



## Break-Out Session 2

# The Role of SPIs in Safety Performance

## MANAGEMENT PROCEDURES

### Group 3

*Please save under a different name, e.g.  
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# MANAGEMENT PROCEDURES elements

- SMS – adequacy, use
- Maintenance/mechanical integrity
- Control of the site, e.g., access people etc.
- Interfaces, e.g., ships, road/rail tankers
- Management of change
- Emergency response planning
- Auditing, accident/incident investigation, feedback loops, performance measurement



European  
Commission

# Session 2A

# (2A) 1. How often do operators use SPIs for management procedures?



Frequency	Number of inspectors in your group
Always	Hungary (UT), Norway PSA, Italy
Nearly always	Germany, Sweden
Sometimes	Slovenia, Norway DSB, Croatia, Austria
Almost never	Hungary (LT), Croatia (LT)
Never	

- Can make a difference with UT and LT (Hungary)
- In Norway, sites under Oil and Gas (PSA) is always, sites under civil protection are sometimes
- Where the site has SPIs (as in multinational sites), nearly always have this type of SPI (Austria)

## (2A) 2. What kind of SPIs should be used for each of the specific management procedure categories?



### Maintenance/mechanical integrity

- Probably most common indicator in oil and gas, but also important for most production plants of any type.
- Typical question is: Why do you monitor this type of equipment?
- The equipment may have several statistics. Why does the company choose a specific statistic?
  - Example (Norway-oil and gas, Germany – chemical industry) – list of maintenance tasks with due date – how much work is late?
- For maintenance, 3 categories of equipment: safety critical, production critical, noncritical – could ask why is this equipment not considered noncritical
  - Even if not an SPI discussion, the question of what is safety critical is always a part of the inspection discussion.



## Maintenance (cont'd)

- In Croatia, ask questions on the basis of what equipment is involved in major accident scenario. It is a kind of SPI to ask about this.
- A permit to work for hot or cold work could also be a measure
  - % of work conducted permit-to-work condition in accordance with permit conditions)
- Does the indicator change over certain periods in the year (e.g., maintenance, presence of contractors)?
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## Control of the site

- Sites will have procedures for security, and operator can make a test as to whether the procedures are regularly used.
- However, it is often not a priority for SPI, except for sites where security is a big challenge, e.g., explosives
- Could be already under management of contractors, or management of change, emergency planning

## Emergency response

- How quickly can you evacuate the site during exercises? (An acceptance criteria for the emergency response in Norway O&G.)
- (Croatia) Every year have a joint exercise and the results could be an SPI.

## Audits

- Audit results and follow-up can be an SPI for the SMS
- The use of internal audits can be an SPI for the strength of the SMS.
  - Are there follow-up on actions?
  - How many non-compliances are found?
- Example: Some operators do audit every 6 months or year of all elements



## Accident investigation

- The number of near misses can be a useful SPI. (Some countries define “near miss” or “incident”, Some let operators decide.)
- Can be a performance indicator for regulator on their sites overall if near misses/incidents are reportable
  - In Hungary, Norway, Croatia the sites have to report “incidents” (defined in the law) and can sometimes be very low quantity releases.
  - In Sweden, recommend that site reports near misses, incidents but not defined in law
- Czech has to have a process for dealing with major accidents
- Croatia looks for a list of potential situations that could lead to an accident

## Management of change

- Documentation of MoC process, especially preliminary risk assessment
- MoCs should be completed within a due date, but maybe is not an SPI
  - Italy requires a deadline for completing the MoC process.
- In some countries, inspectors can ask to review MoC for “significant” changes , e.g., that affect quantity involved or change in scenario, change of contractor or supplier
- MoC metric has examples in the OECD document, e.g., # of incidents related, training on changes

# Session 2B

# (2B) 1. Are SPIs useful as input for evaluating the MAPP and SMS? – PART 1



- The SPI should indicate the strength of the SMS so it is useful.
  - The choice of a good indicator depends on the site situation.
  - Mandatory SPIs – Can't always convince the site of the value of SPIs
- If you focus on the correct measures, they should trigger improvement in procedures, e.g., mechanical integrity
  - Same for the authority – if focus on an area across a sector, there will be an improvement.
  - Have to be careful about what you choose to target in the SPI. If you focus on one thing, you might lose focus on something else.
    - Example: A site might focus on environmental risks and ignore other risks, e.g., third party risks
- Site should re-evaluate its SPI programme periodically

# (2B) 1. Are SPIs useful as input for evaluating the MAPP and SMS? – PART 2



## Communication of SPI results

- Sharing accident lessons learned is one way to do it  
Example: Small group in the company reviews incident reports and analyses it for relevance to SMS, other processes and sites and in the industry
- Some industry sectors do not like to share lessons learned, partly due to nature of the industry (explosives)
- Communication practices are also cultural
- Can give feedback for improving the SMS and SPI programme

## (2B) 2. How can you tell when the SPIs for management procedures are having an impact on performance?



- In general, sites that use SPIs over time can show positive trends.
- Norway example: The SPI monitoring has resulted in changes of procedures for mechanical integrity
- SPIs give more control over the safety of the site over time
  - You can see how the choice of SPIs changes over the life of the plant
  - It can also take time to see results. Months or years sometimes.
  - SPIs can find a problem, but making changes to solve a problem takes time.
- Asking the question “why” (why do you do that?) is a good technique.
  - Good to ask management and workers
- SPIs can also show economic benefits for the site. (Inspectors can use this to motivate sites to use SPIs.)

## (2B) 3. Which level of management is most interested in SPIs for management procedures?



- SPIs are usually aimed at how you implement the SMS so it is for management.
- Management used to be very interested in lost-time indicator, but is not a strong SPI, so that interest has decreased now.