

# Creating a Sustainable SPCC Program

Oregon Department of Transportation

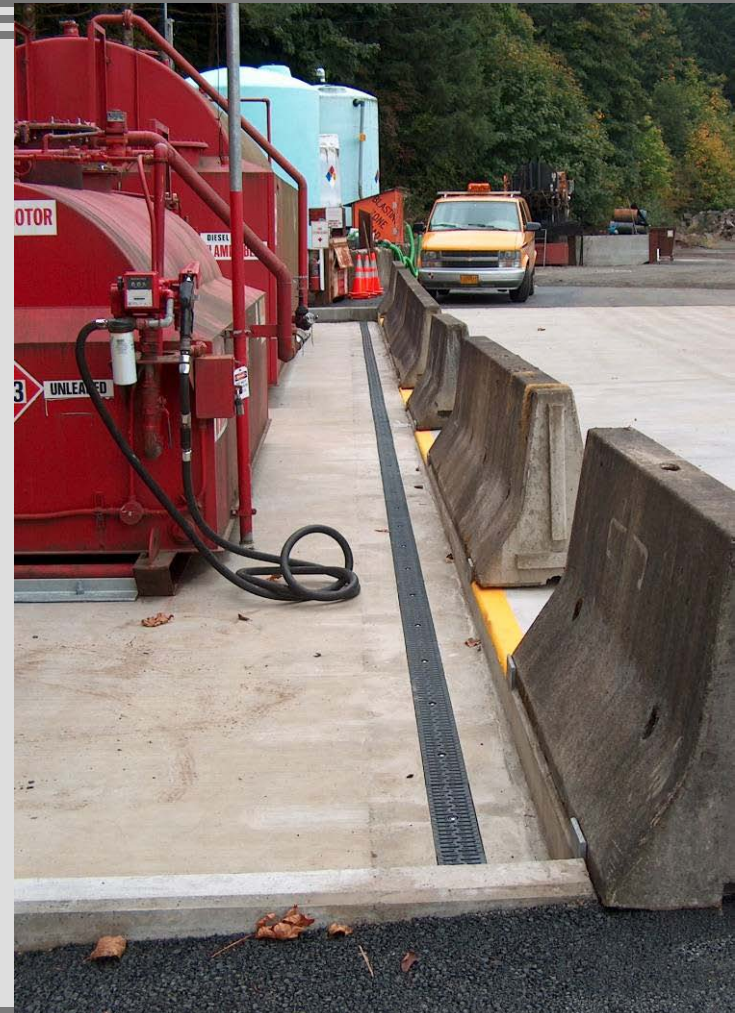
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ODOT Office of Maintenance and Operations



## Sustainable Program

- Sustainability balances
  - environmental requirements
  - economic limitations
  - community objectivesin a manner that protects the needs of current and future generations
- To be sustainable a program should be functional, fair, and feasible





# Spill Prevention Control and Countermeasure

- Federal regulation under the Clean Water Act
- Oil Pollution Prevention Rules (40 CFR Part 112)
- Established January 1974
- SPCC Plans are required by the 1990 amendment





# Spill Prevention Control and Countermeasure

SPCC Plans are required for non-transportation facilities that

- store more than 1,320-gallons of oil aboveground or at least 42,000 gallons of oil in underground tanks
- and, could reasonably be expected to discharge oil into navigable water

Or if EPA requires one  
"to carry out the purpose of  
the Clean Water Act".

FYI

Transportation facilities are  
defined as moving.  
Non-transportation facilities  
are fixed location.





# Spill Prevention Control and Countermeasure

- SPCC regulations require
  - Secondary containment
    - oil containers and tanks
    - oil-filled equipment
    - oil handling activities
  - Overfill protection
  - Discharge prevention
  - Spill response actions
  - Security measures
  - Routine inspection
  - Training





## ODOT's SPCC Program

- ODOT began preliminary work for the SPCC program in 2001
- Major work started in 2003 in response to EPA inspections
- Fully implemented by October 2007





## ODOT's SPCC Program

- ODOT Maintenance yards were considered on a site-by-site basis
  - Was a sufficient quantity of oil stored onsite
  - Could a discharge impact navigable water
- About 25% of ODOT yards participate in the SPCC program





## ODOT's SPCC Program

- Establishment period (2003 – 2007)
  - 27 yards were in the original group
  - 3 yards were removed in November 2005 after EPA issued new guidance
  - 23 of the 24 yards have fuel stations
- Spent about 1.5 million primary implementation
  - Major maintenance and policy option package
  - Four outliers were over \$100k
  - Average cost was \$46,500







## ODOT SPCC Plan

Stamped by Maintenance and Operations Engineer and signed by Support Services

Plans contain:

- Specific Regulations
- Descriptions of compliance
- Maps and drawings
- Forms, design plans, O&M Plans





## SPCC Implementations

- Biggest challenge was secondary containment
- **General** - oil activities and oil-filled equipment
  - Secondary containment for the most likely discharge.
  - Capacity determined by good engineering practices.
- **Specific** - oil storage containers
  - Secondary containment for a major container failure
  - Entire capacity of container plus freeboard





## SPCC Implementation

- General assessments
  - Bulk fuel
    - Delivery
    - Dispensing
    - Tank lines
  - Oil Transfers
    - Lube lines
    - Used oil transfers
  - Transfer tanks
- Engineer Design Criteria





## SPCC Implementation

- Site-specific containment systems were designed for filling bulk fuel tanks
- Fuel loading areas are frequently uncovered; managing tributary flow can be problematic
- The systems included
  - Drive-through containment pads
  - Drive-in containment pads
  - Drainage control





# SPCC Implementation

## Containment structures

- Bunkers
- Curbs
- Pads





# SPCC Implementation

## Drainage control

- Valves and seals
- Oil/water separators
- Inserts





# SPCC Implementation

## Double-walled tanks

- Bulk fuel tanks
- Oil tanks
- Generator fuel tanks





# SPCC Implementation

## Other types of containment

- Sumps
- Spill pallets
- Absorbents





## Sustainable Program

- Sustainability balances
  - environmental requirements
  - economic limitations
  - community objectives
- In order to be sustainable a program has to be functional, fair, and feasible





## Sustainable Program - Requirements

### Exclusions

- Motive-powered tank
- Ancillary vehicle equipment
- Hot-mix asphalt (HMA)
- Mobile refuelers
- Pesticide application equipment
- Residential heating oil tanks





## Sustainable Program - Requirements

- 'Environmental equivalence' demonstrates compliance by meeting the goal instead of a specific requirement
- Equivalent measures cannot be used to meet secondary containment requirements.





## Sustainable Program - Requirements

- Secondary containment may be impractical
- Impracticality based on
  - Space and geographic
  - Local zoning
  - Fire codes
  - Safety
  - Cost (not sole justification)
- Alternative protection must be implemented





## Sustainable Program - Economics

- Implementation
  - Policy Option Package
  - Dedicated design engineer
  - Site specific
  - Allow flexibility
- Ongoing
  - Non-propriety
  - Minimize maintenance needs
  - Provide programmatic items





## Sustainable Program - Community

- Each SPCC plan comes with a checklist
  - Overview of site specific requirements
    - Secondary containment
    - Overfill protection
    - Security
    - Environmental equivalence
    - Reoccurring actions, training, and employee expectations
  - Pictures





## Sustainable Program - Community

- Programmatic procedures
  - Utilize other programs
    - Environmental Management System (EMS)
    - Emergency response
  - Standardize
    - Spill kits
    - Integrity tests
    - Training
  - Statewide office writes SPCC Plans and provides updates





## Sustainable Program - Community

- Practical and feasible
  - Local manager approves designs and procedures
  - Designed systems come with O&M plans
  - Keep maintenance within normal scope
  - Use passive containment when possible
  - Utilize signage





## Sustainable Program - Community

- Moving forward
  - 2 yards added since 2007;  
1 more in 2011
  - SPCC requirements are considered in new fuel station proposals
  - Updated SPCC plans posted on intranet web site
  - Existing plans are being reviewed and updated





# Questions

