



Spill Prevention, Control and Countermeasure Plans

40 CFR Part 112

**U.S. EPA Region 7
Oil Pollution
Prevention Program**

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Presentation Disclaimer

- Please note that this presentation is a summary and does not cover every SPCC provision.
- Always refer to the SPCC rule and official Agency guidance found at: <http://epa.gov/oilspill>.

Rule Applies to Non-Transportation Related Facilities

Regulations apply to owners and operators of facilities involved in:



- Drilling
- Producing
- Gathering
- Storing
- Processing
- Refining
- Transferring
- Distributing
- Using
- Consuming



SPCC Criteria

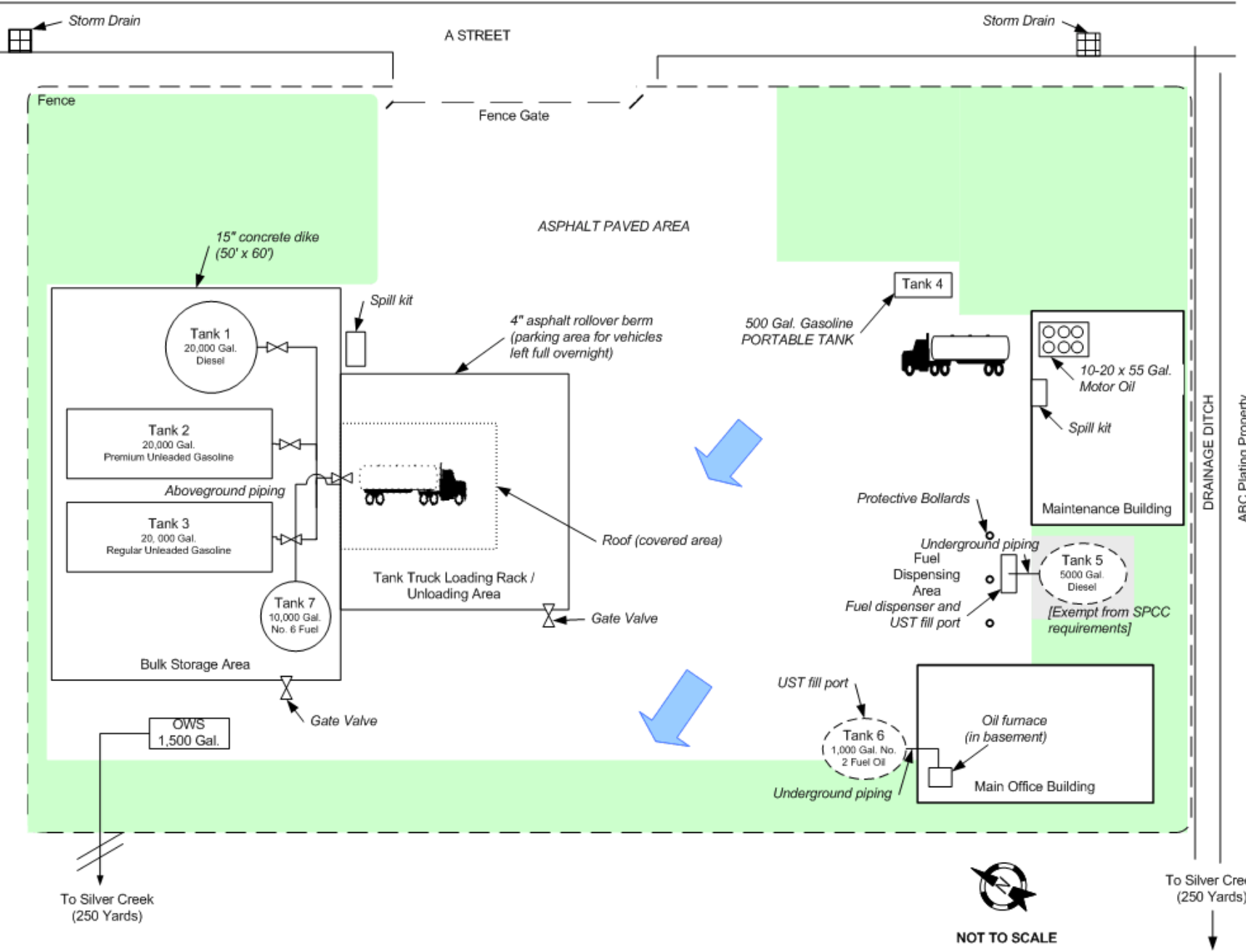
You must have an SPCC Plan if:

- Facility stores > 1,320 gallons of oil in aggregate above-ground storage or has 42,000 gallons of completely buried oil storage capacity; and
- Facility has a “reasonable expectation of an oil discharge” to waters of the United States.



Plan Requirements

- Plan is available and kept at the nearest manned facility.
- Full approval of management to implement the Plan.
- Professional Engineer must certify:
 - Familiar with the requirements of 40 CFR part 112.
 - PE or agent has visited and examined the facility.
 - Plan has been prepared in accordance with good engineering practice, considering applicable industry standards and the rule requirements.
 - Procedures for required inspections and testing have been established.
 - Plan is adequate for the facility.
- Follow the sequence of the rule or provide a cross-reference.



General Requirements

- Describe physical layout and include a diagram of the facility.
- Location and contents of each fixed container
- Transfer stations
- Connecting pipes
- Underground storage tanks marked as "exempt"

NOT TO SCALE

General Requirements (cont.)

- Type of oil and storage capacity for each container.
- Operating procedures for routine handling of products to prevent a discharge of oil.
- Containment, equipment, and procedures to control a discharge.
- Countermeasures to contain, clean up, and mitigate an oil spill.
- Methods of disposal of recovered materials.
- Contact list and phone numbers for reporting a discharge.

General Requirements (cont.)

- Provide general secondary containment for the most likely release scenarios.
 - Dikes, berms, or retaining walls sufficiently impervious to contain oil
 - Curbing or drip pans
 - Sumps and collection systems
 - Culverting, gutters, and drainage systems
 - Weirs and booms
 - Spill diversion pond
 - Retention pond
 - Sorbent materials

Failure Analysis

- Where experience indicated reasonable potential for equipment failure:
 - Tank loading or unloading equipment
 - Tank overflow, rupture, or leakage
 - Other equipment known to be a source
- Predict for each type:
 - Direction (e.g., north or to the road; not “to containment”)
 - Rate of flow
 - Total quantity of oil that could be discharged

Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
Bulk Storage Area (Aboveground Storage Tanks #1, 2, 3, or 7)				
Failure of aboveground tank (collapse or puncture below product level)	20,000	Gradual to instantaneous	SW to Silver Creek	Concrete dike
Tank overflow	1 to 120	60 gal/min	SW to Silver Creek	Concrete dike
Pipe failure	20,000	240 gal/min	SW to Silver Creek	Concrete dike
Leaking pipe or valve packing	600	1 gal/min	SW to Silver Creek	Concrete dike
Leaking heating coil (Tank #7)	10,000	1 gal/min	SW to Silver Creek	Concrete dike
Loading Rack/Unloading Area				
Tank truck leak or failure inside the rollover berm	1 to 2,000	Gradual to instantaneous	SW to Silver Creek	Rollover berm, on to oil/water separator
Tank truck leak or failure outside the rollover berm	1 to 2,000	Gradual to instantaneous	SW to Silver Creek	Rollover berm, on to oil/water separator
Hose leak during truck loading	1 to 300	60 gal/min	SW to Silver Creek	Rollover berm
Fuel Dispensing Areas				
Tank #4 and diesel dispenser hose/connections leak	1 to 150	30 gal/minute	SW to Silver Creek.	Land-based spill response capability (spill kit) and oil/water separator
Maintenance Building				
Leak or failure of drum	1 to 55	Gradual to instantaneous	SW to Silver Creek.	Spill pallets, oil/water separator
Other Areas				
Complete failure of portable tank (Tank #4)	500	Gradual to instantaneous	SW to Silver Creek.	Secondary shell, oil/water separator
Leaking portable tank or overfills (Tank #4)	1 to 100	3 gal/min	SW to Silver Creek.	Secondary shell, oil/water separator

Inspections, Tests, and Records

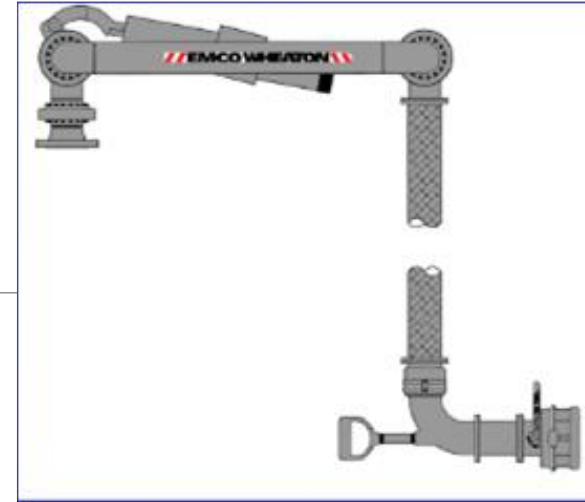
- Recordkeeping according to the frequency and procedures established in the SPCC Plan.
- Sign, date, and keep with the Plan for 3 years.
- Records of inspections and testing:
 - Tanks, pipes, valves, etc.
 - Dike drainage log
 - 5-Year Plan review

Training

- Train oil-handling personnel:
 - Operation/maintenance of prevention equipment
 - Discharge procedure protocols
 - Applicable pollution control laws, rules, and regulations
 - General facility operations
 - Contents of the SPCC Plan
- Designate person accountable for discharge prevention and who reports to facility management.
- Schedule/conduct at least one briefing a year:
 - Known discharges and failures, malfunctioning components, new precautionary measures

Loading/Unloading Racks

- Secondary containment must be provided for the capacity of the largest single compartment of the tank truck.
 - Catchment, curbing, diversion
 - Trench, sump, UST
 - Quick drainage system
- There must be a system to prevent trucks from departing prematurely.
 - Interlocked warning light or physical barrier
 - Wheel chocks, warning signs
 - Vehicles brake interlock system to prevent departure before complete disconnection
- Lowermost drains and outlets of vehicles must be inspected for leaks prior to filling and departure.



Facility Drainage

- Diked areas must be controlled by manual open-and-closed design valves, manually activated pumps, or ejectors.
- Valves must be normally closed.
- Inspect for oil before draining retained water.
- Keep a record of drainage from containment.
- Design undiked areas with a potential for discharge to flow into a catchment basin designated to retain oil or divert it back to the facility.



Bulk Storage Tank Requirements

- Container materials and construction compatible with material stored and conditions of storage, such as pressure and temperature
- Secondary containment sized for the capacity of the largest container plus freeboard.
- Ensure that diked areas are sufficiently impervious to contain oil.
- Be free of vegetation/materials that could compromise containment and inhibit periodic inspection.
- Visible leaks must be promptly corrected and oil removed from containment.
- Mobile or portable tanks must be properly positioned to prevent a discharge.
- Buried and partially buried tanks must have corrosion protection compatible with the local soil conditions.



Inspections of Tanks

- Test and inspect each above-ground container for integrity on a regular schedule and whenever you make material repairs.
- Determine in accordance with an industry standard.
 - Qualifications of personnel performing the tests and inspections
 - Frequency and type of testing (i.e., visual and non-destructive)
 - Procedures for testing and inspections
- Keep comparison records.
- Inspect the container's supports and foundations.
- Inspect the outsides of containers for deterioration, discharges, or accumulation of oil inside diked areas.

Overflow Protection

- Each tank/container must be provided one of the following:
 - High liquid level alarms with audible/visual signal at a constantly attended operation
 - High liquid level pump cutoff
 - Direct communication between the container gauger and the pumping station
 - Fast response system such as direct vision gauges or telemetry
 - If you use this system, a person must be present to monitor gauges and the overall filling of the container.
- Regularly test liquid level sensing devices.

Transfer Operations

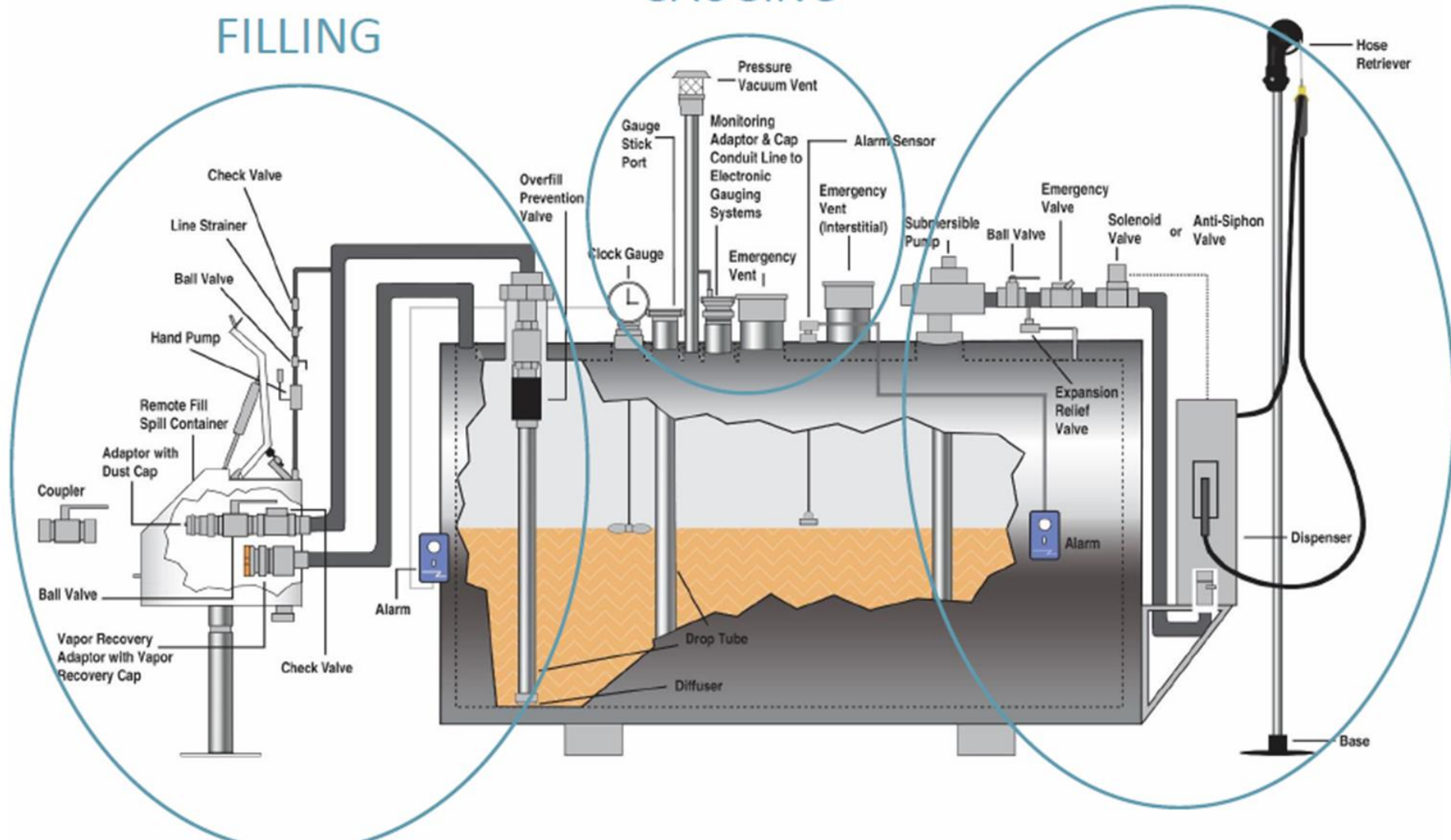
- Buried piping installed or replaced after Aug. 16, 2002, must be protectively wrapped or coated, and cathodically protected to satisfy the corrosion requirements under the UST regulations (40 CFR parts 280/281).
- Buried piping exposed for any reason must be inspected for deterioration and corrosion damage and take corrective action.
- Cap or blank-flange the piping terminal connection at the transfer point and mark it as to origin.
- Properly design pipe supports.
- Regularly inspect all above-ground piping, valves, and appurtenances to assess their general condition.
- Conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, replacement.
- Pipes must be protected from vehicular traffic with warnings, signs, physical barriers.

TANK EQUIPMENT

VENTING & GAUGING

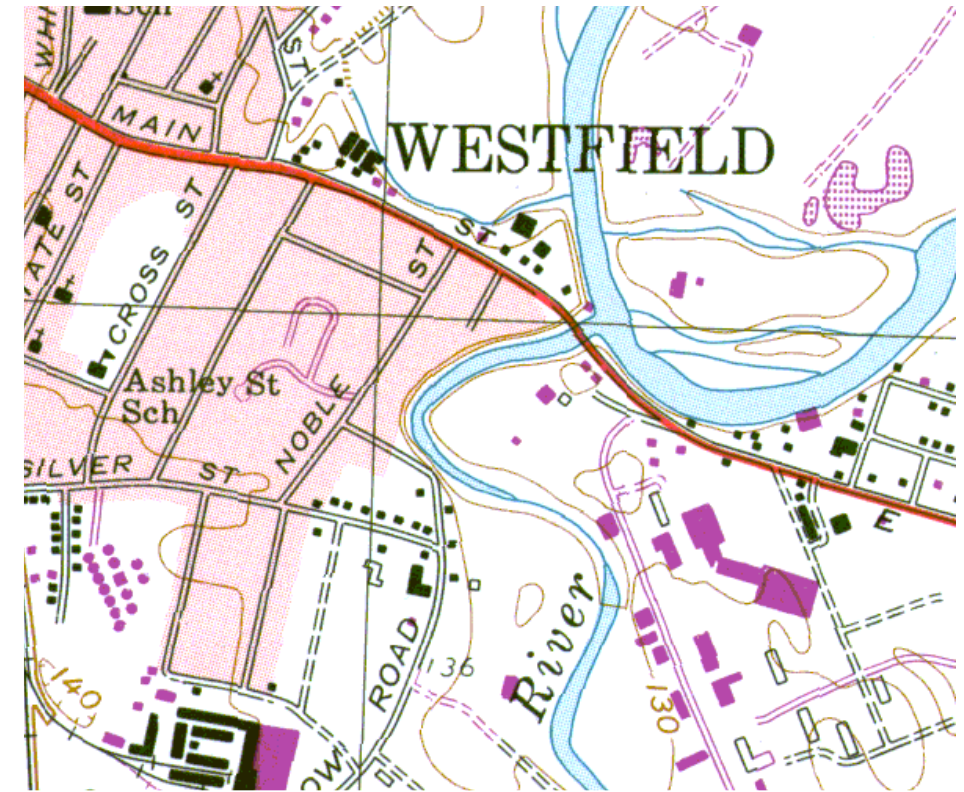
DISPENSING

FILLING



Attachments

- Certification of the Applicability of Substantial Harm
- Maps, facility diagrams, and piping diagrams
- Records
- Detailed response plans for different spill scenarios
- Secondary containment calculations



Contact List and Phone Numbers

- National Response Center: 800-424-8802
- EPA Region 7 Spill Line: 913-281-0991
- Response Contractor
- LEPC
- Non-Emergency Numbers
 - Hospital
 - County Sheriff
 - State and Municipal Agencies/Departments