



Asbestos Materials Refit survey and partial reinspection

NW Stormpetrel

Shell Tankers Australia Pty Ltd



Reference: 754-PEREN324141

6 December 2023

ASBESTOS MATERIALS REFIT SURVEY AND PARTIAL REINSPECTION

NW Stormpetrel

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QUALITY INFORMATION

Revision history

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EXECUTIVE SUMMARY¹

Tetra Tech Coffey Pty Ltd completed an update of the asbestos materials register following the request for shell to inspect any new materials installed on board and further sampling of unidentified systems this was completed on the Northwest Stormpetrel between 17th November – 19th November 2023 while the vessel was alongside at the Karratha Gas Plant in Dampier, Western Australia.

Sampling was conducted generally on systems identified by the engineers as being recently changed and then further systems that had not been completely sampled:

A partial reinspection of previously identified items has also taken place during this visit.

Please refer to the asbestos register in Appendix B for more detail.

Please note that all activities and services provided by Tetra Tech Coffey are subject to the Methodologies and Statement of Limitations contained within this report.

Recommended actions and risk control strategies for reinspected materials are contained within the asbestos register and the recommendations section of this report. Tetra Tech Coffey recommends ongoing inspections of these materials by competent person

¹ This executive summary must be read in the context of the full report and the attached limitations.

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1. INTRODUCTION

Tetra Tech Coffey Pty Ltd (Coffey) was engaged by Shell International Trading and Shipping Company Limited (Shell) to conduct a Post Refit Asbestos Assessment on board the NorthWest Stormpetrel to in Dampier WA.

The assessment was undertaken between 17th November – 19th November 2023 as a Post Refit assessment to sample locations where equipment has been worked on, refurbished or replaced since the previous inspection.

The assessment was conducted based on the condition of the materials at the time of inspection.

The purpose of this assessment was to provide a comprehensive investigation of re-introduction of ACM to systems onboard.

International, Commonwealth, State legislation and industry guidance requires that an asbestos risk assessment inclusive of an asbestos register be developed by workplace owners, controllers of workplaces, employers, and other interested parties, such as contractors, as part of an overall asbestos materials management plan designed to control the risks of exposure to hazardous materials. The asbestos register summarises the findings of the risk assessments, as well as presenting methods of risk reduction that may be utilised as part of the management plan.

The vessel asbestos assessment involved the assessment of the vessel for asbestos-containing materials (ACM) including previously identified ACM, in accordance with the Scope of Works described in this report. A qualitative risk assessment was also completed of visually observed suspect ACM.

Recommended actions and risk control strategies for reinspected materials are contained within the asbestos register and the recommendations section of this report. Coffey recommends ongoing inspections of these materials by competent persons.

1.1 VESSEL INFORMATION

The asbestos materials re-assessment has previously been undertaken whilst the vessel was docked at Dampier, Western Australia.

The Northwest Stormpetrel was constructed as a (LNG - NWS-class) LNG Gas Bulk Carrier in 1994 built at Mitsubishi Heavy Industries' (MHI) Nagasaki shipyard and delivered in June 1994. She has a gross tonnage of 101050 tonnes, a length overall of 272.0 m and a breadth of 42.0 m and a draft of 11.1 m.

The vessel has previously been subject to an asbestos survey undertaken by Tetra Tech Coffey.

Table 1: Vessel Description

Vessel Description			
Vessel Name:	NW Stormpetrel		
Location of Survey:	Dampier, WA	Built Year & Location:	1989, Japan
Gross Tonnage:	101,050 tonnes	Length:	272.00 m
Beam:	42.0 m	Draught:	11.1 m

1.2 SCOPE OF WORK

The scope of work involved a Tetra Tech Coffey Workplace Health & Safety Consultant (the Surveyor) mobilising to the vessel to complete a post refit inspection after recent refit of various systems as advised by the chief engineer.

A partial reinspection of previously identified items has also taken place during this visit.

This work was completed to meet the requirements of Australian Maritime Safety Authority, Occupational Health and Safety (Maritime Industry) Act 1993 and Regulations 2003 (Regulation 2.08 and Schedule 2).

1.3 TETRA TECH TEAM

The vessel assessment was undertaken by WHS Hazmat Consultant, Mr Zane Gordon of Tetra Tech Coffey.

During the vessel visit, a vessel Engineer provided assistance with location of the areas of interest and interpretation of information.

2. RECOMMENDATIONS

2.1 STRUCTURE OF RECOMMENDATION

The recommendations, conclusions or stability of asbestos materials contained in this report shall not abrogate a person of their responsibility to work in accordance with Statutory Requirements, Codes of Practice, Guidelines, Material Safety Data Sheets, Work Instructions or reasonable work practices. Below are some general identified areas that need actions taken please refer to the attached asbestos register for more detailed information.

- Gasket 2SA – AF2, Main Feed Pump Turbine Exhaust Gasket 450.10.01.g11 – Remove.
- Drum of Kilbond grey lagging adhesive - 2nd deck - 2sa - hc1 drawer – Remove.
- Lower old strainer between LD comps gasket - CMR - lower old strainer between LD comps – Remove remaining debris.

2.1.1 Friable & Non-friable Asbestos

Asbestos containing materials (ACM) are referred to as either friable or non-friable. Friable asbestos is in the form of a powder, or can be crumbled, pulverised or reduced to powder by hand pressure when dry. Friable asbestos includes materials such as sprayed and thermal insulation, pipe lagging and millboard, and can release fibres with only minimal disturbance.

Non-friable asbestos products are ones in which the asbestos fibres are bound within the matrix of the material. Non-friable asbestos is difficult to damage or cause the release of fibres by hand and includes materials such as asbestos cement sheeting, some gaskets types, and adhesives, mastics and putty's. However, non-friable asbestos containing materials that have been subjected to weathering, physical damage, water damage, fire or other conditions may contain exposed fibres which could be released upon disturbance.

2.1.2 Control Measures

Friable ACM exhibits the greatest risk to human health as fibres are released upon minimal disturbance. As such removal and replacement would be the preferred option if such materials were found in accessible areas or air conditioning systems.

Alternatively, removal and replacement may not be the preferred option for bonded ACM in a good and stable condition as the risk associated with removal could be high (as in the case of breaking up and or refurbishment/modification to vessels may expose situations, which were concealed or otherwise impractical to access during this assessment).

The selection of the most appropriate control measure should be determined from risk assessments and detailed knowledge of the workplace and activities. The following general principles may be applied:

If the ACM is friable, in a poor/unstable condition and accessible with risk to health from exposure, immediate access restrictions should be applied and removal is required as soon as practicable using a licensed removalist.

If the ACM is friable and accessible but in a stable condition, removal is preferred. However, if removal is not immediately practicable, then short-term control measures (i.e. restrict access, sealing, enclosure etc.) may be employed until removal can be facilitated.

If the ACM is bonded and in a poor/unstable condition; minimising disturbance and removal or encapsulation may be appropriate controls.

For bonded ACM's in a good and stable condition, on-going maintenance and periodic inspection would be appropriate controls.

Any remaining identified ACM's or presumptions should be appropriately labelled, where possible, and regularly inspected to ensure they are not deteriorating and/or resulting in a potential risk to health.

Prior to any future breaking up and or modification to vessels may expose situations, which were concealed or otherwise impractical to access during this assessment asbestos containing materials likely to be disturbed by those works should be removed in accordance with the Shell Asbestos Management Plan and Guidance along with NOHSC Code of Practice for the Safe Removal of Asbestos 2nd Edition [NOHSC: 2002 (2005)].

Further assessment of risk through airborne fibre monitoring can assist with decisions on the most appropriate, and urgency of, control measures.

Other control measures such as training and communication strategies, control of contractors and administrative procedures must be considered as part of the overall Shell Asbestos Management Plan.

Coffey recommends Type 3/Intrusive surveys be conducted prior to breaking up, refit, repair or rebuild and modification or any structural alterations.

Should any further suspect Asbestos and/or Hazardous Materials become evident during future refurbishment works. A qualified and experienced hygienist should be contacted immediately so that an OHS consultant can confirm the status of the suspect materials.

2.2 RECOMMENDED CONTROL MEASURES

2.2.1 ACM Penetration Packing

Penetration packing materials have been previously identified throughout the vessel and a representative sampling methodology was developed to address the potential extent of Bulkhead and Deckhead penetrations containing suspect ACM. A number of locations identified asbestos as a constituent of the material. Due to the extensive use of penetration packing, the extent of repairs and refurbishments undertaken it is strongly recommended all similar material types be managed as asbestos containing.

Bulkhead, Deckhead and Deck penetrations have been assessed as likely to have Non friable ACM and have varying condition assessments that relate to condition and quality of the penetration seal following refurbishment works.

It is recommended to prevent inadvertent exposure to workers that the packing materials be removed prior to scheduled maintenance, or refurbishment, using appropriate localised control measures in accordance with Shell AMP, relevant legislation, Standards and Guidance Materials.

The following controls recommended for immediate action include, but are not limited to:

- HSE Safety Alert to communicate risk of exposure during routine maintenance and new installation thru penetrations.
- Labelling of penetrations to warn of potential hazard.
- Complete a risk assessment and develop a management plan prior to removal of the ACM.

2.2.2 Loose/Stored Gasket Items

During previous surveys loose and stored gasket / packing materials were identified throughout the vessel and a representative sample of these were taken. Asbestos Register have been updated with findings located in Appendix A.

2.2.3 In Situ Asbestos Gaskets

Asbestos gaskets and packing materials have been identified within systems. Due to the sporadic nature of installation it should be assumed that asbestos gaskets may be present throughout the vessel, so care should be taken when accessing any pipework/flanges. Further inspections and consultation with the vessel engineering teams would be required to assess management options regarding the full extent of asbestos gaskets within systems.

It is strongly recommended to consider all similar material types as containing asbestos unless confirmed otherwise through sampling and laboratory analysis. It is therefore recommended to prevent re-use of any of gaskets and packing material and that they are all removed utilising appropriate localised control measures and in accordance with local legislative requirements.

These materials require removal utilising appropriate localised control measures and in accordance with local legislative requirements.

All asbestos removal works should be undertaken in a controlled manner to ensure where remedial works take place contamination of the area cannot occur and risk of exposure of personnel to airborne asbestos fibres is minimised. The removal should also include cleaning of the immediate areas where materials have been stored.

In addition to the above, all gaskets and packing material when removed should be appropriately controlled and disposed of regardless of asbestos content. Adherence to this will limit confusion of the asbestos content of loose used gaskets and reduce the potential for used ACM gaskets to be stockpiled or left in locations where easily disturbed.

2.2.4 Replacement Gaskets

A rigorous procurement control process is required to ensure no ACMs are introduced into systems or store on the vessel. These control measures should include obtaining detailed material data sheets from the manufacturer, implementing an independent third-party testing regime to analyse representative samples of new material prior to storing or introduction into vessel systems combined with Shell's current management systems and training.

2.3 PROCUREMENT PROCEDURE

It is known that Asbestos Containing Materials are still in production and has widespread usage throughout the Asia-Pacific region with distribution to suppliers worldwide and as such the possibility exists that Asbestos Containing Material maybe inadvertently introduced to piping systems during works.

Care should be taken whenever maintenance and replacement works are conducted to ensure that only asbestos free products are procured / installed and are not inadvertently introduced to the vessel via installation of replacement materials or those materials pre-installed to replacement equipment.

It is recommended that prior to any procurement or reinstatement works replacement materials be sampled and tested prior to use.

All asbestos removal works should be undertaken in a controlled manner to ensure where remedial works take place contamination of areas such as bilges and equipment cannot occur and risk of exposure of personnel to airborne asbestos fibres is minimised. The removal should also include cleaning of the immediate areas where materials have been stored.

2.4 TRAINING

Information, instruction and training must be provided to workers, contractors and others who may come into contact with hazardous materials (including asbestos) in a workplace, either directly or indirectly.

Depending on the circumstances this hazardous materials awareness training may include:

- The purpose of the training;
- The health risks of hazardous materials;
- The types, uses and likely occurrence of hazardous materials on site, in plant and/or equipment in the workplace;
- The trainee's roles and responsibilities for hazmat management;
- Where the register of hazmat is located and how it can be accessed;
- The timetable for removal of hazmat from the workplace;
- The processes and procedures to be followed to prevent exposure, including exposure from any accidental release of hazmat into the workplace;
- Where applicable, the correct use of maintenance and control measures, protective equipment and work methods to minimise the risks from hazmat, limit the exposure of workers and limit the spread of hazmat outside any work area;
- The National Exposure Standard (NES) and control levels for hazmat; and
- The purpose of any air monitoring or health surveillance that may occur.

Should any further suspect asbestos and/or hazmat become evident during future disturbance/ refurbishment works which have not been addressed in this report, Tetra Tech Coffey should be contacted immediately so that a WHS consultant can confirm the status of the suspect material/s.

Tetra Tech Coffey is able to assist with all aspects of Risk Management for removal of asbestos and other hazardous materials resulting from these findings.

3. ASBESTOS MATERIALS REGISTER

Identified and tested items are listed in an Asbestos Materials Register in **Appendix A**. The Register is to be read in conjunction with the whole report.

The Asbestos Materials Register is made up of relevant information gathered on site plus Tetra Tech Coffey's assessment of risk and assignment of action ratings. Reference to photographs, where available, is made in the register along with sample identification and analysis results, where applicable. Sample analysis results from previous assessments may be utilised and referenced in the registers.

The register is provided in tabular form and flows from left to right starting with the material description, through additional information, leading to an assessment of risk and recommended action for remedial works. Recommended actions are a guide only.

The client should decide the most appropriate controls based on such factors as risk, detailed knowledge of workplaces and procedures, plans for upgrade or refurbishment etc.

Please refer to the following sections in conjunction with the register.

Section 3	Methodology	Contains important information regarding the survey and report methods
Section 4	Risk Assessments	Explains all terminology and ratings used.
Section 5	Recommendations	Contains information and recommendations applicable to asbestos materials and their management.
Section 8	Photograph	Cross - referenced from register, where available
Appendix A	Asbestos Materials Register	Register containing a list of all asbestos materials identified during the survey
Appendix B	Analytical Reports	Contains results of sample analysis from the survey. See previous reports for referred samples.
Appendix C	Asbestos Materials Maintenance Log	Table provided for client use, if required, to maintain a record of works associated with asbestos materials.
Appendix D	Legislative Requirements	Tabulates legislative requirements state-by-state. (accurate to last periodic update by Tetra Tech Coffey)
Appendix E	Limitations	Limitations regarding scope, methodology

4. REFERENCES

Department of Industrial Resources (DoIR) *Guidance for Upstream Petroleum on the National Ban on Asbestos* of 31 December 2003.

National Occupational Health and Safety Commission (NOHSC), *Approved Criteria for Classifying Hazardous Substances*, 1008 - 2002

Model Code of Practice - *How to Management and Control Asbestos in the Workplace* (2020)

Model Code of Practice - *How to Safely Remove Asbestos* (2020)

National Occupational Health and Safety Commission Code of Practice for the *Management and Control of Asbestos in the Workplace*; [NOHSC: 2018 (2005)].

National Occupational Health and Safety Commission (NOHSC), *List of Designated Hazardous Substances*, 10005 - 1999

Occupational Health and Safety (Maritime Industry) Act 1993

The National Model regulations for the *Control of Workplace Hazardous Substances*; [NOHSC: 1005 (1994)]

Seafarers Safety, Rehabilitation and Compensation Authority's "Guidance on the Prohibition on the use of Asbestos in Australian Maritime Industry Workplaces (Version 3 March 2004).

Work Health and Safety Act 2011 and Regulations (Commonwealth, NSW 2017, ACT 2011, NT 2011, QLD 2011, TAS 2012 & SA 2012)

Work Health and Safety Act 2020

Work Health and Safety (General) Regulations 2022

The National Occupational Health & Safety Commission -NOHSC 1003-2005: *Australian Exposure Standards for Atmospheric Contaminants in the Workplace*.

Amendment to the Customs (Prohibited Imports) Regulations 1956 - Regulation 4C – Importation of Asbestos – Australian Customs Notice No. 2009/30. – August 2008.

5. PHOTOGRAPHS



Photo 1

Q5434

Tank top engine room - fwd VPJ 44 Ballast v/v flange (original gasket)



Photo 2

Q5438

Tank top - fwd port under 1 ballast P/P suction
Loose remnant Gasket (Tombo 1500) under 1 ballast P/P suction



Photo 3

Q5465

3rd Deck - engine room port boiler furnace hole mounting flange

Photo 4

C6137

4th Deck Port Ships Frame adjacent to No.2 steam, Gasket

Photo Not Available

Removed



Photo 5
Q5226
3rd deck - IG room - Portside ships frame
Black sheet gasket - Tombo 1901



Photo 6
Q5235
3rd deck - No. 2 main switchboard room - fwd shelf
Used unknown origin brake disks



Photo 7
Q5337
3rd deck - steering flat - aft Winch hydraulic tank
Gasket filling pump flange



Photo 8
Q5338
3rd deck - steering flat - aft Winch hydraulic tank
Gasket debris on ground



Photo 9
C6048
3rd deck - engine room workshop fwd - sheet Gasket packing shelf 2nd from top
Grey sheet gasket debris on shelf



Photo 10
C6072
3rd deck - engine room workshop aft - welding bay
Valve flange Valqua 1500 gasket



Photo 11
Q5217
2nd deck - IG room Portside ships frame
Green loose used Gasket



Photo 12
Q5219
2nd deck - IG room - Portside ships frame
Loose Green square Gasket



Photo 13
Q5220
2nd deck - IG room -Portside ships frame
Loose Green oval Gasket



Photo 14
Q5445
2nd deck - engine room- starboard boiler gas hood
expansion piece out



Photo 15
Q5327
2nd deck - starboard fwd - main a/c oil receiver
Sight glass gasket



Photo 16
C6092
2nd deck - 2sa -ab4 drawer
Diesel generator controls packing Gasket -
350.50.01.f17



Photo 17
C6104
2nd deck - 2sa - af3 drawer
Feed press reg packing -450.10.01.032

No Photo Available

Photo 18
Q5333
2nd Deck – 2PA – IG Boiler Spray Unit,
Gasket N2 Pipe
Gasket



Photo 19
C6113
2nd deck - 2sa - al3 drawer
Coffin brand main feed pump packing-
450.10.01.007. Manufacture 1 7460-8. And 17460-7.
Asbestos label on pack



Photo 20
Q5168
2nd deck - 2sa -bg3 drawer
Main boilers white coloured Gasket - 680.01.01.030



Photo 21
Q5176
2nd deck - 2sa - bj4 drawer
Sight glass Gasket -
04.42.44.00.003



Photo 22
Q5180
2nd deck - 2sa - bj4 drawer
Loose sight Gasket - no markings



Photo 23
Q5183
2nd deck - 2sa - cc3 drawer
Vortex branded Metaflex gasket - no code



Photo 24
Q5185
2nd deck - 2sa - cc4 drawer
Ac freon circuit Gasket - Tombo 1901 branded -
560.11.01.g01



Photo 25
Q5187
2nd deck - 2sa - cd1 drawer
Main air con blind cover Gasket - green -
550.10.01.g10



Photo 26
Q5191
2nd deck - 2sa - gb2 shelf
Tombo branded boiler door Gasket - no product code



Photo 27
Q5194
2nd deck - 2sa - cc3 drawer
Vortex branded Gasket - no product code



Photo 28
Q5200
2nd deck - 2sa - cc3 drawer



Photo 29
Q5203
2nd deck - 2sa -starboard side ship frame
Sight glass Gasket - Tombo branded - only partial numbers visible "13"



Photo 30
Q5204
2nd deck - 2sa -starboard side bulkhead
German made sight glass Gasket brand unknown



Photo 31
Q5208
2nd deck - 2sa - hc1 drawer
Drum of Kilbond grey lagging adhesive



Photo 32
Q5210
2nd deck - 2sa - hc1
Inert Gas gaskets -
568.21.01.f13



Photo 33
Q5371
Focsle Store -Starboard Aft - Hyd Oil Fuel Tank Return Glass
Gasket to hyd oil tank return glass gasket



Photo 34
Q5425
2nd Deck – 2SA – Starboard Aft – Sanderling Spares Cardboard Box
Loose Valqua 1500 Gasket

No Photo Available

Removed



Photo 35
Q5426
2nd Deck – 2SA – Starboard Aft – Sanderling Spares Cardboard Box
Loose Tombo Branded Gasket – Assumed 1903

Photo 36
Q5360
CMR - lower old strainer between LD comps
lower old strainer between LD comps gasket

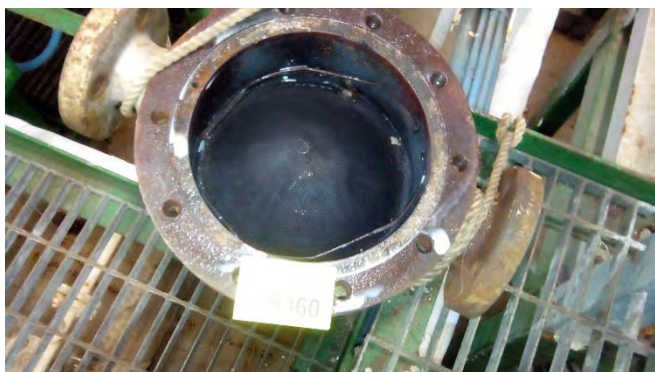


Photo 37
Q5360
CMR - lower old strainer between LD comps
lower old strainer between LD comps gasket (remnant Gasket)



Photo 38
Q5236
F Deck Stores
Large and small Tombo 1000 gasket

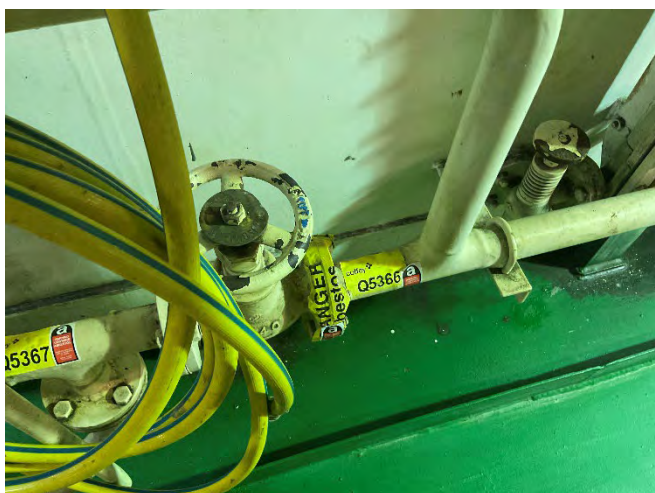


Photo 39
Q5366
Focsle store -starboard Aft - hyd oil store tk outlet
Gasket to hyd oil store tk outlet



Photo 40
Q5367
Focsle store -starboard Aft - hyd oil store tk outlet
Gasket to hyd oil store tk outlet port



Photo 41
Q5369
Focsle store -starboard Aft - hyd trans P/P suction
Gasket to hyd trans P/P suction



Photo 42
Q5373
Focsle store - aft -emergency fire generator
Exhaust manifold Gasket



Photo 43
Q5339
Port UDPP- IG 2 Dbpp
Spectacle piece downstream Gasket



Photo 44
Q5340
Port UDPP
Spectacle piece up stream Gasket



Photo 45
Q5341
Port UDPP IG to ebpp Valve Gasket



Photo 46
Q5324
A deck - incinerator room sludge tank gauge
2nd sight glass Gasket



Photo 47
Q5454
A Deck – Incinerator Room – Incinerator Flue
Incinerator Flue At Damper Inlet gasket



Photo 48
Q5239
F deck stores - bc2
Electromagnetic Gasket for mount - Valqua 930 -
921.10.01.g02



Photo 49
Q5243
F deck - cable locker
Cable penetration insulation



Photo 50
C6145
2nd Deck 2SA – BE3 Drawer
Main system trap gasket – 709.71.01.Y01 & 709.71.01.Y02



Photo 51
FD5263
4th Deck, Engine Room, Port, Primary Bilge Tank
Steam Drain Line,
Woven Rope (Chrysotile)



Photo 52
FD5264
4th Deck, Engine Room, Port, Primary Bilge Tank
Steam Heat Supply, Woven Rope (Chrysotile) & Non-ACM Adhesive (White)



Photo 53
FD5272
4th Deck, Engine Room, Boiler No.2 Top, Mixed Debris (Chrysotile)



Photo 54
FD5258
Boiler Gauge Glass Level, Engine Room, No.2 Boiler Level Transmitter (Port), Woven Rope (Chrysotile) & Non-ACM White Adhesive.

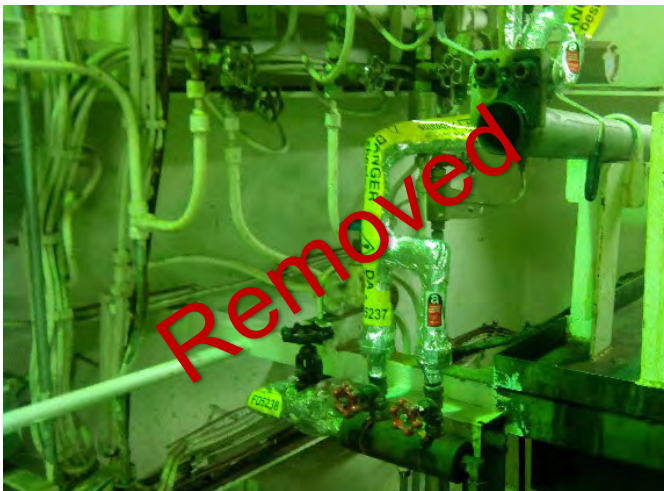


Photo 55
FD5237
2nd Deck, Engine Room, Burner Cleaning Bench, Steam Supply, Woven Rope (Chrysotile)



Photo 56
FD5238
2nd Deck, Engine Room, No.2 Boiler Drum Safety Valve, Forward, Woven Rope (Chrysotile)



Photo 57
FD5239
2nd Deck, Engine Room, No.2 Boiler Drum Safety Valve, Aft, Woven Rope (Chrysotile)



Photo 58
FD5240
2nd Deck, Engine Room, No.1 Boiler, No.1 Burner F.O. Gauge Line, Woven Rope (Chrysotile)



Photo 59
FD5241
2nd Deck, Engine Room, No.1 Boiler, No.1 Burner ATM, Steam Line, Woven Rope (Chrysotile)



Photo 60
FD5242
2nd Deck, Engine Room, No.1 Boiler, No.2 Burner ATM, Steam Line, Woven Rope (Chrysotile)



Photo 61
FD5249
2nd Deck, Engine Room, No.2 Boiler, No.1 Burner ATM,
Steam Line, Woven Rope (Chrysotile)



Photo 62
FD5250
2nd Deck, Engine Room, No.2 Boiler, No.1 Burner F.O.
Supply Line, Woven Rope (Chrysotile)



Photo 63
FD5251
2nd Deck, Engine Room, No.2 Boiler, No.2 Burner ATM,
Steam Line, Woven Rope (Chrysotile)



Photo 64
Q5061
3rd Deck, Work Shop, Stored Items, Gasket Branded
Valqua 1500 (Chrysotile)



Photo 65
Q5078
4th Deck – Main Engine Room – Grease Extractor, Gasket (Chrysotile)



Photo 66
Q5089
3rd Deck – Generator No.1 Room – Gasket to L.O, Filter Casing, Gasket (Chrysotile)



Photo 67
Q5052
2nd Deck, Sauna, Fibre Cement Debris (Chrysotile)



Photo 68
Q5052
2nd Deck, Sauna, Fibre Cement Debris (Chrysotile)



Photo 70

DJSP008

2nd Deck, Engine Room, Manoeuvring Valve Fwd Mount Insulating, Shim, Gasket (Chrysotile)



Photo 71

B4527

Tank Top, Gasket to main suction pipe line gate valve flange, Main engine room starboard, fwd under walkway (Chrysotile)



Photo 71

B4535

4th Deck, Gasket to pipe line sight Glass, Main engine room port (Chrysotile)



Photo 72

B4537

4th Deck, Gasket to inlet pipe flange to grease extractor Main engine room port fwd (Chrysotile)



Photo 73

B4538

4th Deck, Gasket to outlet pipe flange to grease extractor, Main engine room port fwd (Chrysotile)



Photo 74

B4566

Rope seal to boiler sight glass, Main engine room starboard aft adjacent to boiler (Chrysotile)



Photo 75

B4567

Rope seal to boiler sight glass, Main engine room starboard aft (Chrysotile)



Photo 76

B4601

Gasket to L O filter casing, Generator room no2 adjacent to generator (Chrysotile)

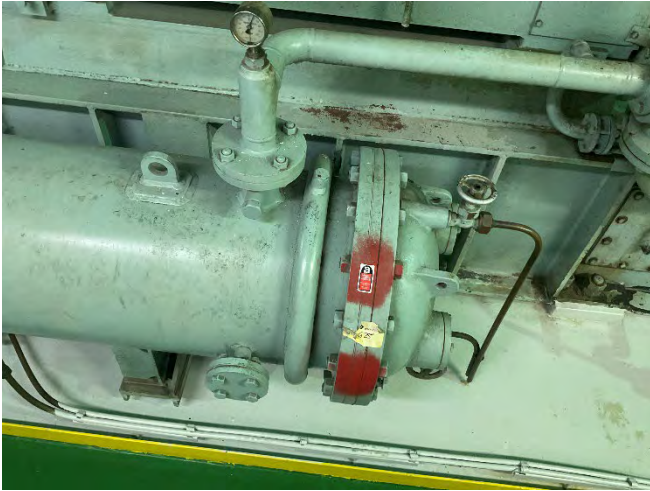


Photo 77

Gasket to L O cylinder head to turbo generator , Main engine room port fwd (Chrysotile)



Photo 78

B4626

Gasket to access plate to L O cooler to turbo generator, Main engine room port fwd (Chrysotile)



Photo 79

B4636

Spare gaskets make shinko 1500, Storage area starboard aft drawer AA3 (Chrysotile)



Photo 80

B4702

Gasket to fi fi hydrant flange, External area under cargo on/off load area (Chrysotile)



Photo 81

T6091

2nd Deck – 2SA – AF2, Main Feed Pump Turbine Exhaust Gasket, 450.10.01.g11 (Chrysotile)



Photo 82

T6095

G Deck – Electrical Cable Trunk – Lighting Panel Board, Cable Penetration Material (Chrysotile)

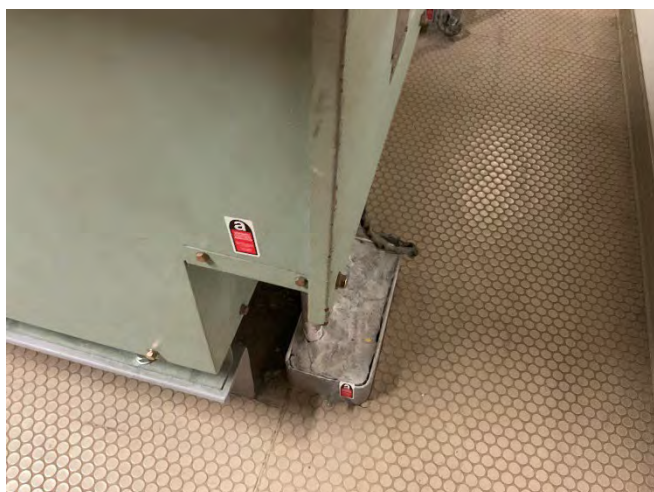


Photo 83

T6096

2nd Deck – MSB – Distribution Transformer Deck Head Penetration, Deck Head Penetration Material (Chrysotile)



Photo 84

T6087

2nd Deck – 2SA – AE4, Emergency Diesel Generator Engine Gasket for Intake Manifold 352.01.01.f48 (UMF)



Photo 85
FD2510
F Deck – Electrical Cable Store – Aft, Deck Head Penetration Material Debris (Chrysotile)



Photo 86
M6640
F Deck – Electrical Cable Locker – Stbd Fwd - Penetration Material Debris (Chrysotile)



Photo 87
M6644
F Deck – Electrical Cable Trunk – On top of lighting panel board -Stbd Aft, Putty Mastic Material Debris (Chrysotile)



Photo 88
M6645
F Deck – Electrical Cable Locker –Cable Tray - Stbd Fwd - Penetration Material Debris (Chrysotile)



Photo 89

M6664

2nd Deck No1 Boiler Water Drum Level Aft, Putty Mastic Material Debris in grates (Chrysotile)



Photo 90

M6697

Lower Plates – Mastic Putty to cables to No2 Ballast Pump (Chrysotile)



Photo 91

ZA21820

A Deck Incinerator Room - Gasket to new pipe joint (Chrysotile)



Photo 92

ZA21819

Green gasket - Upper Deck Port Lube oil Aelo mid-engine port side (Chrysotile)



Photo 93
ZA21825
3rd Deck Lube oil system to Generator 2 Gasket
Adjacent walkway Port Side (Chrysotile)

No Photo Available

Photo 94
ZA21836
Brown gasket - Top #2 DG Cooling Water Inlet Flexible
Pipe (Chrysotile)



Photo 95
ZA21841
2nd Deck 2as Drawer AH2 - Spare Forward fire pump
gasket (Chrysotile)

No Photo Available

Photo 96
ZA21842
Blue gasket - Upper Deck Port Lube oil Aelo exhaust
casing (Chrysotile)

APPENDIX A: ASBESTOS REGISTER

Surveyor: Andrew Breed	Survey Type: Asbestos Survey Type 2	Date of Survey: 19 to 30 October 2017
Site Contact: Tony Billett	Vessel: Northwest Sanderling	Review Date: 31 October 2017
Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
Tank top												
ACM	Gasket to bilge suction gate valve flange	Main engine room aft adjacent to prop shaft	-	B4500	0	-	-	-	-	0	Nil	
ACM	Gasket to bilge suction pipe flange	Main engine room aft adjacent to prop shaft	-	B4501	0	-	-	-	-	0	Nil	
ACM	Gasket to bilge water separator pipe flange	Main engine room aft adjacent to prop shaft	-	B4502	0	-	-	-	-	0	Nil	
ACM	Gasket to bilge water separator pipe flange	Main engine room aft adjacent to prop shaft	-	B4503	0	-	-	-	-	0	Nil	
ACM	Gasket to bilge water separator gate valve flange	Main engine room aft adjacent to prop shaft	-	B4504	0	-	-	-	-	0	Nil	
ACM	Gasket to bilge pump gate valve flange	Main engine room aft adjacent to prop shaft	-	B4505	0	-	-	-	-	0	Nil	
ACM	Gasket to bilge pump pipe flange	Main engine room aft adjacent to prop shaft	-	B4506	0	-	-	-	-	0	Nil	
ACM	Gasket to ER bilge pump gate valve flange inlet	Main engine room aft adjacent to prop shaft	-	B4507	0	-	-	-	-	0	Nil	
ACM	Gasket to ER bilge pump gate valve flange outlet	Main engine room aft adjacent to prop shaft	-	B4508	0	-	-	-	-	0	Nil	
ACM	Gasket to galley drain O.B pipe flange	Main engine room aft adjacent to Hull	-	B4509	0	-	-	-	-	0	Nil	
ACM	Gasket to galley drain O.B pipe flange	Main engine room aft adjacent to Hull	-	B4510	0	-	-	-	-	0	Nil	
ACM	Gasket to soil O.B pipe flange	Main engine room aft adjacent to Hull	-	B4511	0	-	-	-	-	0	Nil	
ACM	Gasket to soil O.B pipe flange	Main engine room aft adjacent to Hull	-	B4512	0	-	-	-	-	0	Nil	
ACM	Gasket to V-PJ054 to pump	Main engine room port fwd	-	B4513	0	-	-	-	-	0	Nil	
ACM	Gasket to V-PJ055 to pump	Main engine room port fwd	-	B4514	0	-	-	-	-	0	Nil	
ACM	Gasket to main pump drive casing	Main engine room port fwd	-	B4515	0	-	-	-	-	0	Nil	
ACM	Gasket to technical water discharge pipe flange	Main engine room port fwd adjacent to V-PJ054	-	B4516	0	-	-	-	-	0	Nil	
ACM	Gasket to auxiliary condenser	Main engine room midship fwd	-	B4517	0	-	-	-	-	0	Nil	
ACM	Gasket to auxiliary condenser	Main engine room midship fwd	-	B4518	0	-	-	-	-	0	Nil	
ACM	Gasket to condenser access plate	Main engine room midship fwd	-	B4519	0	-	-	-	-	0	Nil	
ACM	Gasket to S.W discharge gate valve flange to swimming pool	Main engine room starboard fwd	-	B4520	0	-	-	-	-	0	Nil	
ACM	Gasket to S.W discharge gate valve flange to swimming pool	Main engine room starboard fwd	-	B4521	0	-	-	-	-	0	Nil	
ACM	Gasket to pipe line flange V-PJ074	Main engine room starboard fwd adjacent to sludge tank	-	B4522	0	-	-	-	-	0	Nil	
ACM	Gasket to sludge tank inlet gate valve flange	Main engine room starboard fwd	-	B4523	0	-	-	-	-	0	Nil	
ACM	Gasket to auxiliary circulation pump gate valve	Main engine room starboard fwd	-	B4524	0	-	-	-	-	0	Nil	
ACM	Gasket to auxiliary circulation pump gate valve	Main engine room starboard fwd	-	B4525	0	-	-	-	-	0	Nil	
ACM	Gasket to auxiliary circulation pump gate valve	Main engine room starboard fwd	-	B4526	0	-	-	-	-	0	Nil	
ACM	Gasket to main suction pipe line gate valve flange	Main engine room starboard fwd under walkway	71	B4527	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to mechanism access plate	Main engine room starboard fwd under walkway	-	B4528	0	-	-	-	-	0	Nil	
ACM	Pipe wrap to steam pipe to M.E	Main engine room starboard	-	B4529	0	-	-	-	-	0	Nil	
ACM	Plaster type material to secondary turbine	Main engine room midship	-	B4530	0	-	-	-	-	0	Nil	
ACM	Gasket to port condenser lower gauge glass	Tank top - port condenser lower gauge glass	-	Q5429	0	-	-	-	-	0	Nil	
ACM	Gasket to fwd port 1 drain P/P end cover	Tank top - engine room - fwd port 1 drain P/P end cover	-	Q5433	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon		Survey Type: Asbestos Survey				Date of Survey: 17/11/2023						
Site Contact: Chief Engineer		Vessel: Northwest Sanderling IMO:8608872				Review Date: 17/11/2024						
Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Gasket to fwd VPJ 44 Ballast v/v flange (original)	Tank top - engine room - fwd VPJ 44 Ballast v/v flange (original)	1	Q5434	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC)
ACM	Gasket to fwd 2 cond P/P casing	Tank top - engine room- fwd 2 cond P/ P casing	-	Q5435	0	-	-	-	-	0	Nil	
ACM	Gasket to fwd L.O cooler end cover	Tank top - Engine Room- fwd L.O cooler end cover	-	Q5436	0	-	-	-	-	0	Nil	
ACM	Gasket to VPJ 39	Tank top - fwd - VPJ 39	-	Q5440	0	-	-	-	-	0	Nil	
ACM	Gasket to fwd EM bilge valve suction	Tank top - fwd EM bilge valve suction	-	Q5441	0	-	-	-	-	0	Nil	
ACM	Gasket to fwd starboard Main /ax S.W circ x-over	Top tank - engine room- fwd starboard Main /aux S.W circ x-over	-	Q5442	0	-	-	-	-	0	Nil	
ACM	Gasket to port fwd sea chest vent	Bottom plates - port fwd sea chest vent	-	Q5437	0	-	-	-	-	0	Nil	
ACM	Gasket to bearing cover	Bottom plates - aft tailshaft -bearing cover	-	Q5420	0	-	-	-	-	0	Nil	
ACM	Unknown Gasket at bottom of spare sea strainer	Bottom plates- spare sea strainer	-	Q5439	0	-	-	-	-	0	Nil	
ACM	Cover Gasket	Bottom Plates - Aft Tail Shaft - Bear Cover,	-	Q5420	0	-	-	-	-	0	Nil	
ACM	Gasket to port cond o/bd valve	Bottom plates -engine room - port cond o/bd valve	-	Q5423	0	-	-	-	-	0	Nil	
ACM	Gasket to port main fire pump casing	Bottom plates - port main fire pump casing	-	Q5428	0	-	-	-	-	0	Nil	
ACM	Bottom Plates - Port Fire/ Bilge P/P to Overboard Gasket	Bottom Plates - Port Fire/Bilge P/P to Overboard	-	Q5430	0	-	-	-	-	0	Nil	
ACM	Gasket to port fire/bilge P/P to overboard	Bottom plates - port fire/bilge P/P to overboard	-	Q5430	0	-	-	-	-	0	Nil	
ACM	Gasket the fire press P/P overboard connection	Bottom plates -engine room - fire press P/P overboard connection	-	Q5431	0	-	-	-	-	0	Nil	
ACM	Gasket to port bilge /as P/P bilge interlock	Bottom plates -engine room- port bilge /as P/P bilge interlock	-	Q5432	0	-	-	-	-	0	Nil	
ACM	Aft Bilge Pump V/V Chest Cover valve gasket	Bottom Plates -Engine room - Aft Bilge Pump V/V Chest Cover valve	-	Q5422	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Aft Portsides – Shinko Ind Branded Pump	-	Q5067	0	-	-	-	-	0	Nil	
ACM	Loose Gasket	Starboard Aft V-PJ206 – Loose Gasket	-	Q5073	0	-	-	-	-	0	Nil	
ACM	Gaskets	Starboard Aft – Tailco Branded Main Pump – LO Pump DEL T202	-	Q5074	0	-	-	-	-	0	Nil	
ACM	Gaskets	Main turbine condenser suction tube	-	ZA21822	0	-	-	-	-	0	Nil	Sampled November 2023
ACM	Gasket	Starboard Aft – Bilge Suck Valve Gasket	-	Q5075	0	-	-	-	-	0	Nil	
ACM	Gasket	Engine Room – Starboard Fwd – No.32 V/T Valve	-	Q5076	0	-	-	-	-	0	Nil	
ACM	Gasket material	#2 Condensate pump - split casing sealant	-	ZA8930	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket	Main Engine Room – Starboard Fwd S.W Disch Valve,	-	Q5077	0	-	-	-	-	0	Nil	
ACM	Gasket material	MT LO Cooler SW inlet pipe flange	-	ZA8929	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Ballast w VPJ52 fwd of #1 ballast pp	-	ZA8926	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	VPJ31 #1 pump suction fwd	-	ZA8928	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	VPJ37 #2 pump discharge fwd	-	ZA8927	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Storm Valves - port	-	ZA8925	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Storm Valves - stbd	-	ZA8922	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Bilge pp safety valve pipe flange	-	ZA8924	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	OWS overboard spool flange	-	ZA8923	0	0	0	0	0	0	Nil	Sampled September 2022

4th Deck

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Pipe wrap to main feed steam pipe	Main engine room port aft	-	B4533	0	-	-	-	-	0	Nil	
ACM	Gasket to C.W pipe flange to auxiliary pump feed	Main engine room port	-	B4534	0	-	-	-	-	0	Nil	
ACM	Gasket to pipe line sight glass	Main engine room port	71	B4535	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to inlet pipe flange to grease extractor	Main engine room port fwd	72	B4537	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to outlet pipe flange to grease extractor	Main engine room port fwd	73	B4538	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to control valve from extractor	Main engine room port fwd	-	B4539	0	-	-	-	-	0	Nil	
ACM	Gasket to control valve from extractor	Main engine room port fwd	-	B4540	0	-	-	-	-	0	Nil	
ACM	Gasket to air inlet pipe flange to air dryer no2	Main engine room port fwd	-	B4541	0	-	-	-	-	0	Nil	
ACM	Gasket to air inlet gate valve flange to air dryer no3	Main engine room port fwd	-	B4542	0	-	-	-	-	0	Nil	
ACM	Gasket to spare gate valves	Main engine room port fwd under work bench	-	B4543	0	-	-	-	-	0	Nil	
ACM	Gasket to spare gate valves	Main engine room port fwd under work bench	-	B4544	0	-	-	-	-	0	Nil	
ACM	Gasket to chlorinator gate valve flange VPH 303	Main engine room port fwd	-	B4545	0	-	-	-	-	0	Nil	
ACM	Gasket to no1 FW pump gate valve flange	Main engine room fwd starboard	-	B4546	0	-	-	-	-	0	Nil	
ACM	Gasket to no3 FW pump gate valve flange	Main engine room fwd starboard	-	B4547	0	-	-	-	-	0	Nil	
ACM	Gasket to gate valve bonnet to F.O suction from filter	Purifier room	-	B4548	0	-	-	-	-	0	Nil	
ACM	Gasket to access plate to HFO transfer pump	Purifier room	-	B4549	0	-	-	-	-	0	Nil	
ACM	Gasket to FO discharge gate valve bonnet	Purifier room	-	B4550	0	-	-	-	-	0	Nil	
ACM	Gasket to FO suction to burn pump	Purifier room adjacent to oil tank	-	B4551	0	-	-	-	-	0	Nil	
ACM	Gasket to FO suction gate valve bonnet to oil tank	Purifier room adjacent to oil tank	-	B4552	0	-	-	-	-	0	Nil	
ACM	Gasket to diesel oil purifier pipe flange	Purifier room adjacent to oil tank	-	B4553	0	-	-	-	-	0	Nil	
ACM	Gasket to diesel oil purifier pipe flange	Purifier room adjacent to oil tank	-	B4554	0	-	-	-	-	0	Nil	
ACM	Gasket to LO purifier pipe flange	Purifier room adjacent to oil tank	-	B4555	0	-	-	-	-	0	Nil	
ACM	Gasket to LO purifier pipe flange	Purifier room adjacent to oil tank	-	B4556	0	-	-	-	-	0	Nil	
ACM	Gasket to drain inspection tank sight glass	Main engine room starboard	-	B4557	0	-	-	-	-	0	Nil	
ACM	Insulation to lift shaft bulk heads	Main engine room midship	-	B4558	0	-	-	-	-	0	Nil	
ACM	Fibre blocks use unknown	4th deck - starboard ships frame adjacent steam chest	-	Q5229	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Control air discharge gasket	4th deck - No 2 GS Air compressor	-	Q5247	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 GS Air compressor	-	Q5248	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 GS Air compressor	-	Q5249	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 2 GS Air compressor	-	Q5250	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 2 GS Air compressor	-	Q5251	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 GS Air compressor	-	Q5252	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 1 GS Air compressor	-	Q5253	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 1 GS Air comp	-	Q5254	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 1 GS Air compressor	-	Q5255	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 1 GS Air compressor	-	Q5256	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 1 GS Air compressor	-	Q5257	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 1 GS Air compressor	-	Q5258	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 1 control Air compressor	-	Q5259	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 1 control Air compressor	-	Q5260	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 1 control Air compressor	-	Q5261	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 1 control Air compressor	-	Q5262	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 1 control Air compressor	-	Q5263	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 1 control Air compressor	-	Q5264	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 1 control Air compressor	-	Q5265	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 1 control Air compressor	-	Q5266	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5267	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5268	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5269	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5270	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5271	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5272	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5273	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5274	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5275	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5276	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 3 control Air compressor	-	Q5279	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 3 control Air compressor	-	Q5280	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 2 control Air compressor	-	Q5281	0	-	-	-	-	0	Nil	
ACM	Control air discharge Gasket	4th deck - No 1 GS Air compressor	-	Q5282	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket	4th deck - No 1 GS Air compressor	-	Q5283	0	-	-	-	-	0	Nil	
ACM	Gs air discharge Gasket at air res	4th deck - No 1 control Air compressor	-	Q5284	0	-	-	-	-	0	Nil	
ACM	Gs reservoir main	4th deck Gs Res	-	Q5285	0	-	-	-	-	0	Nil	
ACM	Gs outlet filter bypass	4th deck - GS comp	-	Q5286	0	-	-	-	-	0	Nil	
ACM	Gs air filter control inlet	4th deck - gs air comp	-	Q5287	0	-	-	-	-	0	Nil	
ACM	Gs air filter bypass 2	4th deck - gs air comp	-	Q5288	0	-	-	-	-	0	Nil	
ACM	Gs outlet filter inlet	4th deck - gs air comp	-	Q5289	0	-	-	-	-	0	Nil	
ACM	Gs outlet main 2	4th deck - gs air comp	-	Q5290	0	-	-	-	-	0	Nil	
ACM	Gs main outlet 3	4th deck - gs main outlet 3	-	Q5291	0	-	-	-	-	0	Nil	
ACM	Gs main outlet 4	4th deck - gs air comp	-	Q5292	0	-	-	-	-	0	Nil	
ACM	GS - Air Cross over	4th deck - GS Air	-	Q5293	0	-	-	-	-	0	Nil	
ACM	GS air supply to control air 1 gasket	4th deck - GS air supply to control air	-	Q5306	0	-	-	-	-	0	Nil	
ACM	GS air supply to control air 2 gasket	4th deck - GS air supply to control air 2	-	Q5307	0	-	-	-	-	0	Nil	
ACM	GS air supply to control N2	4th deck - GS air supply to control N2	-	Q5308	0	-	-	-	-	0	Nil	
ACM	GS air supply to control N2-2 gasket	4th deck - GS air supply to control N2-2	-	Q5309	0	-	-	-	-	0	Nil	
ACM	GS air supply to control N2-3 gasket	4th deck - GS air supply to control N2-3	-	Q5310	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Flange Gasket control air dryer inlet	4th deck - control air dryer inlet	-	Q5311	0	-	-	-	-	0	Nil	
ACM	Flange Gasket to control air receiver filter bypass	4th deck - control air receiver filter outlet filter bypass 1	-	Q5312	0	-	-	-	-	0	Nil	
ACM	No 2 bellows gasket	4th deck - MDF p/p 2 steam outlet bellows	-	C6138	0	-	-	-	-	0	Nil	
ACM	control at outlet water trap bypass 1 Gasket	4th deck - control at outlet water trap bypass 1	-	Q5300	0	-	-	-	-	0	Nil	
ACM	control air outlet water trap bypass 2 Gasket	4th - control air outlet water trap bypass 2	-	Q5301	0	-	-	-	-	0	Nil	
ACM	control air trap water inlet	4th deck - control air trap water inlet	-	Q6302	0	-	-	-	-	0	Nil	
ACM	control air water trap outlet Gasket	4th deck - control air water trap outlet	-	Q6303	0	-	-	-	-	0	Nil	
ACM	control air dryer bypass water trap outlet	4th deck - control air dryer bypass water trap outlet	-	Q5304	0	-	-	-	-	0	Nil	
ACM	control air dryer bypass water trap inlet Gasket	4th deck - control air dryer bypass water trap inlet	-	Q5305	0	-	-	-	-	0	Nil	
ACM	Flange Gasket control air receiver filter outlet bypass 2	4th deck - control air receiver filter outlet bypass 2	-	Q5313	0	-	-	-	-	0	Nil	
ACM	Flange Gasket to control air receiver filter outlet	4th deck - control air receiver filter outlet	-	Q5314	0	-	-	-	-	0	Nil	
ACM	Flange Gasket control air receiver filter outlet	4th deck - control air receiver filter outlet	-	Q5315	0	-	-	-	-	0	Nil	
ACM	lube oil heater outlet gasket	4th deck - purifier room - lube oil heater outlet	-	Q5316	0	-	-	-	-	0	Nil	
ACM	Gasket to 2 vac pump Venturi inlet	4th deck - engine room - 2 vac pump Venturi inlet	-	Q5413	0	-	-	-	-	0	Nil	
ACM	Gasket to 2 vac pump P/P end cover	4th deck - engine room - 2 vac pump P/P end cover	-	Q5415	0	-	-	-	-	0	Nil	
ACM	Gasket to LP turbine fwd gov. Oil. 1st flange	4th deck - engine room - LP turbine fwd gov. Oil. 1st flange	-	Q5417	0	-	-	-	-	0	Nil	
ACM	Gasket to LP turbine cover manhole	4th deck - engine room- LP turbine cover manhole	-	Q5418	0	-	-	-	-	0	Nil	
ACM	Gasket to drains cooler outlet V/V	4th deck - engine room- starboard fwd - drains cooler outlet V/V	-	Q5460	0	-	-	-	-	0	Nil	
ACM	Gasket to drains cooler end cover	4th deck - engine room- starboard fwd - drains cooler end cover	-	Q5461	0	-	-	-	-	0	Nil	
ACM	Gasket to drains cooler f.w valve	4th deck - engine room- starboard fwd - drains cooler f.w valve	-	Q5462	0	-	-	-	-	0	Nil	
ACM	Gasket to drains cooler condenser inlet valve	4th deck - engine room- starboard fwd - drains cooler condenser inlet valve	-	Q5463	0	-	-	-	-	0	Nil	
ACM	Woven seal to port aft 1 boiler flue door	4th Deck - engine room- port aft 1 boiler flue door	-	Q5464	0	-	-	-	-	0	Nil	
ACM	Insulation	HP Turbine Nozzle Box	-	Q5062	0	-	-	-	-	0	Nil	
ACM	Gasket	Astern Manoeuvring Valve	-	Q5063	0	-	-	-	-	0	Nil	
ACM	Insulation	Steam Chest	-	Q5064	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Port Fwd – Atlas Copco Air Compressor Line Gasket,	-	Q5079	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Port Fwd – Atlas Copco – Air Compressor Outlet Gasket	-	Q5080	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Gasket to Chlorinator	-	Q5082	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Fwd – Fresh Water Generator Pipe	-	Q5083	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Starboard Fwd – Gasket to No.2 FW Pump Gate Valve	-	Q5084	0	-	-	-	-	0	Nil	
ACM	Black Gasket	DO Transfer Pump – Purifier Room	-	M6658	0	-	-	-	-	0	Nil	
ACM	Blue Dae Young 9901Gasket	Stored on DO Transfer Pump – Purifier Room	-	M6659	0	-	-	-	-	0	Nil	
ACM	Brown Gasket	LSMGO FW Cooling Valve & Regulating Valve – Purifier Room	-	M6660	0	-	-	-	-	0	Nil	
ACM	Brown & Blue Gasket Debris	On grates adjacent Diesel Oil Purifier Auto Control Panel	-	M6661	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Insulation Debris in Grates	Steam Manifold Area – Turbine Flat	-	M6672	0	-	-	-	-	0	Nil	
ACM	Gaskets	No3 Main CCS FW Cooling Pump	-	M6673	0	-	-	-	-	0	Nil	
ACM	Gaskets	Main Engine Condenser Vacuum Pump	-	M6675	0	-	-	-	-	0	Nil	
ACM	Gaskets	Main Fire Pump – Bottom Plates	-	M6676	0	-	-	-	-	0	Nil	
ACM	Gaskets	Lube Oil Cooler Covers – Bottom Plates	-	M6677	0	-	-	-	-	0	Nil	
ACM	Gaskets	No1 Main Condensate Pump – Bottom Plates	-	M6678	0	-	-	-	-	0	Nil	
ACM	Gaskets	No2 Ballast Pump – Bottom Plates	-	M6679	0	-	-	-	-	0	Nil	
ACM	Gaskets	No2 Main CCS FW Pump – Bottom Plates	-	M6680	0	-	-	-	-	0	Nil	
ACM	Gaskets	No1 Inducted Evaporator Pump – Bottom Plates	-	M6681	0	-	-	-	-	0	Nil	
ACM	Gaskets	Main Circulation Pump – Bottom Plates	-	M6682	0	-	-	-	-	0	Nil	
ACM	Gaskets	No1 IGG Dryer Tower Lid	-	M6684	0	-	-	-	-	0	Nil	
ACM	Gaskets	No2 IGG Dryer Tower Lid	-	M6685	0	-	-	-	-	0	Nil	
ACM	Gaskets	Evaporator Steam Condensate Flanges	-	M6686	0	-	-	-	-	0	Nil	
ACM	Gaskets	Evaporator Steam Condensate Flanges	-	M6687	0	-	-	-	-	0	Nil	
ACM	Insulating Plate	Main Steam Chest	-	M6695	0	-	-	-	-	0	Nil	
ACM	Gaskets	Auxiliary Condenser -Lower Plates	-	M6696	0	-	-	-	-	0	Nil	
3rd Deck												
ACM	Mastic Putty to Cables	No2 Ballast Pump – Lower Plates	90	M6664	1	0	2	0	1	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket material	#1 MFD pump relief valve outlet pipe flange	-	ZA8934	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	No Access	FO Heater Inlet / Outlet Flange	-	Presumed	1	1	2	0	0	4	A4	No Access September 2022
ACM	Metallic Gasket material	Control air receiver relief valve outlet flange	-	ZA8932	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Metallic Gasket material	GS air receiver relief valve outlet flange	-	ZA8933	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	No Access	Viscometer flanges in Purifier room	-	Presumed	1	1	2	0	0	4	A4	No Access September 2022
ACM	Gasket material	Aux Cond SW inlet pipe gasket	-	ZA8931	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Aux Cond SW inlet pipe gasket	-	ZA8931	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Green gasket	3rd deck - Lube oil system to Generator 2 Ventilation Cover Gasket	-	ZA21831	0	-	-	-	-	0	Nil	
ACM	Orange gasket	3rd deck workshop - fibrous O-ring	-	ZA21830	0	-	-	-	-	0	Nil	
ACM	Black Gasket	3rd deck workshop - 3 star Gasket store	-	ZA21829	0	-	-	-	-	0	Nil	
ACM	Insulation Debris	Emergency Generator Room	-	Q5060	0	-	-	-	-	0	Nil	
ACM	Gasket black	Workshop Sichern gasket	-	ZA21823	0	-	-	-	-	0	Nil	
ACM	Black rubbery gasket material	Lube oil system to Generator 2 Ventilation Cover Gasket Starboard	-	ZA21824	0	-	-	-	-	0	Nil	
ACM	Woven Gasket to port boiler furnace sight hole mounting flange	3rd Deck - engine room- port boiler furnace hole mounting flange	3	Q5465	1	0	2	0	1	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to 2 boiler 2 burner sight glass mounting flange	4th deck - engine room- 2 boiler 2 burner sight glass mounting flange	-	Q5466	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
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Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Green gasket	Lube oil system to Generator 2 Gasket Adjacent walkway Port Side	93	ZA21825	1	0	2	0	1	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Fibre Cement	Workshop Aft Bulkhead	-	DJSP001	0	-	-	-	-	0	Nil	
ACM	Woven Rope	Workshop SS Fwd Rope Lagging Spares	-	DJSP002	0	-	-	-	-	0	Nil	
ACM	Gasket	#2 D.G. Intercooler Lower Flange	-	DJSP003	0	-	-	-	-	0	Nil	
ACM	Packing Debris in Grates	No2 Boiler Top Plate (Soot Blowers)	-	M6662	0	-	-	-	-	0	Nil	
ACM	Cable Insulation to Cables	No2 Boiler Top Plate (Soot Blowers)	-	M6663	0	-	-	-	-	0	Nil	
ACM	Gaskets	Helicopter Foam System	-	M6665	0	-	-	-	-	0	Nil	
ACM	Gasket	#2 D.G. Intercooler Top Flange	-	DJSP004	0	-	-	-	-	0	Nil	
ACM	Gasket	TG L.O. Hand Pump Top Flange	-	DJSP006	0	-	-	-	-	0	Nil	
ACM	Gasket	# Control Air Compressor Outlet	-	DJSP007	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Turbine Nozzle Valve Insulating Shim to Hydraulic Valve Control	-	DJSP009	0	-	-	-	-	0	Nil	
ACM	Gasket to FW outlet gate valve bonnet	Main engine room starboard aft	-	B4559	0	-	-	-	-	0	Nil	
ACM	Gasket to sewage treatment plant pipe flange	Main engine room starboard aft	-	B4560	0	-	-	-	-	0	Nil	
ACM	Gasket to sewage treatment plant gate valve flange	Main engine room starboard aft	-	B4561	0	-	-	-	-	0	Nil	
ACM	Gasket to sewage treatment plant gate valve flange	Main engine room starboard aft	-	B4562	0	-	-	-	-	0	Nil	
ACM	Gasket to VPJ 213 gate valve flange	Main engine room starboard aft	-	B4563	0	-	-	-	-	0	Nil	
ACM	Rope seal to boiler access plate	Main engine room starboard aft	-	B4564	0	-	-	-	-	0	Nil	
ACM	Gasket to FW control valve 233	Main engine room starboard aft adjacent to boiler	-	B4565	0	-	-	-	-	0	Nil	
ACM	Rope seal to boiler sight glass	Main engine room starboard aft adjacent to boiler	74	B4566	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Rope seal to boiler sight glass	Main engine room starboard aft	75	B4567	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Pipe wrap to steam pipe to boiler	Main engine room starboard aft	-	B4568	0	-	-	-	-	0	Nil	
ACM	Pipe wrap to steam pipe to boiler	Main engine room starboard aft	-	B4569	0	-	-	-	-	0	Nil	
ACM	Gasket to clean oil tank sight glass	Main engine room starboard aft adjacent to work shop	-	B4570	0	-	-	-	-	0	Nil	
ACM	Gasket to LO day tank sight glass	Main engine room starboard aft adjacent to work shop	-	B4571	0	-	-	-	-	0	Nil	

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Site Contact: Chief Engineer		Vessel: Northwest Sanderling IMO:8608872				Review Date: 17/11/2024						
Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Gasket to CO tank sight glass	Main engine room starboard aft adjacent to work shop	-	B4572	0	-	-	-	-	0	Nil	
ACM	Gasket to clean oil tank access plate	Main engine room starboard aft adjacent to work shop	-	B4573	0	-	-	-	-	0	Nil	
ACM	Gasket to fog horn access plate	Work shop bench	-	B4574	0	-	-	-	-	0	Nil	
ACM	Gasket to replaced gate valve	Work shop under bench	-	B4576	0	-	-	-	-	0	Nil	
ACM	Gasket to replaced gate valve	Work shop under bench	-	B4577	0	-	-	-	-	0	Nil	
ACM	Gasket to replaced gate valve	Work shop under bench	-	B4578	0	-	-	-	-	0	Nil	
ACM	Gasket to replaced gate valve	Work shop under bench	-	B4579	0	-	-	-	-	0	Nil	
ACM	Gasket to replaced gate valve	Work shop under bench	-	B4580	0	-	-	-	-	0	Nil	
ACM	Panels to all bulkheads	Work shop area	-	B4582	0	-	-	-	-	0	Nil	
ACM	Panels to all bulkheads	Work shop area	-	B4583	0	-	-	-	-	0	Nil	
ACM	Panels to ceiling	Work shop area	-	B4584	0	-	-	-	-	0	Nil	
ACM	Panels to ceiling	Work shop area	-	B4585	0	-	-	-	-	0	Nil	
ACM	Spare pre made gasket garlock	Work shop area	-	B4586	0	-	-	-	-	0	Nil	
ACM	Spare pre made gasket senital	Work shop area	-	B4590	0	-	-	-	-	0	Nil	
ACM	Spare pre made gasket J walker chieftan	Work shop area	-	B4591	0	-	-	-	-	0	Nil	
ACM	Gasket to actuator to ballast valve	Work shop area	-	B4592	0	-	-	-	-	0	Nil	
ACM	Gasket to fi fi hydrant pipe flange	Main engine room starboard	-	B4593	0	-	-	-	-	0	Nil	
ACM	Gasket to fi fi hydrant gate valve bonnet	Main engine room starboard	-	B4594	0	-	-	-	-	0	Nil	
ACM	Brake lining to lift brake	Lift motor room	-	B4595	0	-	-	-	-	0	Nil	
ACM	Debris	Generator room no2 on walkway	-	B4596	0	-	-	-	-	0	Nil	
ACM	Debris	Generator room no2 under walkway	-	B4597	0	-	-	-	-	0	Nil	
ACM	Spare gasket valqua 6500	Generator room no2 on bulkhead bracket	-	B4598	0	-	-	-	-	0	Nil	
ACM	Gasket to D O inlet gate valve bonnet	Generator room no2 adjacent to port exit	-	B4599	0	-	-	-	-	0	Nil	
ACM	Gasket to D O outlet gate valve bonnet	Generator room no2 adjacent to port exit	-	B4600	0	-	-	-	-	0	Nil	
ACM	Gasket to L O filter casing	Generator room no2 adjacent to generator	76	B4601	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to L O pipe line flange from generator	Generator room no2 adjacent to generator	-	B4602	0	-	-	-	-	0	Nil	
ACM	Gasket to L O cooler cylinder	Generator room no2 adjacent to generator	-	B4603	0	-	-	-	-	0	Nil	
ACM	Gasket to L O temp control valve	Generator room no2 adjacent to generator	-	B4604	0	-	-	-	-	0	Nil	
ACM	Gasket to L O temp control valve outlet flange	Generator room no2 adjacent to generator	-	B4605	0	-	-	-	-	0	Nil	
ACM	Gasket to L O pipe line flange	Generator room no2 adjacent to generator	-	B4606	0	-	-	-	-	0	Nil	
ACM	Insulation to cable penetration	Generator room no1 adjacent to door way	-	B4607	0	-	-	-	-	0	Nil	
ACM	Gasket to L O gate valve bonnet to L O pump no2	Steering gear room fwd port	-	B4608	0	-	-	-	-	0	Nil	
ACM	Gasket to emergency T valve to L O pump no2	Steering gear room fwd port	-	B4609	0	-	-	-	-	0	Nil	
ACM	Gasket to transfer oil tank sight glass	Deck Machinery HPU 2600 Transfer Tank	-	B4610	0	-	-	-	-	0	Nil	
ACM	Gasket to L O tank sight glass	Steering gear room fwd port	-	B4611	0	-	-	-	-	0	Nil	
ACM	Gasket to fi fi hydrant	Steering gear room fwd port	-	B4612	0	-	-	-	-	0	Nil	
ACM	Perforated panels	Steering gear room fwd port phone box	-	B4613	0	-	-	-	-	0	Nil	
ACM	Gasket to L O tank vent	Steering gear room aft port	-	B4614	0	-	-	-	-	0	Nil	
ACM	Gasket to L O tank sight glass	Steering gear room aft port	-	B4615	0	-	-	-	-	0	Nil	
ACM	Gasket to L O reserve tank sight glass	Steering gear room aft starboard	-	B4616	0	-	-	-	-	0	Nil	
ACM	Packing to cable penetration	Steering gear room stairwell to poop deck	-	B4617	0	-	-	-	-	0	Nil	

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Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Rope seal to door way	Steering gear/Engine room door way	-	B4618	0	-	-	-	-	0	Nil	
ACM	Gasket to L O gravity tank sight glass	Main engine room port	-	B4619	0	-	-	-	-	0	Nil	
ACM	Gasket to L O pipe line flange	Main engine room port	-	B4620	0	-	-	-	-	0	Nil	
ACM	Gasket to L O gate valve bonnet	Main engine room port	-	B4621	0	-	-	-	-	0	Nil	
ACM	Gasket to main fi fi line gate valve	Main engine room port	-	B4622	0	-	-	-	-	0	Nil	
ACM	Gasket to main fi fi line pipe flange	Main engine room port	-	B4623	0	-	-	-	-	0	Nil	
ACM	Gasket to fi fi hydrant gate valve bonnet	Main engine room port	-	B4624	0	-	-	-	-	0	Nil	
ACM	Gasket to L O cylinder head to turbo generator	Main engine room port fwd	77	B4625	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to access plate to L O cooler to turbo generator	Main engine room port fwd	78	B4626	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to fi fi hydrant	Steering gear room fwd port	-	B4612	0	-	-	-	-	0	Nil	
ACM	Perforated panels	Steering gear room fwd port phone box	-	B4613	0	-	-	-	-	0	Nil	
ACM	Gasket to L O tank vent	Steering gear room aft port	-	B4614	0	-	-	-	-	0	Nil	
ACM	Gasket to L O tank sight glass	Steering gear room aft port	-	B4615	0	-	-	-	-	0	Nil	
ACM	Gasket to L O reserve tank sight glass	Steering gear room aft starboard	-	B4616	0	-	-	-	-	0	Nil	
ACM	Packing to cable penetration	Steering gear room stairwell to poop deck	-	B4617	0	-	-	-	-	0	Nil	
ACM	Rope seal to door way	Steering gear/Engine room door way	-	B4618	0	-	-	-	-	0	Nil	
ACM	Gasket to L O gravity tank sight glass	Main engine room port	-	B4619	0	-	-	-	-	0	Nil	
ACM	Gasket to L O pipe line flange	Main engine room port	-	B4620	0	-	-	-	-	0	Nil	
ACM	Gasket to L O gate valve bonnet	Main engine room port	-	B4621	0	-	-	-	-	0	Nil	
ACM	Gasket to main fi fi line gate valve	Main engine room port	-	B4622	0	-	-	-	-	0	Nil	
ACM	Gasket to main fi fi line pipe flange	Main engine room port	-	B4623	0	-	-	-	-	0	Nil	
ACM	Gasket to fi fi hydrant gate valve bonnet	Main engine room port	-	B4624	0	-	-	-	-	0	Nil	
ACM	Gasket (Green/Blue)	Fresh Water Pneumatic Press Spool	-	FD5273	0	-	-	-	-	0	Nil	
ACM	Woven Rope	F.O. Scupper 3 piece	-	FD5274	0	-	-	-	-	0	Nil	
ACM	Woven Rope	Turbo ALT Gland Steam Outlet	-	FD5284	0	-	-	-	-	0	Nil	
ACM	Woven Rope	Turbo ALT Gland Steam PRV Inlet	-	FD5285	0	-	-	-	-	0	Nil	
ACM	Woven Rope	Turbo ALT Gland Steam PRV Inlet	-	FD5286	0	-	-	-	-	0	Nil	
ACM	Woven Fabric	Turbo ALT Gland Steam Inlet	-	FD5287	0	-	-	-	-	0	Nil	
ACM	Woven Rope	Engine Room, No.2 Boiler, Gauge Glass Support	-	FD5259	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, 0.26 MPA Steam PRV Line (Forward No.2 Boiler)	-	FD5260	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, 0.26 MPA Steam PRV Line (Forward No.2 Boiler)	-	FD5261	0	-	-	-	-	0	Nil	
ACM	Woven Rope	Engine Room, No.1 Boiler Level Transmitter Line	-	FD5262	0	-	-	-	-	0	Nil	

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Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Debris	Engine Room, No.2 Boiler Gauge Glass Level	-	FD5283	0	-	-	-	-	0	Nil	
ACM	Sight glass Gasket igg steam heater drain	3rd deck - IG room - starboard	-	Q5227	0	-	-	-	-	0	Nil	
ACM	Steam heater condenser butterfly	3rd deck - IG room - starboard	-	Q5228	0	-	-	-	-	0	Nil	
ACM	Pump gland packing - large tube case - 444.10.01.095	3rd deck - No. 2 main switchboard room - fwd shelf	-	Q5232	0	-	-	-	-	0	Nil	
ACM	Pump gland packing - small tube case - 44.10.01.005	3rd deck - No. 2 main switchboard room - fwd shelf	-	Q5233	0	-	-	-	-	0	Nil	
ACM	Pump shaft packing - no product code	3rd deck - No. 2 main switchboard room - fwd shelf	-	Q5234	0	-	-	-	-	0	Nil	
ACM	Penetration material	3rd deck - No. 2 main switchboard room - accommodation services 2 transformer deck penetration	-	Q5231	0	-	-	-	-	0	Nil	
ACM	Backing board to eyewash station	3rd deck - engine Room workshop	-	C6136	0	-	-	-	-	0	Nil	
ACM	Furnace door seal	3rd deck - engine room- port boiler	-	Q5334	0	-	-	-	-	0	Nil	
ACM	Flange gasket	3rd deck - engine room- 1 D/G room - start air manifold	-	Q5335	0	-	-	-	-	0	Nil	
ACM	Gasket filling pump flange	3rd deck - steering flat - aft Winch hydraulic tank	7	Q5337	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Loose Gasket - Tamec temasil new generation	3rd deck - engine room - workshop gasket bench	-	Q5411	0	-	-	-	-	0	Nil	
ACM	Gasket to 2 diesel generator L.O prime P/P suction	3rd deck - engine room- 2 diesel generator L.O prime P/P suction	-	Q5443	0	-	-	-	-	0	Nil	
ACM	Gasket to Spare flange cover	3rd deck - engine room - workshop- welding bay	-	Q5444	0	-	-	-	-	0	Nil	
ACM	Gasket to Itelifoam S.w supply	3rd deck - steering flat - Itelifoam S.w supply	-	Q5467	0	-	-	-	-	0	Nil	
ACM	Dark grey Gasket debris	3rd deck - engine room workshop - Gasket bench hole punch	-	C6044	0	-	-	-	-	0	Nil	
ACM	Green gasket debris on hole punch	3rd deck - engine room workshop - Gasket Bench	-	C6045	0	-	-	-	-	0	Nil	
ACM	Black gasket debris on hole punch	3rd deck - engine room workshop - Gasket bench	-	C6046	0	-	-	-	-	0	Nil	
ACM	Green James walker branded gasket debris	3rd deck - engine Room workshop - Gasket punch block	-	C6047	0	-	-	-	-	0	Nil	
ACM	Wall panels	3rd deck - engine room workshop- fwd wall	-	C6049	0	-	-	-	-	0	Nil	
ACM	Black sheet Gasket - James walker Chieftain BS7531	3rd deck - engine room workshop fwd - sheet Gasket shelves	-	C6050	0	-	-	-	-	0	Nil	
ACM	Dust and debris on sheet Gasket shelves	3rd deck - engine room workshop fwd - sheet Gasket shelves	-	Visual observation	0	-	-	-	-	0	Nil	
ACM	Flange Gasket - air vent sea chest ?	3rd deck - engine room workshop fwd bulkhead	-	C5051	0	-	-	-	-	0	Nil	
ACM	Blue Guard Garlock brand sheet Gasket	3rd deck - engine room workshop fwd - sheet Gasket shelves	-	C6052	0	-	-	-	-	0	Nil	
ACM	Loose Moulded pipe insulation	3rd deck - engine room workshop fwd - lagging shelves	-	C6053	0	-	-	-	-	0	Nil	
ACM	White woven rope on spool	3rd deck - engine room workshop fwd - lagging shelves	-	C6054	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	White fibre debris on brown rope	3rd deck - engine room workshop fwd - lagging shelves	-	C6055	0	-	-	-	-	0	Nil	
ACM	White insulation debris	3rd deck - engine room workshop fwd - lagging shelving	-	C6056	0	-	-	-	-	0	Nil	
ACM	Teadit na 1005 Gasket - blue green	3rd deck - engine room workshop fwd - sheet Gasket shelves	-	C6057	0	-	-	-	-	0	Nil	
ACM	Wall sheet debris behind tool shadow board	3rd deck - engine room workshop starboard tool shadow board	-	C5058	0	-	-	-	-	0	Nil	
ACM	Loose dn80-200k valve - remnant gasket	3rd deck - engine room workshop fwd under milling mech breaker	-	C6059	0	-	-	-	-	0	Nil	
ACM	Black coloured James Walker Chieftain B5 7531 premade gasket	3rd deck - engine room workshop fwd - bench adjacent 50t press	-	C6060	0	-	-	-	-	0	Nil	
ACM	Loose Blue "ST1630" labeled Gasket	3rd deck - engine room workshop fwd - bench adjacent 50t press	-	C6061	0	-	-	-	-	0	Nil	
ACM	Debris within box	3rd deck - engine room workshop -starboard metal store - Gasket cutting box.	-	C6062	0	-	-	-	-	0	Nil	
ACM	Blue loose premade 3star Jeil E&S Co Ltd Gasket	3rd deck - engine room workshop fwd - bench adjacent 50t press	-	C6063	0	-	-	-	-	0	Nil	
ACM	Blue loose Teadit NA1005 Gasket	3rd deck - engine room workshop fwd - bench adjacent 50t press	-	C6064	0	-	-	-	-	0	Nil	
ACM	Blue green loose Teadit NA 1006 Gasket	3rd deck - engine room workshop fwd - bench adjacent 50t press	-	C6065	0	-	-	-	-	0	Nil	
ACM	Blue gasket debris	3rd deck - engine room workshop starboard - metal store racks floor	-	C6066	0	-	-	-	-	0	Nil	
ACM	Black loose premade Tombo NA 1993 gasket	3rd deck - engine room workshop fwd - bench adjacent 50t press	-	C6067	0	-	-	-	-	0	Nil	
ACM	Loose green blue "ST1630" gasket	3rd deck - engine room workshop aft - welding bay flange box	-	C6068	0	-	-	-	-	0	Nil	
ACM	Blue Garlock 2950 gasket	3rd deck - engine room workshop aft welding bay flange box	-	C6069	0	-	-	-	-	0	Nil	
ACM	3.5-inch flange with unbranded Gasket attached	3rd deck - engine room workshop aft - welding bay flange box	-	C6070	0	-	-	-	-	0	Nil	
ACM	Valve gland packing	3rd deck - engine room workshop aft welding bay	-	C6071	0	-	-	-	-	0	Nil	
ACM	Top flange gasket to AS Valve	3rd deck - engine room workshop aft - welding bay	-	C6073	0	-	-	-	-	0	Nil	
ACM	Green blue flange Gasket not branded	3rd deck - engine room workshop aft - welding bay flange box	-	C6074	0	-	-	-	-	0	Nil	
ACM	Side flange Gasket to duplex filter	3rd deck - engine room workshop - loft	-	C6075	0	-	-	-	-	0	Nil	
ACM	ST1630 NA labeled Gasket debris	3rd deck - engine room workshop - Gasket bench drawers	-	C6076	0	-	-	-	-	0	Nil	
ACM	Start air receive Gasket	3rd deck - engine room workshop - Gasket bench drawer	-	C6077	0	-	-	-	-	0	Nil	
ACM	Gaskoid James walker branded sheet gasket	3rd deck - engine room workshop - Gasket bench drawers	-	C6078	0	-	-	-	-	0	Nil	
ACM	Pillar branded No.5611 "clean sheet" gasket	3rd deck - engine room workshop - Gasket bench drawers	-	C6079	0	-	-	-	-	0	Nil	
ACM	Black flange Gasket - brand logo unreabled	3rd deck - engine room workshop - Gasket bench drawers	-	C6080	0	-	-	-	-	0	Nil	
ACM	Garlock sheet Gasket ST706	3rd deck - engine room workshop -Gasket bench drawers	-	C6081	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Large green Ferolite Nam 39 branded Gasket	3rd deck - engine room workshop - Gasket bench drawers	-	C6082	0	-	-	-	-	0	Nil	
ACM	Black gasket ST1630 NA. thick	3rd deck - engine room workshop - Gasket bench drawers	-	C6083	0	-	-	-	-	0	Nil	
ACM	Green ST1604 gasket	3rd deck - engine room workshop - Gasket bench drawers	-	C6084	0	-	-	-	-	0	Nil	
ACM	Brown Bakelite sheet	3rd deck - engine room workshop - elect workroom	-	C6085	0	-	-	-	-	0	Nil	
ACM	Package AC cable penetration	3rd deck - engine room workshop aft	-	C6086	0	-	-	-	-	0	Nil	
ACM	Gasket	No.2 Diesel Generator Room – Generator – Gasket to FW Filter Pipe Flange	-	Q5086	0	-	-	-	-	0	Nil	
ACM	Gasket	No.2 Generator Room – Generator – Gasket to Jacket Cool W.IN. Pipe flange	-	Q5087	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Port Fwd – Woven Insulation Wrap to Gland Stm Out Pipe – Turbo Generator	-	Q5088	0	-	-	-	-	0	Nil	
ACM	Gasket	Generator No.1 Room – Gasket to L.O Filter Casing	-	Q5089	0	-	-	-	-	0	Nil	
ACM	Gasket	Inert Gas Generator Room – Port Side – Flange Gasket to Air Dryer – Dry Air Out Pipe	-	Q5090	0	-	-	-	-	0	Nil	
ACM	Gasket	Inert Gas Generator Room – Upstairs Fwd – End Plate, Smt Ovens Branded Chamber	-	Q5091	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Port Aft – Flange Gasket to F.W Disch Valve – No.1 F.W Pump	-	Q5092	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Strboard Fwd – Sewer Treatment Unit – Gasket to Gate Valve Flange	-	Q5092	0	-	-	-	-	0	Nil	
ACM	Gasket	No.2 Diesel Generator Room – Generator – Gasket to FW Filter Pipe Flange	-	Q5086	0	-	-	-	-	0	Nil	
ACM	Gasket	No.2 Generator Room – Generator – Gasket to Jacket Cool.W.IN. Pipe flange	-	Q5087	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Port Fwd – Woven Insulation Wrap to Gland Stm Out Pipe – Turbo Generator	-	Q5088	0	-	-	-	-	0	Nil	
ACM	Gasket	Inert Gas Generator Room – Port Side – Flange Gasket to Air Dryer – Dry Air Out Pipe	-	Q5090	0	-	-	-	-	0	Nil	
ACM	Gasket	Inert Gas Generator Room – Upstairs Fwd – End Plate, Smt Ovens Branded Chamber	-	Q5091	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Port Aft – Flange Gasket to F.W Disch Valve – No.1 F.W Pump	-	Q5092	0	-	-	-	-	0	Nil	
ACM	Gasket	Main Engine Room – Strboard Fwd – Sewer Treatment Unit – Gasket to Gate Valve Flange	-	Q5093	0	-	-	-	-	0	Nil	
ACM	Gasket	Chemical Injection System	-	M6666	0	-	-	-	-	0	Nil	
ACM	Old Black Gasket Material	On Turbine Alternator	-	M6668	0	-	-	-	-	0	Nil	
ACM	Old Brown Tombo Gasket Material	On Turbine Alternator	-	M6669	0	-	-	-	-	0	Nil	
ACM	Old Light Brown Gasket Material	On Turbine Alternator	-	M6670	0	-	-	-	-	0	Nil	
ACM	Old Gold Gasket Material	On Turbine Alternator	-	M6671	0	-	-	-	-	0	Nil	
ACM	Gasket	No2 IGG Blower	-	M6691	0	-	-	-	-	0	Nil	
ACM	Gasket Material Debris	Beneath IGG Cover Plate Fwd	-	M6692	0	-	-	-	-	0	Nil	
ACM	Gasket	No1 IGG Blower	-	M6693	0	-	-	-	-	0	Nil	
ACM	Gasket Material Debris	Ships Frame adjacent IGG Blower No1	-	M6694	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon		Survey Type: Asbestos Survey				Date of Survey: 17/11/2023						
Site Contact: Chief Engineer		Vessel: Northwest Sanderling IMO:8608872				Review Date: 17/11/2024						
Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Gasket material	#1 DG FO return valve	-	ZA8938	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Metallic Gasket material	Boiler SAH condensate pipe -port boiler cond trap bypass valve flange	-	ZA8937	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Helideck faom tank -gauge glass top flange	-	ZA8936	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Helideck faom tank -gauge glass pump inlet	-	ZA8935	0	0	0	0	0	0	Nil	Sampled September 2022
2nd Deck												
ACM	Black gasket	2as Drawer AH2 - Spare Forward fire pump gasket	95	ZA21841	1	2	3	2	2	10	A3	Program for Planned Removal, Manage & Re-inspect Periodically Investigation into potential use on vessel required
ACM	Blue Gasket	2nd deck 2as Drawer AE1 - Spare Gasket 190.00.00.P03	-	ZA21840	0	-	-	-	-	0	Nil	Sampled November 2023
ACM	Gasket	2SA – CD2, Main Air Conditioning Compressor Gasket for Oil Filter 550.10.01.G14	-	T6086	0	-	-	-	-	0	Nil	
ACM	Gasket	2SA – AE4, Emergency Diesel Generator Engine Gasket for Intake Manifold 352.01.01.f48	84	T6087	0	0	0	0	0	0	Nil	Sampled January 2018
ACM	Gasket	2SA – AE4, Emergency Diesel Generator Engine Gasket for Exhaust Manifold 352.01.01.f50	-	T6088	0	-	-	-	-	0	Nil	
ACM	Gasket	2SA – AE2, Emergency Diesel Generator Engine JIS Gasket Turbine Fitting 352.01.01.f47	-	T6089	0	-	-	-	-	0	Nil	
ACM	Gasket	2SA – AF2, Main Feed Pump Turbine Exhaust Gasket 450.10.01.g11	81	T6091	1	2	3	2	2	10	A3	Program for Planned Removal, Manage & Re-inspect Periodically Investigation into potential use on vessel required
ACM	Plaseal NF-p3 Sealing Compound	Supplied by Chief Engineer	-	T6092	0	-	-	-	-	0	Nil	
ACM	Packing Material	MSB – Distribution Transformer Deck Head Penetration Deck Head Penetration Material	83	T6096	1	2	2	0	1	6	A2	Restrict Access, Manage and Remove Utilising Appropriate Control Measures Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC)
ACM	Packing Material	Monitoring Room – MISC BMS Control Panel, Deck Head Penetration Material	-	T6097	0	-	-	-	-	0	Nil	
ACM	Joint packing for soot blower	Storage area starboard aft drawer BF1	-	B4627	0	-	-	-	-	0	Nil	
ACM	Joint packing for soot blower make pillar	Storage area starboard aft drawer BF2	-	B4628	0	-	-	-	-	0	Nil	
ACM	Spare gasket valqua 6502	Storage area starboard aft drawer BJ2	-	B4630	0	-	-	-	-	0	Nil	
ACM	Spare gasket for manoeuvring valves	Storage area starboard aft drawer BJ3	-	B4631	0	-	-	-	-	0	Nil	
ACM	Rope seal packing	Storage area starboard aft drawer BM1	-	B4632	0	-	-	-	-	0	Nil	
ACM	Spare gaskets for main header pump	Storage area starboard aft drawer AF3	-	B4633	0	-	-	-	-	0	Nil	
ACM	Spare gaskets for turbine exhaust AV1000	Storage area starboard aft drawer AF3	-	B4634	0	-	-	-	-	0	Nil	
ACM	Insulation to copper gaskets for manifolds	Storage area starboard aft drawer AE2	-	B4635	0	-	-	-	-	0	Nil	
ACM	Spare gaskets make shinko 1500	Storage area starboard aft drawer AA3	79	B4636	1	2	2	0	0	5	Nil	Removed
ACM	Rope seals	Storage area starboard aft drawer BF3	-	B4637	0	-	-	-	-	0	Nil	
ACM	Rope seals	Storage area starboard aft drawer BF3	-	B4638	0	-	-	-	-	0	Nil	
ACM	Pre made gaskets IT 1996NA	Storage area starboard aft drawer GA2	-	B4639	0	-	-	-	-	0	Nil	
ACM	Pre made gaskets ST 1630	Storage area starboard aft drawer HC1	-	B4640	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Blanket	Storage area starboard aft exit	-	B4641	0	-	-	-	-	0	Nil	
ACM	Gasket to L O tank sight glass	Storage area starboard fwd	-	B4642	0	-	-	-	-	0	Nil	
ACM	Gasket to L O tank access plate	Storage area starboard fwd	-	B4643	0	-	-	-	-	0	Nil	
ACM	Gasket to air handling cylinder gate valve no1	Main engine room starboard fwd	-	B4644	0	-	-	-	-	0	Nil	
ACM	Gasket to air handling cylinder gate valve no2	Main engine room starboard fwd	-	B4645	0	-	-	-	-	0	Nil	
ACM	Gasket to air handling cylinder no2 pipe flange	Main engine room starboard fwd	-	B4646	0	-	-	-	-	0	Nil	
ACM	Gasket to L O tank sight glass	Main engine room starboard fwd	-	B4647	0	-	-	-	-	0	Nil	
ACM	Gasket to L O tank sight glass	Main engine room starboard fwd	-	B4648	0	-	-	-	-	0	Nil	
ACM	Gasket to L O sump tank gate valve bonnet	Main engine room starboard fwd	-	B4649	0	-	-	-	-	0	Nil	
ACM	Gasket to L O sump tank gate valve bonnet outlet	Main engine room starboard fwd	-	B4650	0	-	-	-	-	0	Nil	
ACM	Packing to cable penetration	Main engine room starboard fwd	-	B4651	0	-	-	-	-	0	Nil	
ACM	Gasket to L O outlet gate valve bonnet to Aux tank	Main engine room starboard fwd	-	B4652	0	-	-	-	-	0	Nil	
ACM	Gasket to diesel oil suction gate valve bonnet - tank	Main engine room starboard fwd	-	B4653	0	-	-	-	-	0	Nil	
ACM	Gasket to diesel oil suction gate valve bonnet - boiler	Main engine room starboard fwd	-	B4654	0	-	-	-	-	0	Nil	
ACM	Gasket to service air to deck services	Main engine room starboard fwd	-	B4655	0	-	-	-	-	0	Nil	
ACM	Gasket to HT steam gate valve bonnet	Main engine room starboard fwd	-	B4656	0	-	-	-	-	0	Nil	
ACM	Panels to bulkhead	No 2 main switchboard room	-	B4657	0	-	-	-	-	0	Nil	
ACM	Panels to bulkhead	No 2 main switchboard room	-	B4658	0	-	-	-	-	0	Nil	
ACM	Packing to cable penetration	No 2 main switchboard room	-	B4659	0	-	-	-	-	0	Nil	
ACM	Panels to bulkhead	Monitor room	-	B4660	0	-	-	-	-	0	Nil	
ACM	Gasket to fi fi main line gate valve	Main engine room adjacent to monitor room	-	B4661	0	-	-	-	-	0	Nil	
ACM	Gasket to fi fi hydrant	Main engine room adjacent to monitor room	-	B4662	0	-	-	-	-	0	Nil	
ACM	Woven Rope	Engine Room, Burner Cleaning Bench, Steam Supply	-	FD5236	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, No.1 Boiler, No.2 Burner ATM, Steam Line	-	FD5243	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, No.1 Boiler, No.2 Burner ATM, Steam Line	-	FD5244	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, No.1 Boiler, No.2 Burner ATM, Steam Line	-	FD5245	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, No.1 Boiler, No.1 Burner ATM, Steam Line	-	FD5246	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, No.1 Boiler Atomizer Steam Press Gauge Line	-	FD5247	0	-	-	-	-	0	Nil	
ACM	Woven Rope (Debris)	Engine Room, No.1 Boiler Tops	-	FD5248	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, No.2 Boiler. No.2 Burner ATM Steam Line	-	FD5252	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, No.2 Boiler. No.2 Burner ATM Steam Line	-	FD5253	0	-	-	-	-	0	Nil	
ACM	Woven Fabric (Grey) & Adhesive (White)	Engine Room, No.2 Boiler. No.2 Burner F.O. Supply Line	-	FD5254	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, Boiler ATM Steam Gauge Line	-	FD5255	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, No.2 Boiler Fuel Oil Supply Line	-	FD5256	0	-	-	-	-	0	Nil	
ACM	Woven Fabric & Adhesive (White)	Engine Room, Boiler Tops, Large Steam Line	-	FD5257	0	-	-	-	-	0	Nil	
ACM	Gland Packing (Fragment)	Engine Room, No.1 Boiler, AFT	-	FD5290	0	-	-	-	-	0	Nil	
ACM	Gasket (Fragment)	Engine Room, No.1 Boiler, AFT	-	FD5291	0	-	-	-	-	0	Nil	
ACM	Gasket (Fragment)	Engine Room, No.2 Boiler Drum	-	FD5292	0	-	-	-	-	0	Nil	
ACM	Gland Packing (Fragment)	Engine Room, No.2 Boiler Drum AFT	-	FD5293	0	-	-	-	-	0	Nil	

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Putty Debris in Grates	No1 Boiler Water Drum Level	87	M6664	1	0	2	0	1	4	Nil	Removed
ACM	Used blue gasket "ba-gl" text	2nd deck - IG room - Portside ships frame	-	Q5218	0	-	-	-	-	0	Nil	
ACM	Loose grey oval Gasket	2nd deck - IG room -Portside ships frame	-	Q5221	0	-	-	-	-	0	Nil	
ACM	Igg steam heater condenser outlet flange	2nd deck - IG room - Portside	-	Q5222	0	-	-	-	-	0	Nil	
ACM	IG compressor cly head gasket	2nd deck - IG room - Portside	-	Q5223	0	-	-	-	-	0	Nil	
ACM	Sight glass Gasket	2nd deck - IG room -IG compressor	-	Q5224	0	-	-	-	-	0	Nil	
ACM	IG compressor LT outlet Gasket	2nd deck - IG room - Portside	-	Q5225	0	-	-	-	-	0	Nil	
ACM	Sight glass Gasket	2nd deck - IG room -Portside ships frame	-	Q5230	0	-	-	-	-	0	Nil	
ACM	Gasket to 2nd deck starboard boiler gas hood expansion piece out	2nd deck - engine room- starboard boiler gas hood expansion piece out	14	Q5445	1	0	2	0	1	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to 2nd deck - engine room- starboard boiler gas hood expansion piece in	2nd deck - engine room- starboard boiler gas hood expansion piece in	-	Q5446	0	-	-	-	-	0	Nil	
ACM	Gasket to 2 boiler 2 burner gas shroud	2nd deck - engine room - 2 boiler 2 burner gas shroud	-	Q5447	0	-	-	-	-	0	Nil	
ACM	Gasket to No1 hot water circ pump suction	2nd deck - engine room - 2PA - No1 hot water circ pump suction	-	Q5471	0	-	-	-	-	0	Nil	
ACM	IG Boiler Spray Unit, Gasket N2 Pipe	2nd Deck – 2PA – IG Boiler Spray Unit, Gasket N2 Pipe	-	Q5333	0	-	-	-	-	0	Nil	
ACM	Gasket to F.O Additive tank cover	2nd deck - engine room - fwd port - F.O Additive tank cover	-	Q5456	0	-	-	-	-	0	Nil	
ACM	Gasket to F.O Additive tank cover vent	2nd deck - engine room - fwd port - F.O Additive tank fill vent	-	Q5457	0	-	-	-	-	0	Nil	
ACM	Sight glass gasket	2nd deck - starboard fwd - main a/c oil receiver	-	Q5327	0	-	-	-	-	0	Nil	
ACM	Burner 2/2 atomising steam flange	2nd deck - engine room - boiler tops	-	Q5328	0	-	-	-	-	0	Nil	
ACM	Manoeuvring valve Gasket - pillar clean sheet 5611 - 708.10.01.021	2nd deck - 2sa - bj3 drawer	-	C6146	0	-	-	-	-	0	Nil	
ACM	Pillar clean sheet 5611 Gasket - no code	2nd deck - 2sa - bj2 drawer	-	C6147	0	-	-	-	-	0	Nil	
ACM	Engine diesel gen Gasket-350.00.00.f34	2nd deck - 2sa - ab5 drawer	-	C6090	0	-	-	-	-	0	Nil	
ACM	Daihatsu branded Gasket - 350.00.00.x40	2nd deck - 2sa - ab5 drawer	-	C6091	0	-	-	-	-	0	Nil	
ACM	Valqua 6500 Gasket - 350.00.00.u87	2nd deck - 2sa - ab4 drawer	-	C6093	0	-	-	-	-	0	Nil	
ACM	Valqua 6500 Gasket -350.00.00.g78	2nd deck - 2sa - ab4 drawer	-	Similar to C6093	0	-	-	-	-	0	Nil	
ACM	Valqua 6500 Gasket -350.00.00.x42	2nd deck - 2sa - ab4 drawer	-	Similar to C6093	0	-	-	-	-	0	Nil	
ACM	Lo pump body Gasket -350.00.00.u79	2nd deck - 2sa -shelf above aa5 drawer	-	C6094	0	-	-	-	-	0	Nil	
ACM	Diesel gen large copper Gasket - 350.00.00.066	2nd deck - 2sa - above aa5 drawer	-	C6095	0	-	-	-	-	0	Nil	
ACM	Small green gasket -582.10.01.018	2nd deck - 2sa - ad2 drawer	-	C6096	0	-	-	-	-	0	Nil	
ACM	Valqua Gasket 352.01.01.f44	2nd deck - 2sa - ae4 drawer	-	C6097	0	-	-	-	-	0	Nil	
ACM	Valqua Gasket - 352.01.01.f45	2nd deck - 2sa - ae4 drawer	-	C6098	0	-	-	-	-	0	Nil	
ACM	Feed water chem metering pump gland packing -592.21.01.f07	2nd deck - 2sa -af5 drawer	-	C6099	0	-	-	-	-	0	Nil	
ACM	Klingersil c-4401 Gasket -450.10.01.g31	2nd deck - 2sa - af3 drawer	-	C6100	0	-	-	-	-	0	Nil	
ACM	Safety valve Gasket -450.10.01.g20	2nd deck - 2sa - af3 drawer	-	C6101	0	-	-	-	-	0	Nil	
ACM	Main feed Gasket - 450.10.01.ga5	2nd deck - 2sa - af3 drawer	-	C6102	0	-	-	-	-	0	Nil	
ACM	Oil pilot valve cover Gasket -450.10.01.g36	2nd deck - 2sa - af3 drawer	-	C6103	0	-	-	-	-	0	Nil	

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Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Oil sump cover Gasket Klingers c-440 -450.10.01.g37	2nd deck - 2sa - af3 drawer	-	C6105	0	-	-	-	-	0	Nil	
ACM	Liquid piston ring-435.11.01.001	2nd deck - 2sa - ag4 drawer	-	C6016	0	-	-	-	-	0	Nil	
ACM	Discharge pump mouth ring-581.13.01.003	2nd deck - 2sa - ag4 drawer	-	Similar to C6106	0	-	-	-	-	0	Nil	
ACM	Sludge transfer pump packing- 436.011.01.f08	2nd deck - 2sa - ah4 drawer	-	C6108	0	-	-	-	-	0	Nil	
ACM	Fwd fire pump engine ex mani Gasket - 355.10.01.g32	2nd deck - 2sa - ah2 drawer	-	C6109	0	-	-	-	-	0	Nil	
ACM	Evaporator Gasket. Reinz AFM 37 - 620.20.01.057	2nd deck - 2sa - AH2 drawer	-	C6110	0	-	-	-	-	0	Nil	
ACM	Evaporator Gasket. Reinz AMF 39 - 620.20.01.011	2nd deck - 2sa - ah1 drawer	-	C6111	0	-	-	-	-	0	Nil	
ACM	Coffin brand main feed pump packing-450.10.01.007. Manufacture 17460-9	2nd deck - 2sa -al3 drawer	-	C6112	0	-	-	-	-	0	Nil	
ACM	Main feed pump repair gasket - 450.19.01.GC0	2nd deck - 2sa - al4 drawer	-	C6114	0	-	-	-	-	0	Nil	
ACM	Main feed pump crush washer - 450.10.01.gg4	2nd deck - 2sa - al2 drawer	-	C6115	0	-	-	-	-	0	Nil	
ACM	Electrohydraulic steering gear packing - 296.10.01.001	2nd deck - 2sa - am2 drawer	-	C6116	0	-	-	-	-	0	Nil	
ACM	Gantry crane inner disc brake- 216.10.01.g20	2nd deck - 2sa - ba5 drawer	-	C6117	0	-	-	-	-	0	Nil	
ACM	Evaporator gasket betech seals fj2790 branded -620.20.01.050	2nd deck - 2sa -ah1 drawer	-	C6118	0	-	-	-	-	0	Nil	
ACM	Main steam system valve packing - 709.11.01.gk9	2nd deck - 2sa - bd1 drawer	-	C6119	0	-	-	-	-	0	Nil	
ACM	Main steam system valve packing - 709.11.01.g70	2nd deck - 2sa - bd1 drawer	-	C6120	0	-	-	-	-	0	Nil	
ACM	Main steam system valve packing - 709.11.01.g73	2nd deck - 2sa - bd1 drawer	-	C6121	0	-	-	-	-	0	Nil	
ACM	Gland packing 03.31.02.00.606	2nd deck - 2sa - be4 drawer	-	C6122	0	-	-	-	-	0	Nil	
ACM	Desuperheater gland packing- 601.61.01.002	2nd deck - 2sa - bd2 drawer	-	C6123	0	-	-	-	-	0	Nil	
ACM	Main steam system valve packing- 709.11.01.gj8	2nd deck - 2sa - bd1 drawer	-	C6124	0	-	-	-	-	0	Nil	
ACM	Woven rope - no part number visible	2nd deck - 2sa - shelf above bf5	-	C6125	0	-	-	-	-	0	Nil	
ACM	Desuperheater Gasket -601.31.01.003	2nd deck - 2sa - bd2 drawer	-	C6126	0	-	-	-	-	0	Nil	
ACM	Soot blower packing - no product number visible	2nd deck - 2sa - bf1 drawer	-	C6127	0	-	-	-	-	0	Nil	
ACM	Heavy fuel oil system valve gland packing - 716.11.01.g05	2nd deck - 2sa -be4 drawer	-	C6128	0	-	-	-	-	0	Nil	
ACM	Boiler bog system valve packing - 722.11.01.g13	2nd deck - 2sa -be5 drawer	-	C6129	0	-	-	-	-	0	Nil	
ACM	Boiler sight glass Gasket -694.30.00.022	2nd deck - 2sa - be1 drawer	-	C6130	0	-	-	-	-	0	Nil	
ACM	Boiler burner registers Gasket- 694.30.00.019	2nd deck - 2sa - be1 drawer	-	C6131	0	-	-	-	-	0	Nil	
ACM	Main boilers instrumentation sheet packing - 690.11.01.062	2nd deck - 2sa - bf2 drawer	-	C6132	0	-	-	-	-	0	Nil	
ACM	Soot blower main boiler - packing - 693.10.00.017	2nd deck - 2sa - bf1 drawer	-	C6133	0	-	-	-	-	0	Nil	
ACM	Main boiler graphite coloured Gasket - 680.01.01.030	2nd deck - 2sa -bg3 drawer	-	Q5169	0	-	-	-	-	0	Nil	
ACM	Main steam system valve packing ring - 709.11.01.gr1	2nd deck - 2sa -bg4 drawer	-	Q5170	0	-	-	-	-	0	Nil	
ACM	Mountings main boiler gland packing - 692.10.01.006	2nd deck - 2sa -bg4 drawer	-	Q5173	0	-	-	-	-	0	Nil	
ACM	Packing ring 61 -709.11.01.g29	2nd deck - 2sa - bg4 drawer	-	Q5172	0	-	-	-	-	0	Nil	
ACM	Small white coloured Gasket - no product code	2nd deck - 2sa - bg4 drawer	-	Q5174	0	-	-	-	-	0	Nil	
ACM	Main steam system valve Gasket - 709.11.01.g97	2nd deck - 2sa - bg4 drawer	-	Q5175	0	-	-	-	-	0	Nil	

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Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Sight glass Gasket -04.42.44.00.003	2nd deck - 2sa - bj4 drawer	21	Q5176	1	2	2	0	0	5	Nil	Identified item removed and disposed of by PCB Holdings. Drawer Environmentally cleaned
ACM	Sight glass Gasket - square edge Tombo brand - no product code	2nd deck - 2sa -bj4 drawer	-	Q5177	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Maneuvering valve seat packing - grey - 705.10.01.018	2nd deck - 2sa - bj1 drawer	-	Q5178	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Maneuvering valve seat packing- white - no code	2nd deck - 2sa - bj1 drawer	-	Q5179	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Loose slight Gasket - no markings	2nd deck - 2sa - bj4 drawer	22	Q5180	1	3	3	1	2	10	Nil	Identified item removed and disposed of by PCB Holdings. Drawer Environmentally cleaned
ACM	Evictor monitor kit Novus Gasket - no product code	2nd deck - 2sa - bm5 drawer	-	Q5181	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Hose handling crane brake lining- 215.10.01.005	2nd deck - 2sa - ca2 drawer	-	Q5182	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Vortex branded Metaflex gasket - no code	2nd deck - 2sa - cc3 drawer	23	Q5183	1	1	2	1	1	6	Nil	Identified items removed and disposed of by PCB Holdings
ACM	Pump main A/c Gasket- valqua 647 branded - 550.50.01.g04, 550.50.01.g01and 08.81.71.00.g24	2nd deck - 2sa -cc4 drawer	-	Q5184	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Ac freon circuit Gasket - Tombo 1901 branded -560.11.01.g01	2nd deck - 2sa -cc4 drawer	24	Q5185	1	0	2	0	1	4	Nil	Identified item removed and disposed of by PCB Holdings
ACM	Vortex branded blue Metaflex Gasket - 260494	2nd deck - 2sa - cd1 drawer	-	Q5186	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Main air con blind cover Gasket - green -550.10.01.g10	2nd deck - 2sa - cd1 drawer	25	Q5187	1	0	2	0	1	4	Nil	Identified item removed and disposed of by PCB Holdings
ACM	Main aircon blind cover- blue gasket - 550.10.01.g10	2nd deck - 2sa - cd1 drawer	-	Q5188	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Main aircon blind cover black gasket -550.10.01.g10	2nd deck - 2sa - cd1 drawer	-	Q5189	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Bakelite light switch	2nd deck - 2sa -db4 drawer	-	Q5190	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Junctions and light switches	2nd deck - 2sa - db3 and db4 drawer	-	Similar to Q5190	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Tombo branded boiler door Gasket - no product code	2nd deck - 2sa - gb2 shelf	26	Q5191	1	3	2	2	1	9	Nil	Identified item removed
ACM	Boiler fire bricks - Tombo branded?	2nd deck - 2sa - hb2 shelf	-	Q5192	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Purifier drive clutch brake	2nd deck - 2sa -aj1 drawer	-	Q5193	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Vortex branded Gasket - no product code	2nd deck - 2sa - cc3 drawer	27	Q5194	1	1	2	1	1	6	Nil	Identified item removed and disposed of by PCB Holdings
ACM	Desuperheater large flange Gasket - 601.31.01.g04	2nd deck - 2sa - bd2 drawer	-	Q5195	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Desuperheater beige coloured Gasket Voltex - 601.31.01.006	2nd deck - 2sa - bd2 drawer	-	Q5196	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Desuperheater cream coloured Gasket Voltex - 601.31.01.006	2nd deck - 2sa - bd2 drawer	-	Q5197	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Desuperheater white coloured Voltex gasket - 601.31.01.006	2nd deck - 2sa - bd2 drawer	-	Q5198	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Desuperheater Gasket inner - 601.51.01.g03	2nd deck - 2sa - bd2 drawer	-	Q5199	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Butterfly valve Gasket valqua 1500	2nd deck - 2sa - cc3 drawer	28	Q5200	1	0	2	0	1	4	Nil	Identified item removed and disposed of by PCB Holdings
ACM	Pump condenser vacuum shaft packing no waxy coating - 444.10.01.005	2nd deck - 2sa -af2 drawer	-	Q5201	0	-	-	-	-	0	Nil	Sampled September 2017

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Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Pump condenser vacuum shaft packing , with waxy coating - 444.10.01.005	2nd deck - 2sa -af2 drawer	-	Q5202	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Sight glass Gasket - Tombo branded - only partial numbers visible "13"	2nd deck - 2sa -starboard side ship frame	29	Q5203	1	0	2	0	0	3	Nil	Identified item removed and disposed of by PCB Holdings
ACM	German made sight glass Gasket brand unknown	2nd deck - 2sa -starboard side bulkhead	30	Q5204	1	0	2	0	0	3	Nil	Identified item removed and disposed of by PCB Holdings
ACM	Fire main valve isolator gland packing	2nd deck - 2sa - ha1	-	Q5205	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Dm100tk valve gland packing	2nd deck - 2sa - ha1 drawer	-	Q5206	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	New spare 10k80 valve gland packing	2nd deck - 2sa - hc1 drawer	-	Q5207	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Drum of Kilbond grey lagging adhesive	2nd deck - 2sa - hc1 drawer	31	Q5208	1	2	3	2	2	10	A3	Program for Planned Removal, Manage & Re-inspect Periodically Investigation into potential use on vessel required.
ACM	Remnant Gasket on valve flange - mr 06.710.001	2nd deck - 2sa - hc1	-	Q5209	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Inert gas comp gasket -568.31.01.f01	2nd deck - 2sa - hc1	-	Q5211	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Furnace door sealant , Tombo branded ff cartridge	2nd deck - 2sa - jþ1	-	Q5212	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket "gambit AF Oil , medal europejski"	2nd deck - 2sa - hc1	-	G5213	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket , template for gearbox bottom starboard side " clean sheet no 5611 pillar"	2nd deck - 2sa - hc1	-	Q5214	P	0	1	1	1	3	A4	Although no Asbestos identified – similar gaskets have returned unidentified mineral fibres
ACM	Ballast butterfly valve top flange Gasket	2nd deck - 2sa -adjacent to bm4 drawer	-	Q5215	0	-	-	-	-	0	Nil	Sample September 2017
ACM	Pump main mouth ring-401.10.01.002	2nd deck - 2sa - ag1 drawer	-	Q5216	0	-	-	-	-	0	Nil	Sample September 2017
ACM	Provisions Refrigerator Compressor – Gasket – 552.10.026	2nd Deck – 2SA – Starboard Aft – Sanderling Spares Cardboard Box	-	Q5427	0	-	-	-	-	0	Nil	Sample September 2017
ACM	Gasket	Stores, Drawer AB5 – Spare Gasket Daihatsu Generator Part Number 350.00.00.h42	-	Q5107	0	-	-	-	-	0	Nil	Sampled July 2017
ACM	Gasket	Starboard Arm – Stores – Drawer AB5 – Spare Exhaust Gasket for Diesel Generator – Part Number 350.00.00.f31	-	Q5108	0	-	-	-	-	0	Nil	Sampled July 2017
ACM	Woven Rope	Starboard Arm Store – Drawer BF3 –Woven Rope Wrap P6-41 No.215	-	Q5109	0	-	-	-	-	0	Nil	Sampled July 2017
ACM	Gasket	Starboard Arm Stores – Drawer BG3 – Main Fed /P Inlet Steam VPA020,028 Valve	-	Q5110	0	-	-	-	-	0	Nil	Sampled July 2017
ACM	Gasket	Starboard Arm – Stores Drawer AI2 –Gasket Part 17299	-	Q5111	0	-	-	-	-	0	Nil	Sampled July 2017
ACM	Gasket	Starboard Arm Stores – Gasket to Sight Glass on GEN.ENG.PURIF. L.O. TK	-	Q5112	0	-	-	-	-	0	Nil	Sampled July 2017
ACM	Gasket	Starboard Arm Stores – Gasket to Pipe Flange Adjacent to CA1-CA5 Drawers	-	Q5113	0	-	-	-	-	0	Nil	Sampled July 2017
ACM	Brake Lining	Starboard Arm Stores, above Drawer BC5 – Winch Brake Lining	-	Q5114	0	-	-	-	-	0	Nil	Sampled July 2017
ACM	No Access	Chem dosing valve (next to dosing tank)	-	Presumed	1	1	2	0	0	4	A4	No Access September 2022
Upper Deck												
ACM	Blue gasket	Upper Deck Port Lube oil Aelo exhaust casing	96	ZA21842	1	2	3	2	2	10	A3	Program for Planned Removal, Manage & Re-inspect Periodically Investigation into potential use on vessel required
ACM	Gasket to main pipe line flange	Fire control room	-	B4663	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Blue gasket	upper deck port Lube oil Aelo system gasket	-	ZA21827	0	-	-	-	-	0	Nil	Sampled November 2023

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Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Gasket to water spray curtain gate valve bonnet	Fire control room	-	B4664	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to pipe line flange	Fire control room	-	B4665	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to gate valve flange	Fire control room	-	B4666	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to gate valve bonnet	Fire control room	-	B4667	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to feed pipe line flange	Fire control room	-	B4668	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to gate valve bonnet	Fire control room	-	B4669	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Packing to cable penetration	Fire control room	-	B4670	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Perforated panels to phone box	Emergency generator switchboard room	-	B4671	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Rope seal to door way	Emergency generator switchboard room	-	B4672	0	-	-	-	-	0	Nil	Most doors are rope however some are rubber
ACM	Rope seal to fire damper	Main corridor ceiling void adjacent to clean laundry	-	B4673	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Rope seal to fire damper	Main corridor ceiling void adjacent to clean laundry	-	B4674	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Cement to cable penetration	Air conditioning room	-	B4675	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Cement to cable penetration	Cable trunk room	-	B4676	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Panels to bulkhead	No 2 cargo switchboard room	-	B4677	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Insulation to bulkhead	No 2 cargo switchboard room	-	B4678	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Panels to bulkhead	Deck store /workshop	-	B4679	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to fi fi hydrant flange	External deck area aft	-	B4680	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to fi fi gate valve bonnet	External deck area aft	-	B4681	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to clean drain tank vent	External deck area aft	-	B4682	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to rescue boat winch motor	External deck area aft starboard	-	B4683	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to clean oil tank vent	External deck area aft starboard	-	B4684	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to diesel oil storage tank vent	External deck area aft starboard	-	B4685	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to waste oil overflow vent	External deck area aft starboard	-	B4686	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to working air ,line	Cargo machinery room starboard	-	B4687	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Rope seal to machinery bulkhead	Cargo machinery room starboard	-	B4688	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Rope seal to machinery bulkhead	Cargo machinery room starboard	-	B4689	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Perforated panels to phone box	Cargo machinery room starboard	-	B4690	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to technical water gate valve bonnet inlet	Cargo machinery room starboard	-	B4691	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to technical water gate valve bonnet outlet	Cargo machinery room starboard	-	B4692	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to drain water pipe flange	Cargo machinery room starboard	-	B4693	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to L O pipe line flange	Cargo machinery room starboard	-	B4694	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Seal to air duct system	Cargo machinery room starboard	-	B4695	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Packing to cable penetration	Cargo machinery room starboard	-	B4696	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to steam pipe line flange	Upper deck external Area starboard	-	B4697	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to return pipe line flange	Upper deck external Area starboard	-	B4698	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to no3 LWB tank vent	Upper deck external Area starboard	-	B4699	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to gate valve flange no 389	Upper deck external Area port adjacent to cargo no3	-	B4700	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to gate valve flange no 389	Upper deck external Area port adjacent to cargo no4	-	B4701	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to fi fi hydrant flange	External area under cargo on/off load area	80	B4702	1	1	2	0	0	4	A5	Sampled Dec 2012
ACM	Gasket to fi fi pipe line flange	External area under cargo on/off load area	-	B4703	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Brake lining to mooring winch	External area fwd port	-	B4704	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Brake lining to mooring winch	External area fwd port	-	B4705	0	-	-	-	-	0	Nil	Sampled Dec 2012

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ACM	Brake lining to anchor winch	External area fwd port	-	B4706	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Brake lining to mooring winch	External area aft port below heli deck	-	B4707	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Brake lining to mooring winch	External area aft below heli deck starboard	-	B4708	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to WBT vent	External area aft below heli deck starboard	-	B4709	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to FWT vent	External area aft below heli deck starboard	-	B4710	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Insulation board to iron rest	Clean laundry room	-	B4728	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket	Starboard, Manifold Pneumatic FSD Cowling	-	FD5277	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket	Starboard, DCP Monitor	-	FD5278	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Outboard Line to CMR Gasket	Upper Deck under CMR Outboard Line to CMR	-	Q5389	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket to no 1 AHU steam inlet	Upper deck - AHU room -no 1 AHU steam inlet	-	Q5448	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket to f.w pipe to accommodation	Upper deck - AHU room fwd - f.w pipe to accommodation	-	Q5449	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket to d.o tank manhole	Upper deck -emergency generator room - d.o tank manhole	-	Q5451	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket to deareator drain spectacle piece	Upper deck - Engine Room - upper deck casing - deareator drain spectacle pieces	-	Q5450	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Remnant Gasket on loose pipe flange	Upper deck - cargo switchboard room no 1- work bench	-	Q5320	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Edge radiator inlet flange Gasket	Upper deck - emergency generator room	-	Q5321	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	d.o tank drain cock	Upper deck -emergency generator room - d.o tank drain cock	-	Q5452	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket to d.o tank instanter valve	Upper deck -emergency generator room - d.o tank instanter valve	-	Q5453	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket to steam supply No.1. AHU	Upper deck - AHU room - steam supply No.1. AHUf	-	Q5468	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket to No.1. AHU humidifying supply valve	Upper deck - AHU room - No.1. AHU humidifying supply valve	-	Q5469	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket to Deck cable trunk by o/bd door	Upper deck - AHU room - Deck cable trunk by o/bd door	-	Q5470	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket to sight glass BVRCS tank	Upper deck -Hydraulics room - sight glass BVRCS tank	-	Q5472	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Loose Flange Gasket No1	Upper Deck Starboard Deck Workshop	-	Q5375	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Loose Flange Gasket No2	Upper Deck Starboard Deck Workshop,	-	Q5376	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Loose Flange Gasket No3	Upper Deck Starboard Deck Workshop	-	Q5377	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Vent Aft, Gasket	Upper Deck Starboard Aft -Starboard Bunker Vent Aft	-	Q5383	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	DCP Box 19 Gasket	Upper Deck, Starboard Aft DCP Box 19	-	Q5384	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Upper Deck Starboard Aft Hydrant Gasket	Upper Deck Starboard Aft Hydrant Gasket	-	Q5385	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Aft Pilot Ladder Air supply Gasket	Upper Deck Starboard Aft Pilot Ladder Air Supply Gasket	-	Q5386	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Aft GS Air Outlet Gasket	Upper Deck Starboard Aft GS Air Outlet Gasket	-	Q5387	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	CMR Hose Flange (Removed) Gasket	Upper Deck Starboard Under CMR Hose Flange (Removed) Gasket	-	Q5388	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Upper Deck under CMR Outboard Line to CMR Gasket	-	Q5389	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	G.S Air Outlet Gasket	Upper Deck under CMR G.S Air Outlet Gasket	-	Q5390	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Capstan Air Drive Gasket	Upper Deck under CMR Capstan Air Drive Gasket	-	Q5391	0	-	-	-	-	0	Nil	Sampled September 2017

Surveyor: Zane Gordon		Survey Type: Asbestos Survey				Date of Survey: 17/11/2023						
Site Contact: Chief Engineer		Vessel: Northwest Sanderling IMO:8608872				Review Date: 17/11/2024						
Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Aft GS Air Outlet Gasket	Upper Deck Starboard under Manifold Aft GS Air Outlet	-	Q5392	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Green gasket material	Upper Deck Port Lube oil Aelo mid engine port side - gasket -	92	ZA21819	1	0	2	0	1	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket	Upper Deck Port Lube oil Aelo fan casing	-	ZA21821	0	-	-	-	-	0	Nil	Sampled September 2023
ACM	Manifold ESD Air Connection Gasket	Upper Deck Starboard at Manifold ESD Air Connection	-	Q5393	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	No.2 Cargo Tank Gasket	Upper Deck Starboard Capstan at No.2 Cargo Tank	-	Q5394	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	G.S Air At No.1 Cargo Tank Gasket	Upper Deck Starboard G.S Air At No.1 Cargo Tank	-	Q5395	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Foscle Starboard Hydrant Gasket	Upper Deck Foscle Starboard Hydrant	-	Q5396	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Hyd Head Tank Alarm Gasket	Upper Deck Port Aft Hyd Head Tank Alarm	-	Q5397	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Chippy Store loose gasket	Upper Deck Port Aft Chippy Store,	-	Q5398	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	G.S Air Outlet Gasket	Upper Deck Port Aft UDPP Entrance G.S Air Outlet	-	Q5399	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	No.5 WBT Vent Aft Gasket	Upper Deck Port No.5 WBT Vent Aft Gasket	-	Q5400	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	No.2 Dome G.S Outlet Gasket	Upper Deck Port By No.2 Dome G.S Outlet	-	Q5403	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	No.1 Dome G.S Outlet Gasket	Upper Deck Port Forward By No.1 Dome G.S Outlet	-	Q5404	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Loose Valqua GF300 Gasket	Upper Deck -Starboard - Manifold Deck House	-	Q5473	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Upper Deck - Starboard Bunker HFO Fwd Manifold Gasket	Upper Deck -Starboard Bunker HFO Fwd Manifold Gasket	-	Q5474	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Fwd D.O Bunker Blank Gasket	Upper Deck Starboard Manifold - Fwd D.O Bunker Blank	-	Q5475	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Upper Deck Port Manifold - Fwd D.O Bunker Blank Gasket	Upper Deck Port Manifold - Fwd D.O Bunker Blank	-	Q5476	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Fwd F.O Bunker Blank Gasket	Upper Deck Starboard Manifold - Fwd F.O Bunker Blank	-	Q5477	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	AFT HFO Bunker Blank Gasket	Upper Deck Port Manifold - AFT HFO Bunker Blank	-	Q5478	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Aft D.O Bunker Blank Gasket	Upper Deck Port Manifold - Aft D.O Bunker Blank	-	Q5479	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	CMR drain CLR SEP TK vent gasket	CMR - drain CLR SEP TK vent	-	Q5356	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	CLR drain end cover gasket	CMR - drain end cover gasket	-	Q5357	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	CMR drain cooler inspection door gasket	CMR - drain cooler inspection door	-	Q5358	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	CMR no2 L.D bulkhead penetration gasket	CMR - no2 L.D bulkhead penetration	-	Q5359	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Lower old strainer between LD comps gasket	CMR - lower old strainer between LD comps	37	Q5360	1	0	2	1	1	5	A3	Gasket removed during sample – Remanent gasket on flange requires removal/cleaning
ACM	Lower forward port strainer outlet V/V gasket	CMR - lower forward port strainer outlet V/V	-	Q5361	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Work bench gaskets	CMR - work bench	-	Q5362	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	upper L.O STOR TL gauge glass gasket	CMR - upper L.O STOR TL gauge glass	-	Q5363	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Fibre Cement Panels	Dirty Gear Laundry Iron Rest Board,	-	Q5059	0	-	-	-	-	0	Nil	Sampled September 2017

Surveyor: Zane Gordon	Survey Type: Asbestos Survey	Date of Survey: 17/11/2023
Site Contact: Chief Engineer	Vessel: Northwest Sanderling IMO:8608872	Review Date: 17/11/2024

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Gasket	Fire System in Hose Cabinet –Adjacent to Dirty Gear,	-	Q5070	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Cement Penetration Material	Fire Control Room, Deck Head above Fire Alarm Panel,	-	Q5071	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Fire Control Room – Bonnet Valve	-	Q5072	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Starboard Mid – External – As. 7 Water Ballast Tank Vent	-	Q5094	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Portside – External No.4 Water Ballast Tank – Gasket To No.4 Water Ballast Tank Vent Flange Vent	-	Q5095	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Portside – External – Gasket to Small Pipe Adjacent to Water Ballast Tank Vent	-	Q5096	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	External – Starboard FWD - Winch DM6 – Brake Lining to Mooring Winch DM6	-	Q5097	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Port Side Manifold – External – Gasket to Vent Cover – Between VL-021 And VG- 071	-	Q5102	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Aft Adjacent to Helipad – External – Gasket to Fire Main Adjacent to Helipad	-	Q5103	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Starboard Aft – Adjacent to Deck – Gasket to Ball Valve – Adjacent Deck Workshop – External,	-	Q5104	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Forecastle Deck – Fwd below Anchor Winches - Gasket to No.2 Fwd Crane Motor – Hydraulic System Pipe Work,	-	Q5098	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Forecastle Deck – Fwd – Gasket to Emergency Fire Pump Discharge Valve	-	Q5099	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Forecastle Deck – Starboard – Gasket to Emergency Fire Pump – Educt from Fire Line,	-	Q5100	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Forecastle Deck – Portside – Gasket to Bilge Eductor Check Valve	-	Q5101	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Insulation	Funnel Casing – Starboard Wide – Insulation Material to Starboard Side Generator Exhaust Stack	-	Q5102	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Roll of gaskets material for GG Burner Cover	Fwd Bulkhead of IGG Room	-	M6667	0	-	-	-	-	0	Nil	Sampled October 2019
ACM	Gaskets	No1 A/C Compressor Mechanical Seal Cover	-	M6688	0	-	-	-	-	0	Nil	Sampled October 2019
ACM	Gaskets	Steam Trap Door	-	M6689	0	-	-	-	-	0	Nil	Sampled October 2019
ACM	Gasket material	Quick Close valve receiver ECC access flange	-	ZA9382	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	FCC Fire main isolating valve (Flying Passage)	-	ZA8943	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Deluge filter cover FCC	-	ZA8940	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Fire main under port manifold (overhead)	-	ZA8945	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Fire main - riser between 1 and 2 domes	-	ZA8948	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	CCFW Pipe to CMR (under CMR fwd)	-	ZA8944	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	LO Filling pipes stbd side	-	Presumed	1	1	2	0	0	4	A5	No Access to Sample September 2022
ACM	Gasket material	#2 S WBT aft air vent flange	-	ZA8947	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	#2 S WBT aft air vent flange	-	ZA8946	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Stbd aft - Vent pipes for ST CW Tank	-	ZA8920	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	FFC valves - firemain x-over to GS deluge valve	-	ZA8942	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	FFC valves - firemain x-over to CMR deluge valve	-	ZA8941	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	FO Bunker valve port aft flange	-	-	0	0	0	0	0	0	Nil	Sampled September 2022

Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
Fo'c'sle Store												
ACM	Blue gasket	Focsle Store Hydraulic Lube Oil Storage Gasket	-	ZA21826	0	0	0	0	0	0	Nil	Sampled November 2023
ACM	Loose gaskets - blue	Focsle store - starboard Aft - store rack	-	Q5364	P	0	0	0	0	0	Nil	Unknown mineral fibres detected by PLM analysis. Additional analysis required to confirm. Treat as ACM until proved otherwise.
ACM	Flange gaskets attached to plates	Focsle store -starboard Aft - story rack	-	Q5365	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket to hyd oil store tk outlet	Focsle store -starboard Aft - hyd oil store tk outlet	39	Q5366	1	0	2	0	0	3	A5	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to hyd oil store tk outlet port	Focsle store -starboard Aft - hyd oil store tk outlet	40	Q5367	1	0	2	0	0	3	A5	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to G.S air to Lo store tank	Focsle store - starboard Aft - g.s air to Lo store tank	-	Q5368	0	0	0	0	0	0	Nil	
ACM	Gasket to hyd trans P/P suction	Focsle store -starboard Aft - hyd trans P/P suction	41	Q5369	1	0	2	0	0	3	A5	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Flange snap connector gasket	F deck store - box adjacent to ca2	-	Q5237	0	0	0	0	0	0	Nil	
ACM	Gasket to No 1 Hyd P/P outlet	Focsle store - aft- No 1 hyd p/p outlet	-	Q5372	0	0	0	0	0	0	Nil	
ACM	Exhaust manifold Gasket	Focsle store - aft -emergency fire generator	42	Q5373	1	0	1	0	0	2	A5	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable

Surveyor: Zane Gordon		Survey Type: Asbestos Survey				Date of Survey: 17/11/2023						
Site Contact: Chief Engineer		Vessel: Northwest Sanderling IMO:8608872				Review Date: 17/11/2024						
Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Gasket to hyd oil tank return glass	Focsle Store -Starboard Aft - Hyd Oil Fuel Tank Return Glass	33	Q5371	1	0	2	0	0	3	A5	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
Under Deck Pipe Passage												
ACM	Spectacle piece downstream Gasket	Port UDPP- IG 2 dbpp	43	Q5339	1	0	2	0	0	3	A5	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Spectacle piece up stream Gasket	Port UDPP	44	Q5340	1	0	2	0	0	3	A5	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	IG to ebpp Valve Gasket	Port UDPP	45	Q5341	1	0	2	0	0	3	A5	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Gasket to HFO transfer pipe from E.R 1st flange	Port UDPP - HFO transfer pipe from E.R 1st flange	-	Q5343	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket to IG N/R V/V bonnet	Port UDPP - IG N/R V/V bonnet	-	Q5342	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket debris on top of IG NR V/V	Port UDPP- top of IG NR V/V	-	Q5344	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Flange Gasket	Port UDPP Aft -under IG D.O Fill valve	-	Q5345	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket to Aft bilge educator suction	Port UDPP- Aft bilge educator suction	-	Q5346	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket to Aft bilge N/r V/V bonnet	Port UDPP- Aft bilge N/r V/V bonnet	-	Q5347	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket to outboard DCP system	Port UDPP - outboard DCP system	-	Q5348	P	0	0	0	0	0	A4	Unknown mineral fibres detected by PLM analysis. Additional analysis required to confirm. Treat as ACM until proved otherwise.
ACM	Gasket on fire main isolator at manifold	Port UDPP- Fire main isolator at manifold	-	Q5349	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket to hydrant branch	Port UDPP- hydrant branch at 3wbt	-	Q5350	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket to fire main branch at 4wbt	Starboard UDPP-fire main branch at 4wbt	-	Q5351	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket to 1.0 mpa steam to cmr under cmr	Starboard UDPP-1.0 MPa steam to cmr under cmr	-	Q5352	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Tombo branded Gasket - loose by hfo tk fill v/v	Starboard UDPP- Aft by hfo TK fill v/v	-	Q5353	0	0	0	0	0	0	Nil	Sampled September 2017

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Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	KLINGERS branded Gasket, loose by hfo TK fill v/v	Starboard UDPP- Aft by hfo TK fill v/v	-	Q5354	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket to Aft bunker line flange	Starboard UDPP- Aft bunker line	-	Q5355	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Cable Penetration Debris beneath Deck Plates	No2 Cargo Switchroom	-	M6649	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Gasket Debris beneath Catwalk Grate	Adjacent Workbench - CMR	-	M6650	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Gasket Debris beneath Catwalk Grate	Adjacent HD Compressor Suction - CMR	-	M6651	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Gasket	DM3 Windlass Cover Inboard	-	M6652	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Packing Material	No1 Hydrate Suction Valves	-	M6653	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Gasket	Upper Valve to No3 Winch & Windlass Hydraulic Pump	-	M6654	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Gasket	Lower Valve to No3 Winch & Windlass Hydraulic Pump	-	M6655	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Gasket Material Debris in Grates	Adjacent Upper Valve to No4 Winch & Windlass Hydraulic Pump	-	M6656	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Gasket Material Debris in Grates	Adjacent Lower Valve to No4 Winch & Windlass Hydraulic Pump	-	M6657	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Gasket	DM9 Mooring Winch	-	M6690	0	0	0	0	0	0	Nil	Sampled October 2019
A Deck												
ACM	Blue gasket	AUX Fern PP Suct Steamer cover		ZA21839	0	-	-	-	-	0	Nil	Sampled November 2023
ACM	Brown Gasket	Main CCS SW Pump Svct Spool		ZA21838	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Blue gasket	Bunker W Press gauge line		ZA21837	0	-	-	-	-	0	Nil	Sampled November 2023
ACM	Brown Gasket	Top #2 DG Cooling Water Inlet Flexible Pipe	94	ZA21836	1	1	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Blue gasket	Bottom #2 DG Cooling Water Inlet Flexible Pipe		ZA21835	0	-	-	-	-	0	Nil	Sampled November 2023
ACM	Blue gasket	Emerg D20 Air Start Motor		ZA21834	0	-	-	-	-	0	Nil	Sampled November 2023
ACM	Brown gasket	Deluge line port manifold - 603/0163		ZA21833	0	-	-	-	-	0	Nil	Sampled November 2023
ACM	Brown gasket	Main Deck Rescue boat flood cable light clamp		ZA21832	0	-	-	-	-	0	Nil	Sampled November 2023
ACM	Rope seal to bottom door	Incinerator room		B4711	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to F O pipe line flange to incinerator	Incinerator room		B4712	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to sludge oil settling tank sight glass	Incinerator room		B4713	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Woven material to engine case lid	Life boat starboard		B4714	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket to pipe flange to life boat sprinkler system	External adjacent to life boat		B4715	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Floor covering	Main access corridor		B4716	0	-	-	-	-	0	Nil	Visually similar to main stairwell & control rooms
ACM	Insulation to ceiling panels	Main access corridor ceiling void		B4717	0	-	-	-	-	0	Nil	Visually similar throughout
ACM	Cement to cable penetration	Electrical trunk room		B4718	0	-	-	-	-	0	Nil	Sampled Dec 2012

Surveyor: Zane Gordon		Survey Type: Asbestos Survey				Date of Survey: 17/11/2023						
Site Contact: Chief Engineer		Vessel: Northwest Sanderling IMO:8608872				Review Date: 17/11/2024						
Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Panels to bulkheads & ceiling	Stewards store/ bond locker		B4719	0	-	-	-	-	0	Nil	Visually similar to other stores/ control rooms
ACM	Rope seal to bottom door	Incinerator room		B4711	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Gasket	Sensor Incinerator Flue Temp	-	FD5282	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	3rd sight gauge Gasket	A deck - incinerator room sludge tank gauge	-	Q5322	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	1st Sight gauge Gasket	A deck - incinerator room sludge tank gauge	-	Q5323	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	2nd sight glass Gasket	A deck - incinerator room sludge tank gauge	46	Q5324	1	0	2	0	0	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Heating element Gasket	A deck - pantry - hot-presses	-	Q5245	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Incinerator Flue at Damper Inlet	A Deck – Incinerator Room – Incinerator Flue At Damper Inlet.	47	Q5454	1	0	0	0	0	0	Nil	Removed
ACM	Gasket	A Deck Incinerator Room - Gasket to new pipe joint	91	ZA21820	1	0	2	0	1	4	A4	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Internal Debris	A Deck - Port Aft - Incinerator Room - Ash Disposal Unit	-	Q5455	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Gasket	Incinerator Room – D.O Tank,	-	Q5068	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	A Deck - incinerator room FD Fan	-	ZA21818	0	-	-	-	-	0	Nil	Sampled September 2023
ACM	Gasket	Incinerator Room – D.O Tank,	-	Q5069	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Fibre Cement Board Ceiling Support	Adjacent Dirty Linen Locker	-	M6646	0	-	-	-	-	0	Nil	Sampled October 2019
ACM	Grout to Floor Tiles	Fish & Meat Rooms	-	M6647	0	-	-	-	-	0	Nil	Sampled October 2019
ACM	Insulation to Ductwork	Vegetable Locker	-	M6648	0	-	-	-	-	0	Nil	Sampled October 2019
ACM	Insulation Block	Internal of Incinerator	-	M6683	0	-	-	-	-	0	Nil	Sampled October 2019
ACM	Gasket material	Deaerator manhole door	-	ZA8921	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Deluge pipe #2 Dome top fwd/stbd spray pipe	-	ZA8949	0	0	0	0	0	0	Nil	Sampled September 2022
B Deck												
ACM	Board panel	Sauna	-	B4722	0	0	0	0	0	0	Nil	Sampled Dec 2012
ACM	Floor covering	Gymnasium	-	B4723	0	0	0	0	0	0	Nil	Sampled Dec 2012
ACM	Panels to bulkhead & ceiling	Gymnasium store	-	B4724	0	0	0	0	0	0	Nil	Visually similar to other stores/ control rooms
ACM	Loose Screws with debris in heating element	B deck - sauna	-	Q5246	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Incinerator Id fan outlet flange Gasket	B deck - e/r casing	-	Q5325	0	0	0	0	0	0	Nil	Removed
ACM	Gasket to no2 FDA fan inlet access hatch	B deck - ER casing No 2 FDA fan	-	Q5326	P	0	0	0	0	0	Nil	Unknown mineral fibres detected by PLM analysis. Additional analysis required to confirm. Treat as ACM until proved otherwise.
ACM	Gasket to sewerage pipe Gasket	B deck - air truck - sewerage pipe	-	Q5382	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Fibre Cement Panels	Sauna Panels Around Heating Element (Short Panels)	-	Q5056	0	0	0	0	0	0	Nil	Sampled September 2017

Surveyor: Zane Gordon		Survey Type: Asbestos Survey				Date of Survey: 17/11/2023						
Site Contact: Chief Engineer		Vessel: Northwest Sanderling IMO:8608872				Review Date: 17/11/2024						
Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Fibre Cement Panels	Sauna Walls around Heating Element (Large Panels),	-	Q5058	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Woven Seal	Pool Area – Wall Mounted Alarm	-	Q5065	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket	Starboard Aft – External – Gasket to Air Valve Flange	-	Q5105	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Fibre Board	B Deck – Sauna Door (Internal), Internal Door Material	-	T6098	0	-	-	-	-	0	Nil	Sampled January 2018
D Deck												
ACM	D Deck Port Fire Hydrant Gasket,	D Deck Port Fire Hydrant Gasket	-	Q5380	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	White Powder Coating on Penetration Material	D Deck – Electrical Cable Trunk – Fwd Bulk Head Penetration,	-	T6100	0	-	-	-	-	0	Nil	Sampled December 2018
F Deck												
ACM	Deckhead Penetration Material	F Deck – Commsn Room – Starboard Deckhead Penetration	-	T6094	0	-	-	-	-	0	Nil	Sampled January 2018
ACM	Deck Head Penetration Material Debris	Electrical Cable Store – Aft,	81	FD2510	1	2	2	0	1	6	A2	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC).
ACM	Panels to bulkhead & ceiling	Equipment store	-	B4725	0	0	0	0	0	0	Nil	Visually similar to other stores/ control rooms
ACM	Panel behind Panels to bulkhead	Equipment store	-	B4726	0	0	0	0	0	0	Nil	Visually similar to other stores/ control rooms
ACM	Vortex jpi 600 NA 304 Gasket	F Deck - Stores AB1 - General Cargo Spares box	-	Q5238	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Electromagnetic seal for lower flange packing -921.10.01.g01	F Deck - stores bc2	-	Q5240	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Liquid cargo pumping system flange Gasket - pillar clean sheet No.5611	F Deck - stores ca3	-	Q5241	P	0	0	0	0	0	A4	Unknown mineral fibres detected by PLM analysis. Additional analysis required to confirm. Treat as ACM until proved otherwise.
ACM	Cable penetration insulation	F Deck - cable locker bulkhead	-	Q5242	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	Cable penetration insulation	F Deck - cable locker	49	Q5243	1	3	3	1	2	10	A2	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Vent fire dampener flange gasket	F Deck - electrical trunk	-	Q5244	0	0	0	0	0	0	Nil	Sampled September 2017
ACM	White Cable Penetration Debris	Cable Locker – Stbd Fwd	-	M6639	0	0	0	0	0	0	Nil	Sampled October 2019

Surveyor: Zane Gordon		Survey Type: Asbestos Survey				Date of Survey: 17/11/2023						
Site Contact: Chief Engineer		Vessel: Northwest Sanderling IMO:8608872				Review Date: 17/11/2024						
Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Grey Cable Penetration Insulation Debris	Cable Locker – Stbd Fwd	86	M6640	1	3	3	1	2	10	A2	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Cable Penetration Insulation Debris	On Top of Starters Cable Locker – Stbd Aft Bulkhead	-	M6641	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	New Cable Penetration Insulation	Cable Locker – Stbd Fwd	-	M6642	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Cable Penetration Insulation Debris	Electrical Cable Trunk – Stbd Aft	-	M6643	0	0	0	0	0	0	Nil	Sampled October 2019
ACM	Grey Putty Debris	On Top of Lighting Panel Board in Cable Trunk – Stbd Bulkhead	87	M6644	1	3	3	1	2	10	A2	Manage and maintain in situ. Inspect periodically for damage. Any planned upgrade, renovation or demolition of this item should be addressed by an unrestricted or restricted licensed asbestos removalist contractor (LARC). Label as reasonably practicable
ACM	Cable Penetration Insulation Debris in Cable Tray	Cable Locker – Stbd Fwd adjacent Aft Bulkhead	88	M6645	0	0	0	0	0	0	Nil	Removed
ACM	Gasket material	Boiler funnel uptake manhole door	-	Presumed	1	1	2	0	0	4	A5	No Access to Sample September 2022
ACM	Gasket material	Fire main aft of external door port side	-	ZA9384	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Fire main aft of external door stbd side	-	ZA9385	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Cable room stbd - new spray pump cable packing Fwd	-	ZA9383	0	0	0	0	0	0	Nil	Sampled September 2022
ACM	Gasket material	Cable room stbd - new spray pump cable packing Aft	-	ZA9382	0	0	0	0	0	0	Nil	Sampled September 2022
G Deck												
ACM	Penetration Material – Debris above Door	G Deck – Electrical Cable Trunk Port Side above Door, Bulkhead	-	T6093	0	-	-	-	-	0	Nil	Sampled January 2018
ACM	Deck Head Penetration Material	G Deck – CACC – IAS Console Deck Head Penetration,	-	T6099	0	-	-	-	-	0	Nil	Sampled January 2018
Bridge												
ACM	Insulation board to inner side of instrument controls	Navigation bridge	-	B4727	0	-	-	-	-	0	Nil	Sampled Dec 2012
ACM	Flange Gasket to fresh water pipe	Brigade - fwd starboard - FW pipe	-	Q5378	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket material attached to nylon instrument mount - no 19 azimuth ring	Bridge - starboard sextant cupboard	-	Q5379	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Freshwater Pipe Flange Gasket	Bridge Forward Starboard Cupboard	-	Q5378	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Gasket Material Attached to Nylon Instrument Mount - 19 Azimuth Ring	Bridge Starboard Sextant Cupboard,	-	Q5379	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Cable Penetration Debris	Radar Locker	-	M6638	0	-	-	-	-	0	Nil	Sampled October 2019
Tanks												
ACM	Flying Passage No.2 Dome Gasket	Flying Passage No.2 Dome Gasket	-	Q5408	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Flying Passage No.3 Dome Gasket	Flying Passage No.3 Dome	-	Q5409	0	-	-	-	-	0	Nil	Sampled September 2017
ACM	Flying Passage No.4 Dome Gasket	Flying Passage No.4 Dome Gasket	-	Q5410	0	-	-	-	-	0	Nil	Sampled September 2017

Surveyor: Zane Gordon		Survey Type: Asbestos Survey				Date of Survey: 17/11/2023						
Site Contact: Chief Engineer		Vessel: Northwest Sanderling IMO:8608872				Review Date: 17/11/2024						
Hazard	Material Description	Location	Photograph No.	Sample No.	Asbestos Fibre Type	Surface Treatment	Product Type	Condition	Likelihood of Disturbance	Risk Score	Action Rating	Comments/Recommendations
ACM	Between #4 and #3 Domes at Big Bend IG Blank Gasket	Between #4 and #3 Domes at Big Bend IG Blank	-	Q5480	0	-	-	-	-	0	Nil	Sampled September 2017

APPENDIX B: LABORATORY ANALYSIS CERTIFICATES



Bulk Identification Report

Job No: 754-PEREN324134 Bulk ID Report Stormpetral Gas Tanker 04122023
Client: Shell Tankers Australia
Client Address: Shell Tankers Australia Pty Ltd, Shell House, 562 Wellington Street, Perth WA 6000
Contact: Zane Gordon
E-mail: zane.gordon@tetratech.com
Date Sampled: 25-11-23
Date Analysed: 01-12-23
Date Authorised: 04-12-23
Sampled By: Zane Gordon
Site: Stormpetral Gas Tanker



Accredited for compliance with ISO/IEC 17025 - Testing
 Accreditation No:2220
 Corporate Site No:16909

Please note: Where you have provided the samples for analysis, Tetra Tech Coffey Pty Ltd does not take any responsibility for the quality of the such samples. This report relates exclusively to the samples analysed by Tetra Tech Coffey Pty Ltd and as such only the samples submitted or collected for analysis have been considered in presenting these results. The data and results contained in this report are not representative of the site, product or source material as a whole. Tetra Tech Coffey Pty Ltd does not make any warranty or representation in relation to the site, product or source material as a whole. If you suspect any material to contain asbestos, then you must immediately stop the works and activities at the site or in respect of the materials and engage Tetra Tech Coffey Pty Ltd or another suitably trained asbestos hygienist to sample, assess or re-assess (as the case may be) the material suspected to contain asbestos.

Test Method: **Asbestos In Bulk Samples and Non-homogenous Material**
 Tetra Tech Coffey Pty Ltd analyses bulk samples for asbestos using polarising light microscopy and dispersion staining techniques in accordance with Coffey SOP WILAB1, and Australian Standard (AS) 4964 – 2004, Method for the qualitative identification of asbestos in bulk samples (AS 4964). The detection limit for the test method as per AS 4964 is 0.1 g/kg. For non-homogenous samples a semi-quantitative aspect is adopted for the test method and is taken into account when reporting the results. As per Tetra Tech Coffey Pty Ltd's NATA approved SOP WILAB1 sample retention periods are set at 1 month for all samples from the date of analysis.

Analysed At: Tetra Tech Coffey Pty Ltd Laboratory, Level 20, Tower B, Citadel Towers 799 Pacific Highway Chatswood NSW 2067

Total Samples: 25

Approved Identifier
 Panika Wongchanda

Approved Signatory
 Matthew Tang

Sample No.	Location & Description	Sample Size (-)	Results
ZA21818	A Deck - Incinerator room FD Fan Gasket - Brown non-homogenous fibrous dust & debris	0.4 g	No asbestos detected above the reporting limit of 0.1 g/kg Organic fibres detected Synthetic mineral fibres detected No trace (respirable) asbestos detected as per AS 4964 2004
ZA21819	Upper Deck Port Lube oil Aelo mid engine port side - gasket - Green fibrous gasket material	17 x 4 x 2 mm	Chrysotile (white asbestos) detected Organic fibres detected
ZA21820	A Deck Incinerator Room - Gasket to new pipe joint - Grey fibrous gasket material	9 x 8 x 1 mm	Chrysotile (white asbestos) detected Organic fibres detected
ZA21821	Upper Deck Port Lube oil Aelo fan casing - gasket - Black rubbery gasket material	9 x 5 x 2 mm	No asbestos fibres detected Organic fibres detected
ZA21822	5th deck - Main turbine condenser suction tube gasket - Grey painted brown fibrous gasket material	16 x 4 x 2 mm	No asbestos fibres detected Organic fibres detected Synthetic mineral fibres detected
ZA21823	3rd deck workshop Slichem gasket - Black/blue fibrous gasket material	20 x 12 x 2 mm	No asbestos fibres detected Organic fibres detected
ZA21824	3rd deck - Lube oil system to Generator 2 Ventilation Cover Gasket Starboard - Black rubbery gasket material	8 x 3 x 1 mm	No asbestos fibres detected Organic fibres detected
ZA21825	3rd deck - Lube oil system to Generator 2 Gasket Adjacent walkway Port Side - Green fibrous gasket material	8 x 6 x 1 mm	Chrysotile (white asbestos) detected Organic fibres detected
ZA21826	Focale Store Hydraulic Lube Oil Storage Gasket - Blue fibrous gasket material	9 x 2 x 1 mm	No asbestos fibres detected Organic fibres detected

Sample No.	Location & Description	Sample Size (-)	Results
ZA21827	upper deck port Lube oil Aelo system gasket - Blue fibrous gasket material	11 x 4 x 1 mm	No asbestos fibres detected Organic fibres detected
ZA21828	3rd deck - Lube oil system to Generator 2 Main Gasket to cooler - Black rubbery gasket material	12 x 4 x 3 mm	No asbestos fibres detected Organic fibres detected
ZA21829	3rd deck workshop - 3 star Gasket store - Blue fibrous gasket material	25 x 9 x 2 mm	No asbestos fibres detected Organic fibres detected
ZA21830	3rd deck workshop - fibrous O-ring - Orange fibrous gasket material	13 x 4 x 2 mm	No asbestos fibres detected Organic fibres detected
ZA21831	3rd deck - Lube oil system to Generator 2 Ventilation Cover Gasket - Green painted black bituminous membrane	10 x 4 x 1 mm	No asbestos fibres detected Organic fibres detected
ZA21832	Main Deck Rescue boat flood cable light clamp - Green rubbery mastic material & brown fibrous gasket material	75 x 30 x 20 mm	No asbestos fibres detected Organic fibres detected
ZA21833	Deluge line port manifold - 603/0163 - Gasket - Brown fibrous gasket material	150 x 50 x 18 mm	No asbestos fibres detected Organic fibres detected
ZA21834	Emerg D20 Air Start Motor - Gasket - Blue fibrous gasket material	140 x 140 x 2 mm	No asbestos fibres detected Organic fibres detected
ZA21835	Bottom #2 DG Cooling Water Inlet Flexible Pipe - Gasket - Blue fibrous gasket material	180 x 172 x 5 mm	No asbestos fibres detected Organic fibres detected
ZA21836	Top #2 DG Cooling Water Inlet Flexible Pipe - Gasket - Brown/grey fibrous gasket material	168 x 168 x 5 mm	Chrysotile (white asbestos) detected
ZA21837	Bunker W Press gauge line - Gasket - Brown fibrous gasket material	52 x 50 x 2 mm	No asbestos fibres detected Organic fibres detected
ZA21838	Main CCS SW Pump Svt Spool - Brown fibrous gasket material & black fibrous gasket material	52 x 20 x 6 mm	Chrysotile (white asbestos) detected
ZA21839	AUX Fern PP Suct Steamer cover - Blue fibrous gasket material	45 x 18 x 4 mm	No asbestos fibres detected Organic fibres detected
ZA21840	2nd deck 2as Drawer AE1 - Spare Gasket 190.00.00.P03 - Blue fibrous gasket material	95 x 33 x 2 mm	No asbestos fibres detected Organic fibres detected
ZA21841	2nd deck 2as Drawer AH2 - Spare Forward fire pump gasket - Black fibrous gasket material	93 x 93 x 2 mm	Chrysotile (white asbestos) detected
ZA21842	Upper Deck Port Lube oil Aelo exhaust casing - gasket - Blue fibrous gasket material	12 x 4 x 1 mm	Chrysotile (white asbestos) detected Organic fibres detected

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APPENDIX C: RISK ASSESSMENT & GLOSSARY

Tetra Tech Coffey adopts the following risk assessment algorithm in order to assess the risks associated with individual asbestos-containing materials identified:

ASBESTOS REGISTER SECTION

Friable

Variable	Score	Description
Friability	Y	Asbestos cement debris, or material which when dry may become crumbled, pulverised or reduced to powder by hand pressure.
	N	Bonded i.e. non-friable material

Materials Assessment

Variables	Scores	Examples of Score Descriptions
Asbestos Type	0	No asbestos
	1	Chrysotile only
	2	Amphibole asbestos (excluding crocidolite)
	3	Crocidolite
Product Type	0	No asbestos detected
	1	Bonded asbestos in good condition
	2	Friable asbestos in good condition or cement in poor condition
	3	Friable asbestos in poor condition
Extent of Damage	0	No visible damage
	1	Minor scratches or mark, broken edges
	2	Significant breakage, many small areas of damage to friable material
	3	High damage, visible debris
Surface Treatment	0	Bonded Asbestos including encapsulated asbestos cement
	1	Enclosed laggings, sprays and boards or bare cement
	2	Bare board or encapsulated lagging/spray or cement debris
	3	Unsealed lagging/spray

Location Assessment

Variables	Scores	Examples of Score Descriptions
Occupant Activity	0	Rare disturbance, e.g. little used store room
	1	Low disturbance, e.g. Office type activity
	2	Periodic disturbance, e.g. industrial or vehicular activity which may contact ACMs
	3	High levels of disturbance e.g. fire door with AIB sheet in constant use
Likelihood of Disturbance	0	Usually inaccessible or unlikely to be disturbed
	1	Minimal likelihood for disturbance
	2	Likely disturbance
	3	Frequent disturbance
Human Exposure Potential	0	Infrequent
	1	Monthly
	2	Weekly
	3	Daily
Maintenance Activity	0	Minor disturbance (e.g. possibility of contact when gaining access)
	1	Low Disturbance (e.g. changing light bulbs in AIB ceiling).
	2	Medium disturbance (e.g. lifting one or two ceiling tiles to access a valve)
	3	High level of disturbance (e.g. moving a number of AIB ceiling tiles to replace a valve or for re-cabling)

Risk Score

The asbestos-containing material risk score is a quantitative assessment determined by the sum of the scores based on the Materials and Location Assessments, i.e. Risk score = Material Score + Location Score (out of as possible 24).

Should no asbestos be detected then the register will indicate a risk score of 0.

Variable	Scores	Examples of Score Descriptions
Risk Score	2 - 4	Very Low Risk - Action Score A5
	5 - 7	Low Risk - A4
	8 - 11	Medium Risk - Action Score A3
	12 - 15	High Risk - Action Score A2
	16 - 24	Very High Risk - Action Score A1

Action Ratings

A1	Action 1	Restrict Access, Manage and Remove Under Fully Controlled Conditions
		<p>As a guide, the material conforms to one, or more, of the following:</p> <ul style="list-style-type: none"> • Friable or poorly bonded to substrate, located in accessible areas • Severely damaged/water damaged, or unstable • Further damage or deterioration likely • Friable asbestos material located in air conditioning ducting • Asbestos debris in reasonably accessible areas
A2	Action 2	Restrict Access, Manage and Remove Utilising Appropriate Control Measures
		<p>As a guide, the material conforms to one, or more, of the following:</p> <ul style="list-style-type: none"> • Damaged material (including debris) • In a reasonably accessible area • Possibility of disturbance through contact • Stored asbestos material in reasonably accessible areas
A3	Action 3	Program for Planned Removal, Manage & Re-inspect Periodically
		<p>As a guide, the material conforms to one, or more, of the following:</p> <ul style="list-style-type: none"> • Further disturbance or damage unlikely other than during maintenance or service • Readily visible for further assessment • Asbestos debris in rarely accessed areas • Possibility of deterioration caused by weathering • Poorly bonded to substrate with bonding un-achievable
A4	Action 4	Enclose, Encapsulate or Seal, Manage & Re-inspect Periodically
		<p>As a guide, the material conforms to one, or more, of the following:</p> <ul style="list-style-type: none"> • Damaged material in reasonably accessible area • Bonded asbestos products located in accessible areas • Friable material or poorly bonded to substrate with bonding achievable • Possibility of fibre release through non aggressive disturbance or contact • Possibility of deterioration caused by weathering and bonding possible
A5	Action 5	Manage & Re-inspect Periodically
		<p>As a guide, the material conforms to one, or more, of the following:</p> <ul style="list-style-type: none"> • Firmly bonded to substrate and readily visible for inspection • Inaccessible and / or fully contained • Stable and damage unlikely

Action Required

The Tetra Tech Coffey consultant surveying the vessel may complete conduct remedial actions (including restricted access to stored materials) where suspect materials are identified until laboratory testing can be completed. Where negative results for samples are returned the items/materials may return to circulation.

R	Return to Service	Restricted Access to Items for Reassurance
		Return to Service, No Asbestos Detected

APPENDIX D: LEGISLATIVE REQUIREMENTS

LEGISLATIVE REQUIREMENTS

The assessment, and preparation of this report have been undertaken in accordance with the requirements of State/Territories legislation and standards outlined below.

State/Territories relevant legislation

States & Territories	Acts	Legislation
Western Australia (WA)	Work Health and Safety Act 2020	Work Health and Safety (General) Regulations 2022

States/Territories code of practices & compliance codes

States & Territories	Codes of Practices & Compliance Codes	
Western Australia (WA)	Code of Practice: How to manage and control asbestos in the workplace	Code of Practice: How to Safely Remove Asbestos

Each section is to be read in conjunction with the whole of this report, including the appendices.

APPENDIX E: METHODOLOGY

METHODOLOGY

Asbestos surveys are undertaken considering a risk management approach, in accordance with relevant statutory regulations and relevant Codes of Practice. A risk assessment was conducted based on a number of factors associated with ACM identified during the survey and prioritised through Risk and Action Classifications.

The assessment involved the onsite investigation for the presence of ACM. Information was collected from the site owners/occupiers/tenants where available on relevant issues pertaining to the site. Based on the available data and the status at the time of inspection, where items were identified, visual and/or analytical characterisation (where required) was performed and reported in **Appendix A: Asbestos Register**.

The assessment was conducted on the basis of the condition, type and location of the materials at the time of inspection. The scope of this investigation did not allow intrusive sampling techniques to be undertaken in all locations, and consequently the register may have limitations as a reference document for the purposes of renovation or demolition.

Only 'typical' suspected material occurrences are inspected and sampled. Sampling is undertaken on a representative basis, for example, the inspection of one fire door of the same type within the same area is undertaken (i.e. not every 'matching' fire door is examined), unless specifically instructed. Sample collection was performed in a non-destructive and non-invasive manner by competent persons. Presumptions, based on knowledge and experience, that inaccessible areas contain asbestos materials may also be made and stated within the register.

Samples collected are representative of the material sampled, individually identified, transported, analysed and reported in accordance with relevant Statutory Regulations, Codes of Practice and Tetra Tech Coffey's Work Instructions. Laboratories undertaking analysis are appropriately NATA certified for the analysis conducted.

The presence of asbestos in bulk samples is determined by Polarised Light Microscopy (PLM) with dispersion staining techniques. Where asbestos was found to exist, a risk assessment was conducted on each item and a priority rating applied. This was conducted in accordance with the protocols described in **Section 4: Risk Assessment**.

The asbestos register is made up of relevant information gathered on site plus Tetra Tech Coffey's assessment of risk and assignment of action ratings. Reference to photographs, where available, is made in the register along with sample identification and analysis results, where applicable. Sample analysis results from previous assessments may be utilised and referenced in this register.

APPENDIX F: STATEMENT OF LIMITATIONS

STATEMENT OF LIMITATIONS

This report and the associated services performed by Tetra Tech Coffey are in accordance with the scope of services set out in the contract between Tetra Tech Coffey and the Client. The scope of services was defined by the requests of the Client, by the time and budgetary constraints imposed by the Client, and by the availability of access to the site.

Tetra Tech Coffey derived the data in this report primarily from visual inspections, examination of available records, interviews with individuals with information about the site, and if requested, limited sample collection and analysis made on the dates indicated. In preparing this report, Tetra Tech Coffey has relied upon, and presumed accurate, certain information provided by government authorities, the Client and others identified herein. The report has been prepared on the basis that while Tetra Tech Coffey believes all the information in it is deemed reliable and accurate at the time of preparing the report, it does not warrant its accuracy or completeness and to the full extent allowed by law excludes liability in contract, tort or otherwise, for any loss or damage sustained by the Client arising from or in connection with the supply or use of the whole or any part of the information in the report through any cause whatsoever.

Limitations also apply to analytical methods used in the identification of substances (or parameters). These limitations may be due to non-homogenous material being sampled (i.e. the sample to be analysed may not be representative), low concentrations, the presence of 'masking' agents and the restrictions of the approved analytical technique. As such, non-statistically significant sampling results can only be interpreted as 'indicative' and not used for quantitative assessments.

The data, findings, observations, conclusions and recommendations in the report are based solely upon the state of the site at the time of the investigation. The passage of time, manifestation of latent conditions or impacts of future events (e.g. changes in legislation, scientific knowledge, land uses, etc.) may render the report inaccurate. In those circumstances, Tetra Tech Coffey shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of the report.

This report has been prepared on behalf of and for the exclusive use of the Client and is subject to and issued in connection with the provisions of the agreement between Coffey and the Client. Tetra Tech Coffey accepts no liability or responsibility whatsoever and expressly disclaims any responsibility for or in respect of any use of or reliance upon this report by any third party or parties.

It is the responsibility of the Client to accept if the Client so chooses any recommendations contained within and implement them in an appropriate, suitable and timely manner.

Asbestos Survey

Asbestos Surveys are non-destructive and as such are not intended for use or referral for the purpose of breaking up of vessels, refit, repair or rebuild and modification or structural alterations. In the event of future breaking up, refit, repair or rebuild and modification or structural alterations further investigation, which may entail destructive testing, shall be required.

No inspection can be guaranteed to locate all asbestos on board a vessel. The assessment cannot be regarded as absolute, without extensive invasion of vessels. Future breaking up and or modification to vessels may expose situations, which were concealed or otherwise impractical to access during this assessment.

Tetra Tech Coffey assessors take samples at any situations known, or suspected, to contain Asbestos. Where the analysis determines that No Asbestos is Detected (NAD) the samples are listed in the report to provide information for future assessments.

Representative sampling is defined as one like sample per consistent material type, situation or item. In these instances, only one test sample will be collected for analytical confirmation and the results expressed as consistent and typical of the site.

Due to the very low concentration of asbestos fibres and the non-homogenous matrix of vinyl floor tiles, false negative results may be obtained. Therefore, the accuracy of all results cannot be guaranteed.

Notably, with some asbestos containing bulk material it can be very difficult, or impossible to detect the presence of asbestos using the polarised light microscopy analytical method, even after ashing or disintegration of samples. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or attributed to the fact that, very fine fibres have been distributed individually throughout the materials.

The analysis of many asbestos products used as a component of insulation materials, may be compromised in instances where the material has been heat affected, as heat may alter the morphology of the fibrous material.

The Client must not rely on an inspection or report as indicating that a site is “asbestos free”. All that the report can be relied upon to show is that no asbestos was found (or that only such asbestos was found as was reported to be found) in the course of the inspection. The findings of the report must be considered together with the specific scope and limitations of the type of inspection undertaken.