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DF01E/3/110209	Written: 02-07-2013	Location:						
		PR	OJECT RISK	<i><b>CANALYSIS</b></i>				
ACTIVITY / AS	SPECT	DANGER / CONSEQUENCE	K B	E Risk	CONTROL MEASURE	K <sup>1</sup>	B¹ E	1 Risk1
		7	ABLE OF CON	ITENTS				
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	Expectable	10		Continuous (direct access) 1			Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<u> </u>	Continuous (indirect access)			Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
<u>'</u>	Unusual but likely	3	Ė	Regularly – daily	6	ш.	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
=	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	l §	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Step 1	. Fill-in activity Step 2. Assign	n dange	r/conse	equence Step 3. Calculate risk (= K x B x	E)	Ste	p 4. Assign measures Step 5. Calc	culate remaining risk¹ (= K¹ x B¹	' x E¹)

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ACTIVITY / ASPECT			DANGER / CONSEQUENCE		K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>

	1. Bilingual explanation Project Risk Analysis											
K	Expectable		10	В	Continuous (direct access)	10						
٩L	Highly likely		6	(D	Continuous (indirect access)	6						
KANS OP VOORVAL	Unusual but likely		3	E K	Regularly – daily	6						
	Unlikely		1	ÄΞ	Occasional – weekly	3						
OP	Possible but unlikely		0,5	EXPOSURE / LOOTSTELLING	Incidental – monthly	2						
SNS	Highly unlikely		0,2	EX BLOC	Rarely – several times a year	1						
₹	Almost impossible		0,1	Δ.	Very rare – once a year	0,						

E	Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
ECT	Serious – Loss of arm or leg	Damage €30.000 ◀ €100.000	10
EFFEC.	Considerable – Disability or Loss of hand or foot	Damage €2.500 ◀ €30.000	7
	Minor – Injury (time lost)	Damage €350 ◀ €2.500	3
	Little – Injury (no time lost)	Damage ◀ €350	1

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<u> </u>	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
, Y	Unusual but likely	3	Æ.	Regularly – daily	6	ш .	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	N X	Incidental – monthly	2	EFF	Considerable – Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
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Step 1	. Fill-in activity Step 2. Assign	dange	r/conse	equence Step 3. Calculate risk (= K x B x	E)	Ste	o 4. Assign measures Step 5. Calo	culate remaining risk¹ (= K¹ x B¹	' x E¹)

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ACTIVITY / ASPECT		DANGER / CONSEQUENCE		K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>

R	R = < 20	Negligable risk, controlled (No measure necessary)
	R = 20 < 70	Possible risk, control measure necessary (I.e. PPE)
SICO	R = 70 < 200	Considerable risk, additional control measures necessary (I.e. PPE and a JSA on Site)
7 RIS	R = 200 < 400	High Risk, additionally direct supervision necessary (Supervisor + I.e. expert / other)
RISK	R = 400 >	Risk too High, investigate different approach and discuss with WB Foxdrill QHSE dept.

#### Important aspects when composing a PRA:

- 1. The objective should always be to reduce the risk to a controlled level (R < 20).
- 2. Collective measures are preferred over individual measures. Where possible the source should be eliminated.
- **3.** It is important to adjust the risks when aspects combined increase the danger and also to mention this.
- 4. Hints for the work specific part: A. Work specific risks according to planning (obliged aspects: Lifting and hoisting, Working at height, PPE usage, Tools and equipment and Hot work), B. Concurrent operations, C. Rope Access D. Hazardous substances (also radiation and H2S)

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
¥ .	Unusual but likely	3	RE -	Regularly – daily	6	ш.	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
Ę	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	(PO	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
0B/	Highly unlikely	0,2	Û	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
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Step 1	. Fill-in activity Step 2. Assign	n dange	r/conse	equence Step 3. Calculate risk (= K x B x	E)	Ste	o 4. Assign measures Step 5. Calo	culate remaining risk1 (= K1 x B1	x E1)

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			•	PROJE	CT	RISI	KΑN	ALYS	'SIS	
	ACTIVITY / ASPECT		DANG	GER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE K1 B1 E1 I	Risk¹
				2. <i>I</i> .	Con	ditio	ns on	site		
Weath	er conditions	Blown out all its cons		lerrick, electrocuted, slipping with es	1	2	40	80	- Stop work in case of wind force 6 or higher, torrential rains, a 60% or higher chance of a thunderstorm and a view of less than 50 meters due to fog	20
Greasy	work area	Dangerous	s situati	ons, slips trips and falls	1	6	15	90	- Maintain good housekeeping (also by site responsible company), use handrails 0,5 1 15	7,5
Oil bas	se mud	e chemi in mudli	cals, slips trips and falls, nes.	3	6	10	180	- Use proper PPE when cleaning the mudtanks (special gloves, coverall, spray-hood) - Read MSDS form all the additives - Isolate the mud agitators (electrical isolation) - Prepare PTW, TRIC card with HSE supervisor - Flush complete mudsystem with water	1,2	
Site general state Dangerous			ous situations, slips trips and falls			10	15	450	- Maintain good housekeeping (also by site responsible company) - Slow driving on the location by forklift, crane, cars and trucks (max. 5km/h.)	7,5
High n activiti	oise level (surrounding es)	Hearing da	damage > 80 dB			3	3	54	- Use of effective/appropriate ear protectors 0,2 3 3	1,8
				3. II. Comn	nunic	atioı	n and	instru	uction	
New a	nd unexpected situations	Errors in a	ssessin	g the situation	6	0,5	40	120	- Discuss before start of the particular activity. 0,2 1 40	8
	carried out is not in accordance e work instructions	Dangerous term cons		ons, accidents, harmful longer	1	6	40	240	- Continuous supervision, a daily start-work-meeting, no specific work carried out without a work permit. 0,2 1 40	8
Compe	etence of personnel	Inexperien execution		trained personnel. Incorrect	3	6	15	270	- Certified and trained personnel supplied, in accordance with g and standards. 0,5 0,5 15	3,8
Relay i	nformation	Handover procedure		complete and/ or wrong	1	3	10	30	- Provide complete information, handover correct engineered information and/ or procedures	10
	Expectable	10		Continuous (direct access)			10		Catastrophic – Many casualties Damage €1.000.000 ▶	100
	Highly likely	6	В	Continuous (indirect access)			6		Disastrous - Multiple casualties Damage €500.000 ◀ €1.000.000	40
	Y Unusual but likely 3 Regularly – daily						6	L L	Very serious – One casualty Damage €100.000 ◀ €500.000	15
Tourisual but likely  Possible but unlikely  1  Regularly – daily  Occasional – weekly				Occasional – weekly			3	EFFECT	Serious – Loss of arm / leg Damage €30.000 ◀ €100.000	10
Unlikely 0,5 Incidental – monthly							2		Considerable – Disability / Loss of hand, foot Damage €2.500 ◀ €30.000	7
Possible but unlikely  Unlikely  Unlikely  Occasional – weekly  Incidental – monthly  Rarely - several times a year							1		Minor – Injury Damage €350 ◀ €2.500	3
Almost impossible 0,1 Very rare - once a year							0,5	1	Little – Injury (no time lost) Damage <b>◄€</b> 350	1
Step 1. Fill-in activity  Step 2. Assign danger/consequence  Step 3. Calculate risk					(= K x	ВхЕ	Ε)	Ste	tep 4. Assign measures Step 5. Calculate remaining risk¹ (= K¹ x B¹ x	E1)
					1	5				

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	ACTIVITY / AS	PECT		DAN	GER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk <sup>1</sup>
Comm	unication			- resulti	lower the load when this is not ng in jamming, tilting or breaking or load	3	3	15	135	Use properly functioning walkie-talkie with a private channel. Always have a when working at height		0,2	3	15	9
			Language	barrier		6	6	15	540	<ul> <li>One person in each crew who unders and Arabic</li> <li>Check if crew understands their job be questions</li> </ul>		0,5	6	3	9
Manua	ıl handling		Wrong po	sture fo	or manual handling (backache)	3	6	3	54	<ul> <li>Don't handle equipment &gt; 25 kg mans</li> <li>Lift with a straight back</li> <li>Use forklift, crane and winch if possil</li> <li>Follow procedure as written in HSE p</li> <li>Manual g- Saudi Arabia, procedure 4</li> <li>requirements in manual handling</li> </ul>	ole for lifting rocedure	0,2	2	1	0,4
					4. III. Welli	being	, hyg	jiene	and he	ealth					
Food a	and canteen		Food pois	oning,	illness	1	6	7	42	<ul> <li>Provide well prepared, thoroughly co healthy food. Keep canteen clean.</li> </ul>	oked and	0,5	1	7	3,5
Sleepi	ng accommodatio	on	Bad night	rest > ı	esulting in concentration problems	1	6	7	42	Have a silence policy in place, after 1 noises from generators, provide dark windows and keep room properly cle-	blinds for	0,5	1	7	3,5
Emplo	yee health and fit	ness		ced state of concentration, dangerous tions, reduced awareness and supervision tiveness				10	50	<ul> <li>Sufficient rest time at night and break day taken by employees (guideline is sleep per night)</li> </ul>		0,5	1	10	5
Emplo contin	yee health and fit	ness /		, reduc	concentration, dangerous ed awareness and supervision	0,5	10	10	50	Provide sufficient food and drinks (quantity)	uality and	0,5	1	10	5
Desert	area		Sunburn			3	6	15	270	Protect your skin for sunburn (clothir sleeves)     Use anti sunburn cream	ng, long	1	1	10	10
			Extreme h	neat – h	eat stroke	3	6	15	270	<ul> <li>Adjust working speed</li> <li>Drink enough water &amp; minerals</li> <li>Take short breaks</li> </ul>		1	1	10	10
	Ex	pectable	10		Continuous (direct access)			10		Catastrophic – Many casualties	Damage €1.000	.000 1	<b>-</b>		100
	Hig	hly likely	6	<u> </u>	Continuous (indirect access)			6		Disastrous – Multiple casualties	Damage €500.0	000 ◀	€1.000	0.000	40
7			Regularly – daily			6	Щ.	Very serious – One casualty	Damage €100.0	000 ◀	€500.0	000	15		
Ĭ,			Occasional – weekly			3	EFFECT	Serious – Loss of arm / leg	Damage €30.00	0 ◀ €	100.00	00	10		
Possible but unlikely  Unlikely  Unlikely  Unlikely  Unlikely  Occasional – weekly  Incidental – monthly					2	]	Considerable – Disability / Loss of hand, foot	Damage €2.500	<b>∢</b> €3	0.000		7			
Possible but unlikely  Unlikely  Occasional – weekly  Incidental – monthly  Rarely - several times a year  Almost impossible  Occasional – weekly  Incidental – monthly  Rarely - several times a year					1		Minor – Injury	Damage €350	<b>∢</b> €2.5	00		3			
Almost impossible 0,1 Very rare - once a year						0,5		Little – Injury (no time lost)	Damage <b>◀€</b> 35	)			1		
Step 1. Fill-in activity Step 2. Assign danger/consequence Step 3. Calculate risk					(= K x	ВхЕ	<u>:</u> )	Ste	ep 4. Assign measures Step 5. Cal	culate remaining	j risk	¹ (= K	1 x B1	x E¹)	
			•			1	6								

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ACTIVITY / ASF	PECT		DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE   K1   B1   E1	Risk <sup>1</sup>
			5. IV. I	Rig m	iove	equi	oment	t	
Mobilisation of rig move	cranes Fa	aulty equip	ment	3	3	15	135	- Third party inspection takes place prior to rigmove (2 or 3 weeks before) at rigmovers yard - Cranes shall have a valid third party inspection sticker and certificate Any slight oil leakage from outriggers pistons and boom pistons to be repaired prior transportation	7,5
		afety equip utrigger ou	ment / installations (LMB, brakes, etc.), t of order	1	2	40	80	Mobilize third party inspector on site and inspect all cranes before commencing mobilisation operations/ transport     Check cranes on site according daily/ weekly checklist cranes (HSE procedure Manual g – Saudi Arabia, procedure 4.2.a: crane procedures, Chapter V, Inspection requirements)	8
Mobilisation of forklift	Fa	aulty equip	ment / Faulty attachments (fork. Boom)	3	3	15	135	Third party inspection takes place prior to rigmove (2 or 3 weeks before) at rigmovers yard  All attached equipment shall be OEM recommended and in good working condition  Having a valid MOPI certificate of critical areas Inspect forklift on arrival and eliminate likelihood of usage of unsafe equipment (HSE procedure Manual g – Saudi Arabia, procedure 4.2.b: Safety requirements in forklift operations, Chapter III, Daily	3,5

	Expectable	10		Continuous (direct access)	10		Catastrophic - Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<u> </u>	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
<b>Y</b>	Unusual but likely	3	ய்	Regularly – daily	6	ш.	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
\_	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious - Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	OĐ)	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB,	Highly unlikely	0,2	Û	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Step 1	. Fill-in activity Step 2. Assign	n dange	r/conse	equence Step 3. Calculate risk (= K x B x	E)	Ste	p 4. Assign measures Step 5. Calo	culate remaining risk1 (= K1 x B1	x E¹)

inspection of forklift trucks)

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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
						All operators shall obtain valid SAG and license and fit to work certificates				
						The additional forklift and crane operators mobilized for the rig move shall have past experience in rig moves				
Mobilizing operators and rigger-1	Incompetent personnel	3	6	15	270	- A part of the basic induction, they shall be fully introduced and trained on the rig procedures; they	0.5	0,5	15	3,75
and the same of th						shall be replaced if rig senior supervisors aren't confident about their skills and capabilities	-,-	,,,		2,12
						<ul> <li>Rigger-1 shall hold a valid Rigger-1 certificate and fit to work certificate (HSE procedure Manual g – Saudi Arabia, procedure 4.2.c: safety requirements in Rigging and lifting)</li> </ul>				
	Faulty equipment	3				Third party inspection takes place prior to rigmove (2 or 3 weeks before) at rigmovers yard				
Mobilizing trucks			3	15	135	All attached equipment shall be OEM recommended and in good working condition     Having a valid MOPI certificate of critical areas	0,5	1	7	3,5
						- Inspect trucks/trailer on arrival and eliminate likelihood of usage of unsafe equipment				
						A valid medical fitness certificate     Valid driver's license for a truck				
						- Saudi license				
	Drivers	3				<ul> <li>Aware of g Journey management and procedures HSE procedure Manual g – Saudi Arabia, procedure 7.4: Road safety compliance &amp; procedure 4.2.l: Safety requirements in Driving)</li> </ul>				

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<b>B</b>	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
¥ .	Unusual but likely	3	ш́	Regularly – daily	6	<b>3</b>	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	l Ø	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
<b>8</b>	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Stop 1	Fill-in activity Step 2 Assign	. dange	rlcone	equence Sten 3 Calculate risk (- K v B v	E)	Sto	n 4 Assign measures Sten 5 Cald	culate remaining risk! (- K¹ v R¹	1 v E1\

Step 1. Fill-in activity Step 2. Assign danger/consequence Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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ACTIVITY / ASP	ECT		DANGER / CONSEQUENCE		K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE K1 B1 E1 Risk1
	6. V. 7	rans	port	(Rig	move	2)
Missing truck	Convoy break up	3	3	15	90	The drivers have to keep the eyes on the vehicle in front and behind them. In case of any vehicle stopping, they will use the lights and the horn to inform the convoy leader in the lead truck.  Mobile phones in every truck. Satellite phone is in every leader's truck.  If alerted, the convoy will stop at the next parking area and waiting the missing vehicle  If not alerted, the convoy has to stop every 2 driving hours, in which case the convoy leader alerts the truck pusher for that geographical area.  Truck pusher will physically check for the missing vehicle to reconnect in his convoy  Food and water to be provided in each truck.
Truck break down	Convoy break-up	3	6	15	270	man. The mobile workshop is provided with satellite phone and it is called by the convoy leader.  The mobile workshop will repair the truck, which will join the original convoy or the next one.
Poor communications and instructions are not followed	Mobile phone coverage and availability	1	6	40	240	- All trucks have telephones each convoy leader will have a thuraya phone in lead truck.
Distracted driver, potential collision risk	Use of mobile phone while driving	3	6	40	720	- Use of phones whilst in control of vehicles is prohibited Drivers must pull over to make a call.

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100	
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40	
<b>Y</b>	Unusual but likely	3	Æ.	Regularly – daily	6	ш.	Very serious – One casualty	Damage €100.000 ◀ €500.000	15	
\_	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10	
ABII	Unlikely	0,5	G.	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7	
0B/	Highly unlikely	0,2	ı D	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3	
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1	
Step 1	Step 1. Fill-in activity Step 2. Assign danger/consequence Step 3. Calculate risk (= K x B x E) Step 4. Assign measures Step 5. Calculate remaining risk¹ (= K¹ x B¹ x E¹)									

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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
Adverse weather conditions. Reduced visibility	Sand storms and heavy rains	3	3	15	90	Adverse weather guidelines require a minimum sight of 200 meter.     Safe stopping areas are identified on route maps     Experience and knowledge of the drivers and lead	0,2	1	3	0,6
Camels on road, possible collision risk	Wild arrived a second at a second and	0.5		40	45	vehicle supervisors  - Convoy rules require lead escort vehicle and	0.4	4		
- fatal accidents known	Wild animals cause obstructions	0,5	3	10	15	drivers, to slow down and to turn on hazard lights	0,1	1	3	0,3
Congested roads leading to delays and potential damage of loads	Many sections of the skid road are single track	6	3	15	270	Lead escort vehicle to notify of oncoming traffic     There are potential passing places available     Experience of move team – competent supervision	1	1	7	7
Road conditions are poor, increased travel times	Conditions poor, due to road works	6	3	15	270	<ul> <li>Generally, the road surface is considered to be good during pre-move assessments of the route road and condition will be discussed at each trip.</li> <li>Speed restrictions areas on the route are identified for the lead vehicle.</li> <li>Skid road use by heavy vehicles will be minimized.</li> <li>At least one tow vehicle to be on standby at known soft sand spots</li> <li>Advance move party will advise convoy of poor conditions and unexpected road works on route.</li> </ul>	1	1	7	7
Mental attention of drivers, loss of control of the vehicle	Fatigue for drivers as a result of extended journeys	3	3	40	360	<ul> <li>Every 2 driving hours stop for 15 minutes</li> <li>Regular stops are planned on each day.</li> <li>Alternative stopping points are available and identified.</li> <li>The maximum distance to be travelled in one trip is 530 km.</li> <li>Each day's timetable allows for at least 12 hours rest time</li> <li>No smoking policy while driving</li> </ul>	0,2	1	40	8

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<b>B</b>	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
¥ .	Unusual but likely	3	ш́	Regularly – daily	6	<b>3</b>	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	l Ø	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
<b>8</b>	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Stop 1	Fill-in activity Step 2 Assign	. dange	rlcone	equence Sten 3 Calculate risk (- K v B v	E)	Sto	n 4 Assign measures Sten 5 Cald	culate remaining risk! (- K¹ v R¹	1 v E1\

Step 1. Fill-in activity Step 2. Assign danger/consequence Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

Document: PRA Risk	ov doc	Written by:
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DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	E	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
Road traffic, potential for accidents	Vehicle accident, injuries	3	6	40	720	Total convoy stops: lead and tail vehicles to be in position     Emergency plans for accident and notification of local emergency services include contact telephone numbers     All trucks will have a first aid kit in the cabin	1	1	3	3
Road traffic	Traffic incident (non-involvement)	1	6	40	240	Competent convoy leader.     Follow police instructions     Good communication to be maintained	0,1	2	7	1,4
Security, injury or loss of property	Theft, assaults, etc.	3	3	10	90	Close liaison with the police     Security posts are located on route, identified on route plans     Vehicles to be keep locked when unattended	0,2	1	10	2
Terrorist interest, attack		0,2	0,5	40	4	Communications with local police and security services	0,1	0,5	15	0,75
Medical incidents and injuries	Occupational incidents - injuries	3	3	40	360	First aid kits in all vehicles     Emergency civil support locally.     Contact numbers as part of the move plan     Every run is covered by one hospital that satisfies the Saudi & g standards	0,2	1	7	1,4
Fire in vehicle cab	Smoking, etc.	3	1	15	45	<ul> <li>Fire fighting extinguishers on-board.</li> <li>Safety equipment checks</li> <li>Professional drivers</li> <li>Vehicles condition to be checked and verified (daily)</li> <li>No smoking while driving</li> <li>Convoy rules to stop</li> </ul>	0,5	0,5	7	1,75
Dropped equipment / load	Unsafe, unstable loads	6	3	10	180	<ul> <li>Cargo check sheet, every day, every stop and pretrip.</li> <li>Loading supervisor – to be available and g personnel.</li> </ul>	0,5	1	7	3,5

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<b>B</b>	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
<u>'</u>	Unusual but likely	3	Ė	Regularly – daily	6	ш .	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
=	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	XPO	Incidental – monthly	2	EFF	Considerable – Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Û	Rarely - several times a year	1		Minor – Injury	Damage €350 <b>◄</b> €2.500	3
R.	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>◀</b> €350	1
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Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

Document: PRA Risk	av doc	Written by:
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DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk¹
Low bridges, overhead telephone and power lines	Overhead snagging	3	3	40	360	<ul> <li>Route survey – Highest load not to exceed 5,5 meter</li> <li>Truck pusher vehicle will check with a measure lowest bridge is 5,5 meter</li> </ul>	0,2	1	7	1,4
Overloading of structures	Overloading of bridge	3	2	40	240	Pre-route checks have confirmed no weight limitations on crossing points	0,2	1	3	0,6
Vehicle stability	Soft sand	6	6	7	252	<ul> <li>Vehicle recovery: experienced personnel, drivers</li> <li>Towing equipment to be inspected up to lifting equipment criteria. Part of safety checks, colour coding system in place</li> <li>Capacity of lifting equipment is above the towing capacity of the truck.</li> <li>Condition of the skid road will be checked</li> </ul>	1	2	3	6
Environmental impact	Waste disposal	3	6	15	270	- Disposal at approved stopping places	0,2	2	15	6
Welfare	Lack of interest	1	6	10	60	<ul> <li>Sanitary facilities – re-stocking of water and food is possible at all planned stopping areas.</li> <li>Prayer facilities are also accommodated.</li> </ul>	0,2	1	6	1,2
Collision with another vehicle or building	Up to 18ft wide loads	3	3	15	135	<ul> <li>Lighting and marking of convoys especially wide loads.</li> <li>Lead escort vehicle to communicate upcoming hazards and obstacles.</li> <li>Move in daylight hours only.</li> </ul>	0,2	3	3	1,8
Country specific requirements for heavy vehicles	Legal requirements not addressed	3	3	15	135	<ul> <li>Move plan requirements and pre-assessment</li> <li>Check if a police escort is requirement in KSA, especially for urban areas etc.</li> <li>All the permits will be obtained by rig move company.</li> </ul>	0,2	3	3	1,8

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ▶	100
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
¥ .	Unusual but likely	3	Έ-	Regularly – daily	6	<b>3</b> -	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
🛓	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	(PO	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
0B,	Highly unlikely	0,2	E)	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
P. P.	Almost impossible	0,1		Very rare - once a year	0,5		Little - Injury (no time lost)	Damage <b>⋖</b> €350	1

Step 1. Fill-in activity Step 2. A

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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					PROJ	ECT I	RISI	KΑN	ALYS	SIS					
	ACTIVITY / ASF	PECT		DAN	GER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk <sup>1</sup>
					7. A. Work specific	risks	acco	ordin	g to pro	oject planning					
					7.1.	M	uds	yste	n						
Liftin	g of mudsystem p	arts (general)	Injured pe	ople an	d/or damage of material	3	6	15	270	<ul> <li>Personal need to be trained in rigging</li> <li>Lifting with certified lifting gear</li> <li>Use proper PPE (gloves, helmet, boots glasses)</li> <li>Toolbox Talk (TBT) with all people involperation</li> <li>Designated Banksman – Rigger-1</li> </ul>	s, coverall,	1	3	1	3
	Assemble stairs (	general)	Injured pe	ople and	d/or damage of material	3	6	15	270	<ul> <li>Personal needs to be trained in rigging</li> <li>Lifting with certified lifting gear</li> <li>Use proper Personal Protective Equipi (gloves, helmet, boots, coverall, glass</li> <li>Careful placing fingers, hands and fee installation</li> <li>Use taglines</li> </ul>	ment (PPE) es)	1	3	1	3
(1	Un)load and (dis)a Shaker tan <mark>(weight: 20 n</mark>	k	Critical lift damage of		<mark>em lift</mark> - Injured people and/or al	1	3	40	120	Lift shaker tank according lifting plan     Barrier the area for personnel which is in the operation     TBT with all people involved in the operation     Only use certified lifting equipment     Only use certified/checked lifting point	eration	0,2	1	40	8
			Mud resid	ue's in t	he pipe- & dump lines	6	3	3	54	Shaker tank needs to be cleaned befor old location     Use bags or blind caps to plug of the l		0,5	3	1	1,5
			Damage o	f equipr	nent / construction	3	3	3	27	<ul> <li>Before start lifting check if all hoses, c lines are disconnected and well stowe</li> <li>Check for loose items on top of the tar</li> </ul>	d.	1	3	3	9
	Ехр	ectable	10		Continuous (direct access)			10		Catastrophic – Many casualties	Damage €1.000	0.000	<u> </u>		100
	High	nly likely	6		Continuous (indirect access)			6		Disastrous – Multiple casualties	Damage €500.0	000 ◀	€1.00	0.000	40
, A	Unusua	al but likely	3	<u> </u>	Regularly – daily			6	Ψ̈́	Very serious – One casualty	Damage €100.0	000 ◀	€500.	000	15
	Possible	but unlikely	1	EXPOSURE	Occasional – weekly			3	CT	Serious – Loss of arm / leg	Damage €30.00	0 ◀ €	100.0	00	10
BIE	Ur	nlikely	0,5	PQ.	Incidental – monthly			2	EFFECT	Considerable - Disability / Loss of hand, foot	Damage €2.500	<b>∢</b> €3	0.000		7
PROBABILITY	Highl	y unlikely	0,2	ũ	Rarely - several times a year			1	-	Minor – Injury	Damage €350 <	<b>∢</b> €2.5	00		3
R.	Almost	impossible	0,1		Very rare - once a year			0,5		Little – Injury (no time lost)	Damage <b>◄€</b> 350	)			1
Step 1.	Fill-in activity	Step 2. As	ssign dange	er/conse	equence Step 3. Calculate risk	(= K x	ВхЕ	Ξ)	Ste	ep 4. Assign measures Step 5. Calc	ulate remaining	j risk	¹ (= K	(1 x B1	x E¹)

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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> <li>TBT with all people involved in the operation</li> <li>Barrier the area for personnel which is not involved in the oepration</li> </ul>	0,2	3	7	4,2
(Un)load and (dis) assemble Vacuum degasser from shaker tank (weight: 1 mT)	- Injured people and/or damage of material					<ul> <li>Barrier the area for personnel which is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Use tagline</li> </ul>				
	Damage of equipment / construction	3	3	7	63	<ul> <li>Before start lifting check if all hoses, cables and lines are disconnected and well stowed</li> </ul>	1	3	7	21
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman</li> <li>TBT with all people involved in the operation</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> <li>Barrier the area for personnel which is not involved in the operation</li> </ul>	0,2	3	7	4,2
(Un)load and (dis)assemble Shale- shaker skid on(of) top of shale shaker tank (Weight: 17 mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift shale shaker skid according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,2	1	40	8
	Damage to shale-shakers / mud cleaner	1	3	10	30	- Check if the shale-shakers are secured before lifting	0,5	3	3	4,5

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<u> </u>	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
¥ .	Unusual but likely	3	ш́	Regularly – daily	6	<b>3</b> -	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
🛓	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	l Ø	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Sten 1	. Fill-in activity Step 2. Assign	n dange	r/conse	eguence Step 3. Calculate risk (= K x B x	F)	Ste	n 4. Assign measures Step 5. Cald	culate remaining risk <sup>1</sup> (= K <sup>1</sup> x B <sup>1</sup>	1 x F1)

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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
	Damage of equipment / construction	3	3	7	63	Before start lifting check if all hoses, cables and lines are disconnected and well stowed     Check for loose items on top of the shale shaker skid	1	3	7	21
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>TBT with all people involved in the operation</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> <li>Barrier the area for personnel which is not involved in the operation</li> </ul>	0,2	3	7	4,2
	Falling of shale-shaker skid after (dis)connecting the lifting gear	3	3	10	90	<ul> <li>Use safety belt during disconnecting the lifting gear at height (life-saving rules)</li> <li>Barrier the gaps in the handrails</li> </ul>	1	2	10	20
(Un)load and (dis)assemble intermediate tank (weight: 25 mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift intermediate tank according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,2	1	40	8
	Mud residue's in the pipe- & dump lines	6	3	3	54	Intermediate tank needs to be cleaned before leaving the old location     Use bags or blind caps to plug of the lines	0,5	3	1	1,5
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hoses, cables and lines are disconnected and well stowed     Check for loose items on top of the tank	1	3	3	9
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<u>m</u>	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
<b>Y</b>	Unusual but likely	3	ы́	Regularly – daily	6	ш .	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	N N	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 <b>◄</b> €2.500	3
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>◀€</b> 350	1
Stop 1	Fill in activity Stan 2 Assign	donac	rlooned	equence Stan 2 Coloulate rick /- K x B x	<b>E</b> \	Sto	n 4 Accian massures Ston F Cole	ulata ramaining rick! (- K1 v P1	V E1\

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk¹
(Un)load and (dis)assemble Suction/mix tank (Weight: 24 mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	Lift suction tank according lifting plan     Barrier the area for personnel which is not involved in the operation     TBT with all people involved in the operation     Only use certified lifting equipment     Only use certified/checked lifting points	0,2	1	40	8
	Mud residue's in the pipe- & dump lines	6	3	3	54	Suction tank needs to be cleaned before leaving the old location (flushing)     Use bags or blind caps to plug of the lines	0,5	3	1	1,5
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hoses, cables and lines are disconnected and well stowed     Check for loose items on top of the tank	1	3	3	9
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2
(Un)load and (dis)assemble reserve tank 01 (Weight: 24 mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift reserve tank 01 according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,2	1	40	8
	Mud residue's in the pipe-lines	6	3	3	54	reserve tank 01 needs to be cleaned before leaving the old location     Use bags or blind caps to plug of the lines	0,5	3	1	1,5
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hoses, cables and lines are disconnected and well stowed     Check for loose items on top of the tank	1	3	3	9

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<b>B</b>	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
<u>'</u>	Unusual but likely	3	Ë	Regularly – daily	6	<b>3</b> -	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
=	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	l Ø	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
8	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Sten 1	Fill-in activity Sten 2 Assign	n dange	r/conse	equence Sten 3 Calculate risk (= K x B x	E)	Sto	n 4 Assign measures Sten 5 Cald	culate remaining risk! (= K¹ x B¹	1 v F1)

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2
(Un)load and (dis)assemble reserve tank 02 (Weight: 24 mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift reserve tank 02 according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,2	1	40	8
	Mud residue's in the pipe-lines	6	3	3	54	Reserve tank 02 needs to be cleaned before leaving the old location     Use bags or blind caps to plug of the lines	0,5	3	1	1,5
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hoses, cables and lines are disconnected and well stowed     Check for loose items on top of the tank	1	3	3	9
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2
(Un)load and (dis)assemble Mixing skid (Weight: 5 mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift Mixtank according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,2	1	40	8
	Mud residue's in the pipe-lines	6	3	3	54	mixtank needs to be cleaned before leaving the old location     Use bags or blind caps to plug of the lines	0,5	3	1	1,5

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
, Y	Unusual but likely	3	Æ.	Regularly – daily	6	<b>3</b> -	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
=	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	S S	Incidental – monthly	2	EFF	Considerable – Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Û	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Stop 1	Fill in activity Stop 2 Assign	dongo	rlooned	oguanca Stan 3 Calculato rick (- K v B v	<u></u>	Sto	n 4 Assign massures Ston 5 Cale	culato romaining rick! (- K1 v B1	- E1\

Step 1. Fill-in activity Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hoses, cables and lines are disconnected and well stowed.     Check for loose items on top of the tank	1	3	3	9
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2
(Un)load and (dis)assemble water tank 01 <mark>(Weight: 24 mT)</mark>	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift water tank 01 according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,2	1	40	8
	Damage of equipment / construction	3	3	3	27	<ul> <li>Before start lifting check if all hoses, cables and lines are disconnected and well stowed</li> <li>Check for loose items on top of the tank</li> </ul>	1	3	3	9
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2
(Un)load and (dis)assemble water tank 02 <mark>(Weight: 24 mT)</mark>	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift water tank 02 according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,2	1	40	8
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hoses, cables and lines are disconnected and well stowed     Check for loose items on top of the tank	1	3	3	9

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
, Y	Unusual but likely	3	Ė	Regularly – daily	6	<b>3</b> -	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
=	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	S S	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Û	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
R.	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Ctop 1	Fill in activity Cton 2 Accier		-loonor	Stan 2 Calculate rick / K v B v		Cta	n 4 Appins managers	vulate remaining riekt / K1 v B1	1 [1]

Step 1. Fill-in activity Step

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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	ACTIVITY / ASPECT		DANG	SER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE		K¹	B¹	E¹	Ris
		Crane driv	ers don	't follow up the signals	3	3	7	63	Designated Banksman – Rigger-1     Don't stand in between load and fixed     Check your surroundings and make such where your escape route is		0,2	3	7	4,
Un	load and install big bag crane	Working a	t height		1	3	15	45	<ul> <li>Use safety belt with double fall arrest</li> <li>Make use of a manbasket during (dis lifting gear</li> <li>Wear the safety belt in a proper way</li> <li>TBT with all people involved in the or</li> </ul>	)connecting	0,5	3	7	10
		Damage o	Damage of equipment during lifting / installation			3	10	30	<ul> <li>Only use certified lifting equipment</li> <li>Only use certified / checked pad-eyes</li> </ul>	5	0,5	3	10	1
	Personnel gets injured by dropped objects				3	3	3	27	<ul> <li>Barrier the area</li> <li>People not involved of the operation of the way</li> </ul>	need to be out	3	3	1	,
Damage to equipment during installation				1	3	10	30	<ul> <li>Make use of guide ropes</li> <li>People not involved of the operation of the way</li> <li>Check if hoist is fixed before start lift</li> </ul>		0,5	3	7	10	
(Un)load and (dis)assemble supercharge pump manifold (Weight: 6 mT)  Tandem lift - Injured people and/or damage of material		ed people and/or damage of	1	3	40	120	<ul> <li>Lift supercharge pump manifold accorplan</li> <li>Barrier the area for personnel which in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting point</li> </ul>	is not involved	0,2	1	40			
		Mud resid	ue's in t	he pipe-lines	6	3	3	54	Supercharge pump manifold needs to before leaving the old location     Use bags or blind caps to plug of the		0,5	3	1	1
		Damage o	f equipr	nent / construction	3	3	3	27	Before start lifting check if all hoses, lines are disconnected and well stow     Check for loose items on top of the s skid	cables and ed	1	3	3	!
	Expectable	10		Continuous (direct access)			10		Catastrophic – Many casualties	Damage €1.000	.000	<b>&gt;</b>		10
	Highly likely	6	<u> </u>	Continuous (indirect access)			6		Disastrous – Multiple casualties	Damage €500.0	00 ◀	€1.00	0.000	4
<b>Y</b>	Unusual but likely	3	ا ش	Regularly – daily			6	ш	Very serious – One casualty Damage €10		00 ◀	€500.	000	15
<u> </u>	Possible but unlikely	1	SUF	Occasional – weekly			3	EFFECT	Serious – Loss of arm / leg	Damage €30.00	0 ◀ €	100.0	00	1
ABII	Unlikely	0,5	EXPOSUR	Incidental – monthly			2	EFF	Considerable – Disability / Loss of hand, foot	Damage €2.500	<b>∢</b> €3	0.000		7
Possible but unlikely  Unlikely  Occasional – weekly  Incidental – monthly  Rarely - several times a year					1		Minor – Injury	Damage €350 ◀	€2.5	00		3		
R R	Almost impossible	0,1		Very rare - once a year			0,5		Little – Injury (no time lost)	Damage <b>◀€</b> 350	)			1

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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				PROJE	ECT	RISP	K AN	IALY	SIS					
	ACTIVITY / ASPECT		DAN	GER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk <sup>1</sup>
		Crane driv	ers don	't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed</li> <li>Check your surroundings and make swhere your escape route is</li> </ul>		0,2	3	7	4,2
(Un	)load and (dis)assemble Brake cooling skid <mark>(Weight: n.a. mT)</mark>	Tandem lit material	f <mark>t</mark> - Injur	ed people and/or damage of	1	3	40	120	<ul> <li>Lift brake cooling skid according lifting</li> <li>Barrier the area for personnel which in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting point</li> </ul>	is not involved peration nts	0,2	1	40	8
		Mud resid	ue's in t	he pipe-lines	6	3	3	54	<ul> <li>Cooling tower + poor-boy degasser s cleaned before leaving the old location</li> <li>Use bags or blind caps to plug of the</li> </ul>	on	0,5	3	1	1,5
Damage of equipment / construction				3	3	3	27	<ul> <li>Before start lifting check if all hoses, lines are disconnected and well stow</li> <li>Check for loose items on top of the b skid</li> </ul>	ed	1	3	3	9	
	Crane drivers don't follow up the signals		3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed</li> <li>Check your surroundings and make swhere your escape route is</li> </ul>	•	0,2	3	7	4,2		
(Un)	oad and (dis)assemble trip tank (Weight: 4 mT)	Injured people and/or damage of material		1	3	40	120	<ul> <li>Barrier the area for personnel which in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting point</li> </ul>	peration	0,2	1	40	8	
		Mud residue's in the pipe-lines		6	3	3	54	<ul> <li>Trip tank needs to be cleaned before location</li> <li>Use bags or blind caps to plug of the</li> </ul>		0,5	3	1	1,5	
		Damage o	f equipr	nent / construction	3	3	3	27	<ul> <li>Before start lifting check if all hoses, lines are disconnected and well stow</li> <li>Check for loose items on top of the tr</li> </ul>	ed	1	3	3	9
	Expectable	10		Continuous (direct access)			10		Catastrophic - Many casualties	Damage €1.000.	1 000.	<u> </u>		100
	Highly likely	6	m	Continuous (indirect access)			6		Disastrous – Multiple casualties	Damage €500.00	00 ◀	€1.00	0.000	40
<b>Y</b>	Unusual but likely	3		Regularly – daily			6	<u>ш</u>	Very serious – One casualty	Damage €100.00	00 ◀	€500.	000	15
Ĭ-	Possible but unlikely	1	SUF	Occasional – weekly			3	EFFECT	Serious – Loss of arm / leg	Damage €30.000	0 ◀ €	100.0	00	10
PROBABILITY	Unlikely	0,5	EXPOSURE	Incidental – monthly			2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500	<b>∢</b> €3	30.000		7
(OB)	Highly unlikely	0,2	Э	Rarely - several times a year			1		Minor – Injury	Damage €350 ◀	€2.5	500		3
<b>R</b>	Almost impossible	0,1		Very rare - once a year			0,5		Little – Injury (no time lost)	Damage <b>◀€</b> 350	)			1
Step 1	p 1. Fill-in activity Step 2. Assign danger/consequence Step 3. Calculate risk (= K x B x E) Step 4. Assign measures Step 5. Calculate remaining risk¹ (= K¹ x B¹ x E¹)										risk	ា (= K	1 x B1	x E1)

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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			PROJE	CT	RISH	<i>(A</i> )	IALYS	SIS					
ACTIVITY / AS	PECT		DANGER / CONSEQUENCE	K	В	Е	Risk		CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
		Crane driver	rs don't follow up the signals	3	3	7	63	- - -	Designated Banksman Don't stand in between load and fixed object Check your surroundings and make sure you know where your escape route is	0,2	3	7	4,2
		-	7.2.	M	ludp	ump	s	I		1			
(Un)load and position <mark>(Weight: 37,5</mark>		Critical lift / damage of n	<mark>tandem lift</mark> - Injured people and/or naterial	1	3	40	120	- - - - -	Lift mudpump according lifting plan Barrier the area for personnel which is not involved in the operation TBT with all people involved in the operation Only use certified lifting equipment Only use certified/checked lifting points Cranes need to have big mats underneath there outriggers Toolbox talk with all involved people	0,2	1	40	8
		Mud residue	s's in the pipe-lines	6	3	3	54	-	Mud pumps needs to be cleaned before leaving the old location Use bags or blind caps to plug of the lines	0,5	3	1	1,5
		Damage of e	equipment / construction	3	3	3	27	-	Before start lifting check if all hoses, cables and lines are disconnected.	1	3	3	9

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100		
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40		
, Y	Unusual but likely	3	Ė	Regularly – daily	6	<b>3</b> -	Very serious – One casualty	Damage €100.000 ◀ €500.000	15		
=	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10		
ABII	Unlikely	0,5	S S	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7		
OB	Highly unlikely	0,2	Û	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3		
R.	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1		
Ctop 1	Chan 4 Fill in positivity. Stan 2 Apping degree/page/page/page/page/page/page/page/pa										

3 3 7

63

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Crane drivers don't follow up the signals

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

Designated Banksman - Rigger-1

where your escape route is

Don't stand in between load and fixed object

Check your surroundings and make sure you know

Step 5. Calculate remaining risk<sup>1</sup> (= K<sup>1</sup> x B<sup>1</sup> x E<sup>1</sup>)

0,2 3

7

4,2

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			PROJE	CT	RISI	(A)	ALYS						
ACTIVITY / AS	SPECT		DANGER / CONSEQUENCE	K	В	Е	Risk	CON	ITROL MEASURE	K¹	B¹	E¹	Risk¹
(dis)assemble stai	rs (general)	Injured peop	ole and/or damage of material	3	6	15	270	Lifting with certi Use proper PPE glasses)	o be trained in rigging and slinging ified lifting gear (gloves, helmet, boots, coverall, fingers and feed during installation				
			7.3.	e.	hote	uctu							
(Un)load and position ODS (Weight: 38		Critical lift / damage of n	Tandem lift - Injured people and/or	1	3	40	120	Barrier the area in the operation TBT with all peo Only use certifie Only use certifie	ox ODS according lifting plan for personnel which is not involved ple involved in the operation ed lifting equipment ed/checked lifting points have big mats underneath there	0,2	1	40	8
		Crane driver	rs don't follow up the signals	3	3	7	63	Don't stand in be	ksman – Rigger-1 etween load and fixed object oundings and make sure you know ape route is (well cellar!)	0,2	3	7	4,2
(dis)assemble base   V-door sid	•	Injured peop	ole and/or damage of material	1	3	40	120	Only use certified Taglines Check where you installation proc	ed lifting equipment ed/checked lifting points u put fingers and feet during eess le surface when hammering	0,2	1	40	8

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100		
	Highly likely	6	<u>m</u>	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40		
<u> </u>	Unusual but likely	3	Ė	Regularly – daily	6	ш.'	Very serious – One casualty	Damage €100.000 ◀ €500.000	15		
🛓	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10		
ABII	Unlikely	0,5	l Ø	Incidental – monthly	2	111	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7		
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3		
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1		
Step 1	Step 1. Fill-in activity  Step 2. Assign danger/consequence  Step 3. Calculate risk (= K x B x E)  Step 4. Assign measures  Step 5. Calculate remaining risk¹ (= K¹ x B¹ x E¹)										

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PROJECT RISK ANALYSIS														
	ACTIVITY / ASPECT		DANG	SER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk <sup>1</sup>
(Un)l	oad and position front base box DS <mark>(Weight: 38 mT)</mark>		- Lift front base box DS according lifting plan - Barrier the area for personnel which is not involved in the operation - Only use certified lifting equipment - Only use certified/checked lifting points - Cranes need to have big mats underneath there outriggers - TBT with all people involved in the operation  mage of equipment / construction  3 3 3 3 27  - Before start lifting check if all hydraulic hoses in the operation of th				not involved  ats eath there eration	0,2	1	40	8			
		Damage of	Damage of equipment / construction			3	3	27	<ul> <li>Before start lifting check if all hydraulic hoses are disconnected.</li> </ul>			3	3	9
	Crane drivers don't follow up the signals				3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is (well cellar!)</li> </ul>			3	7	4,2
(Un)load and (dis)assemble rear base box DS (Weight: 39 mT)		Critical lift / Tandem lift - Injured people and/or damage of material			1	3	40	120	<ul> <li>Lift rear base box DS according lifting</li> <li>Barrier the area for personnel which is in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting poin</li> <li>Cranes need to have big mats underneoutriggers</li> <li>TBT with all people involved in the operation</li> </ul>	not involved ats eath there	0,2	1	40	8
		Crane drivers don't follow up the signals			3	3	7	63	Designated Banksman – competent per Don't stand in between load and fixed     Check your surroundings and make so where your escape route is	object	0,2	3	7	4,2
(di	s)assemble base box spreader DWS side	Injured pe	ople and	l/or damage of material	1	3	40	120	<ul> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting poin</li> <li>Taglines</li> <li>Check where you put fingers and feet installation process</li> <li>Stand on a stable surface when hamm</li> </ul>	during	0,2	1	40	8
	Expectable	10		Continuous (direct access)			10		Catastrophic – Many casualties	Damage €1.000	.000	>		100
	Highly likely	6	В	Continuous (indirect access)			6		Disastrous – Multiple casualties	Damage €500.0	000 ◀	€1.00	0.000	40
, A	Unusual but likely					6	L L	Very serious – One casualty	Damage €100.0	00 ◀	€500.	000	15	
Ĺ	Possible but unlikely 1  Unlikely 0,5  Highly unlikely 0,2  Almost impossible 0,1		SUF	Occasional – weekly			3	EFFECT	Serious – Loss of arm / leg	Damage €30.00	0 ◀ €	100.0	00	10
ABI	Possible but unlikely  Unlikely  Unlikely  Occasional – weekly  Incidental – monthly		Incidental – monthly			2	1111	Considerable - Disability / Loss of hand, foot	Damage €2.500	<b>∢</b> €3	0.000		7	
SOB	Highly unlikely	ighly unlikely 0,2 Rarely - several times a year				1		Minor – Injury	Damage €350 <	50 ◀ €2.500			3	
PF	Almost impossible 0,1 Very rare - once a year				0,5		Little – Injury (no time lost)	Damage <b>∢€</b> 350	)			1		
Step 1	. Fill-in activity Step 2. As	ssign dange	r/conse	quence Step 3. Calculate risk	(= K x	ВхЕ	≣)	Sto	ep 4. Assign measures Step 5. Calc	culate remaining	j risk	¹ (= K	1 x B1	x E¹)

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		Project:
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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	E	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk¹
(Un)load and (dis)assemble rear base box ODS (Weight: 39 mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift rear base box ODS according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hydraulic hoses are disconnected.	1	3	3	9
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – competent person</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2
(Un)load and (dis)assemble drill floor elevator box ODS (Weight: n.a. mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift drill floor elevator box ODS according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8
	Crane drivers don't follow up the signals	3	3	7	63	Designated Banksman – competent person     Don't stand in between load and fixed object     Check your surroundings and make sure you know where your escape route is	0,2	3	7	4,2

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100			
	Highly likely	6	<b>B</b>	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40			
¥ .	Unusual but likely	3	ш́	Regularly – daily	6	<b>3</b>	Very serious – One casualty	Damage €100.000 ◀ €500.000	15			
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10			
ABII	Unlikely	0,5	l Ø	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7			
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3			
<b>8</b>	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1			
Stop 1	Ston 1 Fills in activity Ston 2 Assign danger/consequence Ston 3 Calculate risk (- K v R v F) Ston 4 Assign measures Ston 5 Calculate remaining risk1 (- K1 v R1 v F1)											

Step 1. Fill-in activity Step 2. Assign danger/consequence Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

Document: PRA Risky.doc		Written by:
		Project:
DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
(Un)load and (dis)assemble drill floor elevator box DS (Weight: n.a. mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift drill floor elevator box DS according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hydraulic hoses are disconnected.	1	3	3	9
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – competent person</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2
(Dis)assemble front legs ODS & DS (inside legs)	Injured people and/or damage of material	1	3	40	120	<ul> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Taglines</li> <li>Check where you put fingers and feet during installation process</li> <li>Stand on a stable surface when hammering</li> </ul>	0,2	1	40	8
	Cranes drivers don't follow up the signals	3	3	7	63	Designated Banksman – competent person     Don't stand in between load and fixed object     Check your surroundings and make sure you know where your escape route is	0,2	3	7	4,2
(Dis)assemble secondary front legs ODS & DS (outside legs)	Injured people and/or damage of material	1	3	40	120	<ul> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Taglines</li> <li>Check where you put fingers and feet during installation process</li> <li>Stand on a stable surface when hammering</li> </ul>	0,2	1	40	8

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100		
	Highly likely	6	<u>m</u>	Continuous (indirect access)  6 Disastrous - Multiple casualties  Damage €500.000					40		
<b>Y</b>	Unusual but likely	3	ы́	Regularly – daily	6	ш .	Very serious – One casualty	Damage €100.000 ◀ €500.000	15		
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10		
ABII	Unlikely	0,5	N N	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7		
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 <b>◄</b> €2.500	3		
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>◀€</b> 350	1		
Stop 1	Stan 4 Fill in potingity Stan 2 Applied dengar/connections of Stan 2 Calculate view (- M. v. B. v. E.) Stan 4 Applied magnitudes of Stan 5 Calculate remaining view (- M. v. B. v. E.)										

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

Document: PRA Risky.doc		Written by:
		Project:
DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
	Crane drivers don't follow up the signals	3	3	7	63	Designated Banksman – competent person     Don't stand in between load and fixed object     Check your surroundings and make sure you know where your escape route is	0,2	3	7	4,2
(Un)load and (Dis)assemble rotary spreader (weight: 14 mT)	damaged of material and/ or injured people	1	3	40	120	Designated Banksman     Only use certified lifting equipment     Only use certified/checked lifting points     Stand on a stable surface when hammering     Make use of tagline     Check where you put fingers and feet during installation process	0,2	1	40	8
	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	<ul> <li>TBT with all people involved in the operation</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings in case of emergency</li> </ul>	1	3	7	21
(Un)load and (Dis)assemble front drawworks support spreader (Weight: n.a. mT)	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the operation     Don't stand in between load and fixed object     Check your surroundings in case of emergency	1	3	7	21
	Lifting front drawworks spreader – damaged of material and/ or injured people	1	3	40	120	<ul> <li>Designated Banksman - Competent person</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Stand on a stable surface when hammering</li> <li>Make use of tagline</li> </ul>	0,2	1	40	8
(Un)load and (Dis)assemble rear drawworks spreader (Weight: n.a. mT)	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the operation     Don't stand in between load and fixed object     Check your surroundings in case of emergency	1	3	7	21
	Lifting rear drawworks spreader – damaged of material and/ or injured people	1	3	40	120	<ul> <li>Designated Banksman - Competent person</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Stand on a stable surface when hammering</li> <li>Make use of tagline</li> </ul>	0,2	1	40	8

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
<u>'</u>	Unusual but likely	3	Ė	Regularly – daily	6	ш .	Very serious – One casualty Damage €100.000 ◀ €500.		
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	XPO	Incidental – monthly	2	EFF	Considerable – Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Û	Rarely - several times a year	1		Minor – Injury	Damage €350 <b>◄</b> €2.500	3
R.	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>◀</b> €350	1
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Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

Document: PRA Risky.doc		Written by:
		Project:
DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
(Dis)assemble Hydraulic cathead supports	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the operation     Don't stand in between load and fixed object     Check your surroundings in case of emergency	1	3	7	21
	damaged of material and/ or injured people	1	3	40	120	<ul> <li>Designated Banksman - Competent person</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Stand on a stable surface when hammering</li> <li>Make use of tagline</li> </ul>	0,2	1	40	8
(Un)load and (Dis)assemble setback spreader (weight: 15 mT)	damaged of material and/ or injured people	1	3	40	120	<ul> <li>Designated Banksman</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Stand on a stable surface when hammering</li> <li>Make use of tagline</li> <li>Check where you put fingers and feet during installation process</li> </ul>	0,2	1	40	8
	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the operation     Don't stand in between load and fixed object     Check your surroundings in case of emergency	1	3	7	21
(Un)load and (Dis)assemble Drawworks Drum <mark>(weight: 40 mT)</mark>	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift drawworks drum according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8
	Damage of equipment / construction	3	3	3	27	Before start lifting check if there are no transport damages (resulted in loose items on top)	1	3	3	9
	Crane drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> </ul>	0,2	3	7	4,2

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100	
	Highly likely	6	В	Continuous (indirect access)	6			Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
۲.	Unusual but likely	3	RE -	Regularly – daily	6	ш	U Very serious – One casualty Damage €100.000 ◀ €500			
	Possible but unlikely	1	SUF	Occasional – weekly	3	EC	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10	
ABII	Unlikely	0,5	(PO	Incidental – monthly	2		Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7	
OB	Highly unlikely	0,2	É	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3	
P.	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1	
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Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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	ACTIVITY / AS	PECT		DAN	GER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk <sup>1</sup>
			Getting jan	nmed, t	rapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the op     Don't stand in between load and fixed     Check your surroundings and make swhere your escape route is, rigfloor if finished	d object sure you know	1	3	7	21
(Un)load and (Dis)assemble Drawworks Drive (weight: 21 mT)		Critical lift / Tandem lift - Injured people and/or damage of material		1	3	40	120	<ul> <li>Lift drawworks drive according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>TBT with all people involved in the operation</li> </ul>		0,2	1	40	8		
Damage of			equip	ment / construction	3	3	3	27	Before start lifting check if there are damages (resulted in loose items on		1	3	3	9	
			Crane drive	ers dor	't follow up the signals	3	3	7	63	Designated Banksman – Rigger-1     Don't stand in between load and fixed	d object	0,2	3	7	4,2
Getting jam		nmed, 1	rapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the op Don't stand in between load and fixed Check your surroundings and makes where your escape route is, rigfloor i finished	d object sure you know	1	3	7	21		
		Critical lift material	Critical lift - Injured people and/or damage of material		1	3	40	120	<ul> <li>Lift rotary table according lifting plan</li> <li>Barrier the area for personnel which in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting poi</li> <li>Cranes need to have big mats underr outriggers</li> <li>TBT with all people involved in the operation</li> </ul>	is not involved nts neath there	0,2	1	40	8	
			Crane drive	ers dor	i't follow up the signals	3	3	7	63	Designated Banksman – Rigger-1     Don't stand in between load and fixed	d object	0,2	3	7	4,2
	Exp	ectable	10		Continuous (direct access)			10		Catastrophic – Many casualties	Damage €1.000.	.000	-		100
	Higi	nly likely	6	В	Continuous (indirect access)			6		Disastrous – Multiple casualties	Damage €500.00	00 ◀	€1.000	0.000	40
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	Expectable	10	
PROBABILITY - K	Highly likely	6	
	Unusual but likely	3	
	Possible but unlikely	1	
ABII	Unlikely	0,5	
0B/	Highly unlikely	0,2	
P	Almost impossible	0,1	

	Continuous (direct access)	10
<b>a</b>	Continuous (indirect access)	6
EXPOSURE -	Regularly – daily	6
	Occasional – weekly	3
PO	Incidental – monthly	2
ω	Rarely - several times a year	1
	Very rare - once a year	0,5

ш - - -	Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
7 7 7	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
	Minor – Injury	Damage €350 ◀ €2.500	3
	Little – Injury (no time lost)	Damage <b>⋖</b> €350	1

Step 1. Fill-in activity Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

Document: PRA Risky.doc		Written by:
		Project:
DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
	Work at height – Falling personnel	1	3	15	45	Secure using twin fall arrest harness (always one fall arrest line secured during movement)	0,5	3	7	10,5
	Work at height - Falling tools & equipment	6	3	15	270	No unauthorised access to drill-floor during work at height	1	1	15	15
	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	<ul> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is, rigfloor is still not finished</li> </ul>	1	3	7	21
Install rigfloor panels	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the operation Don't stand in between load and fixed object Check your surroundings in case of emergency and for gaps in rig floor Make use of taglines	1	3	7	21
	Work at height – Falling personnel	1	3	15	45	Secure using twin fall arrest harness (always one fall arrest line secured during movement)	0,5	3	7	10,5
	Work at height - Falling tools & equipment	6	3	15	270	<ul> <li>No unauthorised access to drill-floor during work at height</li> </ul>	1	1	15	15
Install platform with air vessels	Lift platform with air vessels – injured people and/or damaged material	1	3	40	120	<ul> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Make use of taglines</li> </ul>	0,2	1	40	8
	Work at height – Falling personnel	1	3	15	45	Secure using twin fall arrest harness (always one fall arrest line secured during movement)	0,5	3	7	10,5
	Work at height - Falling tools & equipment	6	3	15	270	<ul> <li>No unauthorised access to drill-floor during work at height</li> </ul>	1	1	15	15

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ▶	100						
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40						
, X	Unusual but likely	3	Œ-	Regularly – daily	6	EFFECT - E	Very serious – One casualty	Damage €100.000 ◀ €500.000	15						
🛓	Possible but unlikely	1	SUF	Occasional – weekly	3		Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10						
ABII	Unlikely	0,5	(PO	Incidental – monthly	2		Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7						
OB,	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3						
A A	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1						
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Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

Document: BBA Bick	ry doc	Written by:
Document: PRA Risky.doc		Project:
DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	E	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
(Un)load and (Dis)assemble drillers console (weight: 1 mT)	Vulnerable lift – injured people and/or damaged material	1	3	40	120	Barrier the area for personnel which is not involved in the operation     Only use certified lifting equipment     Only use certified/checked lifting points     Make use of tagline     Check for loose items before lifting the drillers console     Lift with great care because of vulnerable equipment	0,2	1	40	8
	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the operation Don't stand in between load and fixed object     Check your surroundings in case of emergency	1	3	7	21
(Un)load and (Dis)assemble drillers cabin	injured people and/or damaged material	1	3	40	120	<ul> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Make use of tagline</li> </ul>	0,2	1	40	8
	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the operation Don't stand in between load and fixed object     Check your surroundings in case of emergency	1	3	7	21
Unfold/fold up doghouse support	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the operation     Stand on a stable surface when hammering	1	3	7	21
(Un)load and (Dis)assemble doghouse (Weight: 10,3 mT)	Lift doghouse – injured people and/or damaged material	1	3	40	120	<ul> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Make use of taglines</li> <li>Check for loose items before lifting the doghouse</li> <li>Lift with great care because of vulnerable equipment</li> </ul>	0,2	1	40	8

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100		
	Highly likely	6	Ф	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40		
, Y	Unusual but likely	3	Æ.	Regularly – daily	6	ECT - E	Very serious – One casualty	Damage €100.000 ◀ €500.000	15		
=	Possible but unlikely	1	SUF	Occasional – weekly	3		Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10		
ABII	Unlikely	0,5	S S	Incidental – monthly	2		Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7		
OB	Highly unlikely	0,2	Û	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3		
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1		
Stop 1	Ston 1 Fill in activity Ston 2 Assign danger/consequence Ston 2 Calculate risk (- K v B v E) Ston 4 Assign measures Ston 5 Calculate remaining risk! (- K1 v B1 v E1)										

Step 1. Fill-in activity Step 2. Ass

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

Document: BBA Bick	ry doc	Written by:
Document: PRA Risky.doc		Project:
DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	TBT with all people involved in the operation     Don't stand in between load and fixed object     Don't stand underneath a suspended load     Check your surroundings in case of emergency     Stand on a stable surface when hammering	1	3	7	21
Install several stairs	Hook-up stairs, connect pin connections – work at height - falls	1	3	15	45	Secure using twin fall arrest harness (always one fall arrest line secured during movement)     Secure tools	0,5	3	7	10,5
Install several handrails around rigfloor	Hook-up handrails, connect pin connections – work at height - falls	1	3	15	45	<ul> <li>Secure using twin fall arrest harness (always one fall arrest line secured during movement)</li> <li>Secure tools</li> </ul>	0,5	3	7	10,5
Install standpipe skid (ODS)	Hook-up skid – work at height - falls	1	3	15	45	<ul> <li>Secure using twin fall arrest harness (always one fall arrest line secured during movement)</li> <li>Don't stand in between load and fixed object</li> <li>Don't stand underneath a suspended load</li> <li>Check your surroundings in case of emergency</li> <li>Stand on a stable surface when hammering</li> </ul>	0,5	3	7	10,5
	Work at height - Falling tools & equipment	3	6	10	180	- Secure tools	1	2	10	20
Install BOP beams	Lift beams – tandem lift (crane + winch)	3	3	15	135	Stand on a stable surface when hammering     Lift beams according lifting plan, supervised by Rigger-1     Maintain direct contact with crane & winch operators (by radio or visual contact)     Check your surroundings in case of emergency	1	3	7	21
	injured people and/or damaged material	1	3	40	120	<ul> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Stand on a stable surface when hammering</li> </ul>	0,2	1	40	8

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100										
	Highly likely	6	<u> </u>	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40										
<b>Y</b>	Unusual but likely	3	ш́	Regularly – daily	6	ECT - E	Very serious – One casualty	Damage €100.000 ◀ €500.000	15										
È	Possible but unlikely	1	SUF	Occasional – weekly	3		Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10										
ABII	Unlikely	0,5	G.	Incidental – monthly	2		Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7										
0B/	Highly unlikely	0,2	<u> </u>	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3										
R	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1										
Stop 1	Fill-in activity Stop 2 Assign	n dange	rlcone	oguence Sten 3 Calculate rick (- K v B v	E\	Sto	n / Assign measures Sten 5 Cale	culato romaining rick1 (- K1 v B1	Stan 1 Fill-in activity Stan 2 Assign danger/consequence Stan 3 Calculate risk (- K v R v F) Stan 4 Assign measures Stan 5 Calculate remaining risk1 (- K1 v R1 v F1)										

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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					PROJ	ECT I	RISI	$\langle A \rangle$	IALYS	SIS					
	ACTIVITY / ASP	ECT		DAN	GER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk <sup>1</sup>
	Install BOP ho	sts	injured pe	ople an	d/or damaged material	1	3	40	120	<ul> <li>Barrier the area for personnel which in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting point</li> </ul>		0,2	1	40	8
٧	isual inspection of	subbase	Getting jai	nmed, 1	rapped fingers, hands, limbs	3	3	7	63	<ul> <li>Slips, trips and falls</li> <li>Check your surroundings in case of example.</li> </ul>	emergency	1	3	7	21
	er / Raise subbas nly be done when n		operation fatalities.  Install cen structure,	tral sup	ubbase (rigfloor)- Critical ng structure, falling equipment, port (pin connection) - Falling equipment, fatalities.	0,5	6	100	300 240 27	<ul> <li>TBT with all people involved in the operand barrier the danger zone for nonepersonnel</li> <li>all activities in immediate vicinity (dastopped during raising process</li> <li>Check hydraulic system &amp; indicators active supervision</li> <li>Checklist filled out and signed by serone man in charge of operation (g)</li> <li>monitor movement of substructure monitor moving parts from safe distation supports (pin connection)</li> <li>Stand on stable surface when hammed</li> <li>Before start raising check if there are</li> </ul>	essential nger zone) hydraulic unit nior personnel unce ructure	0,5	6	7 7 3	10,5
			Cranes dri	3	3	7	63	on top of rigfloor.  - Designated Banksman – Rigger-1  - Don't stand in between load and fixed  - Check your surroundings and make swhere your escape route is (well cella	sure you know	0,2	3	7	4,2		
					,	7.4.	Ma	ast							
(Dis	s)assemble and (Ur bottom section <mark>(Weight: 11,3 r</mark>	on .	Install mas	st section	on - Work at height	1	3	15	45	<ul> <li>Use manbasket and secure twin fall a to manbasket</li> <li>Secure tools with help of lanyard</li> </ul>	arrest harness	0,5	3	7	10,5
	Expe	ctable	10		Continuous (direct access)			10		Catastrophic – Many casualties	Damage €1.000	.000	<b>&gt;</b>		100
	Highl	y likely	6	В	Continuous (indirect access)			6		Disastrous – Multiple casualties	Damage €500.0	00 ◀	€1.00	0.000	40
, <del>,</del>	Unusua	but likely	3	Æ-	Regularly – daily			6	Щ.	Very serious – One casualty	Damage €100.0	00 ◀	€500.	000	15
È	Possible	but unlikely	1	SURE	Occasional – weekly			3	EFFECT	Serious – Loss of arm / leg	Damage €30.00	0 ◀ €	100.0	00	10
ABII	Un	ikely	0,5	EXPO	Incidental – monthly			2		Considerable - Disability / Loss of hand, foot	Damage €2.500	<b>∢</b> €3	0.000		7
PROBABILITY	Highly	unlikely	0,2	Û	Rarely - several times a year			1		Minor – Injury	Damage €350 ◀	350 ◀ €2.500			3
R	Almost i	mpossible	0,1		Very rare - once a year			0,5		Little - Injury (no time lost)	Damage <b>◄€</b> 350				1

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DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
	Damage to connections and falling equipment	3	6	7	126	Check if all piping and hoses connections are cleaned before commencing lift (ODS)     Check if connections need a new seal (ODS)	1	6	3	18
	2 crane operation - Injured people and/or damage of material		3	40	120	<ul> <li>Lift lower mast section according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>Dedicated banks man</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8
	Critical lift – Man-basket operation	1	3	15	45	<ul> <li>PTW, TRIC-card, TBT with all people involved in the operation</li> <li>Make use of tagline</li> <li>Use man-basket and secure twin fall arrest harness to man-basket, secure tools</li> <li>Secure hand tools with help of lanyard</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,5	3	7	10,5
(Dis)assemble and (Un)load hydraulic cylinder to mast bottom section	Critical lift / 2 crane operation - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift lower mast section according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>Dedicated banks man - Rigger-1</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100		
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40		
۲.	Unusual but likely	3	RE -	Regularly – daily	6	ш	Very serious – One casualty	Damage €100.000 ◀ €500.000	15		
	Possible but unlikely	1	SUF	Occasional – weekly	3 🖫	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10			
ABII	Unlikely	0,5	(PO	Incidental – monthly			Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7		
OB	Highly unlikely	0,2	É	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3		
P.	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1		
Ctom 4	Stan 4 Fill in activity. Class 2 Against demandary and a Calculate right / K v D v F) Ctan 4 Against magazine and class right / K v D v F)										

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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					PROJI	FCT	RISI	ΚΔΛ	ΙΔΙ Υ	EIS					
	ACTIVITY / ASPE	СТ		DAN	GER / CONSEQUENCE	K	В	E	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk <sup>1</sup>
	ACTIVITY ACT	<u> </u>	Critical lif		basket operation	1	3	15	45	PTW, TRIC-card, TBT with all people is operation     Make use of tagline     Use man-basket and secure twin fall at to man-basket     Secure hand tools with help of lanyare Barrier the area for personnel which is in the operation     Only use certified lifting equipment     Only use certified/checked lifting point	arrest harness d s not involved	0,5	3	7	10,5
			Damage t		(hydraulic cylinder) and falling	3	6	7	126	Check if the holes are lined up proper     Grease fitting     Secondary retention pin connection		1	6	3	18
			Heavy load - Injured people and/or damage of material				3	40	120	in the operation - Only use certified lifting equipment - Only use certified/checked lifting poin	- Only use certified lifting equipment - Only use certified/checked lifting points			40	8
			Critical lif	t – Man-	basket operation	1	3	15	45	<ul> <li>PTW, TRIC-card, TBT with all people in operation</li> <li>Make use of tagline</li> <li>Use man-basket and secure twin fall at to man-basket</li> <li>Secure hand tools with help of lanyar</li> <li>Barrier the area for personnel which in the operation</li> <li>Don't step out of the manbasket</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting poin</li> </ul>	arrest harness d s not involved	0,5	3	7	10,5
			Install bad	k face t	russ - Work at height	1	3	15	45	<ul> <li>Use man-basket and secure twin fall at to man-basket</li> <li>Secure tools with help of lanyard</li> </ul>	arrest harness	0,5	3	7	10,5
	Expec	table	10		Continuous (direct access)			10		Catastrophic – Many casualties	Damage €1.000	.000	•		100
	Highly	likely	6	<b>a</b>	Continuous (indirect access)			6		Disastrous - Multiple casualties	Damage €500.0	000 ◀	€1.000	0.000	40
¥	Unusual I	out likely	3	Ë	Regularly - daily			6	<u>ш</u>	Very serious – One casualty	Damage €100.0	000 ◀	€500.0	000	15
PROBABILITY	Possible b	ut unlikely	1	EXPOSURE	Occasional – weekly			3	EFFECT	Serious – Loss of arm / leg	Damage €30.00	0 ◀ €	100.00	00	10
ABII	Unlii	kely	0,5	N S	Incidental – monthly			2	FF	Considerable – Disability / Loss of hand, foot	Damage €2.500	<b>∢</b> €3	0.000		7
(OB)	Highly u	ınlikely	0,2	Ш	Rarely - several times a year			1		Minor – Injury	Damage €350	<b>4</b> €2.5	00		3
Almost impossible 0,1 Very rare - once a year			0,1		Very rare - once a year			0,5		Little – Injury (no time lost)	Damage <b>◄€</b> 35	Damage <b>⋖</b> €350			1

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				PROJE	ECT	RIS	KΑN	ALYS	SIS	_		_	
ACTIVITY / AS	PECT		DA	NGER / CONSEQUENCE	K	В	E	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
Position and (un)load	l catwalk with	l-sirmed w			1		40	120	Barrier the area for personnel which is not involved in the operation  Only use possified lifting equipment.	0.0	1	40	8
travelling bl	injurea p	Injured people and/or damage of material			3	40	120	<ul> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points if available</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8	
(Dis)assemble and (Un)load lower intermediate mast section			ast sed	ction - Work at height	1	3	15	45	Secure twin fall arrest harness to pre-installed steelwire (steelwire attached to yellow posts at each mast section)     Secure tools with help of lanyard	0,5	3	7	10,5
Damage to			to con	nections and falling equipment	3	6	7	126	Check if all piping and hoses connections are cleaned before commencing lift.     Check if connections need a new seal (HP standpipe)	1	6	3	18
		Injured p	eople	and/or damage of material	1	3	40	120	<ul> <li>Lift lower intermediate mast section</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8
(Dis)assemble and (U intermediate mas		Install m	ast sed	ction - Work at height	1	3	15	45	Use twin fall arrest harness to pre-installed steelwire (steelwire attached to yellow posts at each mast section)     Secure tools with help of lanyard	0,5	3	7	10,5
		Damage	mage to connections and falling equipment			6	7	126	<ul> <li>Check if all piping and hoses connections are cleaned before commencing lift.</li> <li>Check if connections need a new seal (HP standpipe)</li> </ul>	1	6	3	18
	Unroll/coil-up service loop on mast section (ODS section)								<ul> <li>Check service-loop support</li> <li>Don't walk under suspended load</li> <li>Use synthetic sling, no steel-wire sling</li> </ul>				
Expectable 10				Continuous (direct access)			10		Catastrophic – Many casualties Damage €1.00	0.000	>		100

	Expectable	10		(
	Highly likely	6	В	(
<b>Y</b>	Unusual but likely	3	Œ-	F
.Τ	Possible but unlikely	1	SUF	(
ABII	Unlikely	0,5	EXPOSURE	ı
PROBABILITY -	Highly unlikely	0,2	Ĥ	F
R	Almost impossible	0,1		١
			_	

Continuous (direct access)	10
Continuous (indirect access)	6
Regularly – daily	6
Occasional – weekly	3
Incidental – monthly	2
Rarely - several times a year	1
Very rare - once a year	0,5

	Catastrophic – Many casualties	Damage €1.000.000 ▶	100
	Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
Ļ	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
<u>-</u>	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
T T	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
_	Minor – Injury	Damage €350 ◀ €2.500	3
	Little – Injury (no time lost)	Damage <b>⋖</b> €350	1

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk¹
	Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift upper intermediate mast section</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8
(Dis)assemble and (Un)load upper mast section	Install mast section - Work at height	1	3	15	45	Use twin fall arrest harness to pre-installed steelwire (steelwire attached to yellow posts at each mast section)     Secure tools with help of lanyard	0,5	3	7	10,5
	Damage to connections and falling equipment	3	6	7	126	Check if all piping and hoses connections are cleaned before commencing lift.     Check if connections need a new seal	1	6	3	18
	Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift upper mast section</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> <li>Cranes need to have big mats underneath there outriggers</li> <li>TBT with all people involved in the operation</li> </ul>	0,2	1	40	8
(Dis)assemble and (Un)load topsection (topsection & lower topsection) with crown skid (weight: 21,5 mT)	Install mast section - Work at height	1	3	15	45	Use twin fall arrest harness to pre-installed steelwire (steelwire attached to yellow posts at each mast section)     Secure tools with help of lanyard	0,5	3	7	10,5
	Damage to connections and falling equipment	3	6	7	126	Check if all piping and hoses connections are cleaned before commencing lift.     Check if connections need a new seal	1	6	3	18

	Expectable 10		Continuous (direct access)		10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<b>B</b>	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
¥ .	Unusual but likely	3	ш́	Regularly – daily	6	<b>3</b>	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	l Ø	Incidental – monthly	2	2 11	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
<b>8</b>	Almost impossible 0,1			Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Stop 1	Fill-in activity Step 2 Assign	. dange	rlcone	equence Sten 3 Calculate risk (- K v B v	E)	Sto	n 4 Assign measures Sten 5 Cald	culate remaining risk! (- K¹ v R¹	1 v E1\

Step 1. Fill-in activity Step 2. Assign danger/consequence Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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				PROJ	ECT	RISI	K AN	IALY	SIS					
	ACTIVITY / ASPECT		DANG	GER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk
	Critical lift / Tandem lift - Injured people and/or damage of material					3	40	120	<ul> <li>Lift topsection according lifting plan</li> <li>Barrier the area for personnel which in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting poil</li> <li>Cranes need to have big mats underroutriggers</li> <li>TBT with all people involved in the operation</li> </ul>	nts eath there	0,2	1	40	8
		Cranes drivers don't follow up the signals					7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed</li> <li>Check your surroundings and make swhere your escape route is</li> </ul>	•	0,2	3	7	4,2
	Reeve-in/out of drill-line Damage to equipment				3	3	3	50	<ul> <li>Monitor movement of drill-line</li> <li>Direct communication between involvoperator of drill-line spool</li> </ul>	ved and	1	3	3	9
Injuries to personnel				nel	3	3	15	135	<ul> <li>Keep hands clear of dangerous areas and moving parts during process</li> <li>Active supervision</li> <li>Direct communication between involved crewmembers and operator of drill-line spool</li> </ul>		1	3	7	21
(Di	s)assemble several steel-wire cables	Getting ja	nmed, t	rapped fingers, hands, limbs	3	3	7	63	- TBT with all people involved in the op	eration	1	3	7	21
		Work at he	eight –	Falling personnel	1	3	15	45	Secure using twin fall arrest harness (always one fall arrest line secured during movement)     Use man-basket if possible/necessary		0,5	3	7	10,
		Work at he	eight - F	Falling tools & equipment	3	6	10	180	Barrier of area     Only involved people present at the journal of the pools with help of lanyard	obsite	1	2	10	20
		Damage to	equipr	nent	3	3	7	63	Check state of snatch blocks / sheave     Check secondary retention of shackle blocks     Secure dead end with additional stee	es and snatch	1	3	7	21
	Expectable	10		Continuous (direct access)			10		Catastrophic – Many casualties	Damage €1.000	.000 1	<b>-</b>		100
	Highly likely	6	<b>a</b>	Continuous (indirect access)			6		Disastrous – Multiple casualties	Damage €500.0	000 ◀	€1.00	0.000	40
¥	Unusual but likely	3		Regularly – daily			6	<u>۳</u>	Very serious – One casualty	Damage €100.0	000 ◀	€500.	000	15
<u> </u>	Possible but unlikely	1	SURE	Occasional – weekly			3	EFFECT	Serious – Loss of arm / leg	Damage €30.00	0 ◀ €	100.0	00	10
ABIL	Unlikely	0,5	EXPO	Incidental – monthly			2		Considerable – Disability / Loss of hand, foot	Damage €2.500	.500 ◀ €30.000			7
PROBABILITY	Highly unlikely	0,2	Û	Rarely - several times a year			1		Minor – Injury Damage €350 ◀ €2.50			00		3
Ĕ,	Almost impossible	0.1		Very rare - once a year	ery rare - once a year				Little – Injury (no time lost)	Damage <b>∢€</b> 350	<u>,                                     </u>			1

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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		Project:
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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
(Dis)assemble several hoses / service loop	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	- TBT with all people involved in the operation	1	3	7	21
	Work at height - Falling personnel	1	3	15	45	<ul> <li>Secure using twin fall arrest harness (always one fall arrest line secured during movement)</li> <li>Use man-basket if possible/necessary</li> </ul>	0,5	3	7	10,5
	Work at height - Falling tools & equipment	3	6	10	180	<ul> <li>Barrier the area, only involved people present</li> <li>Secure tools with help of lanyard</li> </ul>	1	2	10	20
	Damage to equipment	3	3	7	63	Check state of supports     Secure bolts of supports with lock-wire when necessary	1	3	7	21
(Dis)assemble and (Un)load racking board (Weight: 4 mT)	Work at height – Falling personnel	1	3	15	45	Secure using twin fall arrest harness (always one fall arrest line secured during movement)	0,5	3	7	10,5
	Work at height - Falling tools & equipment	3	6	10	180	Barrier the area, only involved people present     Secure tools with help of lanyard	1	2	10	20
	Critical lift / tandem lift - Injured people and/or damage of material	1	3	40	120	Barrier the area for personnel which is not involved in the operation     Only use certified lifting equipment     Only use certified/checked lifting points     TBT with all people involved in the operation	0,2	1	40	8
	Cranes drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2
	equipment jammed, sudden release	6	3	7	126	Keep hands clear of dangerous areas and moving parts during lifting     Active supervision     TBT with all people involved in the operation	1	3	3	9

	Expectable 10		Continuous (direct access)		10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<b>B</b>	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
¥ .	Unusual but likely	3	ш́	Regularly – daily	6	<b>3</b>	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	l Ø	Incidental – monthly	2	2 11	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
<b>8</b>	Almost impossible 0,1			Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Stop 1	Fill-in activity Step 2 Assign	. dange	rlcone	equence Sten 3 Calculate risk (- K v B v	E)	Sto	n 4 Assign measures Sten 5 Cald	culate remaining risk! (- K¹ v R¹	1 v F1\

Step 1. Fill-in activity Step 2. Assign danger/consequence Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk¹
Visual inspection of mast	Work at height	1	3	15	45	Use man-basket and secure twin fall arrest harness to man-basket     Always one fall arrest line secured during movement     Secure tools with help a lanyard	0,5	3	7	10,5
Lower / Raise mast	Critical operation – Falling structure, falling equipment, fatalities	0,5	6	100	300	TBT with all people involved in the operation clear and Barrier danger zone for non-essential personnel all activities in immediate vicinity (danger zone) stopped during lowering process Check hydraulic system & indicators hydraulic unit Checklist filled out and signed by senior personnel Active supervision One person in charge of the operation monitor movement of substructure monitor moving parts from safe distance	0,5	3	7	10,5
	Work at height	1	3	15	45	<ul> <li>Use secure twin fall arrest harness</li> <li>Secure tools with help of lanyard</li> <li>Barrier the working area underneath the mast</li> </ul>	0,5	3	7	10,5
	Install A-leg in mast shoe (pin connection) - Falling structure, falling equipment, fatalities.	1	6	40	240	<ul> <li>Discuss installation sequence A-leg (pin connection)</li> <li>Stand on stable surface when hammering</li> </ul>	0,5	6	7	21
	amage of equipment / construction		3	3	27	- Before start raising check if there are no loose items in the mast construction	1	3	3	9
	Cranes drivers don't follow up the signals (standby in case of emergency)	3	3	7	63	Designated Banksman     Check your surroundings and make sure you know where your escape route is (well cellar!)	0,2	3	7	4,2

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<b>B</b>	Continuous (indirect access)	6		Disastrous - Multiple casualties	Damage €500.000 ◀ €1.000.000	40
<u>'</u>	Unusual but likely	3	Ė	Regularly – daily	6	<b>3</b> -	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
=	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	OĐ)	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Û	Rarely - several times a year	1		Minor – Injury	Damage €350 <b>◄</b> €2.500	3
8	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Cton 1	Fill in activity Stan 2 Assign			Stop 2 Coloulate rick /- K v B v		Cto	n 4 Assign massures Stop F Cale	vuloto romaining rick1 (- K1 v P1	1 × E1\

Step 1. Fill-in activity Step 3

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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	ACTIVITY / ASI	PECT			DAN	GER / CONSEQUENCE	K	В	Е	Risk		CONTROL MEASURE		K¹	B¹	E¹	Risk <sup>1</sup>
					7.	5. Actions after raising &	befo	ore I	owe	ring r	nast	and substructure					
(Un)le	oad and (dis)asse stairs	emble several	Hook-u height			onnect pin connections – work at	1	3	15	45	-	Secure using twin fall arrest harness fall arrest line secured during movem Use man-basket if needed Secure tools with help of lanyard		0,5	3	7	10,5
(Un)le	oad and (dis)asse pieces of han		Hook-u at heig			s, connect pin connections – work	1	3	15	45	- -	Secure using twin fall arrest harness fall arrest line secured during movem Use man-basket if needed Secure tools with help of lanyard		0,5	3	7	10,5
(Un)l	oad and (dis)asse tube topdri	•	Work a	t he	ight – I	Falling personnel	1	3	15	45	-	Secure using twin fall arrest harness fall arrest line secured during movem	(always one ent)	0,5	3	7	10,5
			Work a	t he	ight - F	alling tools & equipment	6	3	15	270	-	No unauthorised access to drill-floor height	during work at	1	1	15	15
			Getting	jan	nmed, 1	rapped fingers, hands, limbs	3	3	7	63	-	TBT with all people involved in the op	eration	1	3	7	21
(Un)lo	oad and (dis)asser with skid (Weight: 17 r	<u> </u>	opdrive  Work at height (access to topdrive) – Falling personnel			1	3	15	45	-	Secure using twin fall arrest harness fall arrest line secured during movem		0,5	3	7	10,5	
			Work a equipm		•	onnecting) - Falling tools &	6	3	15	270	-	No unauthorised access to drill-floor height (connecting) Secure tools with help of lanyard	during work at	1	1	15	15
			Moving	j pai	rts (trav	velling block)	3	3	10	90	-	Drawworks switched off during opera present	tion, driller	0,1	3	10	3
			Getting	jan	nmed, 1	rapped fingers, hands, limbs	3	3	7	63	-	TBT with all people involved in the op	eration	1	3	7	21
(dis)as	semble HP-hose to topdrive		Work a equipn			onnecting) - Falling tools &	6	3	15	270		<ul> <li>No unauthorised access to dril work at height (connecting)</li> <li>Secure using twin fall arrest had one fall arrest line secured dur</li> <li>Secure tools with lanyard</li> </ul>	arness (always	1	1	15	15
	_					<u> </u>							1			1	
	•	ectable		0		Continuous (direct access)			10			Catastrophic – Many casualties	Damage €1.000				100
*		nly likely		6	В-	Continuous (indirect access)			6	ш	-	Disastrous – Multiple casualties	Damage €500.0				40
		al but likely		3	IRE	Regularly – daily			6	.'.		Very serious - One casualty	Damage €100.0				15
늘		but unlikely		1	nso	Occasional – weekly			3	EFFECT	-	Serious – Loss of arm / leg	Damage €30.00			0	10
3AB		nlikely		,5	EXPOSUR	Incidental – monthly			2	<u> </u>		Considerable – Disability / Loss of hand, foot	Damage €2.500				7
PROBABILITY		y unlikely		,2		Rarely - several times a year			1	-		Minor – Injury	Damage €350 <		00		3
		impossible		,1		Very rare - once a year			0,5			Little – Injury (no time lost)	Damage <b>◄€</b> 350				1
Step 1.	Fill-in activity	Step 2. As	ssign da	nge	r/cons	equence Step 3. Calculate risk (	(= K x	ВхЕ	≣)	S	tep 4.	. Assign measures Step 5. Cale	culate remaining	j risk¹	(= K	1 x B1	x E¹)
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DF01E/3/110209	Written: 02-07-2013	Location:

ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk <sup>1</sup>
	Moving parts (topdrive / hoses)	3	3	10	90	- Drawworks / winch switched off during operation, driller present	0,1	3	10	3
	Getting jammed, trapped fingers, hands, limbs	3	3	7	63	- TBT with all people involved in the operation	1	3	7	21
(Un)load and (dis)assemble ramp V-door	Hook-up ramps, connect pin connections – work at height - falls	1	3	15	45	Use twin fall arrest harness (always one fall arrest line secured during movement)     Use man-basket if needed     Secure tools with help of lanyard	0,5	3	7	10,5
Install derrick man escape device	Work at height	1	3	15	45	<ul> <li>Use twin fall arrest harness in mast</li> <li>Secure tools with help of lanyard</li> <li>Barrier rigfloor</li> </ul>	0,5	3	7	10,5
Position choke manifold	Damaging equipment, injured personnel	3	3	10	90	<ul><li>Use designated lifting eyes</li><li>Use taglines</li><li>Stand clear of manifold when lifting</li></ul>	1	3	3	9
	7.6.	P	owe	r pla	nt					
(Un)load and position generators (emergency, gen 1 till 4) (weight: 26 mT)	Environmental damage	3	6	15	270	- Check if diesel has been pumped out of generator	0,5	6	3	9
	Cranes drivers don't follow up the signals	3	3	7	63	Designated Banksman – Rigger-1     Don't stand in between load and fixed object     Check your surroundings and make sure you know where your escape route is	0,2	3	7	4,2
	Critcal lift / Tandem lift - Lifting generator	1	3	15	45	Lift generator in accordance with lifting plan     Barrier lifting area     Keep hands clear of dangerous areas and moving parts during lifting	1	2	7	14
	Injured personnel	1	3	10	30	Use designated lifting eyes     Stand clear of generator when lifting	1	3	3	9

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	<b>B</b>	Continuous (indirect access)  Regularly – daily  Occasional – weekly			Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
¥ .	Unusual but likely	3	ш́	Regularly – daily	6	<b>3</b>	Very serious – One casualty	Damage €100.000 ◀ €500.000	15
È	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	l Ø	Incidental – monthly	2	EFF	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3
<b>8</b>	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1
Stop 1	Fill-in activity Step 2 Assign	. dange	rlcone	equence Sten 3 Calculate risk (- K v B v	E)	Sto	n 4 Assign measures Sten 5 Cald	culate remaining risk! (- K¹ v R¹	1 v F1\

Step 1. Fill-in activity Step 2. Assign danger/consequence Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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<u> </u>	_, _,			1-50		JECT	RISI	Κ <i>Α</i> Λ	IALYS	SIS					
	ACTIVITY / ASPE	СТ		DAN	GER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk¹
(Un)lo	oad and position SCI (weight: 24 mT		Critcal lift /	Tande	m lift - Lifting sCR container	1	3	15	45	<ul> <li>Lift PCR in according Lift plan</li> <li>Barrier off lifting area</li> <li>Keep hands clear of dangerous areas parts during lifting</li> </ul>	s and moving	1	2	7	14
			Cranes driv	ers do	n't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed</li> <li>Check your surroundings and make where your escape route is</li> </ul>		0,2	3	7	4,2
			Injured per	sonnel		1	3	10	30	<ul> <li>Use designated lifting eyes</li> <li>Stand clear of generator when lifting</li> </ul>		1	3	3	9
(	Un)load and (dis)ass grasshopper	semble			- connect grasshopper to before raising	1	3	15	45	<ul> <li>Use twin fall arrest harness</li> <li>Secure tools with help of lanyard</li> <li>Stand on stable surface when hammen</li> </ul>	ering	0,5	3	7	10,5
			Crane drive	ers dor	't follow up the signals	3	3	7	63	Designated Banks man – competent     Don't stand in between load and fixe     Check your surroundings and make where your escape route is	d object	0,2	3	7	4,2
			Injured per	sonnel		1	3	10	30	<ul> <li>Use designated lifting eyes</li> <li>Stand clear of generator when lifting</li> </ul>		1	3	3	9
					7.7.	Mini	& M	ain c	amp						
	Containers 20'&	40'	Damage to	equip	nent, injured personnel	1	6	10	60	<ul> <li>All standard sized containers are lifted containers, corner lifting pockets or of mentioned with stickers</li> <li>When using ladder, second person to ladder</li> <li>Use taglines</li> <li>Barrier lifting area for non-essential of the standard stan</li></ul>	o hold the	0,5	3	3	4,5
	Storage contain	er	Damage to	equipr	nent, injured personnel	1	3	10	30	<ul> <li>Use appropriate lifting equipment: in with procedure</li> <li>Use taglines, stand clear of tank whe</li> </ul>		0,5	3	3	4,5
	Expec	table	10		Continuous (direct access)			10		Catastrophic – Many casualties	Damage €1.000	.000	<b>&gt;</b>		100
	Highly	likely	6	В	Continuous (indirect access)			6		Disastrous – Multiple casualties	Damage €500.0	000 ◀	€1.00	0.000	40
¥	Unusual b	out likely	3	Ë	Regularly - daily			6	<u>ш</u>	Very serious – One casualty	Damage €100.0	000 ◀	€500.	000	15
PROBABILITY	Possible bu	ut unlikely	1	SURE	Occasional – weekly			3	EFFECT	Serious – Loss of arm / leg	Damage €30.00	0 ◀ €	100.0	00	10
ABII	Unlik	cely	0,5	EXPO	Incidental – monthly			2		Considerable - Disability / Loss of hand, foot	Damage €2.500	<b>∢</b> €3	0.000		7
OB	Highly u	nlikely	0,2	Ш	Rarely - several times a year			1		Minor – Injury	Damage €350	<b>∢</b> €2.5	00		3
4	Almost im	possible	0,1		Very rare - once a year			0,5		Little - Injury (no time lost)	Damage <b>◄€</b> 35	)			1

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	ACTIVITY / ASPECT		DAN	GER / CONSEQUENCE	K	В	E	Risk	CONTROL MEASURE		K¹	B¹	E¹	Risk¹
				7.8.	D	iese	ltank	s						
Unio	oad an position diesel storage tanks <mark>(Weight: ?? mT)</mark>			e <mark>m lift</mark> - Environmental damage, nent, injured personnel	3	6	15	270	<ul> <li>Check level of diesel in tanks, gives in weight!</li> <li>Empty drip-trays (no traces of diesel tank)</li> <li>Use the dedicated lifting eyes</li> <li>Use appropriate lifting equipment in a with procedure</li> <li>Use taglines, stand clear of tank whei</li> </ul>	on outside of	1	6	3	18
				n't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed</li> <li>Check your surroundings and make swhere your escape route is</li> </ul>	•	0,2	3	7	4,2
Unload	d an position skid with oil drums	Environme injured per		mage, damage to equipment,	3	6	10	180	- Check if oil drums are closed		1	6	3	18
		Wrong lifti		erial	3	6	7	126	- Use the proper lifting equipment for t	he skids	1	6	3	18
									-					
				7.9.	Се	men	t tan	ks	- Lift cement tank according lifting plar	n				
Unlo	ead and place cement tank with hopper (Weight: ?? mT)	Critical lift damage of		<mark>em lift</mark> - Injured people and/or al	1	3	40	120	<ul> <li>Barrier the area for personnel which i in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting point</li> </ul>	peration	0,2	1	40	8
	( congress of the constant of									แอ		l i		9
	<b>,</b>	Damage of	equipr	nent / construction	3	3	3	27	Before start lifting check if all hoses, lines are disconnected and proper stop	cables and	1	3	3	
	<b>(</b>	Damage of	equipr	nent / construction	3	3	3	27	- Before start lifting check if all hoses,	cables and	1	3	3	
	Expectable	Damage of	equipr	nent / construction  Continuous (direct access)	3	3	10	27	- Before start lifting check if all hoses,	cables and			3	100
			equipr		3	3		27	- Before start lifting check if all hoses, lines are disconnected and proper sto	cables and owed.	0.000	<u> </u>		
¥ .	Expectable	10	89 -	Continuous (direct access)	3	3	10	ш.	- Before start lifting check if all hoses, lines are disconnected and proper sto Catastrophic - Many casualties	cables and owed.  Damage €1.00	0.000 I	<b>►</b>	0.000	100
	Expectable Highly likely	10	89 -	Continuous (direct access) Continuous (indirect access)	3	3	10	ш.	- Before start lifting check if all hoses, lines are disconnected and proper sto  Catastrophic - Many casualties  Disastrous - Multiple casualties	Damage €500.	0.000 d	<b>►</b> €1.000	0.000	100
	Expectable Highly likely Unusual but likely	10 6 3	89 -	Continuous (direct access)  Continuous (indirect access)  Regularly – daily	3	3	10 6 6	ш	- Before start lifting check if all hoses, lines are disconnected and proper sto  Catastrophic - Many casualties  Disastrous - Multiple casualties  Very serious - One casualty	Damage €1.00 Damage €100.	0.000   000   000	<b>€</b> 1.000.00	0.000	100 40 15
PROBABILITY - K	Expectable Highly likely Unusual but likely Possible but unlikely	10 6 3 1	m	Continuous (direct access) Continuous (indirect access) Regularly – daily Occasional – weekly	3	3	10 6 6 3	ш.	- Before start lifting check if all hoses, lines are disconnected and proper sto  Catastrophic - Many casualties  Disastrous - Multiple casualties  Very serious - One casualty  Serious - Loss of arm / leg	Damage €100.  Damage €300.  Damage €300.	0.000 d 000 d 000 d 00 d €	€1.000 €500.0 €100.00	0.000	100 40 15 10

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ACTIVITY / ASPECT	DANGER / CONSEQUENCE	K	В	Е	Risk	CONTROL MEASURE	K¹	B¹	E¹	Risk¹
	Cranes drivers don't follow up the signals	3	3	7	63	Designated Banksman – Rigger-1     Don't stand in between load and fixed object     Check your surroundings and make sure you know where your escape route is	0,2	3	7	4,2
Unload and place second cement tank (Weight: ?? mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift second cement tank according lifting plan</li> <li>Barrier the area for personnel which is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,2	1	40	8
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hoses, cables and lines are disconnected and proper stowed.	1	3	3	9
	Cranes drivers don't follow up the signals	3	3	7	63	<ul> <li>Designated Banksman – Rigger-1</li> <li>Don't stand in between load and fixed object</li> <li>Check your surroundings and make sure you know where your escape route is</li> </ul>	0,2	3	7	4,2
Unload and place third cement tank (Weight: ?? mT)	Critical lift / Tandem lift - Injured people and/or damage of material	1	3	40	120	<ul> <li>Lift third cement tank according lifting plan</li> <li>Barrier the area for personnel who is not involved in the operation</li> <li>TBT with all people involved in the operation</li> <li>Only use certified lifting equipment</li> <li>Only use certified/checked lifting points</li> </ul>	0,2	1	40	8
	Damage of equipment / construction	3	3	3	27	Before start lifting check if all hoses, cables and lines are disconnected and proper stowed.	1	3	3	9
	Crane drivers don't follow up the signals	3	3	7	63	Designated Banksman – Rigger-1     Don't stand in between load and fixed object     Check your surroundings and make sure you know where your escape route is	0,2	3	7	4,2
Install stairs	Hook-up stairs, connect pin connections – work at height - falls	1	3	15	45	Secure using twin fall arrest harness (always one fall arrest line secured during movement)     Secure tools	0,5	3	7	10,5

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40
X	Unusual but likely	3	RE-	Regularly – daily	6		Very serious – One casualty	Damage €100.000 ◀ €500.000	15
Ĕ	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10
ABII	Unlikely	0,5	(PO	Incidental – monthly	2		Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7
OB,	Highly unlikely	0,2	Э	Rarely - several times a year	1		Minor – Injury	Damage €350 <b>◄</b> €2.500	3
PA	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>◀</b> €350	1

Step 1. Fill-in activity

Step 2. Assign danger/consequence

Step 3. Calculate risk (= K x B x E)

Step 4. Assign measures

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	ACTIVITY / ASPECT		DAN	GER / CONSEQUENCE	K	В	E	Risk	CONTROL MEASURE K1 B1 E1	Risk <sup>1</sup>
				7.10. Unload	ding	of dr	ʻill-pi	pe ba		
Unloa	d and position drill-pipe skids (Weight: ?? mT)	Loose item	s – fall	ing equipment / items	3	6	7	126	<ul> <li>use wooden stops</li> <li>use rubber in between the loads</li> <li>use lorry ratchet straps to secure load on the skid</li> </ul>	18
		Wrong lifting	ng mat	erial	3	6	7	126	- Use the proper lifting equipment for the skids - TBT with all people involved in the operation	18
		Cranes driv	ers do	on't follow up the signals	3	3	7	63	- Designated Banksman – Rigger-1 - Don't stand in between load and fixed object - Check your surroundings and make sure you know where your escape route is	4,2
		Critical lift	/ Tande	<mark>em lift</mark> - Lifting drill-pipe skid	1	3	15	45	- Lift drill-pipe skid according lifting plan - Barrier lifting area - Keep hands clear of dangerous areas and moving 1 2 7 parts during lifting - TBT with all people involved in the operation	14
				7.11.	Mis	cell	anec	us		
	Containers 20'& 40'	Damage to	equipr	ment, injured personnel	1	6	10	60	- All standard sized containers are lifted on top of the containers, corner lifting pockets or different when mentioned with stickers - TBT with all people involved in the operation - Use taglines - Barrier lifting area for non-essential crew	4,5
				0 0	2		4		-	
				8. B. C	Joneu	rren	t ope	rations	- Pre-shift meetings held with all involved	
Con	current operations (general)	Dangerous	situati	ions, damages, fatalities	3	6	40	720	- Permit-to-work system used and monitored (by g) 1 2 10  - Dangerous area's barrier as described in this PRA	20
	Expectable	10		Continuous (direct access)			10		Catastrophic – Many casualties Damage €1.000.000 ▶	100
	Highly likely	6	m	Continuous (indirect access)			6		Disastrous – Multiple casualties Damage €500.000 ◀ €1.000.000	40
, A	Unusual but likely	3	7	Regularly – daily			6	Щ	Very serious – One casualty Damage €100.000 ◀ €500.000	15
	Possible but unlikely	1	EXPOSURE	Occasional – weekly			3		Serious – Loss of arm / leg Damage €30.000 ◀ €100.000	10
BIL	Unlikely	0,5	, PO	Incidental – monthly			2	EFFECT	Considerable – Disability / Loss of hand, foot Damage €2.500 ◀ €30.000	7
PROBABILITY	Highly unlikely	0,2	ũ	Rarely - several times a year			1	-	Minor – Injury Damage €350 ◀ €2.500	3
R	Almost impossible	0,1		Very rare - once a year			0,5	1	Little – Injury (no time lost) Damage <b>◄€</b> 350	1
Step 1.	Fill-in activity Step 2. A	ssign dange	r/cons	equence Step 3. Calculate risk	`	<b>B</b> x <b>E</b>	≣)	Ste	tep 4. Assign measures  Step 5. Calculate remaining risk¹ (= K¹ x B¹ x	( E¹)

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<b>DF01</b>	E/3/110209	Written: 02-07-2013	Location:									
			P	ROJEC	T RI	ISK A	NALYSIS					
	ACTIVITY / ASPECT DANGER / CONSEQUENCE					ВЕ	Risk	CONTROL MEA	SURE	K <sup>1</sup>	B¹ E	1 R
D:12		. Duningt Dials Amalusi	-									
Bilin	gual explanation	n Project Risk Analysi	s							•		
Bilin K	gual explanation	n Project Risk Analysi  Te verwachten	S	10	В	Co	ontinuous (direct acce	ss) Voortdurend	I (directe toegang)			10
K			S	10		Co	ontinuous (direct acce	•	I (directe toegang) I (indirecte toegang)			10
K	Expectable	Te verwachten				Co	· · · · · · · · · · · · · · · · · · ·	•	I (indirecte toegang)			_
K	Expectable Highly likely	Te verwachten Zeer goed mogelijk	gelijk			Co	ontinuous (indirect acc	ess) Voortdurend	I (indirecte toegang)  - dagelijks			6
K	Expectable Highly likely Unusual but likely	Te verwachten Zeer goed mogelijk Ongewoon maar mo Enkel mogelijk als g	gelijk rensgeval			Co	ontinuous (indirect acc	ess) Voortdurend Regelmatig Occasionee	I (indirecte toegang)  - dagelijks			6
•	Expectable Highly likely Unusual but likely Unlikely	Te verwachten Zeer goed mogelijk Ongewoon maar mo Enkel mogelijk als g	gelijk rensgeval aarschijnlijk	6 3	EXPOSURE /	Co	ontinuous (indirect acc egularly – daily ccasional – weekly	ess) Voortdurend Regelmatig Occasionee Ongebruikel	I (indirecte toegang)  - dagelijks  - wekelijks			6 6 3

Е	Catastrophic – Many casualties	Catastrofe – Vele doden	Damage €1.000.000 ►	Schade €1.000.000 ►	100
	Disastrous – Multiple casualties	Ramp – Enkele doden	Damage €500.000 ◀ €1.000.000	Schade €500.000 ◀ €1.000.000	40
	Very serious – One casualty	Zeer ernstig - Een dode	Damage €100.000 ◀ €500.000	Schade €100.000 ◀ €500.000	15
ECT	Serious – Loss of arm or leg	Ernstig - Verlies van arm of been	Damage €30.000 ◀ €100.000	Schade €30.000 ◀ €100.000	10
FF	Considerable - Disability or Loss of hand or foot	Aanzienlijk - Verlies van hand of voet	Damage €2.500 ◀ €30.000	Schade €2.500 ◀ €30.000	7
	Minor – Injury (time lost)	Belangrijk – letsel met verloren tijd	Damage €350 ◀ €2.500	Schade €350 ◀ €2.500	3
	Little – Injury (no time lost)	Gering letsel zonder tijdsverlies	Damage ◀ €350	Schade ◀ €350	1

R	R = < 20	Negligable risk, controlled (No measure necessary)	Verwaarloosbaar risico, beheerst (Geen maatregel vereist)
~ 0	R = 20 < 70	Possible risk, control measure necessary (I.e. PPE)	Risico mogelijk, beheersmaatregel vereist (Bijv. PBM's)
RISK /	R = 70 < 200	Considerable risk, additional control measures necessary (I.e. PPE and a JSA on Site)	Belangrijk risico, beheersmaatregel vereist (Bijv. PBM's en JSA ter plaatse)
- ~	R = 200 < 400	High Risk, additionally direct supervision necessary (Supervisor + I.e. expert / other)	Hoog risco, aanvullend directe supervisie vereist (Supervisor + bijv. expert / anders)

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ▶	100			
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40			
, X	Unusual but likely	3	Œ-	Regularly – daily	6	ш .	Very serious – One casualty	Damage €100.000 ◀ €500.000	15			
È	Possible but unlikely	1	SUF	Occasional – weekly	3	3 5	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10			
ABII	Unlikely	0,5	(PO	Incidental – monthly	2	Considerable - Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7				
OB	Highly unlikely	0,2	Ĥ	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3			
R.	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1			
Cton 1	A Fill in potinity. Step 2 Assign depressions with ( My Pl v E)											

Step 2. Assign danger/consequence Step 3. Calculate risk (= K x B x E) Step 4. Assign measures Step 5. Calculate remaining risk<sup>1</sup> (= K<sup>1</sup> x B<sup>1</sup> x E<sup>1</sup>) Step 1. Fill-in activity

Document: PRA Riskv.doc			Written by: Project:											
DF01E/3/110209 Written: 02-07-2013			Location:											
				PROJE	CT	RISI	KAI	VALY	SIS					
ACTIV	ITY / ASPI	ECT		DANGER / CONSEQUENCE	K	В	Е	Risk		CONTROL MEASURE	K <sup>1</sup>	B¹	E¹	Risk <sup>1</sup>
R = 400 > Risk too High, investigate different approach and discuss with WB Foxdrill QHSE dept.														
	R = 400	> Risio	o te hoog, an	dere aanpak onderzoeken en bespre	ken	met \	WB I	oxdril	II QHSE at	fdeling				

#### Important aspects when composing a PRA:

- 1. The objective should always be to reduce the risk to a **controlled level (R < 20)**.
- 2. Collective measures are preferred over individual measures. Where possible the source should be eliminated.
- 3. It is important to adjust the risks when aspects combined increase the danger and also to mention this.
- 4. Hints for the work specific part: A. Work specific risks according to planning (obliged aspects: Lifting and hoisting, Working at height, PPE usage, Tools and equipment and Hot work), B. Concurrent operations, C. Rope Access D. Hazardous substances (also radiation and H2S)

	Expectable	10		Continuous (direct access)	10		Catastrophic – Many casualties	Damage €1.000.000 ►	100			
	Highly likely	6	В	Continuous (indirect access)	6		Disastrous – Multiple casualties	Damage €500.000 ◀ €1.000.000	40			
, \	Unusual but likely	3	Ë	Regularly – daily	6	<b>3</b> -	Very serious – One casualty	Damage €100.000 ◀ €500.000	15			
<u>F</u>	Possible but unlikely	1	SUF	Occasional – weekly	3	ECT	Serious – Loss of arm / leg	Damage €30.000 ◀ €100.000	10			
ABIL	Unlikely	0,5	(PO	Incidental – monthly	2		Considerable – Disability / Loss of hand, foot	Damage €2.500 ◀ €30.000	7			
OB,	Highly unlikely	0,2	Э	Rarely - several times a year	1		Minor – Injury	Damage €350 ◀ €2.500	3			
PR	Almost impossible	0,1		Very rare - once a year	0,5		Little – Injury (no time lost)	Damage <b>⋖</b> €350	1			
Step 1	Step 1. Fill-in activity  Step 2. Assign danger/consequence  Step 3. Calculate risk (= K x B x E)  Step 4. Assign measures  Step 5. Calculate remaining risk¹ (= K¹ x B¹ x E¹)											
	57											