

DYNAMIC RISK ASSESSMENT PROCESS – CHALLENGES, BARRIERS AND BENEFITS

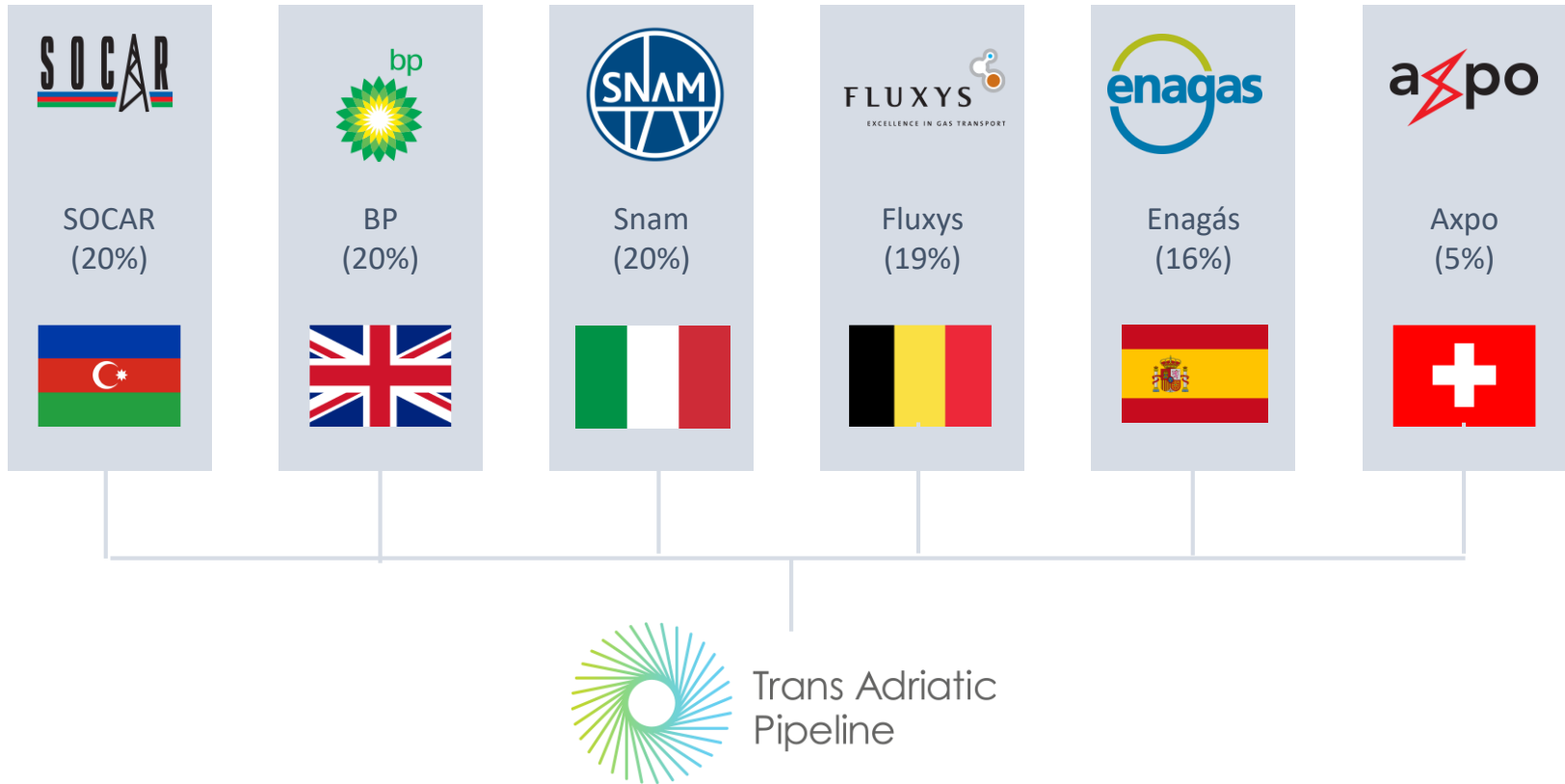


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Senior Corporate QHSE Manager
Trans Adriatic Pipeline

Introduction: The TAP Project

- TAP will bring Caspian natural gas to Europe. Starting at the border of Greece and Turkey, where it will connect with the TANAP, TAP will cross Northern Greece, Albania and the Adriatic Sea to Southern Italy, where it will connect to the Italian gas transportation grid.
- Head Quartered in Baar, Switzerland
- Branch business offices in Athens, Rome, Lecce and Tirana. There are also project execution offices near the route of the pipeline in Thessaloniki, Tirana and in the Melendugno area.
- TAP currently employs over 200 specialists from 30 countries and many thousands more personnel via our EPC Contractors

Owned by:



EPC Contractors:



TAP's route in Greece

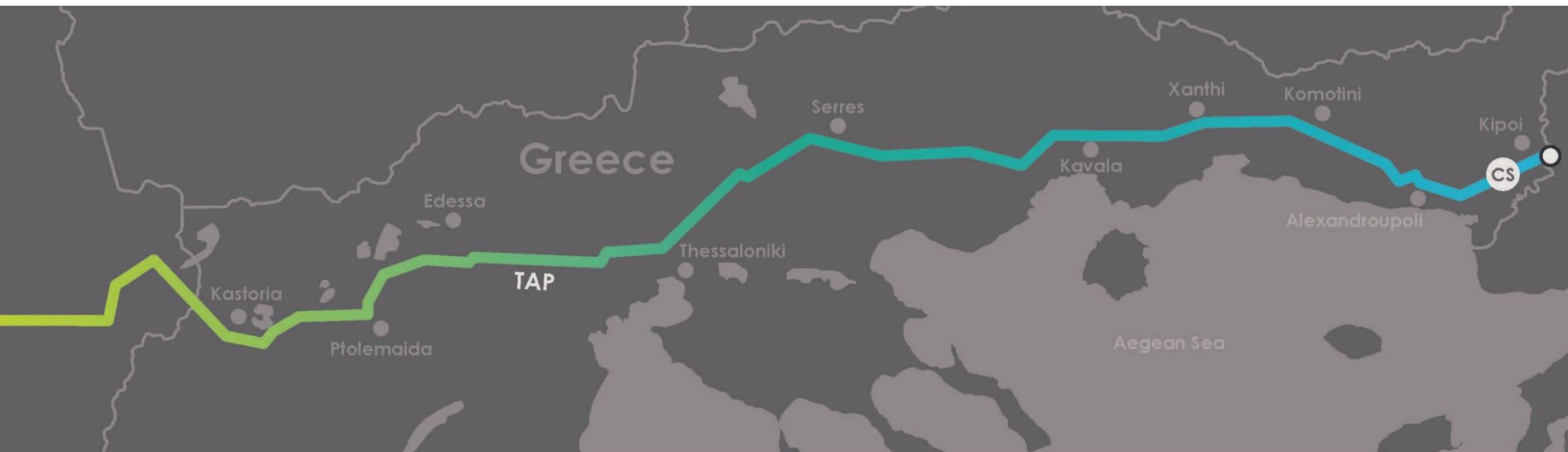
- Longest section of TAP is in Greece

550 km

22 block valve stations

1 compressor station

8 camp sites



- TAP's length in Greece is approximately 550 km
- Starting at Kipoi near the Turkish-Greek border and finishing at the border of Greece with Albania southwest of Ieropigi
- The Greek section will include one compressor station near Kipoi for 10 bcm case (additional one near Serres for 20 bcm case) and 22 block valve stations (BVS)
- Crossing 1,693 roads, 722 rivers and 20 railways (major and minor crossings)



Defining The Issue

- Poor quality Contractors pre start briefings
- Tool Box Talk content inconsistent
- Incident investigation root causes:
 - Workforce not being put to work with correct information
- Reliance on wordy, long, generic JSAs
- Workforce and supervision not engaged in hazard/risk identification

Solution

- Make supervision accountable for how teams are put to work
- Engage supervision and workforce in risk assessment process
- Ensure supervision to check on their teams

Step 1

Dynamic Risk Assessment

TAP Sites

Location: *KP 210*

Date: *07/09/17*

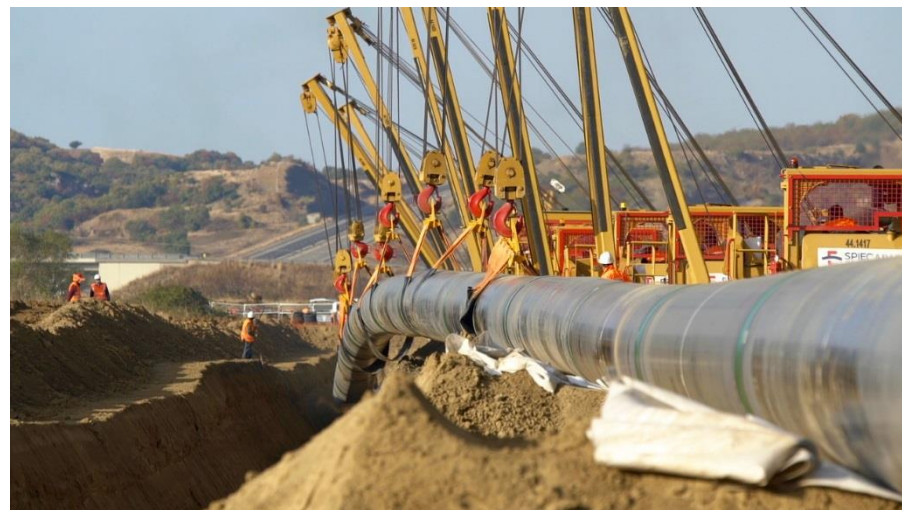
Time: *08:00am*

Task Description:

Lowering and laying pipe along the ROW near high voltage overhead line

Supervisor: *J. Smith*

Company: *TAP*



Step 1

Dynamic Risk Assessment

TAP Sites

Location: *Compressor House 1, Kipoi*

Date: *07/09/17*

Time: *08:00am*

Task Description:

Pouring concrete to create foundations of compressor house

Supervisor: *J. Smith*

Company: *TAP*



Step 2 – Line of Fire Hazards



Line Of Fire - Hand

- Using line-up clamps
- Lining up pipe
- Manual handling



Line Of Fire - Machine

- Lowering and laying
- Welding activities
- Multiple activities in same location



Line Of Fire - Head

- Lining up pipe
- Autowelding activities



Line Of Fire - Body

- Stringing of pipe
- Lining up pipe



Step 2 – Line of Fire Hazards



Line Of Fire - Hand

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Line Of Fire - Machine

- Lowering and laying
- Welding activities
- Multiple activities in same location



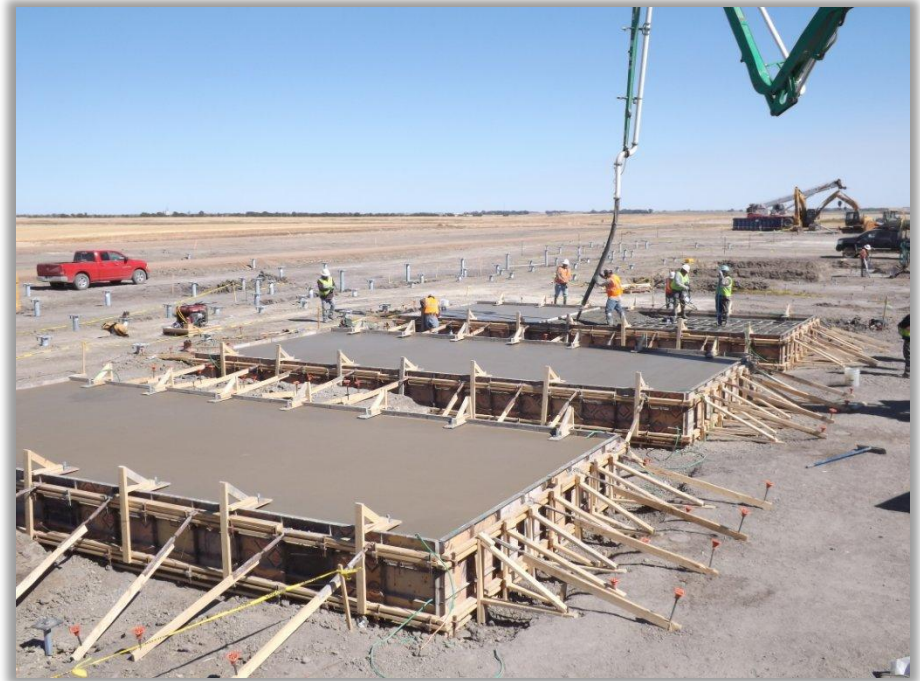
Line Of Fire - Head

- Lining up pipe
- Autowelding activities



Line Of Fire - Body

- Stringing of pipe
- Lining up pipe



Step 2 – Hazard Identification



Excavations

- Working near
- Working inside
- Creating excavations



Steep Slopes

- Working on steep slopes
- Travelling on steep slopes
- Transporting on steep slopes



Pressure

- Buried services (gas, water)
- Hydraulics



Working at Height

- Machine maintenance
- Scaffolding

Step 2 – Hazard Identification



Confined Space

- Working inside trenches
- Working inside pipes
- Auger boring



Overhead Lines

- Working near overhead lines
- Working next to overhead lines
- Travelling between overhead lines



Dropped Objects

- Hand Tools
- Equipment



Flammable

- Welding
- Chemical Use
- Trench Breaker creation

Step 2 – Hazard Identification

Lifting



- Cranes
- Sidebooms with pipe
- Valve installation

Created Openings



- Holes in scaffolding
- Trenches

Electricity



- Hand Tools
- Equipment
- Welding

Hot/Cold



- Welding
- Chemical Use
- Trench Breaker creation

Step 2 – Hazard Identification



Slips, Trips & Falls

- Uneven ground
- Rocky/stony ground
- Equipment wires



Sharp Edges

- Handling pipe edges
- Handling metal sheets



Multiple Activities

- Congested work areas
- Large numbers of people in same area
- More than one work activity in same area

Step 3-6 – Hazard Assessment

Method Statement Ref:	JSA Ref:	Lifting Plan Ref:	Other Ref:	
Hazard/ LoF Sources Describe what could go wrong?	Controls/ Managing LoF How can the hazard be controlled?	Who/ Responsibilities Name the person to put controls in place	Ready?	
			Yes	No

Reference number of method statement & JSA and/or lifting plan

Any other document references (steep slopes checklist etc)

List the top 5 hazards identified (more can be added if necessary)

List the main controls to minimise each of the hazards

Assign a person responsible for putting in place each of the controls

When the control is in place and working confirm in this section

Dynamic Risk Assessment
TAP Sites
 Location: *KP 210*
 Date: *07/09/17* Time: *08:00am*
 Task Description:
Lowering and laying pipe along the ROW near high voltage overhead line
 Supervisor: *J. Smith*
 Company: *TAP*

Line Of Fire Hazards

2 Hazard Identification

Method Statement Ref:	JSA Ref:	Lifting Plan Ref:	Other Ref:	
Hazard/ LoF Sources Describe what could go wrong?	Controls/ Managing LoF How can the hazard be controlled?	Who/ Responsibilities Name the person to put controls in place	Ready?	
			Yes	No
<p><i>LoF - Machine</i></p> <p><i>LoF - Body</i></p> <p><i>Excavations</i></p> <p><i>Overhead Lines</i></p> <p><i>Electricity</i></p> <p><i>Lifting</i></p>	<ul style="list-style-type: none"> - <i>Exclusion zones marked out</i> - <i>Flagmen in place</i> - <i>Agreed communication method between sidebooms</i> - <i>Permit needed for entry</i> - <i>Exclusion zone in place for personnel</i> - <i>Goalposts</i> - <i>Bunting</i> - <i>Flagman for crossings</i> - <i>Pre use visual checks</i> - <i>Equipment inspection</i> - <i>Correct colour code</i> - <i>SWL adhered to</i> 	<ul style="list-style-type: none"> - <i>Supervisor</i> - <i>Supervisor</i> - <i>Spread Boss</i> - <i>Supervisor</i> - <i>Work team</i> - <i>ROW Team</i> - <i>Supervisor</i> - <i>Sideboom Operator</i> - <i>Sideboom Operator</i> 		

Step 7 – Work Party Declaration

Work Party Declaration	
Names and signatures of persons involved in job	
1	I have participated in this dynamic hazard assessment
2	I know the hazards and controls to make this job safe
3	I have read and will follow the relevant MS/JSA
4	I will stop the job if unsafe or if I observe any of our Stop the Job Triggers
Name:.....	Signature:
Name:.....	Signature:
Name:.....	Signature:
Name:	Signature:
Name:	Signature:
Name:	Signature:
New persons to task	
Name:.....	Signature:
Name:	Signature:

Understand what you are agreeing to when you sign this paper

Work party sign here

Any new team members who join after the initial assessment read and sign



Step 8 – Supervisor & Safety Supervisor Challenge

Supervisor Challenge				
	YES	NO	N/A	COMMENTS
Has the team reviewed and signed onto this form?				
Are all team members familiar with this activity?				
Does the Method Statement/JSA cover this activity?				
Are all controls in place?				
Are there any additional hazards which have not been identified?				
Supervisor Verification				
I have verified that the workparty who undertaking the work has satisfactorily completed this DRA to enable them to start and undertake work safely	Date:			
	Time:			
	Signature:			

Safety Supervisor Challenge				
	YES	NO	N/A	COMMENTS
Has the team review and signed onto this form?				
Are all team members familiar with this activity?				
Is the MS/JSA on site and appropriate for the task?				
Are all controls in place?				
Are there any additional hazards which have not been identified?				
Safety Supervisor Verification				
I have verified that the workparty who undertaking the work has satisfactorily completed this DRA to enable them to start and undertake work safely	Date:			
	Time:			
	Signature:			

- Once the individual/work group have been set to work the supervisor should return to challenge their knowledge on the work activity and whether control measures are still suitable.
- Initially the supervisor must ensure the individual/team have;
 - ✓ Completed the Operatives Pre – job Hazard
 - ✓ Checklist Reviewed and signed onto the work pack
 - ✓ Familiar with their activities
 - ✓ Are clear of their roles and responsibilities
- The supervisor should then challenge the team whether the risk assessment/method statement adequately covers the task and whether the control measures are suitable.
- The supervisor should then challenge the team on their general surroundings and if this could effect their safety.

TAP HSE Performance 2017. Video

Questions?