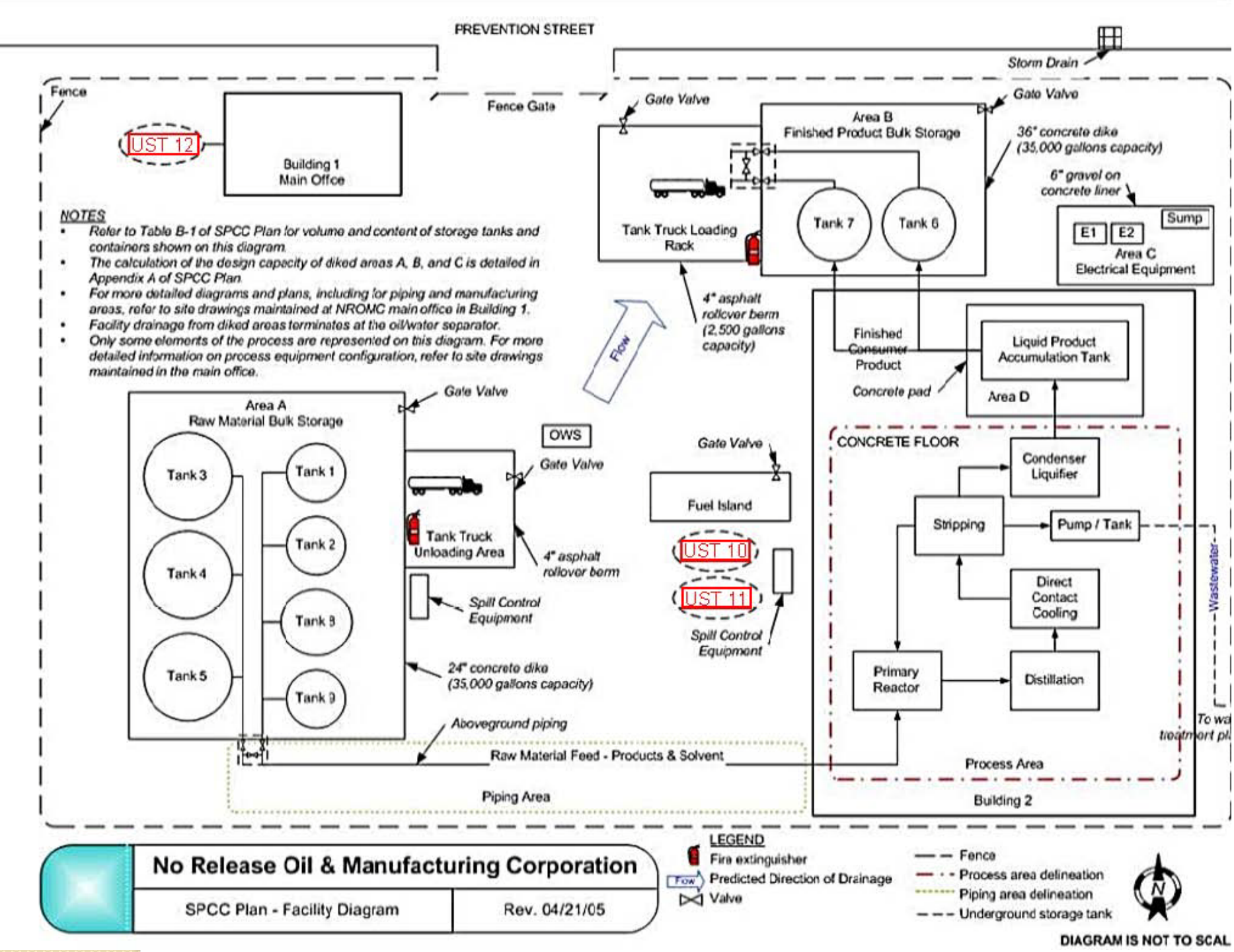
Tank / Container	Type of Oil	Capacity (in gals)
Area A -- Raw Material Storage		
Tank 1	Product A -- #2 Fuel Oil	4,000
Tank 2	Product A -- #2 Fuel Oil	4000
Tank 3	Product B -- #6 Fuel Oil	20000
Tank 4	Product B -- #6 Fuel Oil	20000
Tank 5	Product B -- #6 Fuel Oil	20000
Tank 8	Product C -- Kerosene	6000
Tank 9	Toluene (exempt)	40000
Area B -- Finished Product Storage		
Tank 6	Product D -- Proprietary Oil	20000
Tank 7	Product D -- Proprietary Oil	20000
Area C -- Electrical Equipment		
Transformer #1	Silicon-Based Dielectric Fluid	235
Transformer #2	Silicon-Based Dielectric Fluid	235
Area D		
Liquid Product Accumulation Tank	Product D -- Proprietary Oil	10000
Process Area		
Primary Reactor	Intermediate Oil Product	500
Distillation	Intermediate Oil Product	500
Direct Contact Cooling	Intermediate Oil Product	500
Surface Removal	Intermediate Oil Product	500
Pump / Tank	Intermediate Oil Product	300
Condenser Liquefier	Intermediate Oil Product	500
Underground Storage Tanks		
UST 10 -- Exempt	Gasoline	8000
UST 11 -- Exempt	Gasoline	8000
UST 12	Heating Oil	2000

SPCC Plan – Getting Started

#2 – Facility diagram; required info:

- Location and contents of oil containers
- Completely buried tanks (exempt)
- Connecting piping
- Transfer stations

- Best approach – include other elements required in the plan that aren't necessarily required to be on the diagram, such as:
  - Secondary containment, including capacity and type (such as concrete, double-walled, etc.)
  - Valves and/or drainage system controls
  - Stormwater flow, storm drain inlets, and nearby surface waters
  - Surface identification (concrete, grass, etc.)
  - Direction of flow if spill were to occur
  - Topo, compass direction, and legend


PREVENTION STREET
Storm Drain
Fence
Fence Gate
UST 12
Building 1
Main Office
Gate Valve
Area B
Finished Product Bulk Storage
Gate Valve
36" concrete dike
(35,000 gallons capacity)
6" gravel on
concrete liner
Sump
E1
E2
Area C
Electrical Equipment
Tank Truck Loading
Rack
Tank 7
Tank 6
4" asphalt
rollover berm
(2,500 gallons
capacity)
Flow
Finished
Consumer
Product
Liquid Product
Accumulation Tank
Concrete pad
Area D
NOTES
Refer to Table B-1 of SPCC Plan for volume and content of storage tanks and containers shown on this diagram.
The calculation of the design capacity of diked areas A, B, and C is detailed in Appendix A of SPCC Plan.
For more detailed diagrams and plans, including for piping and manufacturing areas, refer to site drawings maintained at NROMC main office in Building 1.
Facility drainage from diked areas terminates at the oil/water separator.
Only some elements of the process are represented on this diagram. For more detailed information on process equipment configuration, refer to site drawings maintained in the main office.
Area A
Raw Material Bulk Storage
Gate Valve
OWS
Gate Valve
Tank 3
Tank 1
Tank 2
Tank 4
Tank 8
Tank 5
Tank 9
Tank Truck
Unloading Area
4" asphalt
rollover berm
Spill Control
Equipment
24" concrete dike
(35,000 gallons capacity)
Gate Valve
Fuel Island
UST 10
UST 11
Spill Control
Equipment
CONCRETE FLOOR
Condenser
Liquifier
Stripping
Pump / Tank
Direct
Contact
Cooling
Primary
Reactor
Distillation
Wastewater
To wa
treatment pl
Aboveground piping
Raw Material Feed - Products & Solvent
Process Area
Piping Area
Building 2
No Release Oil & Manufacturing Corporation
SPCC Plan - Facility Diagram
Rev. 04/21/05
LEGEND
Fire extinguisher
Flow
Predicted Direction of Drainage
Valve
Fence
Process area delineation
Piping area delineation
Underground storage tank
N
DIAGRAM IS NOT TO SCAL

SPCC Plan – Next Steps

#3 – Spill prevention:

- Steps to be taken to prevent spills during loading and unloading –
  - Conducted in containment area or containment placed at areas where spill could occur, such as connections
  - Double-check connections prior to transfer
  - Attended by *trained* individual
  - Ensure receiving container will not overflow
  - Spill equipment readily available

SPCC Plan – Next Steps

#4 – Routine handling of oils:

- Steps to be taken to prevent spills during routine handling of oil / storage containers –
  - Where applicable / reasonable, store oil where it will be used
  - Use material handling equipment made for the job
  - Procedures can either be in the plan or referenced, carried out by *trained* personnel

SPCC Plan – Next Steps

#5 – Container and containment inspections:

- Type and frequency commiserate with container, type of oil, use, etc.
  - For example, a container with valves that are opened and closed daily may require more frequent inspections than one that is opened and closed once every six months
- May include visual inspection, pressure testing, ultrasonic testing, etc.

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  Of Note: in order to inspect a container, you must be able to see the entire container. Therefore, partially buried containers or a "container within a container" cannot be visually inspected.

- Inspections must also include regular testing of high level alarms, shut-off valves, interstitial monitors, visual gauges, etc.

SPCC Plan – Next Steps

#6 – Proper operation and maintenance of containers, valves, alarms, etc.

- Follow the manufacturer's recommendations for replacement of gaskets, o-rings, etc.
- Ensure that drums typically reused for oil storage are compatible

SPCC Plan – Continued

#7 – When a spill occurs:

- Assessing the situation
  - How much, where's it going / flowing, etc.
  - In containment?
  - Will it reach waters of the US?
- Clean up resources, both internal and external assistance
- Re-use, recycling, and/or disposal options
- Federal and state notifications

SPCC Plan – Continued

#8 – Assessing the situation post spill:

- What went wrong and why?
  - Equipment failure?
  - Human error?
- Outline steps to correct the issue and prevention or reoccurrence
- Update plan, as necessary

SPCC Plan – Other Requirements

- Format:
  - Follow required sequence in 40 CFR Part 112.7 –OR– have a cross reference table
  - Multiple examples and template on EPA website

- PE Certification:
  - Facility > 10,000 gallons storage requires PE certification
  - Facility = / < 10,000 gallons may self certify

SPCC Plans – Other Requirements

- Self-Certify:
  - Tier I
    - No individual oil container > 5,000 gallons
    - Complete and self-certify using plan template in Appendix G, 40 CFR Part 112
  - Tier II
    - Any individual oil container = / > 5,000 gallons
    - "Full" SPCC plan and can self-certify

SPCC Plan – Spill Notification

- 40 CFR 110, "Discharge of Oil"
  - Immediate notification required to the National Response Center; 24/7; 800-424-8802
  - Violate applicable water quality standards; or
  - Cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines

SPCC Plan – Spill Notification

- Title 126, Chapter 18 "Releases of Oil or Hazardous Substances":
  - Notify the NDEQ; M-F, 8 am – 5 pm; 402-471-2186 or 877-253-2603
  - Notify the Nebraska State Patrol; after hours, weekends, and holidays; 402-471-4545

- Immediate notification is required, regardless of the quantity, of an oil or hazardous substance release which occurs beneath the surface of the land or impacts or threatens waters of the state or threatens the public health and welfare

- Immediate notification is required of a release upon the surface of the land of an oil in a quantity that exceeds 25 gallons, or of a hazardous substance which equals or exceeds 100 pounds or its federal RQ

SPCC Plans -- Assistance

- www.epa.gov/osweroe1/content/spcc/
- Regulatory questions
  - Mark Aaron, USEPA Region 7 SPCC
  - 913-551-7205
  - Aaron.Mark@epa.gov
- Non-regulatory
  - Patty Greene, CHMM; Tenaska, Inc.
  - 402-691-9553
  - pgreene@tenaska.com