REPORT ON MV (BADER iii) VOYAGE (LNC-010116 & LNC-010117)

LOAD PORT: ADELAIDE & FREMANTLE

LOAD DATES: From 27/04/2018 to: 28/04/2018 -ADELAIDE : From 02/05/2018 to: 03/05/2018 -FREMANTLE

TO: DISCHARGE PORT(S) - EILAT, ISRAEL & AQABA, JORDAN

DISCHARGE DATES: From 21/05/2018 to: 23/05/2018 -EILAT : From 24/05/2018 to: 28/05/2018 -AQABA

REPORT PREPARED BY

s. 22(1)(a)(ii)

Veterinary Officer, Department of Agriculture and Water Resources

CONTENTS TABLE

- 1. EXECUTIVE SUMMARY- I, s. 22(1)(a)(ii) was the Department of Agriculture and Water Resources independent observer on the vessel the Bader iii taking sheep and cattle from Adelaide and Fremantle to Israel (Eilat) and Jordan (Aqaba) for s. 47G(1)(a)

 The Bader iii departed from Fremantie with 62668 sheep and 5799 cattle on the 28/4/18 from Adelaide and the3/5/18 from Fremantle.
 - The journey went directly to the Gulf of Aqaba via the Arabian and Red Seas.
 - The journey was approximately days and struck elevated temperatures and humidity from the third day so it was unseasonably hot.
 - The stocking density of the ship was at 17>5% below ASEL.
 - The voyage was successful with very low mortality rates of around 0.22 for both the sheep and the cattle. This compares very well with the industry averages of around .7%
 - The Bader is a mixed open and closed deck ship with the sheep on open double tiered decks above the main deck and the cattle below the main deck on enclosed artificially ventilated decks.
 - The mian points to be taken from this voyage are the following.
 - The stock spent around 2 extra weeks in the feedlots prior to departure. This led to very healthy and strong animals that were well used to the pelleted and chaff feeding regime. The selected

and loaded stock were very well suited to the voyage before they s. 47C(1)

left.
s. 47C(1) There were virtually no animals proportionally that died of Inanition. Most of the sheep deaths were due to diseases of healthy animals.

- All the sheep were very well shorn down. s. 47C(1) s. 47C(1)
- The management system of the crew and the state on the Bader were strong. They were for the whole journey at sea well organized and cared for and managed the ship stock environment very well.
- The 17.5% reduction in stocking density was sufficient and allowed the stock sufficient room to always access food and water, to lay down when required and to have sufficient spacing even when the very hot day of 34degrees WBT was encountered.
- The feeding regime of the voyage was well monitored with pellets being mostly used but when hotter weather was encountered the more cooling feed stuffs of Chaff and oats were also available.
- The process of zig zagging as a temperature management system on open deck ships during heat or more importantly with a following wind is remarkably effective with the WBT dropping up to 3-4 degrees upon the start of course altering.

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The Bader

had a designated nursery pen and where needed looked after the lambs and ewes very well.

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s. 47G(1)(a)

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- 2. MV (BADER iii) VOYAGE (LNC-010116 & LNC-010117)
 - a. History

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AIS Vessel Type: Cargo Gross Tonnage: 36387 Deadweight: 26762 t

Length Overall x Breadth Extreme: 204.15m × 26.5m

Year Built: 1978 Status: Active

- b. Size and Layout- 36387 ton see attached deck plan Appendix 1.
- c. Flooring- Steel flooring with incorporated mesh on sheep decks and cement cover on cattle decks.
- d. Services
 - Fodder Storage-fodder stored as pellets in bottom of ship in fodded silos and pumped around by automatic delivery system. Also there is charf in bags and oats in bags for supplementary feeding stored on deck under covers in various positions on the ship. There is ample feed on the

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MANAGEMENT

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s. 47F(1)

4. ACCREDITED VETERINARIAN AND STOCKMEN

a. s. 47F(1)

b.

5. THE CONSIGNMENT

- a. Pre-departure Preparation at Registered Premises
 - Nutrition Management- the sheep and cattle were in the pre departure premises for 2 weeks longer than usual due to approval issues. During this time in the various feedlots the animals were given adlib access to pellets and were introduced to charf. Water was adlib by automatic troughs at all times.
 - This extra time in the feed lots meant the animals were in superb condition and were fully acclimatised to eating pellets/charf prior to loading on the ship.
 - ii. Final Selection of animals- final selection of the animals was done by the s. 47F(1) and the s. 47F(1)
 - s. 47F(1) Their selection was in this instance savage with anything that even vaguely looked less than excellent rejected. Final full inspection of all the stock by s. 47F(1)/Department VO's showed very strong and healthy animals with only 1/2 rejects on H/W.
- b. Consignment description
 - i. Numbers by category and weight see attached Appendix 2.
- c. Fodder and Water Calculation
- d. Load Plan and HSRA- see Appendix 3 attached.

6. THE VOYAGE

a. Route- the route plan for the combined LNC-010116 &010117 was. Bader to load in Port Adelaide- LNC-010116 then proceed to Fremantle-to load LNC-010117. the vessel then proceeded to sail directly to Eilat in Israel via the equator/Arabian sea/red sea & gulf of Aqaba. The Bader then unloaded in Israel and proceeded to Agaba in Jordan to finish unloading.

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c. Temperature and Humidity Records- all in Appendix 4 s. 47G(1)(a) d.

e. Mortalities, Morbidities and Stress Indicators Overall voyage mortalities and morbidity were very low. There were 169 sheep mortalities and 15 cattle deaths.

The sheep mortalities were a mixture of things but mostly due to Enterotoxaemia. This being a disease of healthy sheep is representative of the good condition the sheep arrived in. there were a few deaths due to Innanition but surprisingly few. The sheep deaths were fairly well spread across all decks in all types of sheep except for the Awassi which travelled extremely well. There was a minor increase of deaths in the sheep of upper deck 2 both port and starboard sides. There is no notable reason for this slighter increase.

There were stress indicators in the Sheep. The voyage encountered Equatorial type conditions from the third day out of Fremantle with WBT's of 31 degrees for most days with 34 on the worst day. The sheep often were panting and at times there was open mouth breathing. Some clarification is required here. There were 4-5 levels of respiration seen on this voyage. 1/ temp around 26

degrees wbt normal respiration.

2/ temp around 28-29

WBT there was some panting and increased respiration in a few sheep particularly the big merino rams.

3/ temp 30-32 degrees wbt. There was a general increase in panting to around 25% of sheep and there were a few sheep that started to open mouth breathe by CHOICE. The open mouth breathers would always stop this when you walked past making it more voluntary than not.

4/temp 32-34degrees

WBT . Here like above there was an increase in panting and voluntary open mouth breathing. About 1% of the sheep max at 34 WBT were voluntary open mouth breathing. They were always able to stop.

5/35 degrees plus WBT

we did not see. Also we saw at no time severe heat stress where may sheep together were open mouth breathing and where they continued to show this more severe behaviour without being able to control it.

The cattle mortalities were a mixed bag. there were some very odd uncommon conditions like Abomasal torsion, severe Endocarditis and either a blackleg like condition or trampling. All the p/m causes are recorded in appendix 7.

There were 2 spikes of cattle deaths noted see graph appendix 7. The first of these is after the severe heat spike and the cyclonic storm just before Jeddah. Here there appear to have been 2-3 deaths where no cause other than likely heat stress can be found. One of these was a small pastoral bull s. 47C(1) s. 47C(1)

- s. 47C(1); s. 47F(1) The other bull was a very large European heavy Bull s. 47C(1)
- s. 47C(1) There is a design fault with the Bader cattle pens that allows sleeping cattle to slide their heads under the bottom rail of the pens.s. 47C(1)
- s. 47C(1)
- s. 47C(1) The other causes of cattle death were 2 broken legs and 1 downer bull at the end that needed to be euthanized because it could not be unloaded. The usual cause of death in cattle on Ships BRD pneumonia did not seem to occur at all due to very good early recognition and treatment of any suspected cattle. Stress effect of heat on the cattle was not obvious. At no stage did I

Stress effect of heat on the cattle was not obvious. At no stage did I see definitive open mouth breathing in any of the cattle. Even at 34 WBT. The only obvious sign in the real heat in the cattle was they reduced their food intake and increased their water intake.

- see Appendix 6

- PHOTOGRAPHS AND VIDEOS All loaded onto the report section for the Bader iii in the Vets on ships section.
- 8. ATTACHMENTS -all loaded onto Vets on ships section of server in attachments and appendices.
 - a. Directions Order and other DAWR instructions
 - b. s. 47F(1) Submission
 - c. s. 47F(1) Submission
 - d. Load Plan and HSRA
 - e. Fodder and Water (incl. Calc and consumption: chaff, pellet, water plans and consumption)
 - f. Veterinary Issues Including Management of Hospital Pens
 - g. Temperature and Humidity Records
 - h. Mortalities by Deck and Date
 - i. CSEP
 - i. Deck Wash Plan

LIST OF VIDEO TOPICS

- a. Ventilation- there are numerous videos recorded of the ventilation on the ship on many days which are loaded onto the Vets on ships section of server. The Bader just prior to departure from Adelaide completed its 5 yearly full AMSA- Australian Certificate for the Carriage of Livestock (ACCL) this covered the full assessment of ventilation and lighting.
 - There were no issues with the ventilation during the voyage. It worked to its full capacity for the whole voyage.
- b. Post Mortems- post mortems were performed on all the cattle by the s. 47F(1) and the results are listed in the daily report written by me in attachment.7.
 - There were no post-mortems done by the sheep deaths. He was happy to diagnose the causes of their deaths on clinical presentation. With the low number of sheep deaths and the obvious signs of Enterotoxaemia this covered most of the sheep. s. 47C(1) s. 47C(1)

There is photographic record and video record of several of the p/m's in the daily photographic record section.

c. Hospital Pens and Veterinary Drug Use- there were no initially designated hospital pens. They were created close to walk ways when required to ensure constant supervision. The monitoring of the hospital pens (labelled WELLNESS AREAS by the s. 47F(1) see pictures) was thorough and the animals were well looked after. Whenever an animal was well enough to leave the hospital pen it was returned to the general population and still monitored by having a blue paint sprayed on its back. Veterinary drug use was in line with the ailments being treated and the ship was more than sufficiently supplied with medicants.

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- d. Lambs born- There were 6 lambs born on the voyage and 3 left the ship in very good condition. As soon as a lamb was found the crew were instructed to move it and its mother to the designated nursery pen for care. There was one orphan where the mother could not be found and despite lots of care and treatment by the s. 47F(1) this lamb died. There was another that was moved out of the main pen after birth and its mother tied close to it. By the time the crewman was ready to move it the lamb disappeared into the pen and was trampled. There was another that never did well even though its mother was with it in the nursery pen and died. The remaining 3 lambs all were very well cared for and left the ship in strong condition with the mothers at the end of unloading to go to the feedlot with special care instructions. The crew was very caring for the lambs the master in particular.
- 10. OSERVATIONS AND COMMENTS- these are covered in considerable detail in Appendix 7 my daily reports.

In overview point form here are some observations and comments.

- The Bader iii is a very large ship that can carry 70-80,000 sheep and 6 thousand cattle. For this voyage the stocking density carried a 17.5% reduction on possible numbers. The Bader has an ongoing 10% reduction on stocking in place normally due to a high mortality trip many years ago.
- There appeared to be plenty of room for all the loaded animals with the 17.5% reduction in stocking density. You will see that there are many photos and videos of sheep with lots of room and at times the cattle may have had too much room. Too much room for cattle allows them to sleep totally on their side which with the mentioned lower rail issue on the ship can lead to stuck head problems. There were 20 or so cattle at least that got their heads caught and were freed.s. 47C(1)
- There was no occasion that I felt there was not enough room for the stock. There are issues with conception with stocking. The Bader had its pens set up so the stock had room to move between 2-3 pens. This allowed at times there to be lots of room in some areas and tighter packing in others. This flocking of sheep and herding of cattle was completely at the discretion of the animals. They chose to spread out this way. It is given away in the collective pronouns for sheep and cattle- flock, herd. At no time did there ever appear to be problems with any of the stock accessing feed or water. There were 2 separate water troughs and 2 feed troughs per sheep pen.
- We encountered hot and humid conditions from very early (the 3rd day in the voyage. The s. 47G(1)(a) were invoked from the third day and continued for the full journey. This involved zig zagging the boat to ensure adequate air flow on the open decks especially in following winds. This is very effective and I personally saw a drop of 3 degrees in WBT when this was

instituted. Also the stock on particularly hot days were fed cooling feed stuffs like chaff and oats with less pellets. There were additional fans placed and wired into areas identified as potential hot spot areas and areas of lesser air flow.

s. 47G(1)(a)

s. 47G(1)(a)

s. 47F(1)

- There were some very hot and humid conditions and the stock coped with them very well. Even when the WBT reached 34 degrees at 92% humidity there was no dramatic signs of heat stress. There was an increase in panting and open mouth breathing but not to any severe level. The sheep coped very well in the conditions.
- There appeared to be no change in the death rate in the sheep related to the heat. The rate was low, steady and linear (see graph) for the whole journey so heat seemed to play little role in the sheep mortalities on this voyage.
- There was a small spike in cattle mortality after the heat spike and at unloading. This could be related to the heat for the first jump and the second was more mismanagement. See daily reports

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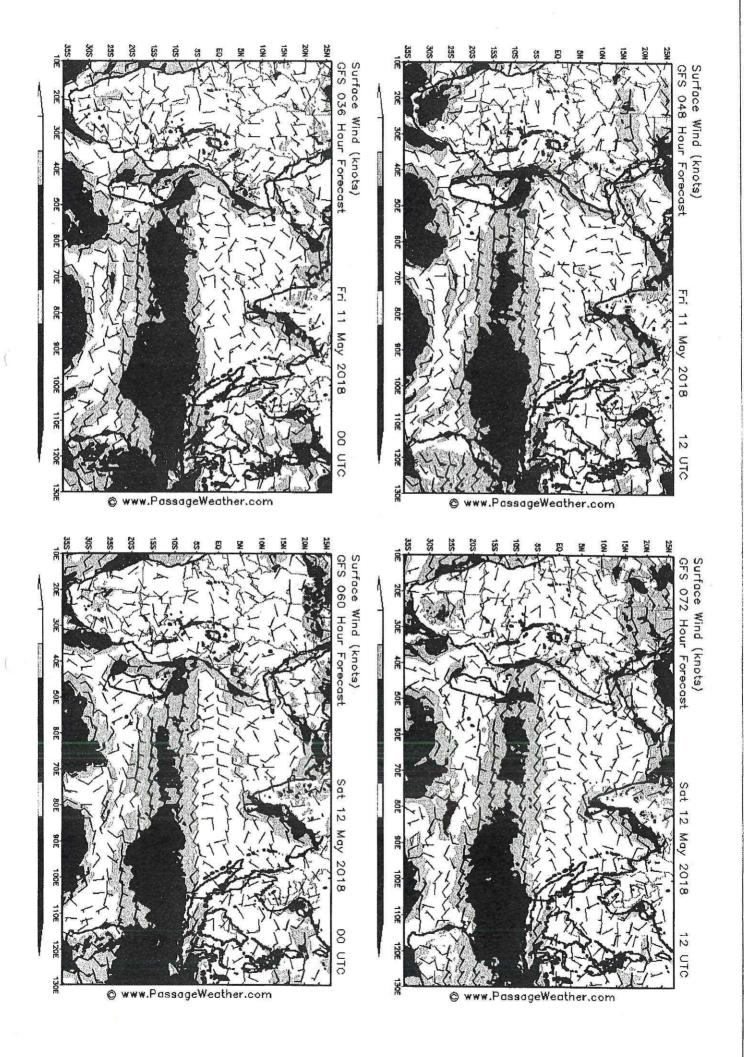
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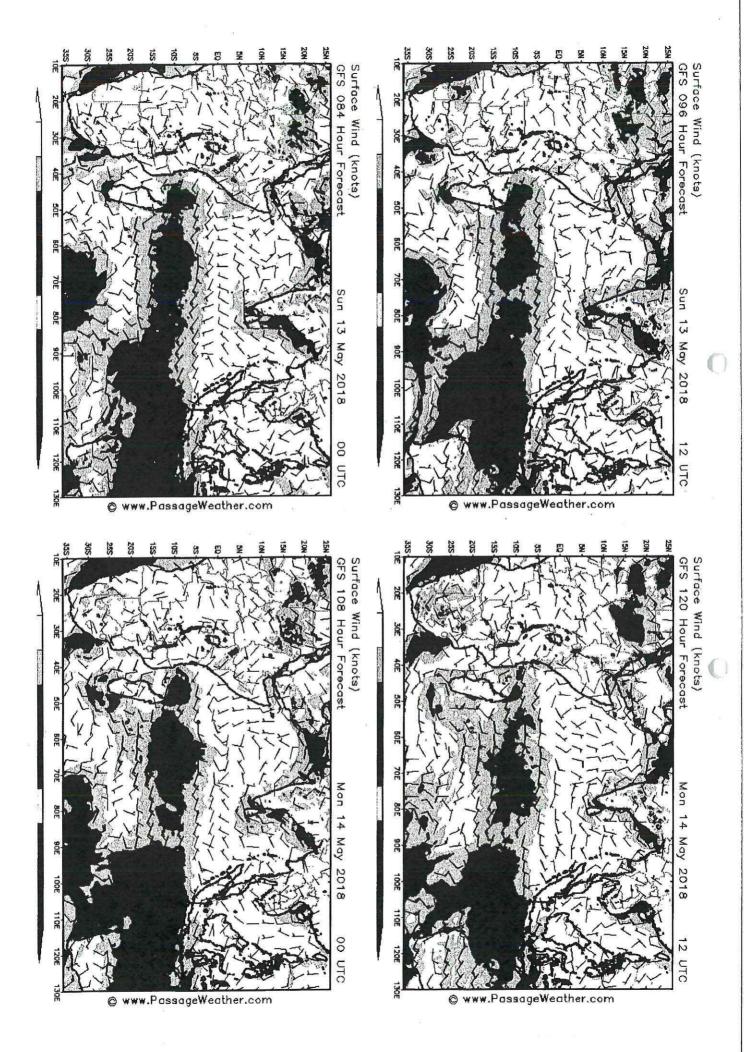
The period of madan started toward the end of the journey and with a high level of the Islamic faith on the ship and especially the wharf there were issues with the unloading of the stock. On the ship they were fine but due to other factors the overall unloading took much longer than expected. 4 days more.

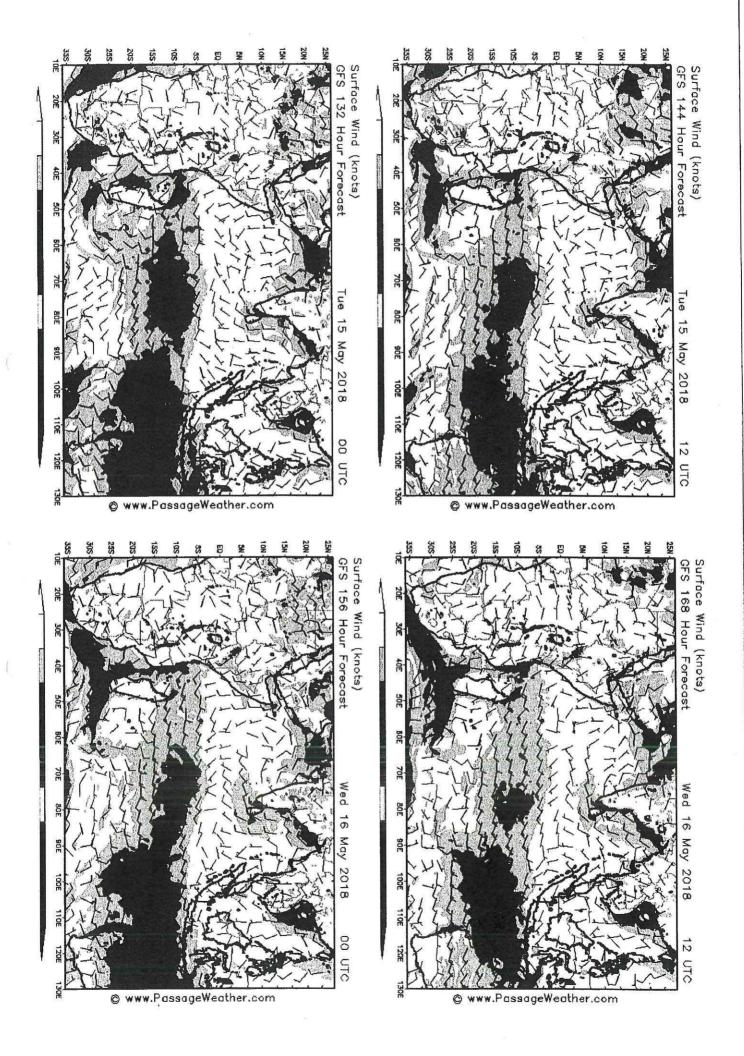
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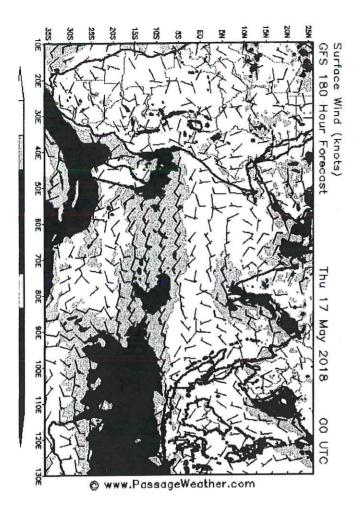
 The regular maintanence and cleaning of the corridors allows the pads to never build up too much . the deepest sheep pad on the Bader would have been no more than 14cm.

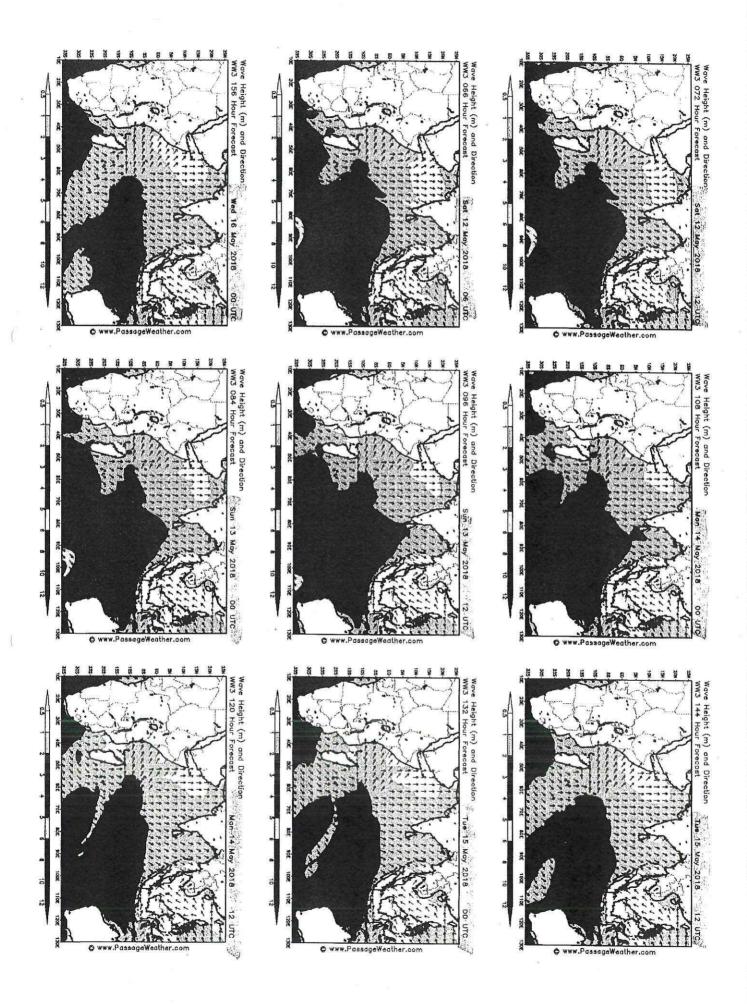






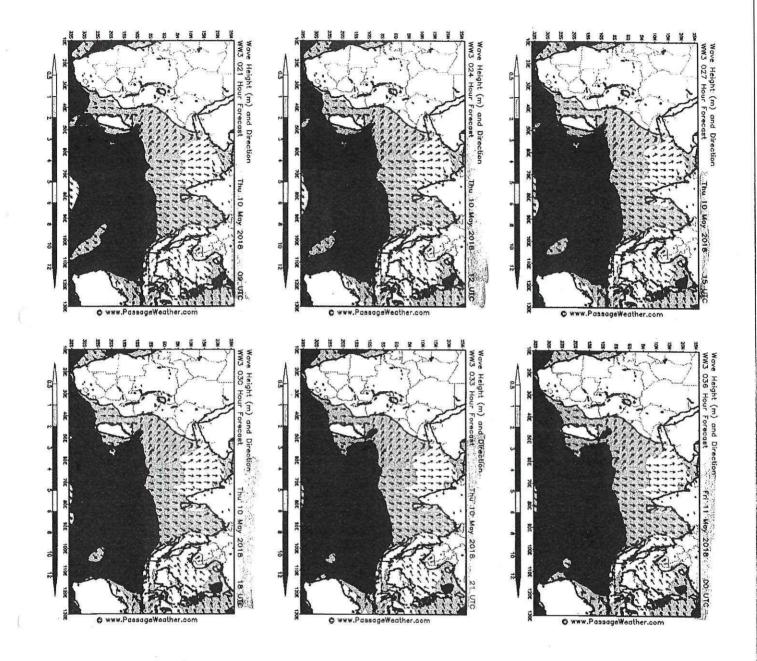






LEX-755





Daily Checklist

Date: 4-5-2018

Your welfare		×
Are you OK?		
Have you contacted you DAWR contact?	YES/Do	You are required to check-in with your DAWR land based contact every day prior to the Master sending the daily voyage report. If your DAWR contact has not heard from you by the time the daily voyage repot arrives, urgent efforts will be made to contact the Master of the vessel immediately to ensure your welfare.
Access to Feed and Water		
Question	Yes/No	Comments
Are there issues with animals accessing feed and water?	no	BEING METT WUNDED
Is feed and water continuously available? If not, why, and for how long?	JE2	
Is the supply of feed and water appropriate for the conditions?	YES	
Is the equipment monitored and operating efficiently?	763	
Daily ventilation, temperature and h	umidity m	onitoring
Have there been any issues with the ventilation system?	N.O.	
Are daily temperature readings being taken? On all decks?	763	Max Temp: 24°C MAIN DECIL Max Humidity: 72°C Humis DECIL 5
Are these occurring at the same time each day?	765	
Are these readings capturing the maximum temperature/humidity level each day?	Y65	
Daily Animal inspection, monitoring a	nd treatm	ent
Are animals that require treatment (e.g. shy feeders, heat stressed, injured or ill animals) being identified and brought to the attention of the AAV in a timely fashion	76S	3 outtle being traded 2x lone of ene I small hill soperated for extra cone
For vessels with split level sheep pens - are all sheep in split level pens being monitored daily?	Y 63	
Pen Condition		
Are the pens in appropriate condition and good order?	X 63	*

Provide an assessment of the quality of the manure pad in the pens (e.g. dusty friable, crumbly, muddy, thick, boggy, liquid). What is its approximate depth	,, I-	2 cm Day & Firm
Have any problem pens been identified with respect to pad condition or ventilation? What is being done to manage this?	20	
Is there management and intervention for pads that are deteriorating in condition? What is being done?	761	NOT REQUIRED 46T
Is the ventilation in the pens adequate?	23(1	
Are any found dead animals removed from the pens in a timely fashion?	763	
AAV's daily activities	9	
Does the observer agree with the assessment provided by the AAV in the Daily Voyage Report?	753	
Are mortalities being accurately recorded and reported?	YES	
Have euthanased animals been counted and recorded separately from those found dead?	J 63	
Have pregnant ewes been identified on the vessel? How many, in what lines? How are they being managed?	- ,	PEGONTIO PROGRAGE THERE ME NONG
Are there pregnant cattle on the vessel? How many, in what lines? How are they being managed?	20	
Are births and abortions being accurately recorded and reported?	Alu	467
How are any neonatal animals managed?	Ala	
Has the AAV carried out any treatments? What for? How? What medications?	91 2	POUTING PRUPHYZNAIS & FOR PRODUCT & Melcanorm for Lame - PENICIZED
Are there any other comments regarding conditions or any other aspect worthy of note?		THEALTHY CATILG
Digital image capture		
Images/video captured?		Yes No
Digital files catalogued and associated file	note	s. 47F(1)

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Daily Checklist

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Date: 5 - 07 18

Your welfare Are you OK? You are required to check-in with your DAWR land based contact every day prior to the Master sending the daily voyage report. If Have you contacted you DAWR YES/No your DAWR contact has not heard from you by the time the daily contact? voyage repot arrives, urgent efforts will be made to contact the Master of the vessel immediately to ensure your welfare. Access to Feed and Water Question Yes/No Comments Are there issues with animals accessing feed and water? Is feed and water continuously available? If not, why, and for how long? Is the supply of feed and water appropriate for the conditions? Is the equipment monitored and operating efficiently? Daily ventilation, temperature and humidity monitoring Have there been any issues with the ventilation system? 26-25 man dech Are daily temperature readings Max Temp: being taken? Max Humidity: 8406 MAIN DECK On all decks? Are these occurring at the same time each day? Are these readings capturing the maximum temperature/humidity level each day? Daily Animal inspection, monitoring and treatment Are animals that require treatment (e.g. shy feeders, heat stressed, injured or ill animals) being identified and brought to the attention of the AAV in a timely fashion For vessels with split level sheep pens - are all sheep in split level pens being monitored daily? Pen Condition Are the pens in appropriate condition and good order?

Provide an assessment of the quality of the manure pad in the pens (e.g. dust friable, crumbly, muddy, thick, boggy, liquid). What is its approximate depth	y, }	-3 cm Day & Flam
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Is the ventilation in the pens adequate?	>)	
Are any found dead animals removed from the pens in a timely fashion?	7	
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Are mortalities being accurately recorded and reported?	1	
Have euthanased animals been counted and recorded separately from those found dead?		
Have pregnant ewes been identified on the vessel? How many, in what lines? How are they being managed?	alu	g a
Are there pregnant cattle on the vessel? How many, in what lines? How are they being managed?	2	
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How are any neonatal animals managed?	Ala	*
Has the AAV carried out any treatments? What for? How? What medications?	7	EUR BULL QUUD EUR BULL QUUD DONNE TU PREVENT IBR
Are there any other comments regarding conditions or any other aspect worthy of note?	7	
Digital image capture		
Images/video captured?		
Digital files catalogued and associated file notes recorded?		

Daily Checklist Date: 6ー 5-18

Your welfare					
Are you OK? 463					
Have you contacted you DAWR contact?	YES No	You are required to check-in with your DAWR land based contact every day prior to the Master sending the daily voyage report. If your DAWR contact has not heard from you by the time the daily voyage repot arrives, urgent efforts will be made to contact the Master of the vessel immediately to ensure your welfare.			
Access to Feed and Water					
Question	Yes/No	Comments .			
Are there issues with animals accessing feed and water?	2				
Is feed and water continuously available? If not, why, and for how long?	γ				
Is the supply of feed and water appropriate for the conditions?	>				
Is the equipment monitored and operating efficiently?	\rightarrow				
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Have there been any issues with the ventilation system?	2	- 10 M2			
Are daily temperature readings being taken? On all decks?	7	Max Temp: $30^{\circ} \omega \beta T$ Max Humidity: $92^{\circ}/6$			
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Are these readings capturing the maximum temperature/humidity level each day?	A	But wedle oenditions con very			
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Are animals that require treatment (e.g. shy feeders, heat stressed, injured or ill animals) being identified and brought to the attention of the AAV in a timely fashion	4				
For vessels with split level sheep pens - are all sheep in split level pens being monitored daily? Pen Condition	7				
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Are the pens in appropriate condition and good order?	1				

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vessel? How many, in what lines?	NA		
How are they being managed?		7	
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accurately recorded and reported?	NA	T 8	
accurately recorded and reported?			
How are any neonatal animals	1.		
managed?	AM		
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medications?	1 .	D C C D T D	
Are there any other comments		for my felle mely	
regarding conditions or any other		CATTLE PENS NEED HILL CUT	
aspect worthy of note?	<u> </u>	10 0	
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Digital files catalogued and associated file notes recorded?			