

# Process Safety Webinar Series - Part 3

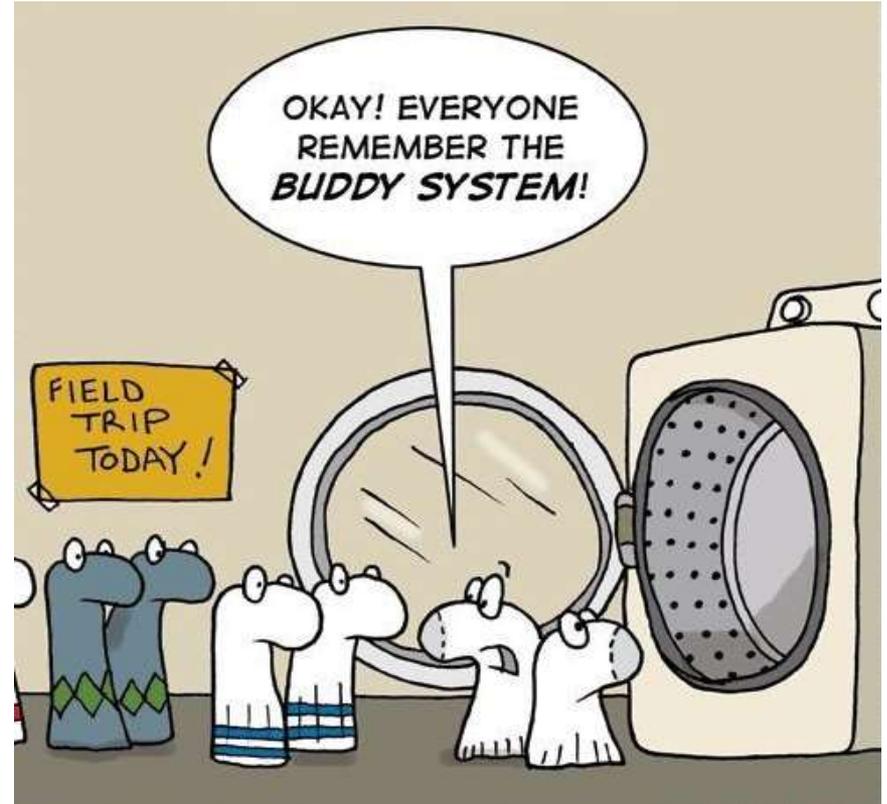
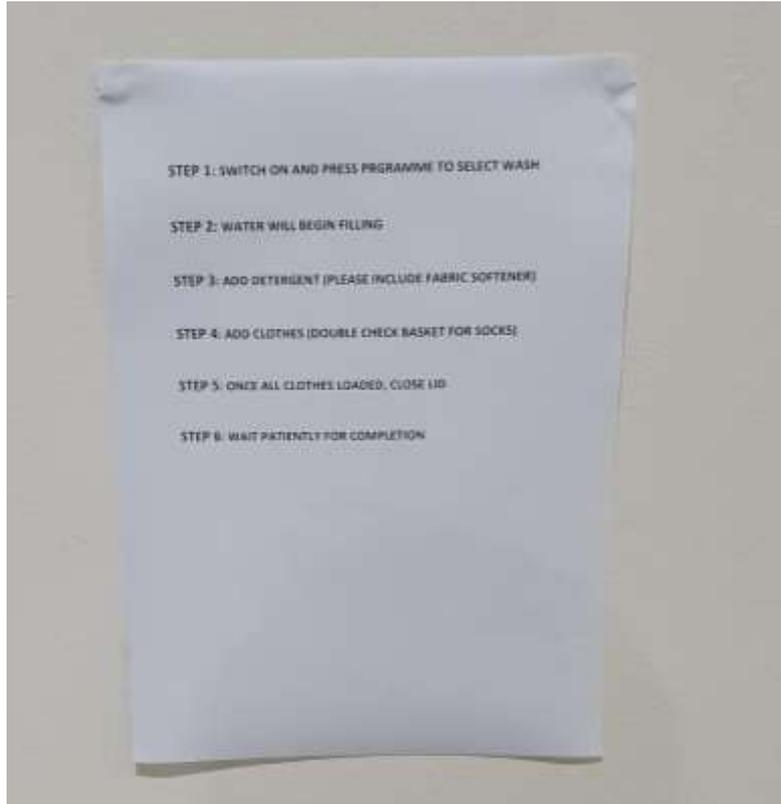
15 April 2021



## Standard Operating Procedures

Ryan Francis

# A Real Life Example



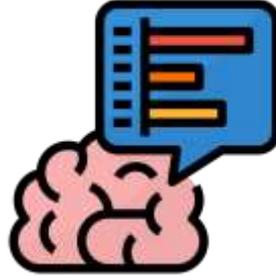
# Comprehensive Standard Operating Procedures

	<b>Procedure 8 -Corrective actions during reaction. In all cases CONTACT SUPERVISION as well</b>	Start time	End Time	RECORD	SIGNATURE
	<b>Event: R5 temperature rising slowly, reaches or exceeds 235.0 degC:</b>				
1	Lower oil heater set points to 100degC. This will stop heaters turning on. Switch oil mode switch to "COOLING" mode, the oil valve to R5 will now stay open to help cool R5 with oil that is cooler than the R5 temperature. Leave R5 setpoint on 227 deg C for now.				
3	When R5 temperature has fallen to 227degC turn oil mode switch "OFF". Monitor R5 temperature for 10 minutes to see if it is steady or carries on increasing. If it is increasing, switch oil mode switch to "COOLING" again and monitor R5 temperature. Obtain further instructions from supervision.				
	<b>Event: R5 pressure rising slowly, reaches 140kPa and still rising.</b>				
1	Check R5 scrubber is running.				
2	Half open R4 vent valve (R4 V8) to scrubber. This will allow any pressure in R4 to vent down.				
3	Slowly crack open R5-R4 line valve (red handle, R5 V13), and allow a little excess pressure to vent to R4.				
4	When pressure in R5 has fallen to 80kPa, close R5-R4 line valve (R5 V13).				
5	Go to R4, when pressure in R4 has fallen to zero, close R4 vent valve to scrubber (R4 V8). Go back to R5 and check if R5 pressure is now steady or rising again. Obtain further instructions from supervision.				
	<b>Event: R5 temperature or pressure continue to rise and cannot be controlled by above procedure.</b>				
1	Lower oil heater set points to 100degC. This will stop heaters turning on. Switch oil mode switch to "COOLING" mode, the oil valve to R5 will stay open to help cool R5 because the hot oil is cooler than R5 itself.				
2	Start R5 scrubber.				
3	Half open R4 vent valve to scrubber (R4 V8). This will allow pressure in R4 to vent down.				
4	Slowly open R5-R4 line valve (red handle, R5 V13), and allow excess pressure to vent to R4.				
5	Let R5 pressure fall to zero, with line valve (R5 V13) fully open and leave this valve open for now.				
7	Check R5 temperature carefully, if it is not over 234 degC and not rising higher, take no further action, wait for instructions from supervision. But if R5 temperature is still rising, continue with next step below.				
8	Check Parprol weigh tank is pressurised to 100kPa. Open Parprol line valves (all 3, R5 V16, WT2 V5 and WT2 V6) to transfer Parprol into R5.				
9	Check Parprol scale to confirm transfer. Then close parprol line valves (R5 V16, WT2 V5 and WT2 V6) open Parprol weigh tank vent valve (WT2 V4).				
10	Check that R5 temperature has gone down and is under control. Obtain instructions from supervision.				

# Looking Beyond the Standard Operating Procedure



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**WORK  
PROCEDURES**

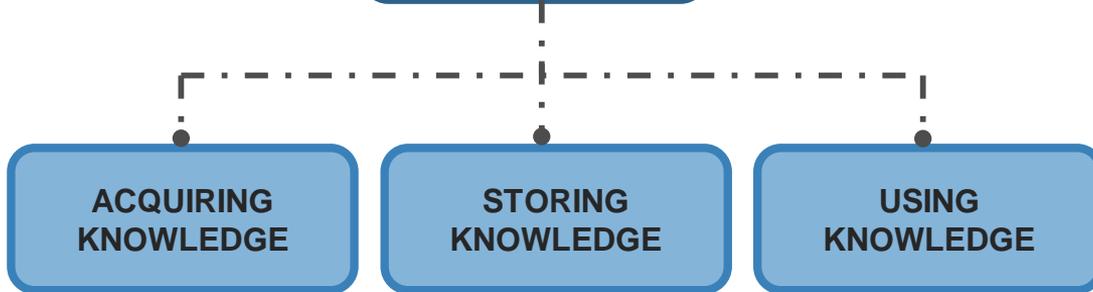
**COGNITIVE  
SKILLS**

**SKILLED  
OPERATOR**

**ACQUIRING  
KNOWLEDGE**

**STORING  
KNOWLEDGE**

**USING  
KNOWLEDGE**



# Building Cognitive Skills

## JOB CONTEXT

- › Knowledge presented in the context of its job
- › Context provides structure on which to hang new knowledge
- › Link between the knowledge and its use



## PEER TEACHING

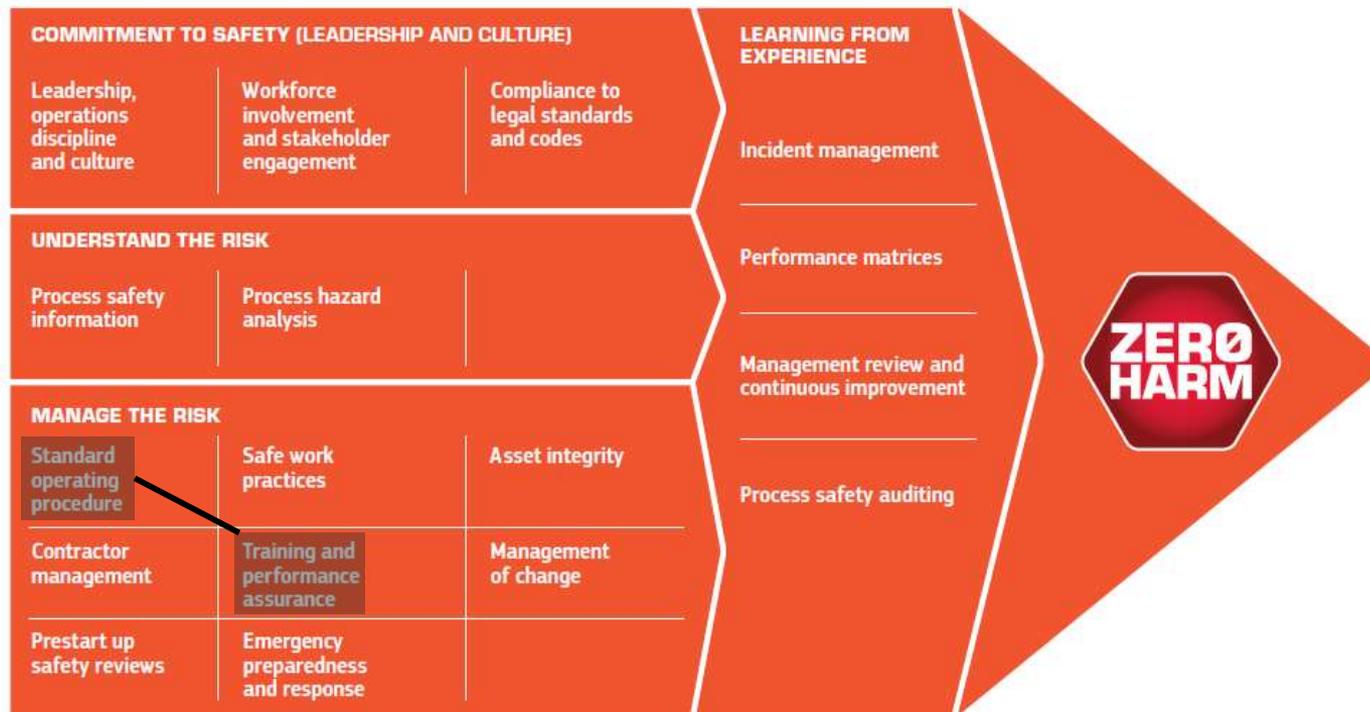
- › Hand the role of instructor to trainees – allows them to look at material from different perspective
- › Senior plant personnel engage in training, relating past experiences
- › Links between knowledge and its importance

## OVER-LEARNING

- › Practice beyond the mastery level
- › Focus on critical tasks

# The Link

The AECI PSM system is based on the PSM standard S1 and incorporates four main pillars or foundational blocks encompassing a total of 17 Process Safety Management elements:



# Thank you

## Any questions?

