



Element, Unit C6, Emery Court, The Embankment Business Park, Heaton Mersey, Stockport, SK4 3GL

Your Element Contact

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Site Specific Protocol (SSP) Commissioned by

AGC Chemicals Europe Ltd

Installation Name & Address

AGC Chemicals Europe Ltd

PO Box 4

York House

Hillhouse International

Thornton Cleveleys

FY5 4QD

EPR Permit: EPR/BU5453IY/V004

Dates of the Proposed Monitoring Campaign

9th - 12th May 2023

SSP Reference Number

EMT-SSP-05959

Release Point References		
A4 L168 Lubricant Oven	A5 ARK Inlet	A5 ARK Outlet

Report Written by

Report Date & Version
2nd May 2023, Version 1

Report Approved by

Signature of Report Approver (Element)

Name of Client

I confirm that I have read and understood the sampling protocol contained in this report, that the sampling location complies with the requirements of all relevant legislation, and I am happy for the sampling to proceed.

Date of Client Approval

Signature of Client (for SSP Approval)

SSP Part 1

CONTACT DETAILS, MONITORING DATES & PERSONNEL

This SSP (Site Specific Protocol) will be updated, if required to include feedback from each visit.

Operator Contact Details

Operator Name	AGC Chemicals Europe Ltd
Site Location	Lancashire
Full Installation Address	PO Box 4 York House Hillhouse International Thornton Cleveleys FY5 4QD
EPR Permit	EPR/BU5453IY/V004

	Primary Site Contact	Alternative Site Contact
Contact Name		
Telephone Number		
Fax Number	-	-
Mobile Phone Number		-
Email Address		

Monitoring Dates

Dates of Previous Campaign	9th March 2023
Job No. of Previous Campaign	EMT05518
Planned Dates of Campaign	9th - 12th May 2023

(If the Planned Dates of the Campaign change at late notice, the SSP will not be re-issued. The final test report will detail the actual monitoring dates.)

Analysis Laboratories (with short name reference as referenced in Part 2 of the SSP)

Element Stockport (EET)	ISO17025 Accreditation Number: 4279
Element Deeside (ELD)	ISO17025 Accreditation Number: 4225
i2 Analytical Ltd	ISO17025 Accreditation Number:

Stack Emissions Monitoring Personnel

where SCM = Site Campaign Manager

	Position	Name	MCERTS Accreditation	MCERTS Number & Expiry Date	Technical Endorsements
SCM	Team Leader				
	Technician				

Element Site Campaign Manager Contact Details

Name	Mobile Phone Number	Email Address

Further Notes on Stack Emissions Monitoring Personnel

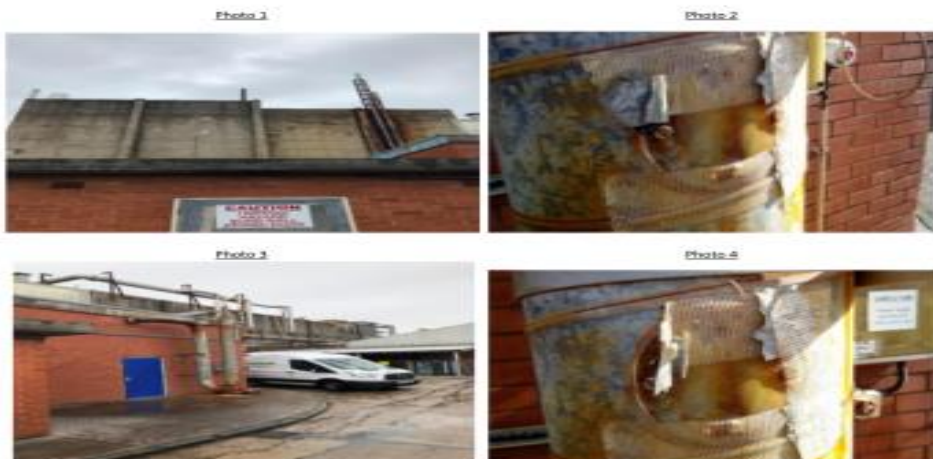
There may be, in exceptional circumstances, a need to change the personnel who will be performing the monitoring. If this was to occur, the sampling team sent to site will hold all the necessary MCERTS Technical Endorsements for the required tests. As this scenario would most likely happen at late notice, the SSP will not be re-issued. The names of the monitoring personnel will be available to the client on the day of sampling (or before if required for inductions / site security / permits to work). The names of the monitoring personnel along with their personal MCERTS accreditation details will also be detailed in the final test report.

SSP Part 2

DETAILS OF MONITORING: STACK AND LOCATION DETAILS

Release Point Reference	A4 L168 Lubricant Oven
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Sampling Location and Stack Photos



Operating & Process Information	Details
Type of Process	Oven
Batch or Continuous Process	Continuous
Feedstock / Fuel Type	Process Oven
Load / Throughput / Continuous Rating of Plant	Normal Load
Expected Velocity, Temperature & Moisture	14.6 m/s 107 °C 0.1 % v/v
Details of Abatement System	N/A
Details of any CEMS Installed (including DCS)	N/A
Process Details Required	Operating conditions to be Provided by Site Contact
Reference Conditions 1	273K, 101.3kPa, without correction for water vapour content.
Reference Conditions 2	N/A

Sampling Location Details	Value	Details
Stack Type / Shape	Circular	Outside - no shelter
Diameter / Dimensions (m)	0.25	
Access	On Ground	
Platform Type and Location	On Ground	
Orientation of Duct	Horizontal	
Sample Port Size / Diameter	Hole	
Sample Port Depth (cm)	0	
Sample Ports Correctly Located?	Yes	
Number of Sampling Lines Available	1	
Number of Sampling Lines to be Used	1	
Number of Sample Points to be Used (per line)	1	N/A
Total Number of Sample Points to be Used	1	
EN 15259 / Homogeneity Representative Point/s	-	
Availability of Utilities	Power	240V
	Lighting	Yes
	Water	Yes

EA Technical Guidance Note M1 / EN 15259 Platform Requirements	Value
Sufficient working area to manipulate probe and operate the measuring instruments	Yes
Platform has 2 levels of handrails (approx. 0.5m & 1.0m high)	Yes
Platform has vertical base boards (approx. 0.25m high)	Yes
Platform has chains / self closing gates at top of ladders	Yes
There are no obstructions present which hamper insertion of sampling equipment	Yes
Safe Access Available	Yes
Easy Access Available	Yes

Sampling Platform / Improvement Recommendations:
The sampling location meets all the requirements specified in EA Guidance Note M1 and EN 15259, and therefore there are no improvement recommendations.

Sampling Plane Validation Criteria		
Requirement	Value	Compliant
Lowest Differential Pressure (Pa)	140	Yes
Ratio of Gas Velocities (:1)	1.0	Yes
Maximum Angle of Swirl (°)	0	Yes
No Local Negative Flow	Yes	Yes

SSP Part 2

DETAILS OF MONITORING: SAMPLING METHOD INFORMATION

Release Point Reference **A4 L168 Lubricant Oven** (continued)

In the "Units" column, ¹ = Reference Conditions 1, ² = Reference Conditions 2

PERIODIC SAMPLING: MANUAL METHODS														
Determinand	Number of Runs Blanks	Units	Emission Limit	Expected Emission	Projected LOD	Standard Reference Method	Element Technical Procedure	Absorption Media / Analysis Technique	Analysis Lab ISO17025 Status	Sample Duration (mins)	Sample Flowrate (ACTUAL) (l/min)	Sample Volume (REF) (m³)	Projected MU (%)	Status of Testing
Hydrogen Fluoride	10 1	¹ mg/m³	N/A	59.0	0.045	CEN/TS 17340	CAT-TP-10	NaOH / IC	EET MCERTS	60	10	0.550	15%	MCERTS
PFOA	10 1	¹ mg/m³	N/A	-	0.045	EN 1911	CAT-TP-11	C3H8O	EET MCERTS	60	10	0.550	15%	MCERTS
Water Vapour	10 0	¹ % v/v	N/A	0.10	0.10	EN 14790	CAT-TP-05	Gravimetric	EET MCERTS	60	10	N/A	5%	MCERTS
Velocity	1 0	¹ m/s	N/A	14.6	3.0	EN ISO 16911-1	CAT-TP-41	Pressure & Temp	EET MCERTS	N/A	N/A	N/A	10%	MCERTS

Velocity Profile - Source: Previous Testing Campaign

Line A			
ΔP	Temp	Velocity	
Pt Pa	°C	m/s	
1 139.5	107.2	14.65	

Monitoring Objectives / Unusual Occurrences / Comments / Health & Safety / Expected Deviations from Standard Reference Methods

1	Perform testing, as requested by the customer, for a number of prescribed pollutants. There are no emission limits set for any of the pollutants at this time
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SSP Part 2

DETAILS OF MONITORING: STACK AND LOCATION DETAILS

Release Point Reference	A5 ARK Inlet
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Sampling Location and Stack Photos



Operating & Process Information	Details
Type of Process	Pre-Scrubber
Batch or Continuous Process	Batch
Feedstock / Fuel Type	PTFE Parts
Load / Throughput / Continuous Rating of Plant	TBC on day of testing
Expected Velocity, Temperature & Moisture	5.3 m/s 68.7 °C 0.8 % v/v
Details of Abatement System	ARK Plant
Details of any CEMS Installed (including DCS)	None
Process Details Required	Operating conditions to be Provided by Site Contact
Reference Conditions 1	273K, 101.3kPa, without correction for water vapour content.
Reference Conditions 2	N/A

Sampling Location Details	Value	Details					
Stack Type / Shape	Circular	Outside - shelter in the adjacent building					
Diameter / Dimensions (m)	0.79						
Access	Stairs						
Platform Type and Location	On Roof						
Orientation of Duct	Horizontal						
Sample Port Size / Diameter	5" Flange						
Sample Port Depth (cm)	10						
Sample Ports Correctly Located?	Yes						
Number of Sampling Lines Available	1						
Number of Sampling Lines to be Used	1						
Number of Sample Points to be Used (per line)	1	N/A					
Total Number of Sample Points to be Used	1						
EN 15259 / Homogeneity Representative Point/s	-						
Availability of Utilities	Power	110V	Lighting	No	Water	No	

EA Technical Guidance Note M1 / EN 15259 Platform Requirements	Value
Sufficient working area to manipulate probe and operate the measuring instruments	Yes
Platform has 2 levels of handrails (approx. 0.5m & 1.0m high)	Yes
Platform has vertical base boards (approx. 0.25m high)	Yes
Platform has chains / self closing gates at top of ladders	N/A
There are no obstructions present which hamper insertion of sampling equipment	Yes
Safe Access Available	Yes
Easy Access Available	Yes

Sampling Platform / Improvement Recommendations:
The sampling location meets all the requirements specified in EA Guidance Note M1 and EN 15259, and therefore there are no improvement recommendations.

Sampling Plane Validation Criteria		
Requirement	Value	Compliant
Lowest Differential Pressure (Pa)	13	Yes
Ratio of Gas Velocities (:1)	1.4	Yes
Maximum Angle of Swirl (°)	7	Yes
No Local Negative Flow	Yes	Yes

SSP Part 2

DETAILS OF MONITORING: SAMPLING METHOD INFORMATION

Release Point Reference	A5 ARK Inlet	(continued)
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In the "Units" column, ¹ = Reference Conditions 1, ² = Reference Conditions 2

PERIODIC SAMPLING: MANUAL METHODS														
Determinand	Number of Runs Blanks	Units	Emission Limit	Expected Emission	Projected LOD	Standard Reference Method	Element Technical Procedure	Absorption Media / Analysis Technique	Analysis Lab ISO17025 Status	Sample Duration (mins)	Sample Flowrate (ACTUAL) (l/min)	Sample Volume (REF) (m³)	Projected MU (%)	Status of Testing
SAA 1000	2	1	¹ mg/m³	N/A	41.0	0.006	EN 1911	CAT-TP-11	10% DMSO	EET MCERTS	240	10	2.216	15% MCERTS
PFOA	2	1	¹ mg/m³	N/A	0.10	0.006	EN 1911	CAT-TP-11	50% Methanol	EET MCERTS	240	10	2.216	15% MCERTS
Water Vapour	4	0	¹ % v/v	N/A	1.0	0.10	EN 14790	CAT-TP-05	Gravimetric	EET MCERTS	240	10	N/A	5% MCERTS
Velocity	2	0	¹ m/s	N/A	2.8	3.0	EN ISO 16911-1	CAT-TP-41	Pressure & Temp	EET MCERTS	5	N/A	N/A	10% MCERTS

Velocity Profile - Source: Previous Testing Campaign

Line A			
	ΔP	Temp	Velocity
Pt	Pa	°C	m/s
1	16.8	68.6	4.86
2	13.4	68.7	4.35
3	25.4	68.7	5.98
4	24.6	68.7	5.89

Monitoring Objectives / Unusual Occurrences / Comments / Health & Safety / Expected Deviations from Standard Reference Methods

1	Perform testing of an investigative nature under trial operation
2	A5 ARK Inlet and Outlet to be tested simultaneously

SSP Part 2

DETAILS OF MONITORING: STACK AND LOCATION DETAILS

Release Point Reference	A5 ARK Outlet
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Sampling Location and Stack Photos



Operating & Process Information	Details
Type of Process	Post-Scrubber
Batch or Continuous Process	Batch
Feedstock / Fuel Type	PTFE Parts
Load / Throughput / Continuous Rating of Plant	TBC on day of testing
Expected Velocity, Temperature & Moisture	5 m/s 38.3 °C 7.9 % v/v
Details of Abatement System	Scrubber
Details of any CEMS Installed (including DCS)	None
Process Details Required	Operating conditions to be Provided by Site Contact
Reference Conditions 1	273K, 101.3kPa, without correction for water vapour content.
Reference Conditions 2	N/A

Sampling Location Details	Value	Details
Stack Type / Shape	Circular	Outside - no shelter
Diameter / Dimensions (m)	0.73	
Access	Ladder	
Platform Type and Location	Permanent	
Orientation of Duct	Vertical	
Sample Port Size / Diameter	5" Flange	
Sample Port Depth (cm)	10	
Sample Ports Correctly Located?	Yes	
Number of Sampling Lines Available	2	
Number of Sampling Lines to be Used	2	
Number of Sample Points to be Used (per line)	1	N/A
Total Number of Sample Points to be Used	1	
EN 15259 / Homogeneity Representative Point/s	-	
Availability of Utilities	Power	110V
	Lighting	No
	Water	Yes

EA Technical Guidance Note M1 / EN 15259 Platform Requirements	Value
Sufficient working area to manipulate probe and operate the measuring instruments	Yes
Platform has 2 levels of handrails (approx. 0.5m & 1.0m high)	Yes
Platform has vertical base boards (approx. 0.25m high)	Yes
Platform has chains / self closing gates at top of ladders	Yes
There are no obstructions present which hamper insertion of sampling equipment	Yes
Safe Access Available	Yes
Easy Access Available	Yes

Sampling Platform / Improvement Recommendations:
The sampling location meets all the requirements specified in EA Guidance Note M1 and EN 15259, and therefore there are no improvement recommendations.

Sampling Plane Validation Criteria		
Requirement	Value	Compliant
Lowest Differential Pressure (Pa)	16	Yes
Ratio of Gas Velocities (:1)	1.3	Yes
Maximum Angle of Swirl (°)	NM	No
No Local Negative Flow	Yes	Yes

SSP Part 2

DETAILS OF MONITORING: SAMPLING METHOD INFORMATION

Release Point Reference	A5 ARK Outlet	(continued)
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In the "Units" column, ¹ = Reference Conditions 1, ² = Reference Conditions 2

PERIODIC SAMPLING: MANUAL METHODS														
Determinand	Number of Runs Blanks	Units	Emission Limit	Expected Emission	Projected LOD	Standard Reference Method	Element Technical Procedure	Absorption Media / Analysis Technique	Analysis Lab ISO17025 Status	Sample Duration (mins)	Sample Flowrate (ACTUAL) (l/min)	Sample Volume (REF) (m³)	Projected MU (%)	Status of Testing
SAA 1000	2	1	¹ mg/m³	N/A	41.0	0.006	EN 1911	CAT-TP-11	10% DMSO	EET MCERTS	240	10	2.387	15% MCERTS
PFOA	2	1	¹ mg/m³	N/A	0.10	0.006	EN 1911	CAT-TP-11	50% Methanol	EET MCERTS	240	10	2.387	15% MCERTS
Water Vapour	4	0	¹ % v/v	N/A	1.00	0.100	EN 14790	CAT-TP-05	Gravimetric	EET MCERTS	240	10	N/A	5% MCERTS
Velocity	2	0	¹ m/s	N/A	2.80	3.000	EN ISO 16911-1	CAT-TP-41	Pressure & Temp	EET MCERTS	5	N/A	N/A	10% MCERTS

Velocity Profile - Source: Previous Testing Campaign

	Line A			Line B		
	ΔP	Temp	Velocity	ΔP	Temp	Velocity
Pt	Pa	°C	m/s	Pa	°C	m/s
1	24.7	38.2	5.71	17.0	38.4	4.73
2	19.8	38.3	5.11	15.7	38.4	4.55

Monitoring Objectives / Unusual Occurrences / Comments / Health & Safety / Expected Deviations from Standard Reference Methods

1	Perform testing, as requested by the customer, for a number of prescribed pollutants. There are no emission limits set for any of the pollutants at this time
2	Perform testing of the required parameters simultaneous with the ARK inlet

SSP Part 3

DEVIATIONS FROM THE SSP THAT MAY HAVE OCCURED ON SITE DURING THE SAMPLING CAMPAIGN

Make a note of any deviations from this SSP below:

(Deviations may include: modification to a sampling duration, removal of a test, change to the number of sampling runs etc.)

At the end of the sampling campaign, the Team Leader must select one of the statements below and complete the required boxes:

- (1) I certify that all testing performed for this sampling campaign followed the testing programme as detailed in this SSP, and no deviations (unless specified in the original SSP and approved by the client) were required.

☐

(tick)

Signature of Team Leader	Date of Signature

- (2) It was necessary to deviate from the testing programme as detailed in this SSP. All deviations are listed above. The client was informed of the deviations and was happy for the testing to proceed / continue on this basis.
(A client signature MUST be obtained for Contract Review purposes)

☐

(tick)

Signature of Team Leader	Date of Signature

Signature of Client	Date of Signature