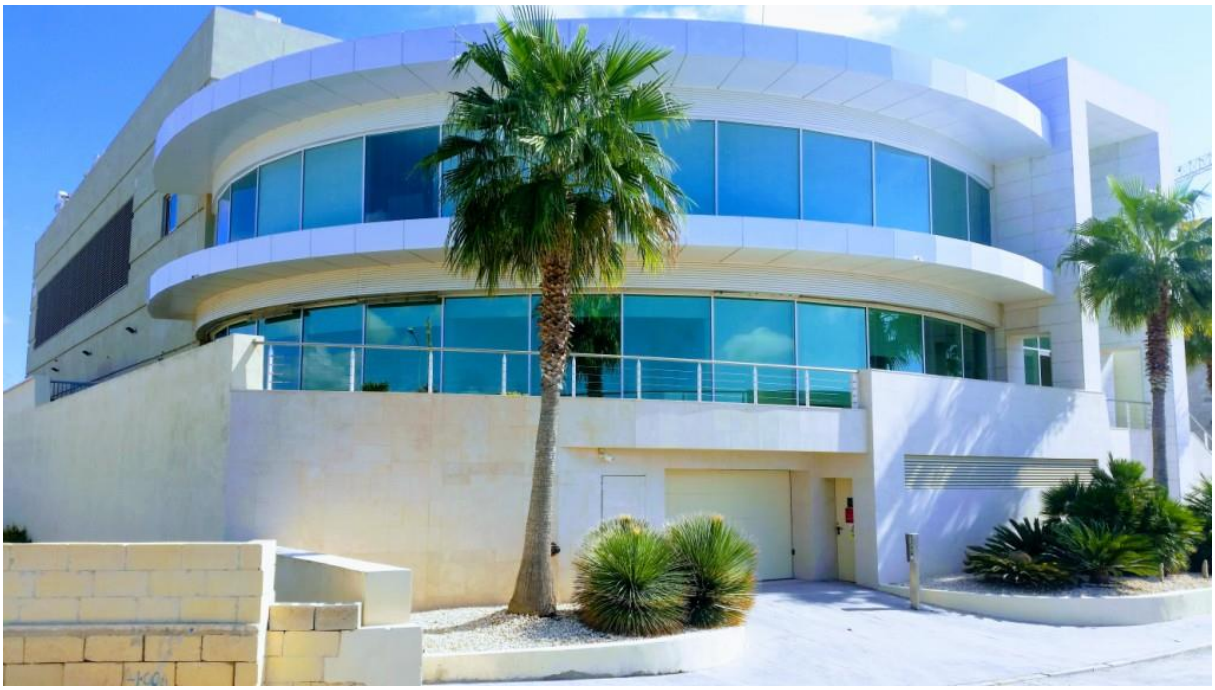
IP0004/21

STERLING CHEMICAL MALTA LTD, HAL FAR

APPLICATION FOR VARIATION OF IPPC PERMIT
VOLUME 4: RESPONSE TO FEEDBACK ON IPPC APPLICATION



Version 1: June 2021

Report Reference:

En-Sure Ltd, 2021. Sterling Chemical Malta Ltd, Hal Far. Application for Variation of IPPC Permit: Volume 4: Response to Feedback on IPPC Application (Version: 1). San Gwann, June 2021; v + 14 pp. + 1 Appendix.

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Quality Assurance

Sterling Chemical Malta Ltd, Hal Far
Application for Variation of IPPC Permit: Volume 4
June 2021

Report for: Sterling Chemical Malta Ltd

Revision Schedule

Rev	Date	Details	Prepared by	Reviewed by	Approved by
00	Jun. 2021	Submission to ERA	**Rachel Decelis** Senior Environmental Consultant	**Rachel Xuereb** Director	**Adrian Mallia** Managing Director

File ref: N:_Active Projects\Environmental Permitting\ES_STG010 - Sterling variation waste storage\IPPC application\04) Consolidated Jun 2021\Vol 4 - Response to feedback.docx

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CONTENTS

APPENDIX

RESPONSE TO FEEDBACK ON IPPC APPLICATION

Feedback from ERA

Form A

Section	Duly made?	ERA Comments 4th May 2021	Sterling Chemical Malta Ltd 27/05/2021
Introductory text	✓	Within the consolidated application in the tab of, ''If you know your Application Reference Number, please enter it into the box below:'' kindly enter IP0004/2.	Updated to include IP0004/21.
A1.1	✓	Noted.	
A1.2	✓	Noted.	
A1.3	✓	Noted.	
A1.4	✓	Noted.	
A2.1	✓	Noted.	
A3.1	✓	Noted.	
A3.5	✓	Noted.	
A3.6	✓	Noted.	

Form C

Section	Duly made?	ERA Comments 4th May 2021	Sterling Chemical Malta Ltd 03/06/2021
C1.1	✓	Proposed variations have been noted.	
C1.2	✓	***Document: Volume 2: Chapter 2: C1.2- Non-Technical Description*** Noted.	
C1.3	✓	***Document: Volume 2: Chapter 2: C1.3 Proposed Variations*** Noted.	
C1.4	✓	Noted.	
C1.4.1	✓	***Document: Volume 3: Addendum 3 to Land & Groundwater Risk Assessment*** Noted.	
C1.4.2	✓	***Document: Volume 3*** Noted.	
C1.4.3	✓	***Document: Volume 3*** Noted.	
C2.1	✓	***Document: Volume 2: Chapter 3***	

Section	Duly made?	ERA Comments 4th May 2021	Sterling Chemical Malta Ltd 03/06/2021
C2.2		**Document: Volume 2: Chapter 3; C2.1 Environmental Management System**	
C2.2.1	✓	Noted.	
C2.2.2	✓	**Document: Volume 2: Chapter 3; C2.2 Proposed Activities** Noted.	
C2.2.3	✓	Noted.	
C2.2.4	✓	***Document: Volume 2: Chapter 3; C2.2.4 Best available technique assessment*** Noted.	
C2.2.5	✓	**Document: Volume 2: Chapter 3; C2.2.5 Alternatives** Noted.	
C2.3	✓	Noted.	
C2.4	✓	Noted.	

Section	Duly made?	ERA Comments 4th May 2021	Sterling Chemical Malta Ltd 03/06/2021
C2.5	✓	**Document: Volume 2: Chapter 3; C2.5 Maintenance** Noted.	
C2.6 C2.6.1. C2.6.2	✓	**Document: Volume 2: Chapter 3; C2.6 Energy** Noted.	
C2.7	✓	**Document: Volume 2: Chapter 3; C2.7 Water** Noted.	
C2.8	x	**Document: Volume 2: Chapter 3; C2.8 Risk Assessment** In the event of a spill could any of the substances such as benzene or halogenated solvents cause damage to the HDPE pipework when passing the liquid to the water washing reservoir? If this could be the case, kindly describe measures taking place to prevent any resulting emissions to the environment. **Document: Risk assessment in the EIA**	From literature, HDPE has good resistance to the aggression of the substances we use which are usually diluted in water. The system was tested immediately after installation and the system is set up with partition valves for targeted checks. In addition to that also the ventilation piping is made of HDPE, because of its high resistance to chemicals.

Section	Duly made?	ERA Comments 4th May 2021	Sterling Chemical Malta Ltd 03/06/2021
		Document: Volume 3: Addendum 3 to Land & Groundwater Risk Assessment Risk rating noted.	
C2.9	✓	**No changes to original permit** Noted.	
C2.10	N/A	Noted	
C2.11	N/A	Noted	
C3			
C3.1.1	✓	**Document: Volume 2: Chapter 4** Kindly provide approximate maximum amounts of waste to be stored for each EWC code. Will any solid waste such as off-spec batches/rejects generated during the production process be stored in the warehouse? If so, how will this waste be safely transported to the warehouse? Should there be any spill of solid (eg. powder) waste what is the proposed remedial action plan?	It is not possible to provide maximum amounts of waste by EWC code, as it depends on the production activities. However, as stated in the application, the maximum approximate quantity of waste will be about 100 cubic metres in total. No solid waste will be stored.

Section	Duly made?	ERA Comments 4th May 2021	Sterling Chemical Malta Ltd 03/06/2021
C3.1.2	✓	**Document: Volume 2: Chapter 4** Could spills from two waste streams cause a hazardous reaction? If so, are there any abatement measures in place to tackle this?	Theoretically yes, but it's quite unlikely to happen due to the fact that aqueous phases may contain only inorganic salts and Dichloromethane is not miscible with water. However, an internal division will be installed between incompatible wastes (e.g. acids and bases). Note that the room will also have a dedicated ventilation system for air circulation; this is required for health and safety reasons, to ensure sufficient air exchange in the workplace. The door of the warehouse will always be kept open, and the vent will exhaust at roof level. It is noted that there are no filters, because the new warehouse will only be used to store the non-flammable waste currently being stored in the external warehouse. Additionally, no operations will be carried out inside the warehouse; there will be closed containers and no transfers or other operations will be carried out. Therefore there are no significant emissions. However, as advised by ERA, this is being added as a new emission point to air (EM22). A drawing showing the ventilation system is included in **Appendix 1**. .
C3.1.3	✓	**Document: Volume 2: Chapter 4** Noted.	
C3.2	N/A	Noted	
C3.3 C3.3.1 C3.3.2 C3.3.3 C3.3.4	N/A	Noted.	
C3.4	N/A		
C3.5	✓	**No changes to original permit** Noted.	
C3.6	x	**Document: Volume 2: Chapter 4; C3.6 Emissions to air**	Due to the installation of abatement equipment and also based on Sterling Chemical's experience with similar monitoring points, the anticipated emissions are as follows:

<table>
<tr><th>Section</th><th>Duly made?</th><th>ERA Comments
4th May 2021</th><th>Sterling Chemical Malta Ltd
03/06/2021</th></tr>
<tr><td></td><td></td><td>Kindly provide the nature and the proposed concentration of substances emitted from each point.</td><td>
<table>
<tr><th>Emission point reference</th><th>Source</th><th>Parameters</th><th>Expected concentrations</th></tr>
<tr><td>EM2</td><td>HVAC (General ventilation and air-conditioning) – HF 51 block</td><td colspan="2">No significant emissions to air (as per paragraph 4.18 of the IPPC application).</td></tr>
<tr><td>EM3A-C</td><td>Clean rooms</td><td>Total particulate matter</td><td>≤5 mg/m^3</td></tr>
<tr><td rowspan="2">EM4C-E, EM8A-D, EM10B-D</td><td rowspan="2">Laboratory fume hoods and lab cabinet</td><td>Total particulate matter</td><td><1 mg/m^3</td></tr>
<tr><td>Total organic carbon (TOC)</td><td>≤20 mgC/Nm^3 (dry gas)</td></tr>
</table>

The concentrations will be verified once the monitoring programme outlined in section C3.10 of the IPPC application is implemented.</td></tr>
<tr><td>C3.7</td><td>N/A</td><td>Noted.</td><td></td></tr>
<tr><td>C3.8</td><td>N/A</td><td>Noted.</td><td></td></tr>
<tr><td>C3.9
C3.9.1
C3.9.2
C3.9.3
C3.9.4</td><td>N/A</td><td>Noted</td><td></td></tr>
<tr><td>C3.10.1
C3.10.2
C3.10.3
C3.10.4
C3.10.5</td><td>x</td><td><u>Document: Volume 2: Chapter 4; C3.10 Monitoring</u>

It is understood that ammonia is not generated or used in any of the production activities on site and therefore, the</td><td>Confirmed; ammonia is only generated as a by-product in one of the processes occurring in the pilot plant (Line 7), i.e. on a very small scale. This request is being included in the updated consolidated application.

Gas volume flows are monitored periodically by an accredited laboratory, according to the emissions monitoring schedule stipulated in the IPPC permit.</td></tr>
</table>

Section	Duly made?	ERA Comments 4th May 2021	Sterling Chemical Malta Ltd 03/06/2021
		monitoring program does not and include any monitoring of ammonia. Kindly formalize this variation request in the proposed variation. Kindly describe how gas volume flows for the various emissions from the process equipment to the abatement equipment (such as scrubbers) are monitored	
C3.11	N/A	Noted	
C4.1	✓	**Document: Volume 2: Chapter 5; Impact on the environment** Noted.	
C4.2	✓	**Document: Volume 2: Chapter 5 Effects on other Sites** Noted.	
C5.1	N/A	Noted	
C6.1	✓	Noted	
C6.2	✓	Noted	
C6.3	✓	Noted	
C7.1	✓	**Document: Volume 1: Appendix 2; Existing Permits** Noted	
C8.1	✓	**Document: Volume 1: Appendix 4; Technically Competent Person**	

Section	Duly made?	ERA Comments 4th May 2021	Sterling Chemical Malta Ltd 03/06/2021
		Noted	
C8.2	✓	Noted	
C9.1	✓	**Document: Volume 1: Appendix 5; Expenditure plan** Noted	
C10	✓	Noted – Covering Letter	

Feedback from Statutory Consultees

External Consultees

Comment received from	Feedback	ERA reply and comment 04.05.21	Sterling Chemical Malta reply 27.05.2021
Environmental Health Directorate	With reference to request to provide any comments on the contents of such application regarding subject in caption, please be informed that this Directorate would like to submit the following comments/recommendations regarding this proposal: 1. With these variations the Directorate has no objection. 2. Mitigation measures and monitoring programme to avoid / reduce any source of air pollution are to be put into practice. 3. Mitigation measures and monitoring to prevent contamination of groundwater are to be adopted. 4. Mitigation measures stated to prevent the leakage of contaminated water from the wash-water reservoir are to be implemented. It is highly recommended that said reservoir is kept under constant monitoring to avoid the risk of leakage that could pose a risk to the contamination of ground water or nearby valley. Furthermore, overflow of wash water reservoir is to be emptied as per local Laws and Regulation. Overflow for of said reservoir is not to overflow into the street. 5. Rainwater reservoir is not to be contaminated with water used from washing. 6. Any new water points in warehouse are to be included in the legionella risk assessment manual. 7. Pest Control Monitoring Program is to be put in place. 8. Second class water should not be used for human consumption and/or personal hygiene. Rainwater reservoir overflow should drain onto the street. Since the rainwater reservoir will be used for firefighting, it is suggested to be chlorinated to prevent the spread of Legionella diseases from sprinkles. 9. Kindly note that the comment 2.2.2.3 C in Page 18 of the Vol 1 IPPC *(or other laboratory providing the equivalent performance and reliability)* is to be removed since Control of Legionella Regulations, 2006 (L.N.5 of 2006), stipulates that tests for Legionella and Heterotrophic count are to be carried out in an accredited lab for said parameters. 10. Moreover, any other unpredicted impacts and nuisances which may arise from this operation and that may have a significant adverse effect on public health are to be immediately addressed by the applicant and any necessary mitigation measures should be taken; 11. Complaints lodged by the public regarding any adverse impacts/nuisances should be immediately addressed by the applicant. All complaints lodged and actions taken are to be recorded and such records are to be readily available to the Competent Authorities when requested.	Mitigation measures are proposed in the application and permit conditions will be included accordingly. High level alarms for wash water reservoirs are in place. Applicant to indicate how the alarms are periodically maintained to ensure functionality. There are no new water emission points, Operator is to confirm that the current Legionella risk assessment is still valid. Operator is to describe the actions in place concerning Pest Control	Noted. Checks/comparisons are carried out daily between reading with a fixed digital detector and manually with a tape measure. Also an alarm equipped with a sounder is installed. There are no new water emission points in the warehouse. The legionella plan remains unchanged and is still valid. The distribution of mousetraps has been extended according to the internal GMP Procedure(s).
Malta Competition and Consumer Affairs Authority	No feedback was provided	N/A	
Malta Resources Authority	No feedback was provided	N/A	
Planning Authority	No feedback was provided	N/A	
Regulatory for Energy and Water Services	The Regulator for Energy and Water Services (REWS) had no comments on this round of consultation.	No further comments	

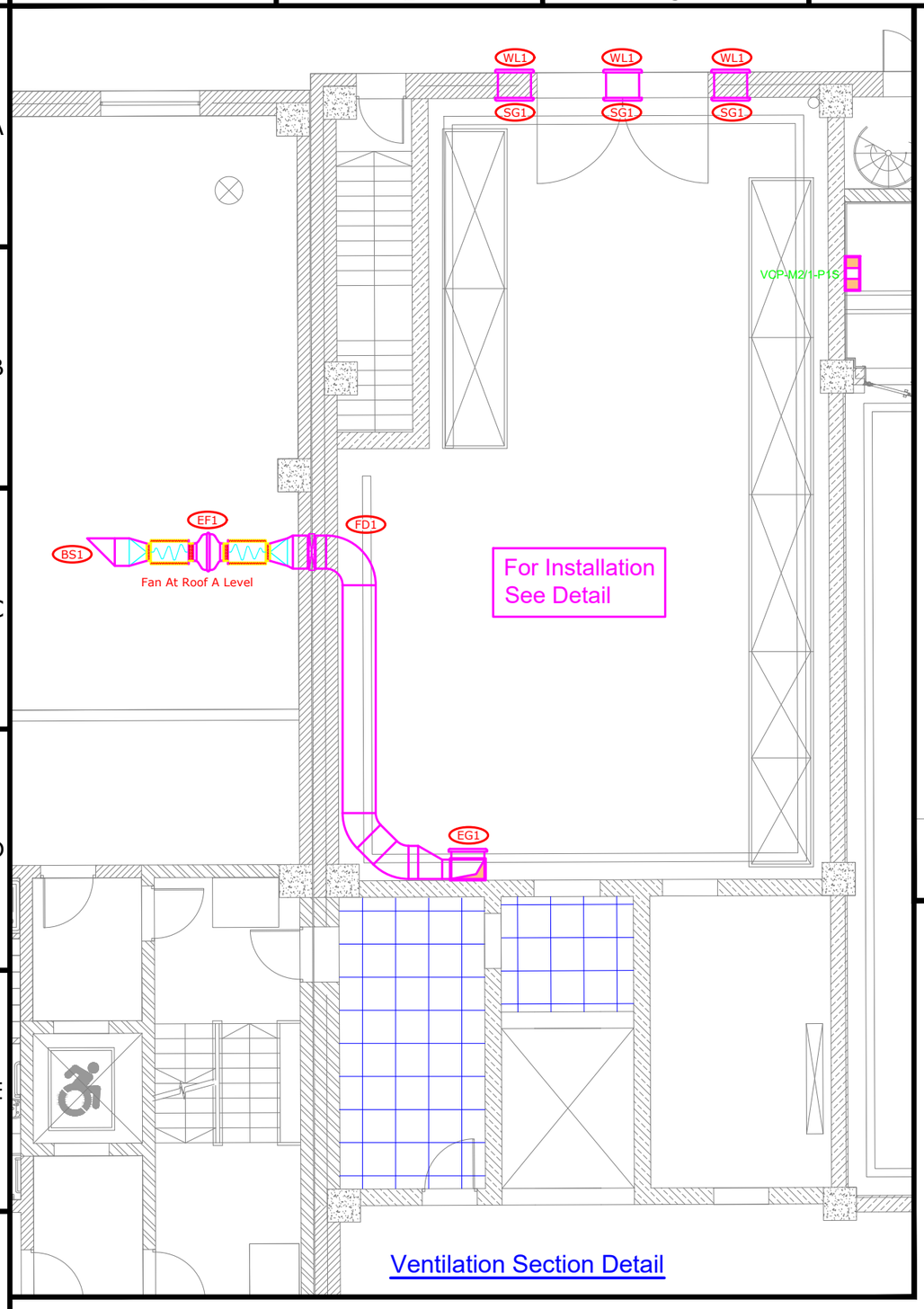
Comment received from	Feedback	ERA reply and comment 04.05.21	Sterling Chemical Malta reply 27.05.2021
Civil Protection Department	No feedback was provided	N/A	
Water Services Corporation	No objection to the variation	N/A	
OHSA	No feedback was provided	N/A	

Internal Consultees

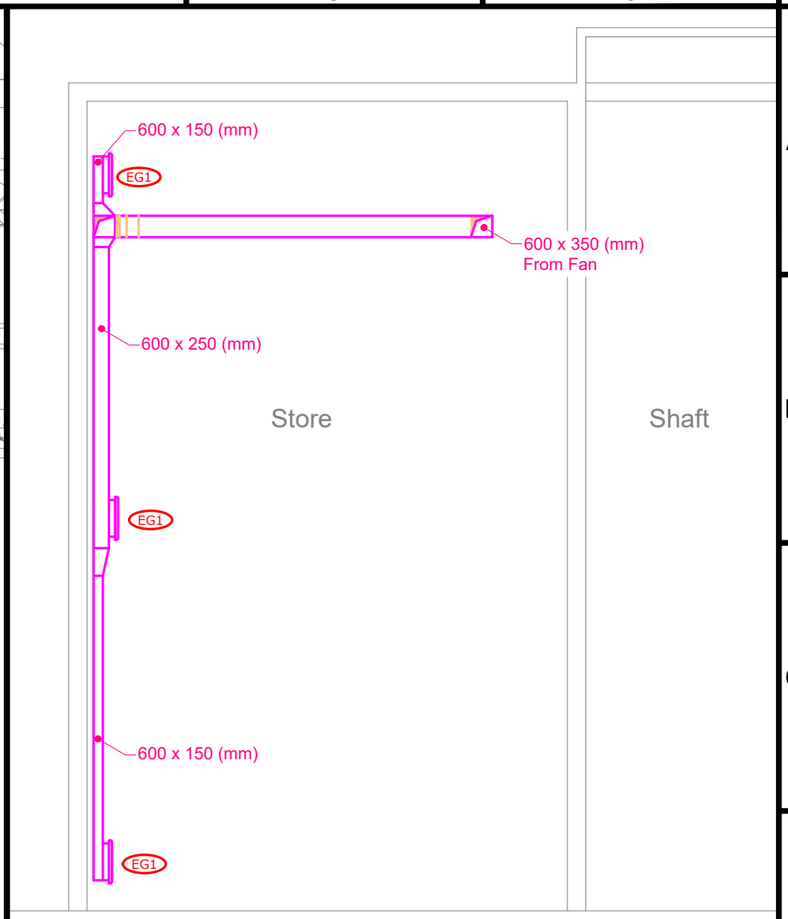
Comment received from	Feedback	ERA reply and comment 04.05.21	Sterling Chemical Malta reply 27.05.2021
Environmental Assessment Unit	No feedback was provided.	No further comments.	
Biodiversity & Water Unit	No feedback was provided	No further comments	
Air quality & Waste Unit **Air Quality Team**	No comments from an air quality perspective.	N/A	
Air quality & Waste Unit **Waste Management Team**	No comments	No further comments.	
Air quality & Waste Unit **Noise Team**	No specific issues have been noted in relation to the permit variation. Nevertheless, we are currently finalising off the review of the recent noise monitoring study which was due in Dec 2020 and are to note that the upcoming noise monitoring is to be carried out and submitted once the commissioning of phase 1 and phase 2 is finalised. We have also been informed by the consultants that the "phase 1 (pilot plant) is currently under construction, with a completion date envisaged in early 2021. Phase 2 of the expansion, being an industrialisation/ commercialisation phase, will be the subject of a separate IPPC variation application."	Operator is to note comment made and provide a status update on project timelines.	Noted The pilot plant is in operation and currently used for "pilot-scale" processes. The timeframe for the rest of Phase 2 is not currently defined.
Compliance & Enforcement Directorate	**Compliance Status:** The site was inspected in April 2021 and this was found to be compliant with permit conditions. **AERs:** 2015, 2016, 2017, 2018, 2019 & 2020 submitted **Emissions to air (based on the 2019 renewed permit):** • EM1 - No exceedances in 2019 • EM 1 – *One minor exceedance (results 22mg/Nm3; limit value 20mg/Nm3) for Halogenated VOCs from EM1. **Actions by Sterling: Sterling declared to have replaced the old carbon filter with two new filters in order to have better control of emissions. New*	No further comments	Note that the HEPA Filter efficiency certificates were all sent to ERA in the 2020 AER.

Comment received from	Feedback	ERA reply and comment 04.05.21	Sterling Chemical Malta reply 27.05.2021
	sampling as soon as we have the representative conditions of the production to be able to sample and we will send the relative results. *[The permit also specifies monitoring for EM13, however the operator declared that this production line was not in operation in 2019 & 2020. Its operation commenced in 2021]* **Schedule 4: VOCs** • **2019 & 2020 submitted.** **Submissions as specified in Schedule 6** • Boiler certification **– Submitted: Latest in 2019** • HEPA filter differential pressure data – **Submitted (2020)** • HEPA Filter efficiency certification – **Submitted for 5 out of 6 certifications (2020)** • Follow-up Noise Monitoring – **Submitted (2020)** • Catchment pits & bunds certification – Water washing reservoir M1; Temporary waste area sump; flammable warehouse sump; External Store sumps WH – **Latest tested in 2019** **IP Items:** Kindly note that all IP items in the permit are now being considered as completed. With regards to **IP item 12**, the IP requirement in terms of 'a proposal' is no longer required due to the submission of monitoring and related justifications which have been reviewed. **Complaints:** No complaints have been received since the issuance of the permit		
Extended Producer Responsibility	Sterling Chemicals are producers of packaging in terms of SL 549.43. The inclusion of the following condition is therefore suggested: Permit Holder shall renew their registration with ERA as a producer of packaging and provide the required information as set out in Subsidiary Legislation 549.43, the Packaging and Packaging Waste Regulations unless putting less than 100kgs of packaging on the market annually. In case the Permit Holder opts to be self-compliant for back-end packaging, the targets as set out in Subsidiary Legislation 549.43, the Packaging and Packaging Waste Regulations, shall also be achieved. Documentation in relation to the Permit Holder's obligations pertaining to S.L 549.43, the Packaging and Packaging Waste Regulations shall be maintained for a period of 5 years and be made available, upon request by ERA.	Operator to note suggested condition.	Noted
Trans-frontier Shipment of Waste	According to Chapter 4 (p.19 – p.20, Vol 2 – IPPC), waste originating from Sterling Chemicals Malta Ltd was (again) confirmed to consist of the following EWC Codes: - EWC 06 01 06* (Other acids) - EWC 07 04 01* (Aqueous washing liquids and mother liquors) - EWC 07 07 03* (Organic halogenated solvents, washing liquids and mother liquor waste) - EWC 16 10 01* (Aqueous liquid waste containing hazardous substances) In addition may we also point out that in the past exports of other wastes not listed above [e.g. contaminated packaging (EWC 15 01 10*)] also took place from Sterling Chemicals Malta Ltd. Hence it is not clear whether such list is intended to be exhaustive or otherwise.	The exhaustive list of waste streams generated on site was provided in the original application (IP0001/14/A), this included EWC 15 01 10*. The EWC codes listed in this variation application refer to the waste types that shall be stored in the proposed waste warehouse.	Noted

Appendix 1: Air circulation system drawing



Ventilation Section Detail



Ventilation Section Detail

-1 0 1 2 3 4 5 6 7 8 9 10

Scale Bar 1:100

A3 PLEASE DO NOT SCALE FROM THE DRAWING

Weather Proof Louver Schedule:

Louver Size:	Louver Type:	Louver Reference:
600 x 600 (mm)	Weather Proof Louver	Louver - WL01
600 x 350 (mm)	Weather Proof Louver	Louver - BS01

Fans Schedule:

Silencers:	Filter Box:	Fan Speed	Fan Type:	Fan Reference:
2 Qty	No	4500m³/hr @ 125Pa	Centrifugal Fan	Extraction Fan EF1

Grills Schedule:

Grill Size:	Grill Type:	Grill Reference:
600 x 600 (mm)	Single Curve c/w Opposed Blade Damper	Extract Grill - EG1
600 x 600 (mm)	Single Curve c/w Opposed Blade Damper	Supply Grill - SG1

General Notes and Legends

Fire Damper Schedule:

Reference:	Size:
FD-01	600 x 350 (mm)

-	-	-	-
-	-	-	-
-	-	-	-
01	16.12.20	AZ	Revised Layout

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Project Name & Address:

Sterling Ltd
Malta 2 Storage

Job No.: 20.041	Drawing No.: MT2-ST.1.VNT.01
Drawn By: A.Zahra	Scale: 1:100
Checked By:	First Drawn: 23.09.20

Position: Level 1

Service: Ventilation Installation Layout