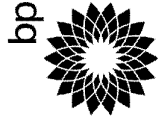


TC-PSC Chair Selection

Experience v Development Opportunity

W. H. Ralph

01-Aug-04



Rank Order of MDL Candidates

- Ken Panozzo
- Willie Willis
- Rich Peltier
- Joe Barnes
- Bill Frink

Why should the MDL with the most demonstrated (PSM) concern, the most (PSM) experienced, and the strongest (PSM) proponent, be selected as the TC-PSC Chair?

PSM Incidents



- Multiple injuries/deaths
- Significant property damage
- Significant environmental damage
- Significant business interruption
- Damage to reputation



BP Refining Process Safety Losses

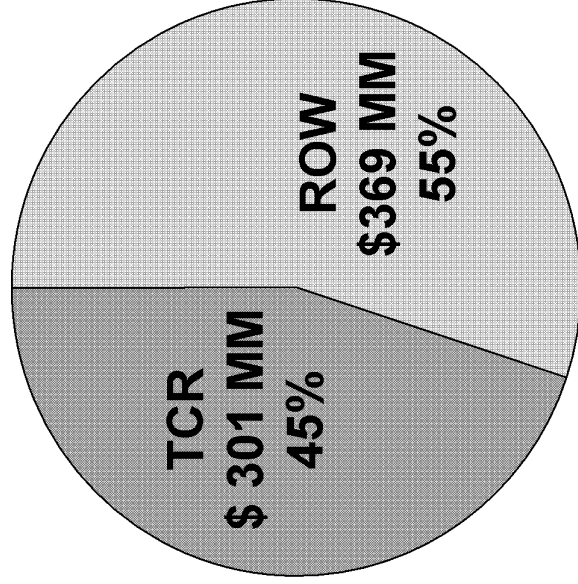
Year	Refining Losses	Texas City Losses
2004 YTD	\$ 150 MM	\$ 136 MM
2003	\$ 90 MM	\$ 2.4 MM
2002	\$ 50 MM	\$ 0.6 MM
2001	\$ 260 MM	\$ 156 MM
2000	\$ 120 MM	\$ 6 MM
5-Year Total	\$ 670 MM	\$ 301 MM (45% of Total)

Texas City Potential Losses Were Actually Much Greater!!
 An Additional \$ 4 MM - \$ 700 MM



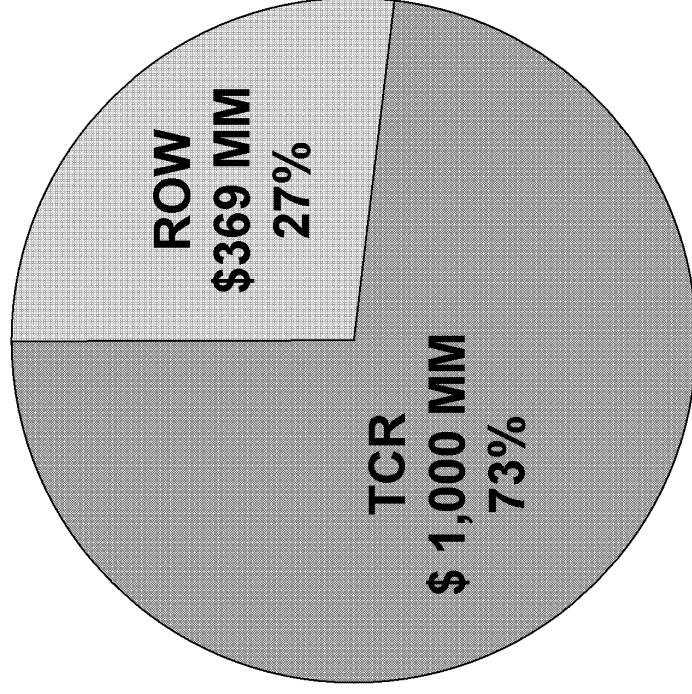
BP Refining Process Safety Losses

Actual Losses
2000 – 2004 YTD

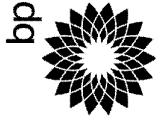


\$ 670 MM

Actual + Potential Losses
2000 – 2004 YTD



\$ 1,370 MM



TCS PSM Incidents 2000-2004 YTD

Year	Location	Event
2004	UU4	Line Rupture (Actual)
2003	UU4	Line Leak (Potential)
	FCCU No. 2	Line Leak (Potential)
2002	OSBL	Piperack External Impact (Potential)
	FCCU No. 3	Broken Nipple (Potential)
	ULC	Thermocouple Blowout (Potential)
	Alky 2	Vessel CUI (Potential)
2001	PS3B	Broken Nipple (Potential)
	FCCU No. 3	Line Rupture (Potential)
2000	Coker B	Line Rupture (Actual)

PSM Is Easy to Ignore

- Process safety (high consequence) incidents are naturally infrequent
- Losing focus does not result in immediate consequence
- The ‘urgent’ overwhelms the ‘important’ if PSM is a part-time function



Weak Signals

“The industry standards don’t ask for it.”

“Our competitors don’t do it.”

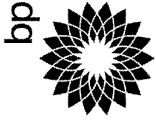
“We have been doing it this way for 20 years and
never had an accident.”

“Why should we be the industry leader?”

“I can’t really believe in low probability numbers.”

“It’s not my job.”

“I don’t have the resources.”



We Never Have Major Accidents !

“I have never been in any accident of any sort worth speaking about....
Nor was I ever in any predicament that threatened to end in disaster of any sort.
I am not very good material for a story”

E J Smith
Captain of the Titanic



Process Safety Culture

“It should not be necessary for each generation to rediscover principles of safety which the generation before already discovered. We must learn from the experience of others rather than learn the hard way. We must pass on to the next generation a record of what we have learned.”

Jesse C. Ducommun

Vice President of Manufacturing

Amoco Oil Company (1955)



Process Safety Culture

“It might seem to an outsider that industrial accidents occur because we do not know how to prevent them. In fact, they occur because we do not use the knowledge that is available. Organisations do not learn from the past or, rather, individuals learn but they leave the organisation, taking their knowledge with them, and the organisation as a whole forgets.”

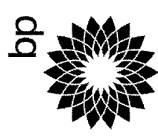
Trevor Kletz



Process Safety Culture

“If we don’t make money, we won’t be in business. If we can’t do it safely, then we shouldn’t be in business”

Lee Valentine,
PSC Chairman



Process Safety Culture

“If the 80/20 rule applied to process safety, then we’d use air as an inert gas.”

Unknown

PSM Link to HRO

- Catastrophic events are naturally infrequent which can lead to a lack of mindfulness or a loss of urgency
[mindfulness – preoccupation with failure]
- Personal experience is insufficient to judge process safety risks – We must learn from the collective experience of the industry
[reluctance to simplify; deference to expertise]
- There is not a single most important element of PSM – All of the elements are woven together – Every detail is important
[swiss cheese model]
- A significant PSM incident has the potential to put BP out of business; PSM is worth the resource commitment