



REPUBLIKA HRVATSKA

MINISTARSTVO ZAŠTITE
OKOLIŠA I ENERGETIKE

EXPERIENCES WITH SAFETY PERFORMANCE INDICATORS IN CROATIA

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Inspection experience

- Does your authority mandate the use of process safety performance indicators for your Seveso establishments?

According to Croatian national legislation the usage of SPI is not mandatory.

- If not, do you know if any of your sites have Safety Performance Indicators (SPI)?

There are two companies use some kind of SPI. These two companies operate approximately 50% of UP sites (25% of all SEVESO sites)

- Do you consider SPIs in the inspection if they have them? If yes, how do you consider them, e.g., for dialogue, as evidence (evidence of what?), etc.

In the inspection of SMS we didn't consider SPI. Companies has started to implement SPI very recently. One of them establish the Procedure on reporting and investigating the incidents (which include some kind of SPI) on 4. of December 2017. So, this year we will have first results and we can take this into account during inspection.

Sites that use SPI

Do you think SPIs are useful for sites? Are they useful for the Seveso inspection?

SPIs are useful for SEVESO sites and for inspection

Why or why not?

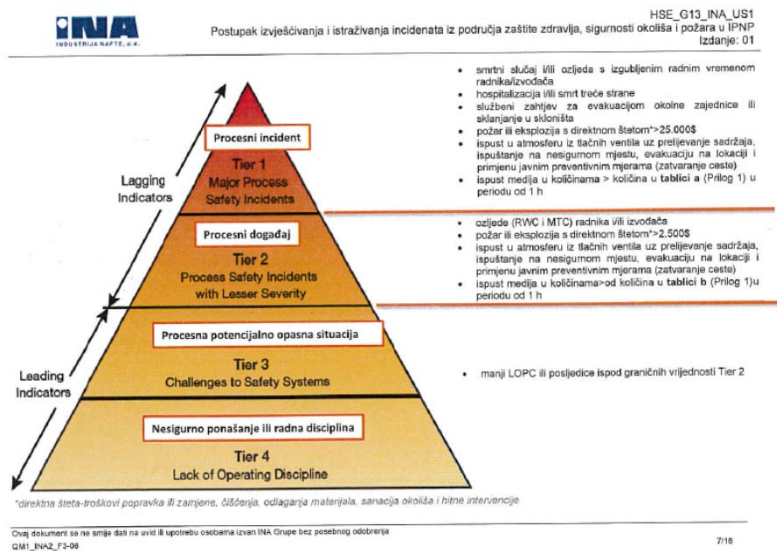
SPIs are useful for the operators as the measure in continuous improvement of their safety performance. For inspectors the implemented SPIs show the priorities for operator in safety performance monitoring and improvement.

In your opinion are there sites which are not currently using SPIs which could benefit from their use?

We don't have much experience in sites with SPI's, so we can't compare them with the sites without SPI.

Good and bad practise

Good practise



PSE category	KPI for Group	Unit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Target	Last Year
Tier 1 (API 754)	LOPC Events of Greater Consequence (according API 754, table 1)	Number														
	Fire or explosion (costs > 100.000 USD)	Number														
	LOPC events of Tier 1 consequence (according API 754, section 5.2.2)	Number														
Tier 2 (API 754)	LOPC Events of Lesser Consequence (according API 754, table 2)	Number														
	Fire or explosion (costs 2.500-100.000 USD)	Number														
	LOPC events of Tier 2 consequence (according API 754, section 6.2.2)	Number														
Tier 3 Challenges to Safety Systems	Other fires (< 2.500 USD)	Number														
	Spills	Number														
	Other LOPC not meeting the threshold level of TIER2	Number														
	Activation of Safety Instrumented System	Number														
	Activated MOS of SIS more than 1 day	Number														
	Activated MOS of SIS more than 7 days	Number														
	Activated MOS of SIS more than 30 days	Number														
	Most Frequent Alarms (Top 20%)	%														15
	Average alarm rate per 10 minutes	Number														2
	Alarm Peak Rate per 10 minutes	Number														1000
	Percent Time when more than 5 Alarms active	%														25
Performance alarm category															Stable	
Tier 4 Operating Discipline and Management System	Process Safety Events	Number														
	Housekeeping audit	Number														
	Technological card deviation (period: 1 day)	%														
	High-risk items from risk analyzes	Number														
	Very high-risk items from risk analyzes	Number														
	Overdue Incident investigation recommendations realization	Number														
	PSR corrective actions over deadline	%														
	PSM cross audit corrective actions over deadline	%														
	PSM self assessment audit corrective actions over deadline	%														
	Percentage of overdue inspections cum	%														
Percentage of preventive maintenance	%															
Temporary repairs including clamps	Number															
Temporary changes (MOC) open past their duration limit	Number															

Thank you for your attention



Croatian Nacional park Plitvice lakes

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