

Notes	EFFECT					CAUSE					ESD_1_0					Total Emergency Shutdown																																											
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<div>EFFECT</div> <div>CAUSE</div> <div>ESD_2_0</div> <div>Emergency Shutdown Including Blowdown</div>			TAG		Description	P & ID	Note
			ESD_2_1		Emergency Shutdown without blowdown		
			TRIP				
			OPEN		Manifolds	3365	1
ESD_2_0	ESD_1_0		Intertrip from Emergency Shutdown 1_0		Manifolds	3365	1
	87HS0002 TRUE		Manual Pushbutton in CCR		Gas Injection Manifold	2603	1
	87NX1005 TRUE		Fire & Gas		Test Separator	2001	1
					MP Separator	2002	1
ESD_2_0					MP Separator	2003	1
					MP Separator	2005	1
					Crude Oil Heater	2004	1
					Coalescer	2006	1
ESD_2_0					Crude Oil Export	2103	1
					Crude Oil Export	2102	1
					1st Stage Recompressor	2302	1
					2nd Stage Recompressor	2304	1
					Gas Dehydrator	2402	1
					Gas Dehydrator	2401	1
					Gas Injection Compressor	2602	1
					Gas Export Compressor	2702	1
					Gas Export	2703	1
					Fuel Gas	4501	1

**EFFECT**

**CAUSE**

***ESD\_2\_1***

### ***Emergency Shutdown Without Blowdown***

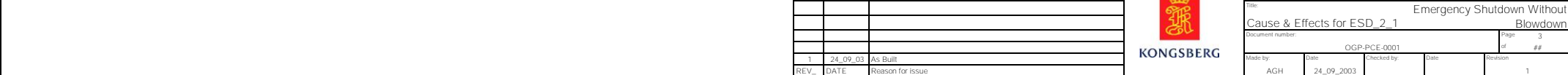
Note	TAG	Alarm	Description	P & ID
ESD_2_1	ESD_2_0		Intertrip from Emergency Shutdown 2_0	

ESD_2_1		43LST0009 HH	High High Level in HP Flare Knockout Drum	4306


[illegible][illegible]

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- 1111

[illegible][illegible]

1	24_09_03	As Built
REV.	DATE	Reason for issue



**KONGSBERG**

<b>Title:</b> Emergency Shutdown Without Blowdown				
<b>Cause &amp; Effects for ESD_2_1</b>				
<b>Document number:</b>			<b>Page:</b> 3	
OGP-PCE-0001			# ##	
<b>Made by:</b>	<b>Date:</b>	<b>Checked by:</b>	<b>Date:</b>	<b>Revision:</b>
AGH	24_09_2003			1

[illegible]

## EFFECT

## CAUSE

**PSD\_3\_0**

### Total Process Shutdown

Note	TAG	Alarm	Description	P & ID
	ESD_2_1		Intertrip from ESD_2_1	
	40LST0004 LL	Low Low Level in Cooling Medium Expansion Tank	4001	A
	40LST0004 HH	High High Level in Cooling Medium Expansion Tank	4001	B
	40PST0001 HH	High High Pressure in Cooling Medium Expansion Tank	4001	C
	43LST0006 HH	High High Level in HP Flare Knockout drum	4306	D
	87NX0003 TRUE	Loss of Main Power		E
	50PA001AB_and TRUE	Both Seawater Pumps Stopped	5001	F
	40PA001AB_and TRUE	Both Cooling Water Pumps Stopped	4002	G
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## Notes

[illegible]

**EFFECT**

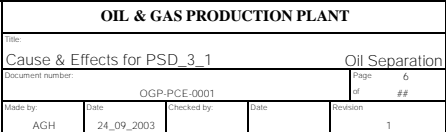
**CAUSE**

*PSD\_3\_1*

**PSD\_3\_1**

[illegible][illegible]

1	24_09_03	As Built
REV.	DATE	Reason for issue



EFFECT	CAUSE	PSD_3_2	Gas Compression	TAG		Description	P & ID	P & ID	Note
				PSD_3_0	Intertrip from Total Process Shutdown				
				1	TRIP	Intertrip to Recompression Train			
				2	TRIP	Intertrip to Gas Export			
				3	TRIP	Intertrip to Gas Injection			
				4	TRIP	Intertrip to Condensate Discharge from Dehydration			
				5	TRIP	Intertrip to Condensate Discharge from Dehydration			
				6	TRIP	Gas Export Compressor			
				7	TRIP	Gas Injection Compressor			
				8					
				9	CLOSE	Test Sep. Gas Outlet to Glycol Contactor			
				10	CLOSE	Test Sep. Gas Outlet Bypass Valve to Glycol Contactor	2001		
				11	CLOSE	Test Sep. Gas Outlet to Glycol Contactor	2001		
				12	CLOSE	HP Sep. Gas Outlet to Glycol Contactor	2002		
				13	CLOSE	HP Sep. Gas Outlet Bypass Valve to Glycol Contactor	2002		
				14	CLOSE	Glycol Contactor Hydration Liquid Outlet	2402		
				15	STOP	Glycol Contactor Hydration Liquid Outlet	2402		
				16	OPEN	Gas Export Compressor	2702		
				17	CLOSE	Gas Export Compressor Anti Surge Valve	2702		
				18	CLOSE	Gas Export Compressor Suction Scrubber Liquid Outlet	2701		
				19	CLOSE	Rich TEG from Regeneration	2402		
				20	CLOSE	Lean TEG to Regeneration	2402		
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**EFFECT**

**CAUSE**

*PSD\_3\_3*

**PSD\_3\_3**

[illegible][illegible]

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[illegible]

**EFFECT**

**CAUSE**

***PSD\_3\_4***

**PSD\_3\_4**

[illegible][illegible][illegible]



**EFFECT**

**CAUSE**

*PSD\_4\_1*

**PSD\_4\_1**

### Test Separator

PSD\_4\_1  
PSD\_4\_1  
PSD\_4\_1  
PSD\_4\_1

## Notes

1) Will only trip the well that is lined up to the Test Separator

[illegible]

**EFFECT**

**CAUSE**

*PSD\_4\_2*

\_\_\_\_\_

\_\_\_\_\_

100

PSD_4_2
PSD_4_2
PSD_4_2
PSD_4_2

[illegible]

Notes

[illegible]

**EFFECT**

**CAUSE**

***PSD\_4\_3***

### Gas Recompression

[illegible][illegible]

1) Forced open by logic signal unless cause is PSD\_3\_2 Intertrip (see PSD\_4\_15)



## OIL & GAS PRODUCTION PLANT

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**EFFECT**

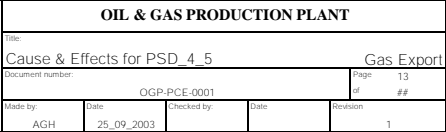
**CAUSE**

*PSD\_4\_5*

**PSD\_4\_5**

[illegible][illegible]

1	25_09_03	As Built
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**EFFECT**

**CAUSE**

*PSD\_4\_8*

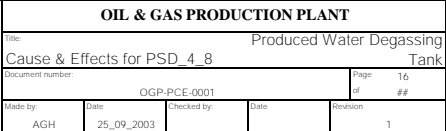
### Produced Water Degassing Tank

Note	TAG	Alarm	Description	P & ID
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PSD_4_8	PSD_3_3	Intertrip from Produced Water Treatment
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[illegible]

1	25_09_03	As Built
REV.	DATE	Reason for issue



**EFFECT**

**CAUSE**

***PSD\_4\_9***

**PSD\_4\_9**

### Coalescer Water Return Pump A

[illegible]

## Notes

[illegible]

**EFFECT**

**CAUSE**

*PSD\_4\_10*

**PSD\_4\_10**

[illegible][illegible]

1	25_09_03	As Built
REV.	DATE	Reason for issue



<b>OIL &amp; GAS PRODUCTION PLANT</b>				
Title:		Coalescer Water Return		
Cause & Effects for PSD_4_10		Pump B		
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Made by:	Date	Checked by:	Date	Revision
AGH	25_09_2003			1

**EFFECT**

**CAUSE**

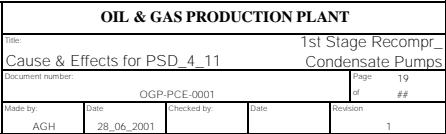
*PSD\_4\_11*

**PSD\_4\_11**

[illegible]

PSD\_4\_11  
PSD\_4\_11  
PSD\_4\_11

1	25_09_03	As Built
REV.	DATE	Reason for issue





**EFFECT**

**CAUSE**

*PSD\_4\_12*

**PSD\_4\_12**

### 2nd Stage Recompr\_ Condensate Pumps

## Notes

[illegible]

**EFFECT**

**CAUSE**

*PSD\_4\_15*

### Dehydration Condensate Discharge

PSD_4_15	Note	TAG	Alarm	Description	P & ID
		PSD_3_2		Intertlp from Gas Compression	

[illegible][illegible][illegible][illegible]

**EFFECT**

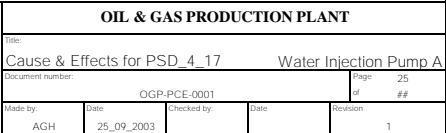
**CAUSE**

*PSD\_4\_17*

**PSD\_4\_17**

[illegible][illegible]

1	25_09_03	As Built
REV.	DATE	Reason for issue



**EFFECT**

**CAUSE**

*PSD\_4\_18*

**PSD\_4\_18**

[illegible][illegible]

Notes

- 1) 20 seconds delay to prevent spurious trips
- 2) 10 seconds delay to prevent spurious trips

[illegible]

**EFFECT**

**CAUSE**

*PSD\_4\_19*

**PSD\_4\_19**

[illegible][illegible]

1	25_09_03	As Built
REV.	DATE	Reason for issue



<b>OIL &amp; GAS PRODUCTION PLANT</b>					
Title:					
Cause & Effects for PSD_4_19			Produced Water Booster		
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Made by: AGH	Date: 25_09_2003	Checked by:	Date:	Revision:	1

**EFFECT**

**CAUSE**

*PSD\_4\_20*

**PSD\_4\_20**

[illegible][illegible][illegible]

**EFFECT**

**CAUSE**

*PSD\_5\_1*

**PSD\_5\_1**

[illegible][illegible]

1	26.09.03	As Built
REV.	DATE	Reason for issue



<b>OIL &amp; GAS PRODUCTION PLANT</b>					
Title:					
Cause & Effects for PSD_5_1			Crude Oil Export Pump A		
Document number				Page	30
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Made by:	Date	Checked by:	Date	Revision	
AGH	26_09_2003			1	

**EFFECT**

**CAUSE**

*PSD\_5\_2*

**Crude Oil Export Pump B**

Note	TAG	Alarm	Description	P & ID
	PSD_3_1		Intertrip from Oil Separation	

PSD_5_2		21PST0016	LL	Low Low Suction Pressure	2102
PSD_5_2		21PST0020	HH	High High Discharge Pressure	2102
PSD_5_2		21PST0020	LL	Low Low Discharge Pressure	2102

[illegible][illegible]



**EFFECT**

**CAUSE**

***PSD\_5\_3***

**PSD\_5\_3**

[illegible][illegible]

1) Delay on timer 5 seconds

[illegible]

**EFFECT**

**CAUSE**

***PSD\_5\_4***

### 2nd Stage Recompressor

Note	TAG	Alarm	Description	P & ID
PSD_5_4	PSD_4_3		Intertrip from Gas Recompression	

PSD_5_4	1	23UAHH0018	HH	Antisurge Trip from 23FC0018	2304

[illegible]

1) Delay on timer 5 seconds



**EFFECT**

**CAUSE**

***PSD\_5\_5***

**Gas Export Compressor**

Note	TAG	Alarm	Description	P & ID
PSD_5_5	PSD_3_2		Intertrip from Gas Compression	

PSD_5_5	1	27UAHH0010	HH	Antisurge Trip from 27FC0010	2702

[illegible][illegible]

1) Delay on timer 5 seconds

[illegible]

**EFFECT**

**CAUSE**

*PSD\_5\_12*

**CAUSE**

PSD\_5\_12

**Production Wells 01 - 16**

[illegible]

## Notes

- 1) PSD\_4\_1 and 13HVxx11 Test Manifold Valve Open
- 2) PSD\_4\_2 and 13HVxx10 Production Manifold Valve Open
- 3) xx = well number

[illegible]

**EFFECT**

**CAUSE**

*PSD\_5\_31 - 33*

**Water Injection Wells 20 - 22**

Note	TAG	Alarm	Description	P & ID
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PSD_5_31 - 33	17NX0017	Manual Push Button
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[illegible]

1) xx = well number

				OIL & GAS PRODUCTION PLANT
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[illegible]