Multi-location, Multi-Program Exercise - case study

Industry Sponsored Exercise

Kent State Stark, Canton, OH

August 13-15, 2013

Marathon Petroleum Company LP

Background

- Marathon Petroleum has been moving toward ever more complex exercises

- With DWH and Enbridge-Marshall releases, the bar had been raised a magnitude, or more. It also opened up opportunities to practice Unified Command

- Some past lessons learned identified a low involvement from Security/Intel Officers

- Annual drill meets PREP requirement, provides training through practice opportunity, and allows Marathon Petroleum to measure itself against the global response community

History – Yearly Top Tier Team Tabletop

- Earthquake Drill, Robinson, IL 2006

- SONS 07, Evansville Venue sponsor 2007

- Houston, Hurricane Drill 2008

- Multi-region Nexus, Huntington, WV 2009

- Offshore Blowout, Lafayette, LA 2010

- Multi-location Drill, Tampa & New Orleans 2011

- Multi-business Unit Drill, Galveston, TX 2012

- Security/Cyber/Spill Exercise, Canton, OH 2013

Exercise Overview

- Multi-location, Multi-incident, Multi-program

  - Multiple releases, caused by "IED & Cyber" attacks
    - Light Utica crude oil mixture from refinery tank overflowed into flood plain
    - Heavy Dilbit mixture from a pipeline leaked into state scenic waterway

- Tier two teams briefed larger Unified team in a transition meeting

- Two full planning cycles in objectives; only one completed

- Law enforcement integrated with Security/Intel/IT section

- Organization and section specific goals

- One press briefing meeting

Planning the Exercise

■ HSEEP lite – More meetings, more overlap in agenda

■ Planning meetings held at Refinery, Kent State Stark University Center and Township FD training building.

■ Incorporating special design elements

- Cyber attack on process controls

- Exploded and unexploded IED's

- Forced manual planning efforts

- Agreed on one ICP for two events

- Minor boom deployment

Planning, continued

- USEPA

- OEMA

- OEPA

- Stark Co. EMA

- Stark Co. Sheriff

- Stark Co. LEPC

- FBI

- OSRO – Clean Harbors

- Marathon Refinery

- Marathon Pipeline

- MPC Corporate

Exercise Scenario

- Canton refinery

    - Crude tank overflows when indicating 85% full

    - Crude follows drainage to Hurford Run, Nimishillen Creek, Sandy Creek

- Tuscarawas River

    - IED ruptures crude oil pipeline

    - 2nd IED found at upstream block valve.

Overview

Refinery release

Pipeline release

Conrail

Hurford Run Creek

Canton Crude

Conrail

B and

I-30 E

Tuscarawas River

and Western Railroad

Tuscarawas River

Bolivar Dam

The Timeline

- T-1 day: Network infection shuts down offsite internet

- T+0: Leak at Pipeline and Refinery

- T+0 toT+4 hrs: Local response teams manage event

- T+4 hrs: Turnover to larger IMT

- T+8 hrs: Internet restored, virus discovered in tank level controller

- T+12 hrs: former employee and contractor discovered to be felons with false identity

- T+16 hrs: Press Conference

- T+20 hrs: IAP delivered EndEx

- T+22 hrs: Critique/Hotwash

**ICP – Kent State Stark
University Center**

**Press Conference
Phase 1 Above
Phase 2 Left**

IMT Objectives

- Annual Tier 3 IMT Exercise is practice for an all volunteer team

- Involve Team(s) at a higher level of Unified Command

- Push Unified Command (Unity of Response) down into sections

- Work one complete planning cycle

- Involve Federal, State, Local, NGO and private in UC

- Major focus on Security/Terrorism
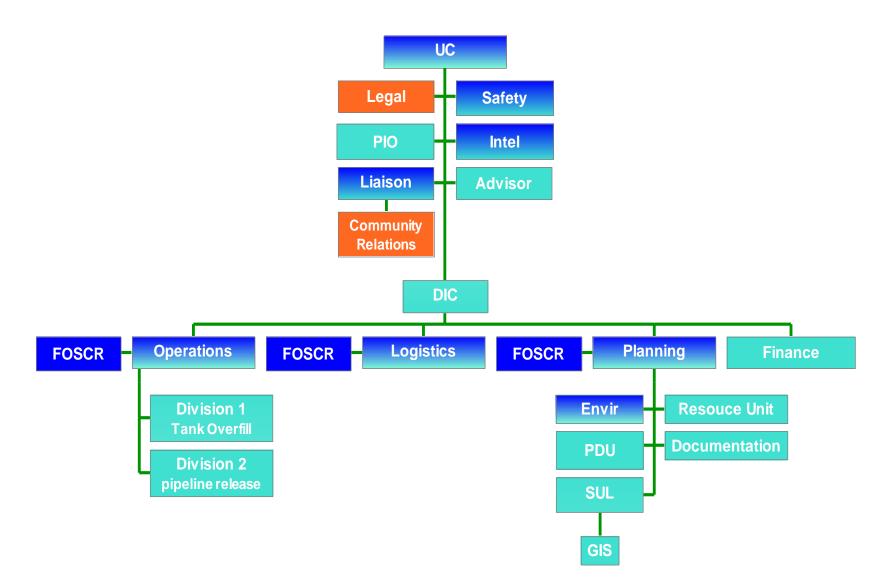
Artificialities

- 24-hour broken daylight

- Size of the IMT

  - Budget concerns allow only one exercise per year

  - Two shifts – rotate leads

- Tier 2 teams partially integrated

- Marathon Petroleum filled lead roles in sections.

- No weather effects

Tier 3 Structure w/ Unity of Response

Unified Response at Work

Safety and Envir Discussion

Turnover Meeting

OPS

MIB-Intel

Practice makes perfect – Wax on, Wax off….

Things that Went Well

- Locations/Facilities
- Good agency participation
- Focus on manual planning
- Training pays dividends
- Embedding PDU
- Balance of stress and simulation is close
- Two phase press conference

Opportunities for Improvement

- Keep pushing the training

- Embed SimCell players and provide them more direction
  - Enhance air monitoring presentation

- Recruit local public responders to play at a high level

- Keep local talent engaged through entire drill

- Keep focus on timeliness of Info to Sit Stat board

- Create Turnover Template for tier 2 teams

Improvement continued

- Keep pushing NIMS savviness higher

- Premeeting coordination between planning and UC

- Reliance on WebIAP as tool instead of knowing process

- Bolster understanding of non player roles

The Long List of Opportunities for Improvement

CERT Drill 2013 Exercise Debrief

Critique Item	Recommended Action	Due Date	Responsible Person
Drill Mechanics			
Explain role of Controllers (email) and introduce them	Add to Drill guide		Pat
Keep Tier 2 teams separate from higher level players	Coordinate with agency on when to show up		all
Need to Embed circuit players**	OPS, RUL, Liaison add to drill checklist		Pat
Log in air monitoring results	Need a dedicated let to deal with on the fly adjustments		Tom
Presence of and Coordination with agencies**	Provide the right level of stress, realism and guidance review checklist		Pat
Lack of software forced basics*	plan for a longer e-free time		Pat and Tim
Local talent and tools were missing*	Set expectation during planning process that key individuals stay and bring their tools with them. Emphasize CERT web during Section meetings		Pat
Announce drill time	7 plus X hours add to drill checklist		Pat
Tables and Sit Stat board	Do we need a better balance, Practice briefings		Whitney
Complexity was value added*	revise drill checklist		Pat
Marathon Values Public Input			N/A
RUNTDIS Dallas exchange from simcell was ignored.	Predrill briefing checklist, add to drill book		Pat
Great opportunity for training at state level	address during drill planning meetings		Pat
SIMCELL map lacked detail	Add a second road style map, put local and/or planning expertise in SIMCELL, add instruction to SIMCELL input sheets		
Simcell voice mail was absent	Add instruction to SIMCELL package, consider using cell phones		
Transition from paper to WebIAP was smooth	none		complete
Continue inviting PR firms and Piers rep	none		complete
Include volunteer issues into drill design***	continue working this		Pat
Kent state Ozark - University center is benchmark***	6000 ft so plus 2 - 1500ft square meeting rooms plus 4 small conference 700, revise checklist		Pat
OPS needs a projector	Make it so add to drill checklist		Pat
Consider a 48 hr drill with 12 hr shifts	NO		complete
Training			
Area of operations not clearly communicated to SUL and maps borrowed too frequently	Embed a GIS person in Ops		Tim and Whitney
all groups need to go through SUL for maps	reinforce with section specific meeting.		all
Training is paying off**	continue with higher level training to increase knowledge bas and depth		Tim
Security awareness Notification and evidence collection	emphasize in Section training		all
Need a consistent template for Sit Stat board Setup*	WNI needs to be updated, SUL needs to be apprised of direction	1/1/2015	Whitney
additional training needed for sections (from PDU)	ongoing		Whitney
Keep working on 215 - 234 flow and content**	Better Management of prep for tactics meeting conflicting tools, Lack of Chain of command within OPS		Tim
Response Management/Tools			
LMSI as coaches was very positive*	continue		Tim
Section Leader Communications*	OPG to review importance of Section Leads to communicate Meeting results with Section personnel after section meetings.		all
Hand off was rough	Develop a better Transition template review with tier 2 teams		Pat
Some old IMH are still being used	identify when an update is made		Whitney
Identify incident name and objectives sooner (from SUL)	Investigate with SUL		whitney
Section leads should not be involved in developing forms	reinforce with sections		all
did not include state in decision making early	Reinforce with IC the state responders may be overwhelmed		tim
Some goals should focus on compliance. Think SMART of regulatory violations	reinforce deadlines are artificial		Tim
PIO should sit in on all key meetings to take notes for public comm's	reinforce with all JIC meetings		Tom
Ensure action items get assigned to a section/unit	reinforce with DOC		whitney
Marathon sets the bar in Stark Co.	none		
AMT under Safety or Environmental or OPS	Embed a safety person to run AMT under OPS		Tom
Dep of Health under Safety or Planning			Tom
Need colored vests and to use them** (but not dark blue)***	buy additional vests and get rid of old junk		Tom
Define the OPS/security link	Add responsibility for intersection Liaison		Pat and Tim
ICS Section - Critique Items/Recommended Actions are not entered into ALHTS as these items are reviewed and addressed by each ICS Section.			
Incident Command/Unified Command			
Need to improve communications to SUs***	Timeliness is still an issue. Drill artificiality. Embed a field observer in OPS		whitney
Remember Unified command means one message from all (USEPA)	Reinforce with IC's		Tim
DIC did a good job communicating into each section	none		complete
IC and planning chief should meet prior to meetings to hammer out the tone and expectations of meetings	Reinforce with IC's and PSC's		Tim
Operations			
OPS chief needs to keep appraised of common resources in multiple divisions	reinforce with section specific meeting.		
Create a wildlife branch headed by an Environmental person			
Planning/Situation Unit/Resource Unit (DUL/PDU)			
transition meeting planning was not advertised very well	Review with section prior to drill		tim
SUL getting to understand the roles through Practice and Training*	none		
Planning section chiefs did not update the SUL on meeting schedules	Reinforce with PSC's that changes have to be communicating		Whitney
SUL got conflicting guidance from MPC, TRG, EMSI, Simcell*	Investigate Equipment lists don't invite Chad		whitney
Continuous projection of maps worked well	none		complete
SUL needs bigger table and note board	revise layout diagram with size and specific needs		Pat
PDU printer works great	Label existing printer		Pat
Safety			
OSHA gave great advice	none		Complete
Safety was weak at the sit map. Detailing safety zones and data	Safety is lazy		Tom
Air monitoring didn't include Benzene	Safety is lazy		Tom
Safety wasn't involved in 215 process	throw a grenade		Tom
Need to expand the Safety Section Toolbox	Safety is lazy		Tom
Logistics			
Starting with a paper requisition worked very well***	Add to toolbox		Pat
Security			
Raise awareness on resource requests specificity and Data entry to WebIap	followup with resource request process		Pat
PIO/JIC			
Consider including phone bank in drills w/ talking points	Keep on radar for future consideration		Pat
Liaison			
Consider Adm. Position for CR/Liaison**	Advise CR to bring admin help, again		Tom
Liaison/CR need training on their position and with Piers **	address in section meetings		Tom
Legal			
Comm with Security and PIO greatly improved	Make aware in section meeting		Pat
Legal was underutilized	have sparse float with sections to gain better understanding		Pat
Consent order was not known in a timely fashion	Emphasize with IC's that anything beyond NOFI needs quick review		Tim
Finance			
Position training and Web IAP entry	Provide individual training, Schedule for new adds		Pat and whitney
Tweeks to WebIAP to catch errors	Followup with finance		
Environmental			
Provide a point man for Notifications	Section breakout discussion		Pat
Sampling and management plans need more detail (from OEPA)	raise awareness of detail from templates		Pat
209 forms don't portray wildlife metrics very Well	Add an alternative 209 form		Whitney
Embed environmental in OPS works	add to IMW		Whitney

The Exercise Stats

- 6 planning meetings in 3 locations with 28 planners

- Two-and-one-half days spent in exercise

- 204 participants representing 27 organizations

- 1 Full planning cycle

- 5000 feet of Cat5 cable

- 100 feet of boom deployed

Summary

- Drill planning process B

    - Need more engagement by locals

- Marathon IMT A-

    - Improving through higher level training

    - Continue Training to a higher savviness in national response system

- Unified Command, OPS, Environmental A+

    - Major step up by planning

- Turnover meeting improving

Marathon Petroleum thanks:

- FBI
- USEPA
- OSHA
- OEPA
- Stark EMA
- Stark LEPC
- Canton Twp FD
- Canton FD
- Canton Ambulance
- Colonial Pipeline
- Tristate Bird Rescue

- Wipro
- RENTSYS
- Clean Harbors
- EMSI
- WPNT
- The Response Group
- GRS
- URS
- Arcadis
- CTEH
- Blackbox

Questions?

Pat McCaffrey
psmccaffrey@marathonpetroleum.com
419-421-3058