

US EPA ARCHIVE DOCUMENT

Rapid Response Trailers for Inland Refineries – Focus on Tier 1 Response Needs

Freshwater Spills Symposium

St, Louis
April, 2009

Brian Hansen, Bill Lerch, Tommy Tomblin, Tom Coolbaugh
ExxonMobil



Response Priorities

Response objectives, in general, are in the following order:

- Protecting the safety and health of responders and the public
 - Reducing the impact to the environment
 - Protecting property
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- Speed is essential, but every spill is unique and may be categorized according to three tiers

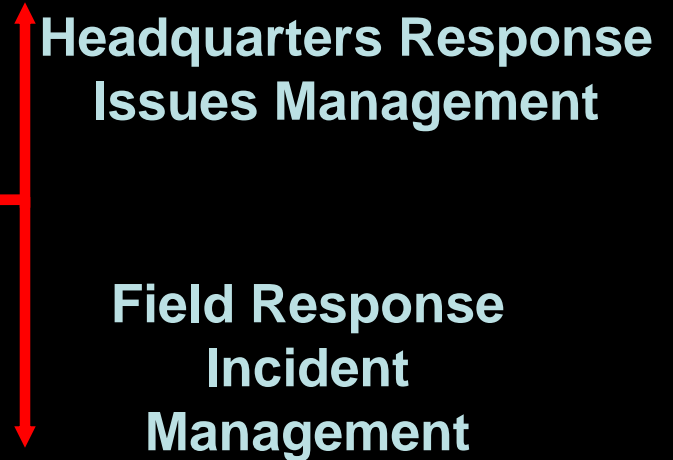
Reference



Tiered Responses

- **Tier 1**
 - **Accidental discharges occurring at or near a vessel or facility as a result of disruption in routine operations. Impacts are low and in-house capability is adequate**
- Tier 2
 - Medium-size spills occurring within the vicinity of vessel or facility as a consequence of non-routine event. Significant impacts are possible and external (regional) support for adequate spill response, e.g., assistance from a local spill cleanup cooperative, is required
- Tier 3
 - Large spills occurring either near or remote from a vessel or facility as a result of a non-routine event, requiring substantial resources and support from national or worldwide spill cooperatives to mitigate effects perceived to be wide-reaching, i.e., spills of national or international significance

Tier 1 Response



- Small and Under Control
- On Company/Customer Property
- Managed by Site/Vessel
- Site Equipment Sufficient
- Local Media/Public Attention

Tier 1 Response Capability

- In many environments, Tier 1 spills may become significantly more severe if not responded to in a timely fashion
- It is imperative that appropriate spill response equipment be available and readily deployable at a moment's notice
- A primary goal is to have fully stocked trailers available that may be easily transported to a spill site without need for specialized vehicles
 - The inventory of response equipment has been selected such that two individuals can maneuver its contents
- Spill response equipment may be transported to the site of any Tier 1 spill, even if it is not readily accessible, and an effective spill response may be undertaken

Examples of Tier 1 Spills

Can consist of a wide range of scenarios

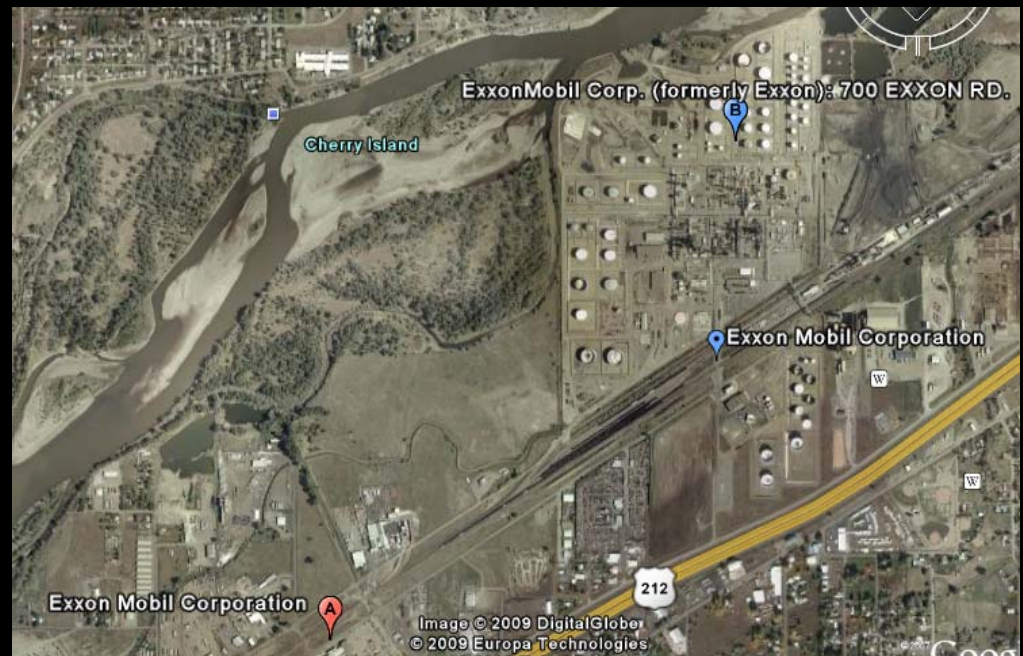
- Overflow of sumps or oil-water separators
- Leakage or overflow of tanks
- Leakage from valves, pipelines or transfer lines
- Tank truck/tank car rollover near water

Rationale for Response Trailers

- Desire to establish small tactical Oil Spill Response (OSR) teams at key ExxonMobil facilities
 - Rapidly respond to any incident within a nominal 250 mile radius
 - Have the right response equipment
 - Well trained personnel
 - Ability to response across North America
- Establish Inter-functional team of OSR experts to assess incidents
- Purchase trailers and equipment for each team designed for small spills in potentially remote locations

Potential Location for Tier 1 Trailers

- The Billings Refinery site is located on 720 acres abutting the Yellowstone River and other large habitat areas. In addition to building nesting platforms for ospreys, employees and their families also constructed 30 American Kestrel nest boxes and monitor them on a regular basis. The American Kestrel, often known as the “Sparrow Hawk,” is the smallest North American falcon.
- Relatively remote
- Near water
- Environmentally sensitive



Example of Tier 1 Trailer

- Self contained
- Well organized
- Managed without large, specialized vehicle
- Managed by 2 person team
- Easily deployed and transportable to wide range of potential spill sites



Planned Equipment List

1 – 100' extension cord	10 – pairs of safety glasses	1 – household broom
8 – rain gear jackets	2 – safety goggles	4 – pitch forks
4 – rain gear pants	10 - hazard guard II 3xl coverall suits	1 – light stand
36 – yellow booties 2xl	1 – pair of hip waders size 10	3 – motor hoes
5 – road cone bases	10 – pairs of booties/low spill boots	6 – street cones
1 – box of green gloves	1 – funnel	3 – bags of absorbents
9 – hazard-guard II 3xl coverall	5 – quarts of oil 10W30	1 – Rubbermaid cooler
3 – bungee cord sets	2 – boxes of rags	1 – spool of 5/8 line
5 – rolls of duct tape	1 – container of hand cleaner	3 – spools of 3/8 line
3 – razor knives	1 – bottle of GOJO	1 – heater
3 – hand scrapers	1 – container of pumice hand cleaner	3 – rolls of garbage bags
1 – pack cyalume light sticks 4/pack	2 – hip waders and rain gear	<u>Absorbent Section of Trailer</u>
1 – scrub brush	2 – rolls of caution tape	10 – absorbent boom
1 – spill curb and drain blockage	1 – generator	10 – bundles of pads
12 – packs of white cotton gloves	2 – wheel barrows	10 – bundles of sweep
12 – hand scrub brushes	1 – ax	3 – white blanket rolls
7 – packs of black gloves	4 – garden rakes	1 – black carpet roll
2 – cases of white Tyvek 3xl	4 – squeegees	1 – box of snare
2 – life jackets	1 – sidewalk scraper	2 – rolls of visqueen plastic
2 – fire extinguishers	6 – chairs	Additional items for AMPD
3 – face shield harnesses	2 – tables	10' Jon boat w/ 6HP motor
	1 – hand cleaning station	1000' of 10 inch boom
	2 – sledge hammers	Drum skimmer
	2 – heavy duty brooms	Powerpack w/ pump
		Trashpump
		50' suction and discharge for both pumps above
		FasTank
		4kw generator

Equipment Staging Design

Trailer Inventory

Trailer Inventory																					
Safety Cones			Heater			Rakes - shovels- ext. poles															
Water Cooler			5 10W30 Oil 5 Quarts, 4 10W40 Oil Quarts, 1 Funnel			2 Rolls Caution Tape, 5 Rolls Duct Tape, 9 Bungee Cords, 3 13		3 Face Shields, 2 Pair Goggles, 10 Pair Safety Glasses 10		10 Hazard Guard Saranac Suits 9		9 Hazard Guard Saranec Suits 4		2 Cases White Tyveks 1							
Open Spool 3/8" Nylon			4 Spill Curb Sewer Blockers			1 Triangle Warning Kit, 1 100' Extension Cord 14		3 Pair Chest Waders 11		11 Rain Jackets, 4 Rain Bib Pants 8		32 Pair Yellow Booties 5		1 Case Yellow Tyveks 2							
3/8" Nylon Rope			3/8" Nylon Rope			Nylon Spool 5/8" Rope			Open Area			2 ABC Fire Extinguisher 15		3 Gojo Hand Cleaners, 2 Boxes Rags 12		2 Life Jackets 9		7 Packs of Black Poly Gloves 6		8 Packs Cotton Liners, 1 Box Surgicals 3	
Cone Bases	Speedy Dry		Speedy Dry		1 Box Drum Liners			2 Rolls Bags			Open Space										
Speedy Dry	Speedy Dry		1 Box of Bags			Roll		1 Spill Curb in Box			1 Shade Tech Tent										
Floor																					

Summary

- Tier 1 spills may become more severe if not responded to in a timely fashion
- Potential spill sites may be remote and not easily approached with bulky equipment
- Small tactical OSR teams are being established at key ExxonMobil facilities to be able to rapidly respond to incidents within a nominal 250 mile radius
- A key design element is to have all equipment manageable by two individuals and easily deployed at a moments notice