

We have a spill. Now what do we do?

April 19, 2023

Jason Christopherson, M.S.
 EHS Division Lead
 Environmental & Safety
 Consultant

Ken Lassa, P.S.
 Senior Consultant/Vice
 President

1

Purpose and Outcome



- What is a spill
- Spill reporting requirements
- Potential spill hazards
- Spills – What does OSHA require?
- Spill response stages
- Spill control equipment
- Examples of “Real World” spills

2

Who is REI?

- Primarily a consulting firm, headquarters located in Wausau:
 - Civil Design
 - Survey
 - DOT construction oversight
 - Environmental
 - EHS Compliance (OSHA, air permitting, SPCC, hazardous waste, DOT Hazmat, EPCRA, etc.)
 - Traditional (due diligence, contaminant investigation and remediation, UST/AST removal, asbestos, etc.)
- Bat phone.....



3

Spill Response

- Emergency 24/7 spill response team
 - Levels C & D only
 - Partner with firms for Levels A & B
- Unique, hazwoper team made up of:
 - Hydrogeologists
 - Professional Soil Scientist
 - Environmental Engineer, P.E.
 - Master of Science degrees
 - Other certifications (asbestos, UST cleaner/remover, certified small water system operators, OSHA 30, etc.)



4

No Limit on Spills

- Happen in good or bad weather
- Can happen at any time
- There never is a convenient time for a spill
- Can be very bad publicity for a company
- Will be posted on social media sites if it impacts the public
- Written plan – EAP, SWPPP, SPCC, ERP, etc.

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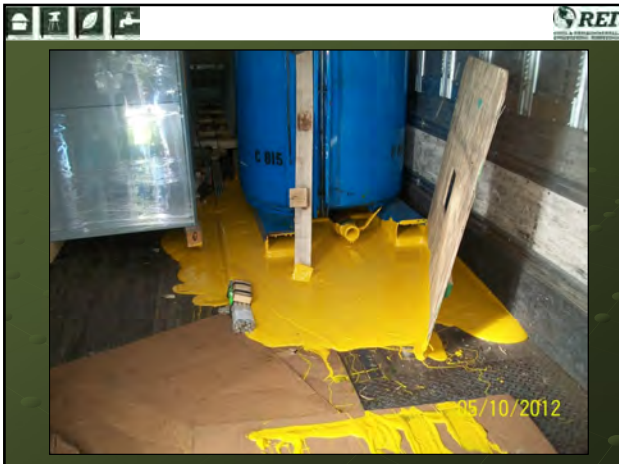
Facts about Spills

- Nobody wants to make the news
 - Recent: Norfolk Southern
- Most commonly fuel
- Often products common in your business
- Many spills due to load shift in truck
- Driver or actions of others could make it better or worse

6



7



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9

Wisconsin Spill Reporting Requirements

- The DNR must be immediately notified of all discharges of hazardous substances that adversely impact or threaten to adversely impact public health, welfare, or the environment.
- Spills that are completely contained and recovered in secondary containment structures are not considered “discharged”

10

When is your spill **reportable** to the DNR?

- **There is an impact to human health**
 - Note: An evacuation is considered a threat to human health.
- **There is an impact to the environment;**
 - Note: Water of the state includes a threat or spill into a sanitary sewer, storm sewer, and/or surface water.
- **There is a fire, explosion or safety hazard;**
 - Note: A slippery road condition is considered a safety hazard.
- **You have not immediately cleaned up the spill;**
 - Note: Has it evaporated or been cleaned up in accordance with NR700-726?
- **The spill was more than the reportable quantities**

11

12

NR706 Exemptions

- Petroleum products completely contained on impervious surface
- Less than **1 gallon** of gasoline on pervious surface
- Less than **5 gallons** of other middle/heavy weight petroleum products on pervious surface
- Less than 250 lbs of dry fertilizer
- Less than 25 gallons of liquid fertilizer (unless RQ applies)
- Pesticides, if amount discharged (when diluted per label directions) would cover less than 1 acre of land according to label instructions (unless RQ applies)

13

Wisconsin Spills - Types

(Average of 1,000 reported spills/year)

Types of Substances Spilled (2014-2016)

Substance Type	Percentage
Petroleum	52%
Other	18%
Mineral Oil	10%
Manure	6%
Industrial Chemicals	6%
Ag Chemicals	4%
Wastewater	4%

<http://www.dnr.state.wi.us/org/aw/r/r/archives/pubs/RR604>

14

Wisconsin Spills - Sites

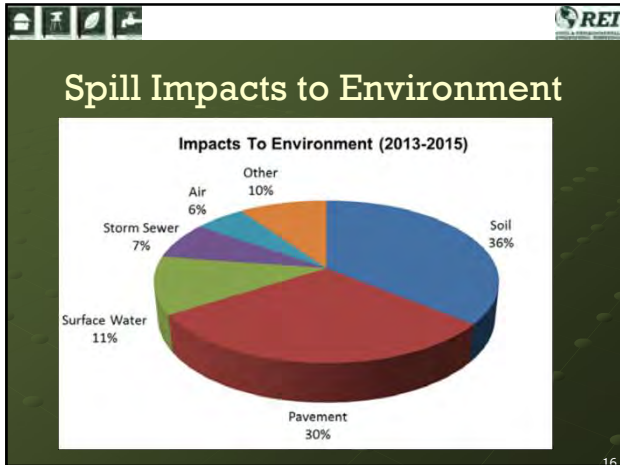
(Average of 1,000 reported spills/year)

Spill Sites (2013-2015)

Site Type	Percentage
Roadway	29%
Other	30%
Private Property	9%
Commercial	9%
Farm	7%
Auto Service	6%
Surface Water	5%
Industrial Facility	5%

<http://www.dnr.state.wi.us/org/aw/r/r/archives/pubs/RR604.p>

15



16



17

Again, if not sure, call and ask questions...

REPORT SPILLS IMMEDIATELY

1-800-943-0003

Wisconsin's 24-Hour Spill Emergency Hotline

Failure to report spills can range from \$25K/day to \$75K/day, and have the potential to include criminal prosecution

18

WDNR Regions-Spill Coordinators

Name	Region	Office
24 Hour Hotline	Statewide	800-943-0002
Cody Herman	Northeast	920-863-9383
Jeff Pappas	Northern	715-528-8544
Trevor Bannister	South Central	608-347-0058
Ellyse Neumann	Southeast	414-750-7530
Jayson Schrank	West Central	715-410-8841

Goal: satisfy NR 708.09
"No further response action"

19

Emergency Response Zone Contract

WPR 10-12-08 (draft)

Zone Boundary

- Northern 1
- Northern 2
- South Central
- Southeast
- West Central

Zone	24 Hour Contact	Primary	Secondary
Northern 1	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111
Northern 2	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111
South Central	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111
Southeast	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111
West Central	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111	John P. Smith, Jr., 715-424-1111

20

Other Reporting Requirements

- Oil Pollution Prevention
 - SPCC, FRP, etc.
 - SPCC Reporting – 1000 gallons, or 2 separate 42 gallon spill events within any 12 month period
 - EPA Regional Administrator
 - Any sheen by definition (properly operating boat motors are exempt)
 - NRC, Coast Guard
 - Used oil regulations, PCB
- DOT Hazmat Incidents Reporting (Incident Report Form 5800.1)
- RCRA, CERCLA, EPCRA, other
 - Reportable Quantities (RQ's)
 - Marine Pollutants

21



Potential Hazards from Spills

- Hazardous atmospheres – know your chemicals!
 - LEL (10%)
 - Oxygen (<19.5%, >23.5%, asphyxiants)
 - Toxics
 - CO (50ppm)
 - H₂S (10ppm, 20ppm ceiling)
 - Vapor density
 - Wind
 - IDLH, PELs, meter variations can indicate potential hazards
- Chemical exposures – skin, eyes, respiratory, ingestion, injection
- Slips, trips, and falls
- Traffic/motorized equipment
- Confined space
- Fires, explosion, exothermic reactions (heat)
- Environmental remediation

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SECTION 2. HAZARDS IDENTIFICATION	
Classifications	<ul style="list-style-type: none"> Flammable Liquid – Category 1 or 2 depending on formulation. Aspiration Hazard – Category 1 Carcinogenicity – Category 2 Specific Target Organ Toxicity (Repeated Exposure) – Category 2 Specific Target Organ Toxicity (Single Exposure) – Category 3 Skin Irritation – Category 2 Eye Irritation – Category 2B Chronic Aquatic Toxicity – Category 2
Pictograms	
Signal Word	Danger
Hazard Statements	<p>Extremely flammable liquid and vapor.</p> <p>May be fatal if swallowed and enters airways – do not siphon by mouth.</p> <p>Suspected of causing blood cancer if repeated over-exposure by inhalation and/or skin contact occurs.</p> <p>May cause damage to liver, kidneys and nervous system by repeated and prolonged inhalation or skin contact. Causes eye irritation. Can be absorbed through skin.</p> <p>May cause drowsiness or dizziness. Extreme exposure such as intentional inhalation may cause unconsciousness, asphyxiation and death.</p> <p>Repeated or prolonged skin contact can cause irritation and dermatitis.</p>



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Consideration Items - Flashpoints of Common Spills

- Gasoline -40 °F
- Methanol 52 °F
- Toluene 40 °F
- Acetone -4 °F
- Isopropyl alcohol
53 °F
- Diesel >143 °F



8

Odor Threshold

- “If I smell something, then I will wear a respirator, or simply evacuate!”
- Acetone – Odor threshold 15-150 ppm, OSHA Ceiling limit of 3000 ppm.
- Methylene Chloride – Odor threshold 250-2500 ppm, PEL = 50 ppm – what is wrong with this?



25

OSHA 1910.120 (Hazwoper)

- Hazardous substance –
 - CERCLA material
 - Biological
 - US DOT Hazmat (49 CFR 172.101)
 - RCRA hazardous waste
- **Emergency Response** – Response to a hazardous substance from employees OUTSIDE the immediate area, does not include incidental releases
- **Incidental Release** – controlled at the time of release by employees in the immediate release area or by maintenance personnel, or poses no potential safety or health hazard (Hazcom training required)

26

OSHA Training Requirements - ER

- Training required: OSHA Hazwoper Standard (29 CFR 1910.120)
 - Hazardous waste site worker (post spill - cleanup, no active spill, 40 hours)
 - Hazardous materials technician (active response for active spill, 24 hours)
 - Operations level – (defensive only for active spill, 8 hours)
 - Other levels (Awareness, HM Specialist, Incident Commander, etc.)
- OSHA training other than 1910.120 (confined space, lockout/tagout, hazard communication, DOT hazmat, fall protection, etc.)

27







Elements of an Emergency Response Plan (1910.120(q)(2)) - continued

- Emergency Medical treatment and first aid
- Emergency alerting and response procedures
- Critique of response and follow-up
- PPE and emergency equipment
- Use of the local emergency response plan (LERP) or state emergency response plan (SERP)

31

Spill Response Stages

- Assess situation and secure scene (usual procedures for responders such as police and fire department)
- Health of individuals involved and safety for those responding
- Recognize release of hazardous or potentially hazardous materials
- Response level required
- Notify responders
- Identify risks
- Report to WDNR
- Clean Up & Evaluation
- Reporting to WDNR, insurance & responsible party

32

Spill Response

- MSDS, placards, labels, ERG, etc.
- Air monitoring – instruments, Draeger tubes, etc.
- Level A – SCBA, fully enclosed chemical suit, full PPE
- Level B – SCBA, full PPE
- Level C – APR, full PPE
- Level D – Full PPE
- “Decon” lines
- Hot zones
- Incident command and communication
- Public interaction/press
- Training – emergency response vs. hazardous waste site worker, hazard communication, confined space, respirator, hazardous waste, SPCC, PSM, RMP, etc.

33




Spill Remediation

- Absorbents
- Excavation
- Soil and water testing
- Neutralizers (acid, base, odor, etc.)
- Pumps
- Vacuum trucks
- Remediation systems

34






Spill Response Products

- Granular absorbents
- Magnetic drain covers
- Absorbent pads
- Absorbent booms/pillows
- Spill kits and buckets
- Overpack drum spill kits
- Train employees on use and location (maps?)



35

Demonstrations

- Hydrophobic – repels water
 - Oil only absorbents
- Hydrophilic – readily absorbs moisture
- Acid/base neutralizer
- Fire retardant
- Have the right tool for the job!

36



37

Internal or External Response?

- Determine risk potential
 - Amount of chemicals, risk of chemicals, location
- Internal spill response
 - Benefit: Quick response times
 - Drawback: Training and equipment expense, capabilities may be limited, finding volunteers
- Contracted spill response
 - Benefit: Experience, increased capabilities
 - Drawback: Response time
- Cost/benefit analysis – Do I have enough spills to rationalize creating an internal team?



38

Various Options

- Full Level A, B, C, and D responses handled internally
- Lesser level response will be handled internally, outside contractor for higher response levels (1910.120 still applicable)
- Train at Operations Level (8-hr) to protect environment (defensive) until outside contractor arrives
- Outsource all spills (other than incidental) to outside contractors

Make sure you have insurance – pollution liability



39

Pollution Liability Insurance

- Spills Law makes you responsible
- Do I have coverage
- How much coverage
- Coverage on over the road trucks
- Coverage on equipment
- How much can a spill cost
- WDNR contract with cost recovery

40

Emergency Spill Response Contractors

- Make sure to have prior arrangements with contractor so they know what you have and if they can respond
- If spill response is necessary, call immediately to give time for responders to get to scene. Often times responder is called hours after incident occurred.
- Prompt calling gets responder to scene in time to begin cleanup as soon as accident scene allows.
- Information to provide to assist responders
 - What is material spilled and estimated amount released
 - Has material entered any surface water or storm drains
 - Who is on site
 - Who is responsible party for spill
 - Has WDNR been notified on spill hotline
 - Unique safety issues present

41




Spill Response

Real world spill scenarios –
can this happen to my company,
and how do I respond?

42

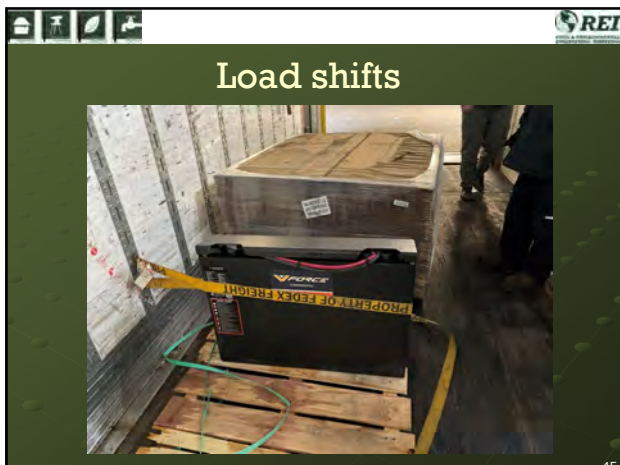


Trailer

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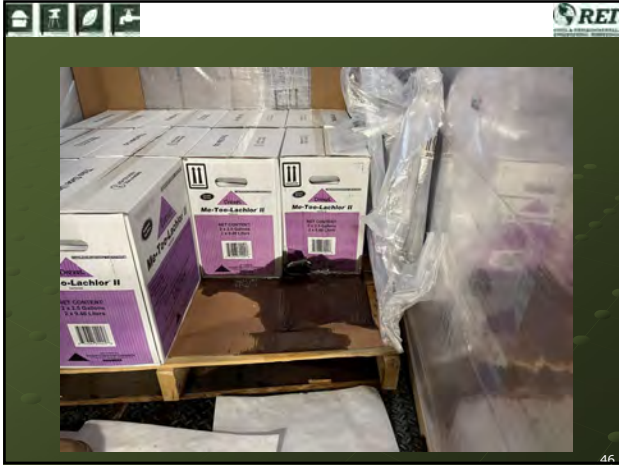


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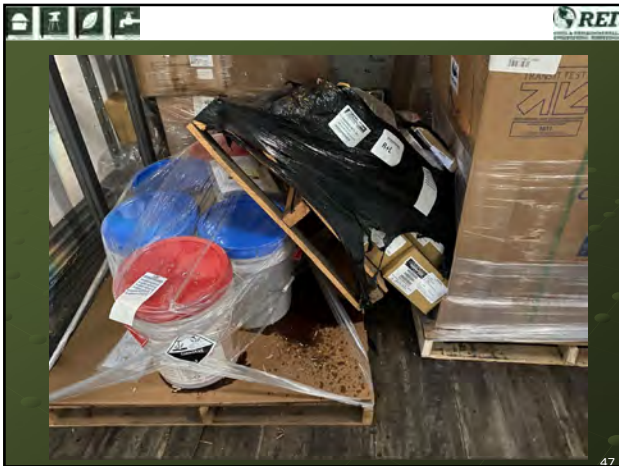


Load shifts

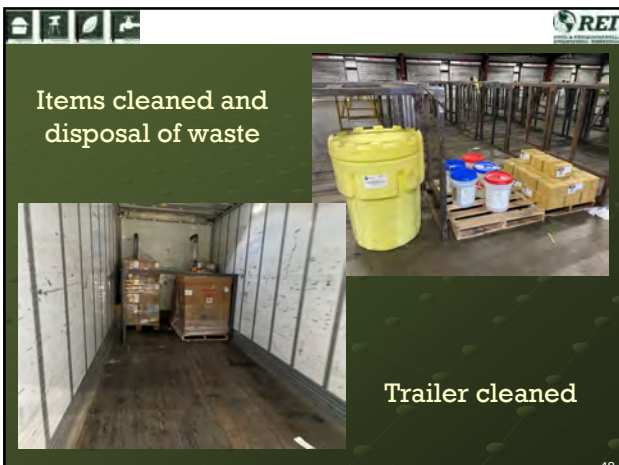
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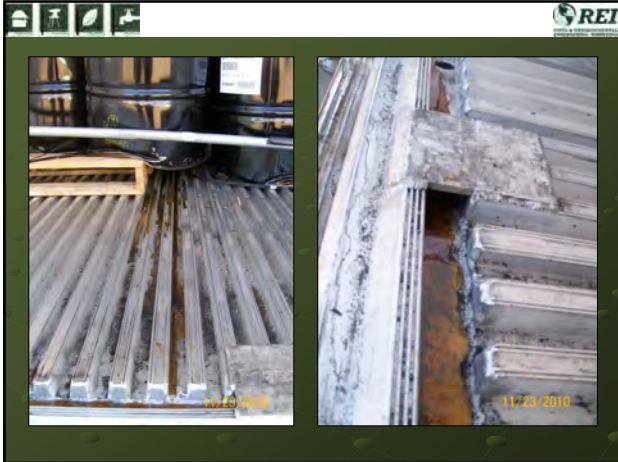
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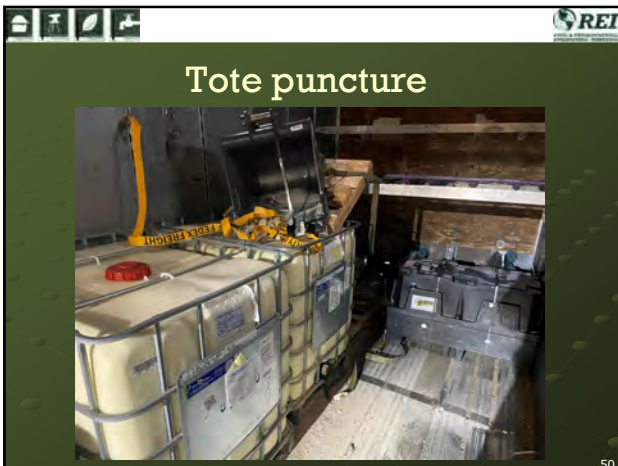
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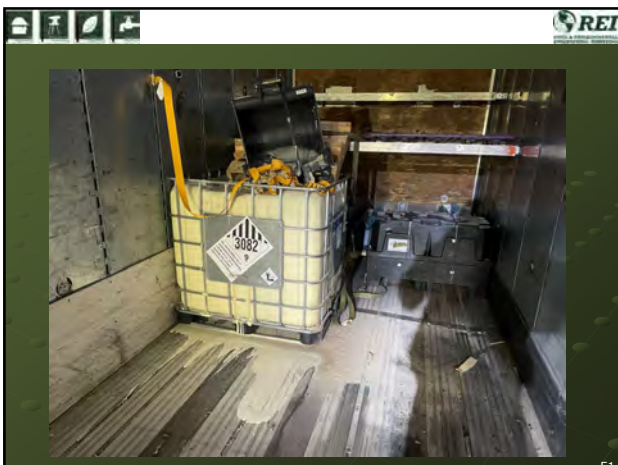


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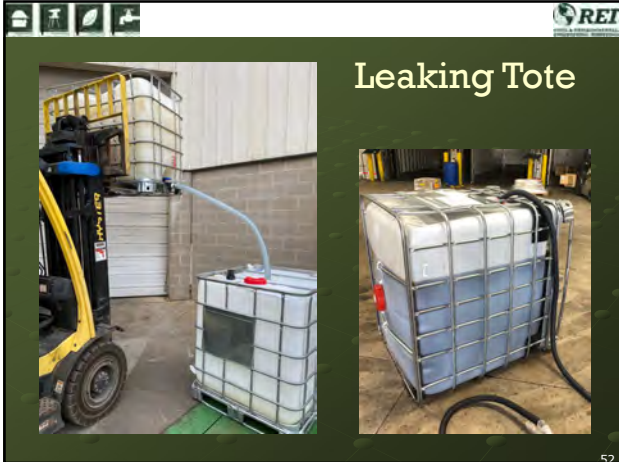


Tote puncture

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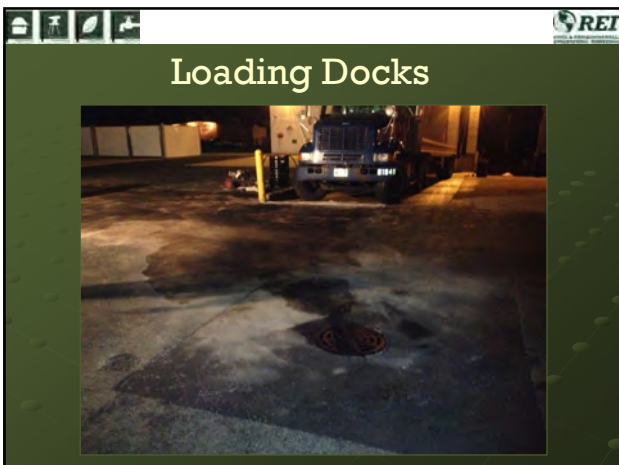
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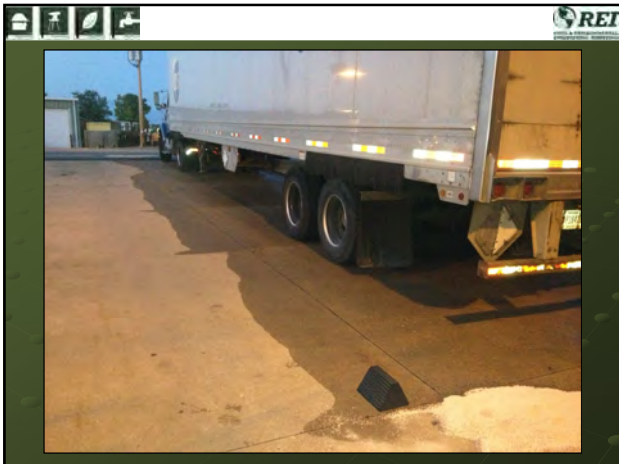
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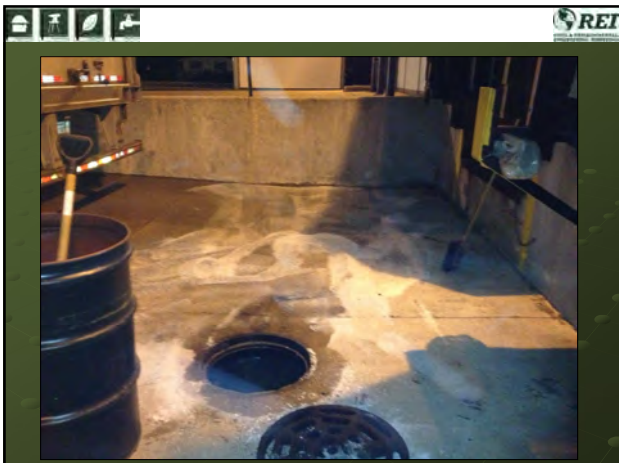
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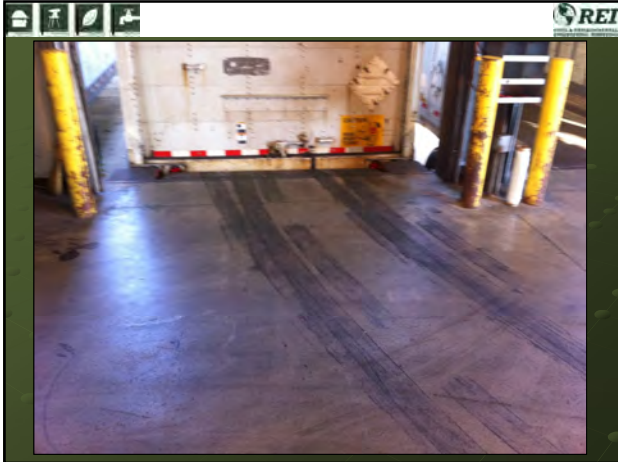
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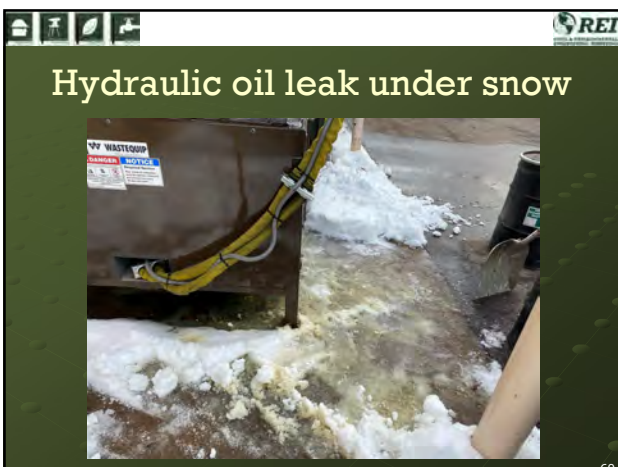


58



Trash/garbage compactors

59



Hydraulic oil leak under snow

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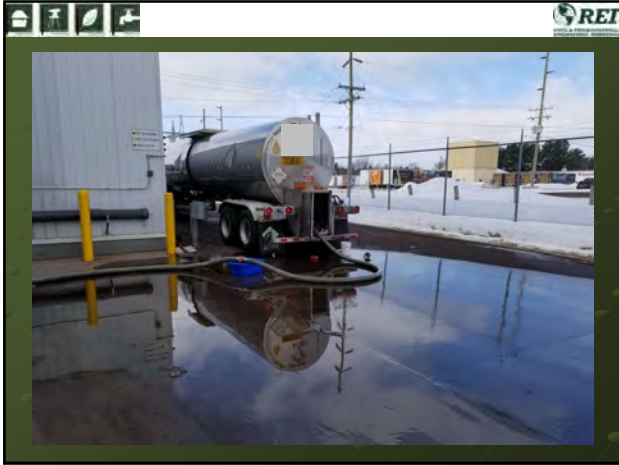
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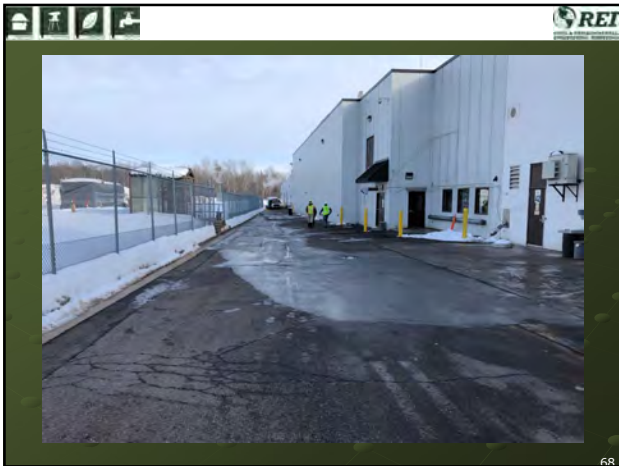
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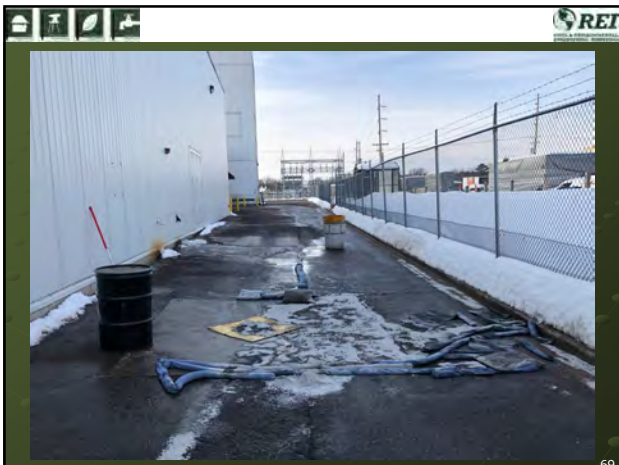
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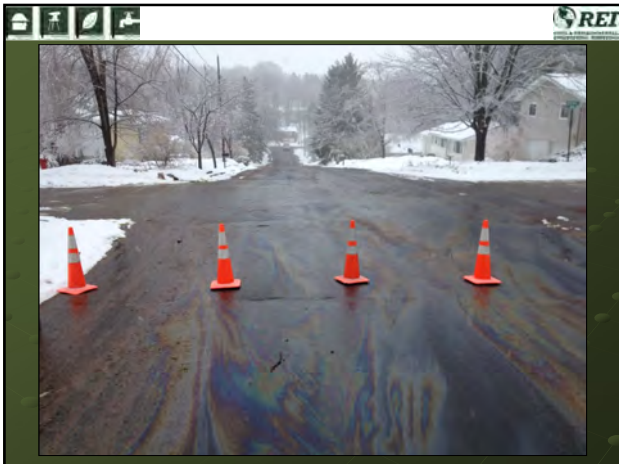


69



Storms bring down power lines

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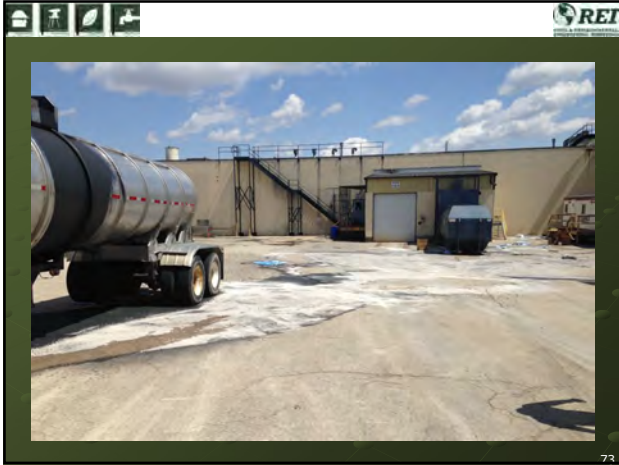


71



Fires – PFAS foam used perhaps?

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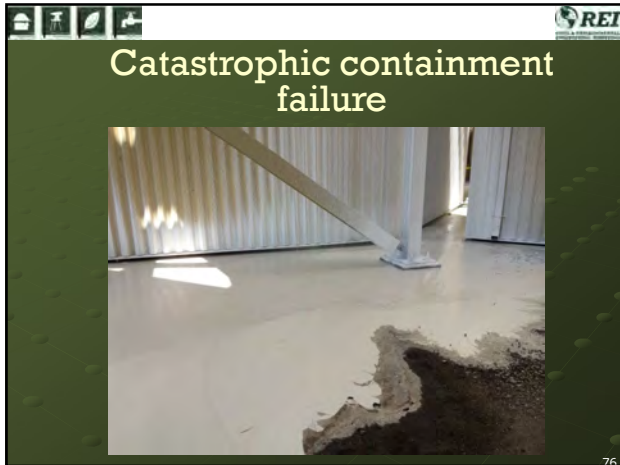
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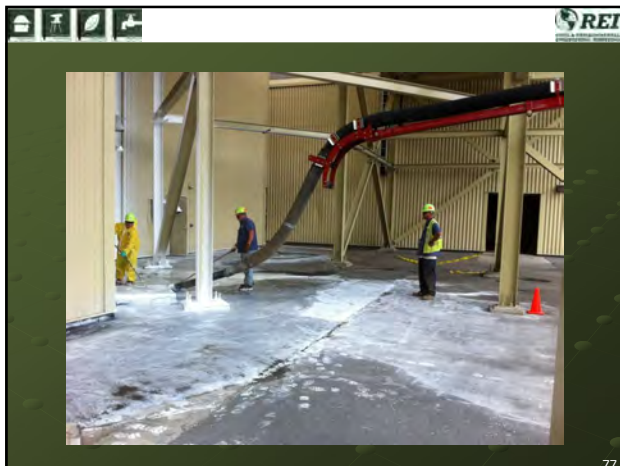
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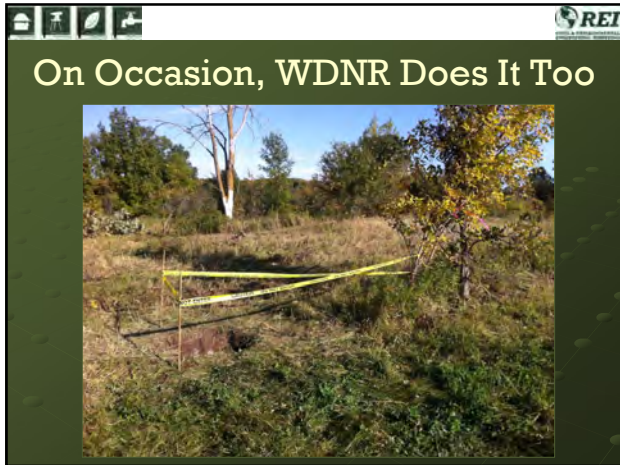
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81



82

Protect Your Home and Business - ASTs



Aboveground Storage Tanks (ASTs)

- Check your storage tank's stability
- Typical 250 gallon tank supports a ton of fuel oil when full
- Necessitates a strong and stable supporting structure.
- Spring thaw


83

Basement Tanks

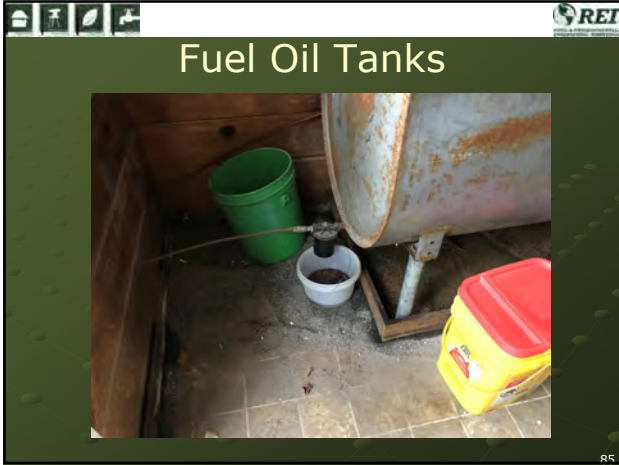
Disconnected fill pipe that leads into your basement

Cancel service with your fuel oil company immediately

Remove fill pipe or secure the cap to make accidental filling more difficult



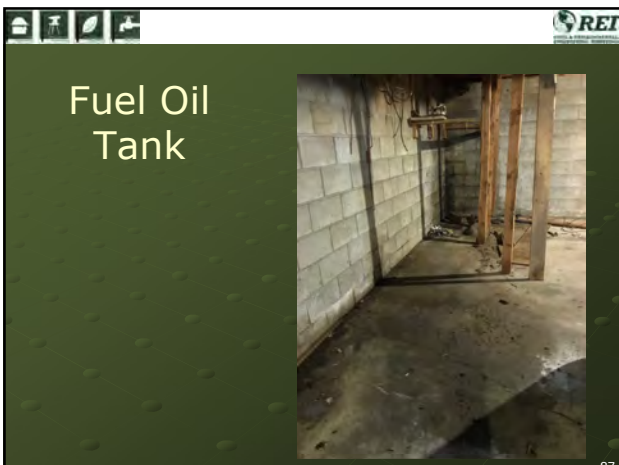
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85



86



87



Thank You!

For more information feel free to contact us!



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REI Engineering, Inc.
4080 N. 20th Avenue
Wausau, WI 54401
Tel: 715-675-9784
Fax: 715-675-4080
REIengineering.com
