

**AFPM & API
ADVANCING
PROCESS SAFETY**

**ANSI API RP-754
Quarterly Webinar**

Feb 10, 2015

*Process Safety Performance
Indicators for the Refining and
Petrochemical Industries*



 **AFPM**
American
Fuel & Petrochemical
Manufacturers

energy 

Purpose of RP 754 Quarterly Webinars

- To support broad adoption of RP-754 throughout the Refining and Petrochemical industries
- To ensure consistency in Tier 1 and 2 metrics reporting in order to establish credibility and validity
- To share learning's regarding the effective implementation of Tier 1-4 lagging/leading metrics

Today's Agenda

- 2014 Tier 1 and Tier 2 PSE data submittals
- Suggestions for effective event descriptions
- Public Reporting
- Update on RP-754 revision activity
- New and improved Event Sharing
- 2015 webinar dates – mark your calendars

2014 Tier 1 and Tier 2 PSE data submittals

- RP-754 metrics program is a joint API-AFPM program
- Both API and AFPM have set **February 28th, 2015** as the deadline for submitting your 2014 data.
 - Please submit your data to ***both*** associations.
 - It is a requirement to be a member of AFPM but not API to submit data. API accepts all data submittals from industry.
- Submit facility data for all U.S. and Non-U.S. refineries as well as U.S. and Non-U.S. petrochemical facilities.
- You may submit your data using the one standardized spreadsheet used by both trade associations (avoiding extra work for you).
 - The only change in the spreadsheet from last year is there are now two separate Refining process unit selections for “hydrotreating” from “hydrocracking”.
 - Submit one spreadsheet for your company including data from all your sites.
- Or you may submit your data using each association’s on-line portal.

2014 Tier 1 and Tier 2 PSE data submittals

Contacts:

API:

- Email spreadsheet directly to Hazem Arafa at arafah@api.org or,
- Load data into API PSE portal located at <https://pseportal.api.org/>

AFPM:

- Email spreadsheet directly to Anna Scherer at safetyportal@afpm.org or,
- Load data into AFPM Process Safety Metrics portal located at [AFPM Safety Portal](#)

2014 Tier 1 and Tier 2 PSE data submittals

- Encourage the individual(s) who submits your company's data to submit your data on time. This allows for thorough trend analysis and provides you with a meaningful outcome!
- Encourage the individual(s) who submits your company's data to provide robust **“Brief Incident Descriptions”**:
 - The following slides give examples of not-so-good and good descriptions...

Event Descriptions that are not helpful:

- Examples of event descriptions that are not helpful for data analysis (i.e., need to be expanded)

Loading Rack Spill

Pipeline Leak

Fire on E-1 Exchangers

Sump vent stack vapors

Tank 143 overfill

Piping failure on west Tk-52 pump.

Charge tank was overfilled

- Others leave you wondering if the event was even a Tier 1 or 2 event.

Power grid shut down resulting in loss of vapor recovery systems

Flared hydrogen sulfide as a result of a unit shutdown

Better, but could be improved with a little more detail

Hydrogen Sulfide was released due to a tubing fitting leak on the Hydrogen Recycle Compressor's discharge flow transmitter.

Why did the fitting leak?

LOPC on tank mixer packing due to loss of lubrication caused by continued use below the minimum level for mixer operation.

Why operated too low?

1" bleeder broken on exchanger head causing an LPG release and fire.

How was it broken?

Some were really good

A flash fire occurred in the FCC reactor when contractor employees were pulling the spectacle blind to change new gaskets on the blind. The Main Column was lined to the flare and flare gas flowed through backwards up the vapor line into the reactor catching fire. The flash fire resulted in one contractor employee receiving minor burns.

Leak on a fractionator Reflux line located in the pipe rack due to corrosion. Corrosion was caused from a leak in a process water line dripping on the reflux line. The Reflux pump was shut down and the line was isolated.

Crane struck crude unit piping at the desalter while removing sump pump. There was a crude release which found an ignition source resulting in a minor fire.

LOPC from overfilling small caustic tank due to malfunctioning level indication and backflow.

Leak on distillate line caused by corrosion/erosion.

- These offered both consequence(s) and a cause

Follow up

- Please reach out to the person in your organization who submits your annual RP-754 data and share this presentation!
- More detailed event descriptions will greatly help the annual industry data analysis.

RP-754 Public Reporting

- RP-754 Section 10.2: Transparency

“Companies should have a philosophy of openness and transparency...”

- RP-754 Section 10.3.1: Broad Access (Nationwide) Public Reporting

“Annually, each Company shall publically report Tier 1 and Tier 2 PSE information...”

“Reporting may be directly from an individual company or through industry trade groups...”

- In 2015, AFPM Board of Directors and API approved posting the following information on their websites.

- Tier 1 industry aggregate count and rate (2012-2014)
- Tier 1 industry 3-year average count & rate (2012-2014)
- Tier 2 industry aggregate count & rate (2013-2014)
- Tier 2 industry 2-year average count & rate (2013-2014)
- Tier 1 individual company count & rate (2014)*
- Tier 1 individual company 3-year average count & rate (2012-2014)*

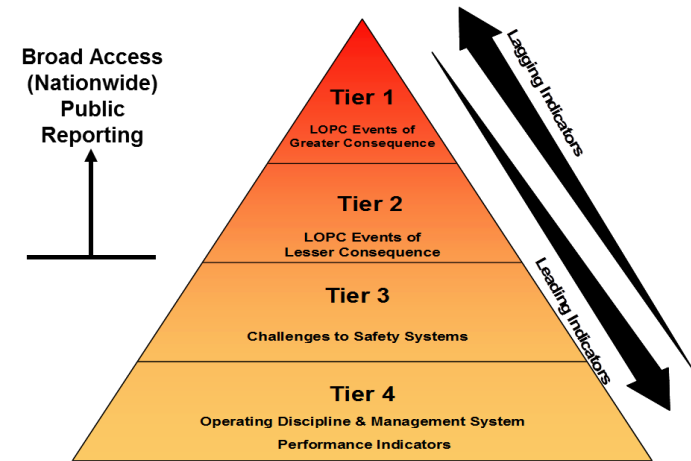
* 1st year for public reporting of individual company data

RP-754 Revision Committee - Status

- Guiding Principles:

- Revision committee members unanimously agree that RP-754 is not broken; it is doing what an indicator is intended to do.
- Evidence indicates it is working within our Companies to focus attention on process safety and to drive performance improvement.
- The revision process is focused on improvement rather than any fundamental change.

- Target is to ballot revision in first quarter 2015
- Anticipate publishing revision in 2015 CY
- Trade associations will collect 2015 data based on original version criteria, allowing time for companies to implement any needed changes
- January 2016 – companies begin collecting data based on new version



EVENT SHARING – New and Improved

- You asked & we responded -
 - Ability to upload photos and supporting documents
 - Disconnect classification for 754 Tier 2 Events from assumption of High Learning Value Event (HLVE)
- Additional choices in data hierarchy to more accurately capture what happened:
 - Mode of Operation (i.e. Normal)
 - Equipment at Point of Release & Equipment involved in Initiating Event
 - Cause
 - Fire Type
 - Explosion Type
 - PRD Activation
- Resolution of conflicts with Internet Explorer versions (i.e. IE 10 vs. Google Chrome)
- Go-Live date of 12/1/2014
- **Webinars on the Event Sharing changes occurred in December and January**

Process Type*:

Material Type*:

Mode of Operation*: [Click To Hide <<](#)
Current Selection = Normal/Steady State Operation

- Start-up
- Planned shutdown
- Emergency shutdown
- [-] Normal
 - Sampling
 - Loading/unloading
 - Equipment Prep/taking out of service for maintenance
 - Equip Commissioning/putting in service after maintenance
 - Switching equip (pumps, filters/etc)
 - Filling/Draining
 - Mixing/Handling Chemicals
 - Operator Performed Maintenance
 - Changing lineups
 - Steady State Operation**
 - Other
- Upset
- Turnaround
- Routine maintenance
- Temporary
- Other

[Reset Mode of Operation](#)

2015 RP-754 webinars

Mark your calendars:

- 1st qtr - today (Feb 10, 2015)
- 2nd qtr – AFPM National Safety Conference in lieu of webinar
- 3rd qtr – July 21, 2015 (10-11am ct)
- 4th qtr – Nov 10, 2015 (10-11am ct)

Resources

- API
 - API RP 754 Fact Sheet
 - Series of four webinars presented in fall 2010 (available for viewing)
 - Listing of FAQ's that help you properly classify a PSE
 - API Guide to collecting PSE data
 - Read-only access to API RP 754
 - Contact Karen Haase at Haasek@api.org for more information
 - Website: <http://www.api.org/environment-health-and-safety/health-safety/process-safety-industry/measuring-safety-improvement.aspx>
- AFPM Safety Portal
 - Process Safety metrics searchable database
 - 2011-2013 annual Process Safety Event reports
 - AFPM Guide to reporting PSE data
 - A "Hypothetical Process Safety Metrics Story"
 - Website: <http://safetyportal.afpm.org/ProcessSafetymetrics-access.aspx>