EDUCATION, SCIENCE AND TRAINING

SENATE LEGISLATION COMMITTEE - QUESTIONS ON NOTICE 2007-2008 BUDGET ESTIMATES HEARING

Outcome CSIRO

DEST Question No. E019_08

Senator Carol Brown asked in writing on 30 May 2007.

Question:

Can you provide the committee with complete details of <u>any</u> incidents during this month, including any reports, notes, or other information detailing such events?

Answer:

CSIRO has provided the following response.

Southern Surveyor

There were two incidents reported in April 2007. See response to Question E018_08. The report for this incident (Incident SS0231) is attached.

On 13 April 2007 the ship took a heavy roll in adverse conditions and the Main Engine shaft alternator tripped off the Main Circuit Board in response to a frequency fault causing a blackout. Auxiliary alternators were started and power was restored. The incident was not life threatening and did not cause injury to any crew, and there was no damage to the vessel therefore no repairs were required. The report for this incident (Incident SS0230) is also attached.

D & O		INCIDENT	REPORTING /	AND INV	ESTIGATION			Form No: CF007-3	
F & U Maritime Se	rvices					Incident No:		IR 230	
Complete as a minimum sections 1	-7 for LOW PO	TENTIAL risk, se	ections 1-13 for MEDIU	M POTENTI	AL risk, sections 1-15	for HIGH POTE	ENTIAL risk incidents		
1. INCIDENT SUMMARY Vessel Sou	uthern Surve	eyor	Vessel Positior	4335S 1	4828E		Date 13.04.07	и Y нн мм Time O136	
Injured Person		· .	Witness 1			I	Witness 2		
Age:	ime in Industry		Time in Composi		Hre on Duty		hrs. Dave into Swine	r d	
i vye I	ine in muusiry:		Time in Company				- Days into Swing	, <u> </u>	
Injured Person Job Title:	*If contractor, note C	ompany, contact name	and phone number						
AMSA Report: Na	vigation Act:	Sect 268	Sect 269 Sect	417 M	O 32 OH&	S (MI) Repoi	rted to AMSA? (Ye	es/No) <u>Fm 18 YES Fm 19</u>	
Client: BOM	as applicable		Date reported:	13.	04.07	Repor	rted to NOPSA? (Y	res/No) <u>Link</u> NO (Yes/No) Link NO	
Safety		Env	ironment		Quality	Equip	ment damage	Emergency Response	
	ing to table below (H	-high M-modium L-los						X	
Actual		Actual		Ac	tual		Actual	Actual L	
Potential		Potential		Poter	ntial	Po	otential	Potential	
Any boxes that have a high risk ra Risk Severity Table	ting are required	to be immediately High, M = Med	reported to your Duty M	Manager & PC Zero)	MS Safety Manager				
Health & Sa	afety	Envi	ironment	Qı	ality	Equip	ment Damage	Emergency Response	
Fatality or serious injury Treatment, LTI, Alternate	(Medical Duties or	Released from sin coverage or Lega	te/vessel or media al Breach	Formal customer complaint or Major non Compliance (NC) >\$40,000				Response requiring External Assistance	
M Modified duties injury	Modified duties injury Contained In Effects		e/vessel Reversible	ustomer Complaint	\$2,000 - \$40,00	00	Response requiring internal assistance		
L First aid or no treatment	required	Contained onboa damage	- ined onboard no environmental s		System Observation			Response handled by vessel - No assistance required.	
2. INCIDENT TYPE									
Health & Safety		Environme	ent	Quality		Equipme	ent	Emergency Response	
Fatality	I	Pollution	Formal C	Complaint		Defective		Fire	
Lost time (LTI)	Intentional Di	ischarge	Inform	al Comp.		Breakdown		Injury	
First aid	Unintended	Solid	F	rocedure		LOSS		Spill	
No Treatment		Liquid	Comm	endation		Design	í	Elect./ Mech Failure X	
Modified duties		Gas		Policy		Use		Grounding	
Hazardous / DG	Othe	er (Specify)		Contract		Damageo	1	Collision	
Illness		L	Oth	er (specify)		Other (specify)	Other (specify)	
3. INCIDENT DETAILS							TASK	LOCATION	
Struck By		Foreig	n Body		Perform	ning Maintenance		Engine room	
Struck Against		Caught Be	etween			Cleaning	,	Deck	
Slip / Trip		Lac	eration			Crew Change		Bridge	
Chemicals		Ele	ectricity			Snore Cargo Handling	1	Accommodation	
Over Exertion		Ca	ught in			Stores Handling	,	Indoor aisles	
Repetitive		Vi	bration		Bu	lk Liquid Transfer	r 📖	Stairs	
Weather	Х	Ex	posure			Mooring	J	Wharf	
Procedural		Fauipment malf	Tide			Travelling		Office	
Poisoning		Comprisent main	(specify)			Other (Specify)	Guner (specily)	
4. INCIDENT IMPACT		HUMAN		_			ENVIRONME		
Hand / Wrist / Fingers			Shoulders	4	Atr	nosphere	-	Sewage	
Upper / Lower Back			Eyes / Vision	-		Ocean	-		
Unest / Torso Head / Neck			Leys / Knee	1	Chen	nical Spill	-		
Face / Teeth		I	nternal Organs	1	0.101	Garbage	1	Cargo	
Ears / Hearing		Feet	/ Ankles / Toes			Leak		Equip. Failure	
Skin			Other (specify)		0	ily Waste	4	Recycling Other (specify)	
	ON	Oher det "	of events loading	eluding incide:	Hazardo	us waste	tion as necessary)	Outer (specity)	
At 0130 hrs duty Engi	neer responde	Give details ed to an Engine	Room alarm (steerir	iciuaing incident	t). He acknowledg	ed the alarm ar	nd then proceeded	to the steering flat. He observed that the	
rudder was working ex	xtremely hard.	0136 hrs the sh	hip took a very heav	/ roll and at	the same time ve	ssel blacked ou	it. Emergency gene	erator auto started. 0140 hrs the duty	
0154 hrs two thrusters	were made n	nade available a	ind the vessel broug	ht head to	wind. 0206 hrs the	Main Engine w	as started clutched	I in & brought up to speed. Engine	
parameters were close MSB until 0900 hrs with	eiy monitored	as the pitch was er had moderate	s slowly increased. C ed. The cause of the	≥30hrs thru blackout w	usters were stoppe as the Shaft Alt br	a & one alterna eaker trippina d	ator snut down. Sha out on frequency fai	arr Alternator was not connected to the ult. Probably caused by a combination of	
the high prop pitch, ru	dder angle & s	ships heavy rolli	ng.			., 3-	, ,		
6. JHA Information			Describe	actions taken in	response of initial JSA/JHA	Analyses.	7		
Does this incident r	elate to an ex	xisting vessel		Y	es				
Date that existing re	elated JHA w	u rille of the Ji as last used a	nd reviewed' (Apr	endix 1.IH	A Review and utili	JEA LITIE:			
7. VESSEL ACKNOWLE	DGEMENT		Review information	provided, includi	ng risk categories, and sign	if satisfied correct			
Roger W Thomas	Date:	13/04/2007	lan Tavlor		Date: 13/04	/2007	Michael Tuck	Date: 13/04/2007	
Employee			Maste	er		-	OH&S Rep)	
Page 1 of 2				Revision	3.0			Date of Last issue:20 Jul 2005	

				Inciden	t No.	IR 230	/ Page 2
8. IMMEDIA	TE CAUSE	What led to the incident occurring (attach diagrams, photos, reports or other i	nformation as necessary)			
9. IMMEDIA	TE CONTAINMENT A	CTIONS	Describe actions taken to avoid for	urther consequences of incident.	Include ar	y first aid treatment onboard	
10. ROOT (CAUSE / SYSTEM FAIL	URE ANALYSIS	Use fish-bo	ne diagram or other appropriate	problem s	olving tools and attach to this form if required	
	Supervision	Training	Contractor	Procedures		Other	
			Management				
							INCIDENT
	Equipment	Hazard ID	Working	Human		Client	
	Design	& Control	Environment	Factors		Systems	
Desc	ription of findings:	(often there is more than one root o	ause that contributed to the incident OR n	hay have reduced the severity of t	the incider	nt)	
No	System Failure		Reason w	hy System Failure	Occu	rred	%Cause
1							
2							
3							
4							
5							
11. PERMA	NENT CORRECTIVE A	CTIONS	Actions to be taken to prevent thi	s or a similar incident from reoccu	urring		
		•	C = corrective action, P = prever	tative action			
No		Action To E	Be Taken	1	C or P	Assignee	Due by Closed
1							
2							
3							
4							
5							
0							
	Master				OH&S	Rep	-
12. Client C	Comments	Client comments to be in	ncluded here if additional information or re	sponse required - send to head o	ffice for re	sponse.	
Name:		Position:		Date:		Contact No:	
13. Verified	Corrective Actions / S	Ship Manager Comment	S Only to be	completed once all actions have t	been satis	factorilijmplemented (attach Ship Manager response a	as required)
					<u></u>		
44 D		k eetenemi in stitus (Sub N	vianager	Date
14. Prevent	ative Actions (High ris	K category incidents)		To be completed by Sa	afety/Envi	ronment/Quality Manager and / or Ship Manager	
Proced	aures, policy or system change	s to be made in response to thi	s incident		⊢or pre	ventative action by management	Duchu
NO 4		Action I	o be laken			Assignee	Due by
1	+						+
2	+						+
3							+
4	1					I	<u> </u>
15. Verified	Preventative Actions	Taken ⊳	eview information provided incl	uding risk category and	sian if e	atisfied correct	
					90.0.5		
	Ship Manager		-		Date		

D&O.		INCIDENT RE	PORTING A		STIGATION			Form No: CF007	7-3
1 & U Maritime S	ervices			(DOTTO		Incident No:		IR 231	
Complete as a minimum sections	1-7 for LOW PC	OTENTIAL risk, sections	a 1-13 for MEDIUN	M POTENTIAL	risk, sections 1-15	for HIGH POTE	NTIAL risk incidents		
1. INCIDENT SUMMARY	uthorn C		angel Dr. '''	40570 440	-05			Y HH	MM
vessel Sc	outnern Surve	eyor V	essel Position	43575 149	09E]	Date 18.04.07	Time	1500
Injured Person			Witness 1				Witness 2		
			-	·					
Age:	Time in Industry	/:1	Time in Company:	:	Hrs on Duty:		hrs Days into Swing:	d	
lained Deer 11 To									
Injured Person Job Title:	*If contractor note (Company, contact name and cho	ne number						
AMSA Report: Na	avigation Act	: Sect 268 Sect	269 Sect 4	417 MO 3	32 OH&S	S(MI) Repor	ted to AMSA? (Yes/N	No) <u>Fm 18</u> YES <u>F</u> m	19
Client: BoM		D	ate reported:	18.04.	07	Repor	ted to NOPSA? (Yes	/No) Link NC)
Incident Type: Tick box or boxes	as applicable					Repor	ted to DOTARS? (Ye	s/No) Link NC)
Safety	<u>/</u>	Environ	ment		Quality	Equip	nent d <u>amage</u>	Emergency R	esponse
	J]						Х
COMPLETE ALL BOXES: Rate risk accor	ding to table below (F	H=high, M=medium, L=low, Z=ze	ro)	-			· · · []		
Actual		Actual	-	Actua	1	-	Actual	Act	ual L
Potential	ding c== -	Potential		Potentia		Po	otential	Poten	tial H
Any poxes that have a high risk r	aung are require – H –	High M = Medium	$ = \cap W \overline{Z} - \overline{Z}$	7ero)	oatety Manager*				
Health & S	afety	Environ	<u>,0w, _ = /</u> nent	Quali	tv	Equipr	nent Damage	Emergency Respon	se
Fatality or serious injury	(Medical	Released from site/upo	sel or media	Formal custom	er complaint or	-4			<u> </u>
H Treatment, LTI, Alternat Legal Breach.	e Duties or	coverage or Legal Brea	ach	ch Major non Compl		>\$40,000		Response requiring External	Assistance
Logar broadt.		Contained on site/veco	el Reversible					<u> </u>	
M Modified duties injury		Effects		NC	mer complaint	\$2,000 - \$40,00	0	Response requiring internal	assistance
I First all the state	and the l	Contained onboard no	environmental	Sustan O'	ration	. \$2.000		Response handled by vesse	I - No assistance
L First aid or no treatment	required	damage		System Obser	vation	< \$2,000		required.	
2. INCIDENT TYPE									
Health & Safety	1	Environment		Quality	-	Equipme	nt	Emergency Respon	nse
Fatality		Pollution	Formal C	omplaint	_	Defective		Fire	
Lost time (LTI)	Intentional D	Discharge	Informa	al Comp.	4	Breakdown		Injury	
Med. treatment	Unintended	1 Release		System	4	Loss		Disease	
First aid	1	Solid	Pr	rocedure	-	Maintenance	⊢	Spill	
No Treatment	•	Liquid	Comm	endation	-	Design	⊢	Elect./ Mech Failure	x
Modified duties	-	Gas]	Policy	-	Use	┝━━┥	Grounding	—
Hazardous / DG	Oth	ici (opecity)		Contract		Damaged	├ <u></u>	Collision	
IIIness Near miss	1	L	Othe	GI (SPECITY)		Juner (specify)	<u> </u>	Other (specify)	
3. INCIDENT DETAILS	1				Т		TASK	LOCA	
Struck Bv		Foreian Bod	y		Performi	ing Maintenance		Engine room	
Struck Against		Caught Between	n			Cleaning		Deck	
Slip / Trip		Laceration	n			Crew Change		Bridge	
Fall from Height		Bur	n		1	Shore		Galley	
Chemicals		Electricit	у			Cargo Handling		Accommodation	
Over Exertion		Caught is	n			Stores Handling		Indoor aisles	
Repetitive		Vibratio	n		Bull	k Liquid Transfer		Stairs	
Weather		Exposur	e			Mooring		Wharf	_
Procedural	┝──┤	Tid	e		1	Travelling		Office	ering Gear Flat
Allergy	\vdash	Equipment malfunction	n		-	Off Work		Other (specify)	ang obar i lat
			"		+	Caler (Specify)			
Hand / Write / Finan		NUMAN	Shoulders	1	۸	osphere		Sewage	
Upper / Lower Pack		Ever	s / Vision	1	Atm	Ocean	1	Oil / Fuel	
Chest / Toreo		Eye	gs / Knee	1	0	ontained	1	Noise	
Head / Neck		Arm	s / Elbow	1	Chemi	ical Spill		Chemical Storage	
Face / Teeth		Interna	al Organs]	(Garbage]	Cargo	
Ears / Hearing		Feet/ Ankl	es / Toes		1	Leak]	Equip. Failure	
Skin		Oth	1er (specify)		Oil	y Waste	1	Recycling	
Consciousness					Hazardou	s Waste		Other (specify)	
5. INCIDENT DESCRIPT		Give details of even	nts leading up to and inc	cluding incident (attac	ch diagrams, photos, rep	ports or other informati	ion as necessary)		
1500 hours whilst on	passage to H	obart at full speed in h	heavy beam sea	s vessel expe	rienced a sudde	en steering gea	r failure.	to port position. The hud	ulic oil
supply pipe to the rar	n was comple	tely separated from the	e inlet connection	on to the forwa	ard ram. The res	sult of this mad	e the steering gear in	operable even in the emer	gency
steering from Steerin	g Flat mode.								
6. JHA Information			De "	actions taken in .	Onse of initial ISA	Analyses			-
Does this incident	relate to an e	xisting vessel .IHA?	vescribe	Yee	JSA/JHA	No X]		
If 'Yes', provide the	e Number an	nd Title of the IHA	JHA No [.]	1 69		JHA Title			
Date that existing r	elated JHA v	was last used and re	viewed: (App	endix 1 JHA R	eview and utiliz	ation Record)			
			V TP			/			
		·····					·····	······	
7. VESSEL ACKNOWLE	DGEMENT		Review information p	provided, including ris	k categories, and sign i	if satisfied correct			
					_				
	Date		I Taylor		Date: 28.04	.07	M Tuck	Date: 18.	.04.07
Employee			Maste	r			OH&S Rep		

IMMEDIATE CAUSE The opposite end of being held in positi The valve block be It was also observe				Incider	nt No.	IR 231	/ Page 2	2
The opposite end of being held in positi The valve block be It was also observe		What led to the incident occurring (a	attach diagrams, photos, reports or other info	ormation as necessary)				
being held in positi The valve block be It was also observe	failed pipe con	nects to the Relief/Bye-p	ass valve block. This valve blo	ock had separated fr	om its i	mounting. It was observed that the	e valve block had o	only
It was also observe	n by one bolt th	at was fretted and shear	ed off in the incident. The second	ond attachment bolt	under t	he block was missing.		
	d that the failed	pipe connection was of t	he olive type, which allowed th	ne pipe to seperate /	complet	ely from the ram connection.		
IMMEDIATE CONTA	NMENT ACTI	IONS	Describe actions taken to avoid furth	her consequences of incident.	Include an	y first aid treatment onboard		
Failed pipe was red	onnected to ram	and carefully tightened.	A wooden shore was cut and	driven between the	bulkhe	ad and pipe to hold the pipe in plac	ce.	
The steering and p	lot oil pumps we	ere then restarted and the	steering slowly worked until a	all the air had been (extracte	d from the system. During this exe	rcise the header to	ank on
the bridge was beir	g topped up.	1554 hours vessel under	rway.					
. ROOT CAUSE / ST	STEW FAILUR	RE ANALYSIS	Use fish-bone	diagram or other appropriate	problem so	lving tools and attach to this form if required		
Suparvisia		Training	Contractor	Drooduroo		Othor		
Supervisio	1	Training	Management	Flocedules		Other		
			Ivianagement					
	>	\rightarrow	\longrightarrow	\longrightarrow		\longrightarrow		т
Equipmon		Hozard ID	Working	Human		Client	INCIDEN	•
Design		R Control	Environmont	Factora		Systems		
Design		a Control	Environment	Faciors		Systems		
Description of fin	linas:	(often there is more that are a	suce that contributed to the insident OD	have reduced theit /	the inclui-	4)		
	m Failure	Untern unere is more than one root c	Reason why	V System Failure		rred	%Ca	lse
1 Eginment	lesian	Olive type connection	used.	, system i anale	2000		20	
2 Wear & Te	ar	System is 35 years of					70	
3 Heavy we	ther	Heavev weather cau	sing steering dear to work I	hard			10	
4			gear to working					
5		1					1	
							I	
PERMANENT COR	RECTIVE ACT	TIONS	Actions to be taken to prevent this o	r a similar incident from reocc	urring			
			C = corrective action, P = prevental	tive action				
No		Action To E	Be Taken		C or P	Assignee	Due by	Closed
1	Inspect all sim	nilar connection on the	system an correct any pro-	blems	Р	C/E Ship Manager	30/04/2007	
2	•	Repair failed hydrauli	c pipe connection		С	C/E Ship Manager	30/04/2007	
3		Repair valve blo	ck mounting		С	C/E Ship Manager	30/04/2007	
4		· ·						
5								
6								
	l Ta	aylor				M Tuck		
	Master				OH&S	Rep		
Client Comments		Client comments to be in	cluded here if additional information or respo	onse required - send to head o	office for re	sponse.		
e:		Position:		Date:		Contact No:		
e:		Position:		Date:		Contact No:		
e:	Actions / Shi	Position:		Date:	been satis	Contact No:	2 as required)	
e: /erified Corrective	Actions / Shi	Position:	S Only to be con	Date:	been satis	Contact No:	o as required)	
e: /erified Corrective	Actions / Shi	Position:	S Only to be cor	Date:	been satis	Contact No:	9 as required)	
le: /erified Corrective	Actions / Shi	Position:	S Only to be cor	Date:	been satis	Contact No:	9 as required)	
e: /erified Corrective	Actions / Shi	Position:	S Only to be con	Date:	been satis	Contact No:	t as required)	
le: /erified Corrective	Actions / Shi	Position:	ts Only to be con	Date:	been satis	Contact No:	t as required)	
le: /erified Corrective	Actions / Shi	Position:	ts Only to be con	Date:	been satis	Contact No:	e as required)	
le: /erified Corrective	Actions / Shi	Position:	ts Only to be cor	Date:	been satis	Contact No:	e as required)	
le: /erified Corrective	Actions / Shi	Position:	ts Only to be cor	Date:	been satis	Contact No:	e as required)	
le: Verified Corrective	Actions / Shi	Position:	t S Only to be cor	Date:	been satis	Contact No:	e as required)	
le: Verified Corrective	Actions / Shi	Position: ip Manager Comment	t S Only to be con	Date: npleted once all actions have	been satis	Contact No: actoriljmplemented (attach Ship Manager response	e as required)	
Ne: Verified Corrective	Actions / Shi	Position: ip Manager Comment category incidents) o be made in response to thi	t S Only to be cor	Date: npleted once all actions have	been satis Ship N iafety/Envir	Contact No: actorilymplemented (attach: Ship Manager response Anager onment/Quality Manager and / or Ship Manager ventative action by management	e as required)	
Preventative Actio	Actions / Shi	Position: ip Manager Comment in Manager Comment ip Manager Comm	t S Only to be cor s incident o Be Taken	Date: npleted once all actions have	been satis Ship N iafetyEnvi For prev	Contact No: actorilymplemented (attach Ship Manager response Manager onment/Quality Manager and / or Ship Manager rentative action by management Assignee	as required) Date Due by	
Preventative Actio	Actions / Shi	Position: ip Manager Comment category incidents) o be made in response to thi Action T	tS Only to be cor s incident o Be Taken		been satis Ship N iafetyEnvi For prev	Contact No: actorilymplemented (attach: Ship Manager response Manager onment/Quality Manager and / or Ship Manager rentative action by management Assignee	Date	
Preventative Actio	Actions / Shi	Position: ip Manager Comment in Manager Comme	t\$ Only to be cor s incident o Be Taken	Date:	been satis Ship M satety/Envir	Contact No: actorilymplemented (attach: Ship Manager response Manager onment/Quality Manager and / or Ship Manager rentative action by management Assignee	Date	
Preventative Actio Procedures, policy or No 1 2 3	Actions / Shi	Position: ip Manager Comment in Manager Comme	tS Only to be cor <u>s incident</u> O Be Taken	Date:	been satis Ship N Safety/Envi	Contact No: actorilymplemented (attach: Ship Manager response Manager onment/Quality Manager and / or Ship Manager rentative action by management Assignee	Date	
Preventative Action Procedures, policy or No 1 2 3 4	Actions / Shi	Position: ip Manager Comment category incidents) o be made in response to thi Action T	tS Only to be cor s incident o Be Taken		been satisf	Contact No: actorilymplemented (attach Ship Manager response Manager onment/Quality Manager and / or Ship Manager rentative action by management Assignee	Date	
Preventative Actio	Actions / Shi	Position: ip Manager Comment category incidents) o be made in response to thi Action T	tS Only to be cor s incident O Be Taken		been satisf	Contact No:	Date	
Preventative Actio	Actions / Shi	Position: ip Manager Comment ip Manager Comment category incidents) o be made in response to thi Action T iken R	tS Only to be cor s incident o Be Taken eview information provided, includ		Ship N For prev	Contact No: actoritymplemented (attach Ship Manager response Aanager onment/Quality Manager and / or Ship Manager ventative action by management Assignee attisfied correct	as required) Date Due by	
Preventative Actio Procedures, policy or No 1 2 3 4 Verified Preventati	Actions / Shi	Position:ip Manager Comment	tS Only to be cor s incident o Be Taken eview information provided, includ		Ship N For prev sign if si	Contact No: actorifymplemented (attach Ship Manager response Anager onment/Quality Manager and / or Ship Manager rentative action by management Assignee attafied correct	Date	
e: erified Corrective reventative Actio Procedures, policy or No 1 2 3 4 erified Preventati	Actions / Shi	Position: ip Manager Comment category incidents) o be made in response to thi Action T 	IS Only to be cor s incident o Be Taken eview information provided, includ		Ship N Ship N For prev Sign if si	Contact No: actoritymplemented (attach Ship Manager response Manager onment/Quality Manager and / or Ship Manager rentative action by management Assignee attafied correct	Date	