

EASTMAN

Cefn Mawr

9th January 2015

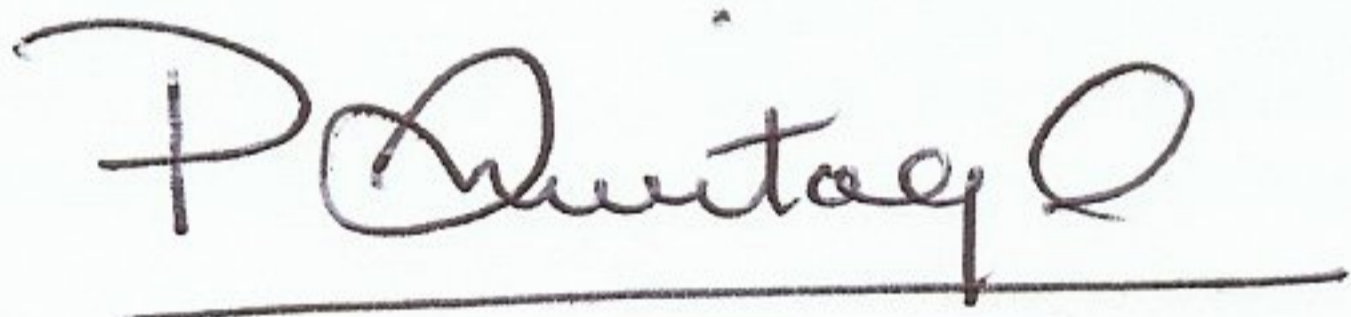
Ian Oakes
Natural Resources Wales
Chester Road
Buckley
Flintshire
CH7 3AJ

Dear Ian,

Re: **Permit No: EPR/NP3335GR**
Reporting of Monitoring Data

Please find enclosed the Monitoring Data Report for the period 01/10/2014 to 31/12//2014

Yours sincerely,

A handwritten signature in black ink, appearing to read 'P. Armitage', is written over a horizontal line.

P.Armitage

WTP Production Engineer

Permit Number: EPR/NP3335GR

Operator:

Solutia UK Limited

Facility: Ruabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water							
Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Pontysyllte Adit (Note1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	2.94	TOC Analysis using Hach Lange Tubes	04/11/2014 11:00:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.01	HPLC with Electrochemical Detector	08/10/2014 11:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,4 Dimethylphenol		Quarterly	0			
	2,6 Dimethylphenol		Quarterly	0			
	Aniline		Quarterly	0			
	Benzothiazole		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	0			
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	0			
	O-Cresol		Quarterly	0			
	O-phenetidine		Quarterly	0			
	P-Cresol		Quarterly	0			
	Phenylisocyanate		Quarterly	0			
	P-Phenetidine		Quarterly	0			
	Sulphur (Mol)		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6 Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

Note 1: This is an off-site environmental monitoring condition

[1] The result is maximum value (or the minimum value in the case of a limit expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum - maximum' measured values

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.

[3] For non continuous measurements the date and time of the sample that produced the result is given. For continuous measurements, or flow/time proportional samples the percentage of the process operating time covered by the monitoring is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The following uncertainties are quoted on a different basis as stated

Signed:


 (authorised to sign as representative of the Operator)

Date:

09/01/2015

Permit Number: EPR/NP3335GR

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Solutia UK Limited

Facility: Ruabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water							
Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Time ^[3]	Uncertainty ^[4]
Trefnant Brook (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	13.2	TOC Analysis using Hach Lange Tubes	12/11/2014 11:00:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.01	HPLC with Electrochemical Detector	15/10/2014 11:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,4-Dimethylphenol		Quarterly	0			
	2,6-Dimethylphenol		Quarterly	0			
	Aniline		Quarterly	0			
	Benzothiazole		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	0			
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	0			
	O-Cresol		Quarterly	0			
	O-phenetidine		Quarterly	0			
	P-Cresol		Quarterly	0			
	Phenylisocyanate		Quarterly	0			
	P-Phenetidine		Quarterly	0			
	Sulphur (Mol)		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6 Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

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Facility: Ruabon Chemical Works

Form Number: Water 1


Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Factory Borehole Middle (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	7.93	TOC Analysis using Hach Lange Tubes	19/11/2014 09:30:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.03	HPLC with Electrochemical Detector	16/12/2014 09:30:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,6 Dimethylphenol		Quarterly	0			
	4-Acetylmorpholine		Quarterly	0			
	Aniline		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	16426		16/12/2014 09:30:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	50		16/12/2014 09:30:00	
	Flectol A		Quarterly	21		16/12/2014 09:30:00	
	O-phenetidine		Quarterly	1156		16/12/2014 09:30:00	
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-phenetidine		Quarterly	1716		16/12/2014 09:30:00	
	Tetrachloroethylene		Quarterly	0			
	2,4,6 Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

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- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.
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Operator:

Solutia UK Limited

Facility: Ruabon Chemical Works

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Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water							
Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Factory Borehole South (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	5.75	TOC Analysis using Hach Lange Tubes	19/11/2014 09:30:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.03	HPLC with Electrochemical Detector	16/12/2014 09:30:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,6 Dimethylphenol		Quarterly	0			
	4-Acetyl morpholine		Quarterly	0			
	Aniline		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	29		23/10/2014 09:30:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	15		19/11/2014 09:30:00	
	O-phenetidine		Quarterly	0			
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-Phenetidine		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6 Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

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Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water							
Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Brook Culvert Sump (Note1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	12.7	TOC Analysis using Hach Lange Tubes	10/12/2014 11:00:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.02	HPLC with Electrochemical Detector	15/10/2014 11:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,4-Dimethylphenol		Quarterly	0			
	2,6-Dimethylphenol		Quarterly	0			
	Aniline		Quarterly	0			
	Benzothiazole		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	18709		10/12/2014 11:00:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Electrol A		Quarterly	37		10/12/2014 11:00:00	
	Methyl Benzothiazole		Quarterly	0			
	O-Cresol		Quarterly	0			
	O-phenetidine		Quarterly	1224		10/12/2014 11:00:00	
	P-Cresol		Quarterly	0			
	Phenylisocyanate		Quarterly	0			
	P-Phenetidine		Quarterly	2589		10/12/2014 11:00:00	
	Sulphur (Mol)		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6-Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

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Solutia UK Limited

Facility: Ruabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water							
Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Road Culvert Sump (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	6.07	TOC Analysis using Hach Lange Tubes	15/10/2014 11:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Total Phenol (mg/l)	No Limit	Quarterly	0.01	HPLC with Electrochemical Detector	15/10/2014 11:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,4-Dimethylphenol		Quarterly	0			
	2,4,6-Dimethylphenol		Quarterly	0			
	Aniline		Quarterly	0			
	Benzothiazole		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	0			
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	0			
	O-Cresol		Quarterly	0			
	O-phenetidine		Quarterly	0			
	P-Cresol		Quarterly	0			
	Phenylisocyanate		Quarterly	0			
	P-Phenetidine		Quarterly	0			
	Sulphur (Mol)		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6 Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

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Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[5]
Rhosymedre Quarry Leachate (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	72.4	TOC Analysis using Hach Lange Tubes	15/10/2014 11:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Total Phenol (mg/l)	No Limit	Quarterly	0.06	HPLC with Electrochemical Detector	05/11/2014 11:00:00	
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,6-Dimethylphenol		Quarterly	0			
	4-Acetylmorpholine		Quarterly	22		15/10/2014 11:00:00	
	Aniline		Quarterly	3.2		05/11/2014 11:00:00	
	Hydroxybenzothiazole		Quarterly	4586		15/10/2014 11:00:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholinyl Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	63		03/12/2014 11:00:00	
	4-Ethylmorpholine		Quarterly	3.8		05/11/2014 11:00:00	
	Flectol A		Quarterly	50		03/12/2014 11:00:00	
	Methyl Benzothiazole		Quarterly	0			
	O-phenetidine		Quarterly	137		03/12/2014 11:00:00	
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-Phenetidine		Quarterly	7210		03/12/2014 11:00:00	
	Sulphur (Mol)		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6-Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

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Date:

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Operator:

Solutia UK Limited

Facility: Ruabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Rhosymedre Quarry b/h B3 (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	34.6	TOC Analysis using Hach Lange Tubes	02/12/2014 11:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Total Phenol (mg/l)	No Limit	Quarterly	0.02	HPLC with Electrochemical Detector	15/10/2014 11:00:00	
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,6-Dimethylphenol		Quarterly	0			
	4-Acetylmorpholine		Quarterly	0			
	Aniline		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	840		02/12/2014 11:00:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholinyl Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	83		15/10/2014 11:00:00	
	4-Ethylmorpholine		Quarterly	0			
	Fiecol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	0			
	O-phenetidine		Quarterly	0			
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-Phenetidine		Quarterly	4.7		15/10/2014 11:00:00	
	Sulphur (Mol)		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6-Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

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Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water							
Emission Point	Substance/ Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
River Dee Upstream (Note 1)	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	Aniline		Quarterly	0			
	Benzothiazole		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholinyl Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	0			
	Methyl BTH Sulphone		Quarterly	0			
	Methyl Sulphyl BTH		Quarterly	0			
	Methyl-4-morpholinocarbodithioate		Quarterly	0			
	O-Cresol		Quarterly	0			
	P-Cresol		Quarterly	0			
	Phenylisothiocyanate		Quarterly	0			
	Phthalimide		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6-Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

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- [3] For non continuous measurements the date and time of the sample that produced the result is given. For continuous measurements, or flow/time proportional samples the percentage of the process operating time covered by the monitoring is given.
- [4] The accreditation status of the equipment and/or the monitoring organisation, as appropriate, for the methods used for both sampling and analysis.
- [5] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The following uncertainties are quoted on a different basis (basis as stated).

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Facility: Ruabon Chemical Works


Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water							
Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result [1]	Test Method [2]	Sample Date and Times [3]	Uncertainty [4]
River Dee Downstream (Note 1)	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	Aniline		Quarterly	0			
	Benzothiazole		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholinyl Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	0			
	Methyl BTH Sulphone		Quarterly	0			
	Methyl Sulphyl BTH		Quarterly	0			
	Methyl-4-morpholinocarbothioate		Quarterly	0			
	O-Cresol		Quarterly	0			
	P-Cresol		Quarterly	0			
	Phenylisothiocyanate		Quarterly	0			
	Phthalimide		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6-Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

Note 1: This is an off-site environmental monitoring condition

- [1] The result is maximum value (or the minimum value in the case of a limit expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum - maximum' measured values
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.
- [3] For non continuous measurements the date and time of the sample that produced the result is given. For continuous measurements, or flow/time proportional samples the percentage of the process operating time covered by the monitoring is given.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The following uncertainties are quoted on a different basis (basis as stated).

Signed:  Date: 09/01/2015
 (authorised to sign as representative of the Operator)

Permit Number: EPPR/NP3335GR

Operator:

Solutia UK Limited

Facility: Ruabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reporting Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Ground Water Carbon Filter (Brook and Road Culvert)	Total Phenol (mg/l)	0.2	Quarterly	0.01	HPLC with Electrochemical Detector	06/10/2014 09:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Total Iron (mg/l)	No Limit Set ^[5]	Quarterly	5.94	BS EN ISO 11885:1998 BS EN ISO 17294-2:2004	06/10/2014 09:00:00	
	Micro Pollutants (ppb)	Note 1			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,6-Dimethylphenol		Quarterly	0			
	4-Acetylmorpholine		Quarterly	0			
	Aniline		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	0			
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholinyl Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	0			
	O-phenetidine		Quarterly	0			
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-Phenetidine		Quarterly	0			
	Sulphur (Mol)		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6-Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

Note 1: Two consecutive weekly or resample results not to exceed: Hydroxybenzothiazole = 20 ppb, Flectol A = 2ppb, others = 2ppb

[1] The result is maximum value (or the minimum value in the case of a limit expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum - maximum' measured values

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.

[3] For non continuous measurements the date and time of the sample that produced the result is given. For continuous measurements, or flow/time proportional samples the percentage of the process operating time covered by the monitoring is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The following uncertainties are quoted on a different basis (basis as stated).

[5] No limit set - an objective level of 25 mg/l set to monitor effectiveness of carbon filters, & detect Fe breakthrough from the outlet of the filters [October 2012]

Signed:

 (authorised to sign as representative of the Operator)

Date:

09/01/2015

Permit Number: EPR/NP3335GR

Operator:

Solutia UK Limited

Facility: Ruabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water							
Emission Point	Substance/Parameter	Emission Limit Value	Reporting Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Ground Water Carbon Filter (Middle Borehole)	Total Phenol (mg/l)	0.2	Quarterly	0.01	HPLC with Electrochemical Detector	06/10/2014 09:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Total Iron (mg/l)	No Limit Set ^[5]	Quarterly	20.5	BS EN ISO 11885:1998 BS EN ISO 17294-2:2004	06/10/2014 09:00:00	
	Micro Pollutants (ppb)	Note 1			Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	2,6-Dimethylphenol		Quarterly	0			
	4-Acetylmorpholine		Quarterly	0			
	Aniline		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	0			
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholinyl Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	0			
	O-phenetidine		Quarterly	0			
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-Phenetidine		Quarterly	0			
	Sulphur (Mol)		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6-Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

Note 1: Two consecutive weekly or resample results not to exceed: Hydroxybenzothiazole = 20 ppb, Flectol A = 2ppb, others = 2ppb

[1] The result is maximum value (or the minimum value in the case of a limit expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum - maximum' measured values

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.

[3] For non continuous measurements the date and time of the sample that produced the result is given. For continuous measurements, or flow/time proportional samples the percentage of the process operating time covered by the monitoring is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated. The following uncertainties are quoted on a different basis (basis as stated).

[5] No limit set - an objective level of 25 mg/l set to monitor effectiveness of carbon filters & detect Fe breakthrough from the outlet of the filters [October 2012]

Signed:


(authorised to sign as representative of the Operator)

Date:

09/01/2015

Permit Number: EPR/NP3335GR

Operator:

Solutia UK Limited

Facility: Ruabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/10/2014 to 31/12/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reporting Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Ground Water Carbon Filter (South Borehole)	Total Phenol (mg/l)	0.2	Quarterly	0.01	HPLC with Electrochemical Detector	06/10/2014 09:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Total Iron (mg/l)	No Limit Set ^[5]	Quarterly	7	BS EN ISO 11885:1998 BS EN ISO 17294-2:2004	24/11/2014 09:00:00	
Micro Pollutants (ppb) Note 1							
	2,6-Dimethylphenol		Quarterly	0	Solvent Extraction with analysis by GCMS		See repeatability data for micropollutants
	4-Acetylmorpholine		Quarterly	0			
	Aniline		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	0			
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholiny Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	0			
	O-phenetidine		Quarterly	0			
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-Phenetidine		Quarterly	0			
	Sulphur (Mol)		Quarterly	0			
	Tetrachloroethylene		Quarterly	0			
	2,4,6 -Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

Note 1: Two consecutive weekly or resample results not to exceed: Hydroxybenzothiazole = 20 ppb, Flectol A = 2ppb, others = 2ppb

[1] The result is maximum value (or the minimum value in the case of a limit expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum - maximum' measured values

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method has been formally agreed with the Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, e.g. colorimetry.

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[5] No limit set - an objective level of 25 mg/l set to monitor effectiveness of carbon filters & detect Fe breakthrough from the outlet of the filters [October 2012]

Signed:


 (authorised to sign as representative of the Operator)

Date:

09/01/2015

REPEATABILITY DATA FOR MICROPOLLUTANTS

Component	Linearity 95% confidence through zero, R ² Range: 5 - 40 mg/l	Repeatability, r			
		6mg/l	10mg/l	16mg/l	40mg/l
Toluene	0.999	0.10	0.40	0.40	3.25
P.C.E	0.998	0.23	0.26	0.15	2.61
p-Xylene	0.998	0.24	0.22	0.30	1.80
Ethylmorpholine	0.997	0.48	0.87	0.41	1.79
Aniline	0.998	0.47	0.83	0.63	3.60
Phenol	0.995	0.31	0.72	0.48	3.46
Ethoxybenzene	0.998	0.34	0.21	0.55	2.92
o-Cresol	0.994	0.30	0.47	0.38	1.83
p-Cresol	0.996	0.19	0.28	0.32	2.81
Dichlorophenol	0.996	0.18	0.09	0.17	1.44
Phenyliothiocyanate	0.995	0.16	0.78	0.28	1.89
Benzothiazole	0.999	0.24	0.34	0.01	2.02
Trichlorophenol	0.996	0.21	0.25	0.70	2.26
Flectol A	0.999	0.30	0.21	0.30	4.00
Phthalimide	0.994	0.20	0.78	0.39	1.67
Methyl-4-morpholinylcarbodithioate	0.998	0.43	0.21	0.18	1.94
Dimorpholinyl Ketone	0.998	0.31	0.54	0.73	1.81
Me Sulphyl BTH	0.996	0.14	0.49	1.12	3.05
Me BTH Sulphone	0.997	0.20	0.46	0.95	2.84