

RECEIVED

07 APR 2014

7th April 2014

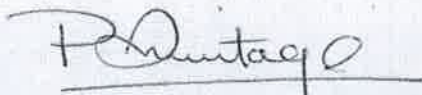
Beth Voice
Natural Resources Wales
Chester Road
Buckley
Flintshire
CH7 3AJ

Dear Beth,

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

Please find enclosed the Monitoring Data Report for the period 01/01/2014 to 31/03/2014.

Yours sincerely,



P. Armitage
WTP Production Engineer

MONITORING RETURNS N. WALES

	INITIALS	DATE
CHECKED Vs AUTHORISATION	☒	8.4.14
TRACKING	JB	7.4.14
OK FOR PUBLIC REGISTER	☐	☐
WTP PRODUCTION ENGINEER	JB	EAM

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 01/01/2014 to 31/03/2014

Emissions to Water						
Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Time ⁽³⁾
Pontcysyllte Adit (Not 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	3.22	TOC Analysis using Hach Lange Tubes	08/01/2014 11:00:00
	Total Phenol (mg/l)	No Limit	Quarterly	0.01	HPLC with Electrochemical Detector	08/01/2014 11:00:00
	Micro Pollutants (ppb)	No Limit	Quarterly	0	Solvent Extraction with analysis by GC/MS	
	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		
	Ficlor 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:

07/04/2014

Permit Number: EPR/NP3335GR

Facility: Ruabon Chemical Works

Operator: Solutia UK Limited
Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/01/2014 to 31/03/2014

Emissions to Water						
Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Time ^[3]
Triflyant Brook (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	11.4	TOC Analysis using Hach Lange Tubes	12/02/2014 10:00:00
	Total Phenol (mg/l)	No Limit	Quarterly	0.01	HPPLC with Electrochemical Detector	15/01/2014 10:00:00
	Micro Pollutants (ppb)	No Limit	Quarterly	0	Solvent Extraction with analysis by GC/MS	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l 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		
	Fleclo 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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Solutia UK Limited

Facility: Ruabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/01/2014 to 31/03/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Time ⁽³⁾	Uncertainty ⁽⁴⁾
Factory Borehole Middle (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	12	TOC Analysis using Hach Lange Tubes	19/03/2014 09:00:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.03	HPLC with Electrochemical Detector	22/01/2014 09:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GC/MS		See repeatability data for micropollutants
	2,6 Dimethylphenol		Quarterly	0			
	4-Acetyl morpholine		Quarterly	0			
	Aniline		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	1228		22/01/2014 09:00:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Ficlor A		Quarterly	0			
	O-phenetidine		Quarterly	171		22/01/2014 09:00:00	
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-Phenetidine		Quarterly	189		22/01/2014 09:00:00	
	Tetrachloroethylene		Quarterly	0			
	2,4,6 Trichlorophenol		Quarterly	0			
	Toluene		Quarterly	0			
	Xylene		Quarterly	0			

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Operator:

Solutia UK Limited

Form Number: Water 1

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Time ⁽³⁾	Uncertainty ⁽⁴⁾
Factory Borehole South (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	4.75	TOC Analysis using Hach Lange Tubes	19/03/2014 09:00:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.04	HPLC with Electrochemical Detector	19/03/2014 09:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Micro Pollutants (ppb)	No Limit			Solvent Extraction with analysis by GC/MS		See repeatability data for micropollutants
	2,6 Dimethylphenol		Quarterly	0			
	4-Acetyl morpholine		Quarterly	0			
	Aniline		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	154		19/02/2014 09:00:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Fiecol A		Quarterly	2.3		19/03/2014 09:00:00	
	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 01/01/2014 to 31/03/2014

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	12.5	TOC Analysis using Hach Lange Tubes	12/03/2014 11:00:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.05	HPLC with Electrochemical Detector	10/02/2014 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	841		10/02/2014 11:00:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Fiecol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	0			
	O-Cresol		Quarterly	0			
	O-phenetidine		Quarterly	141		15/01/2014 11:00:00	
	P-Cresol		Quarterly	0			
	Phenylisocyanate		Quarterly	0			
	P-Phenetidine		Quarterly	648		15/01/2014 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 01/01/2014 to 31/03/2014

Emissions to Water						
Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Time ⁽³⁾
Road Culvert Sump (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	5.21	TOC Analysis using Hach Lange Tubes	15/01/2014 11:00:00
	Total Phenol (mg/l)	No Limit	Quarterly	0.01	HPLC with Electrochemical Detector	15/01/2014 11:00:00
	Micro Pollutants (ppb)	No Limit	Quarterly	0	Solvent Extraction with analysis by GCMS	
	2,4-Dimethylphenol		Quarterly	0		
	2,4,6-Dimethylphenol		Quarterly	0		
	Aniline		Quarterly	0		
	Benzothiazole		Quarterly	0		
	Hydroxybenzothiazole		Quarterly	34		10/02/2014 11:00:00
	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	6.1		10/02/2014 11:00:00
	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 01/01/2014 to 31/03/2014

Emissions to Water

Emission Point	Substance/ Parameter	Emission Limit Value	Reference Period	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Time ⁽³⁾	Uncertainty ⁽⁵⁾
Phosymedre Quarry Leachate (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	63	TOC Analysis using Hach Lange Tubes	05/03/2014 11:00:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.06	HPLC with Electrochemical Detector	05/02/2014 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 GC/MS		See repeatability data for micropollutants
	2,6-Dimethylphenol		Quarterly	0			
	4-Acetylmorpholine		Quarterly	3.5		05/03/2014 11:00:00	
	Aniline		Quarterly	4.3		05/03/2014 11:00:00	
	Hydroxybenzothiazole		Quarterly	7155		08/01/2014 11:00:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholyl Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	52		08/01/2014 11:00:00	
	4-Ethylmorpholine		Quarterly	0			
	Flectol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	9.6		05/02/2014 11:00:00	
	O-phenetidine		Quarterly	52		08/01/2014 11:00:00	
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-Phenetidine		Quarterly	5119		05/03/2014 11:00:00	
	Sulphur (Mo)		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 01/01/2014 to 31/03/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Time ⁽³⁾	Uncertainty ⁽⁴⁾
Phosymedre Quarry b/n B3 (Note 1)	Total Organic Carbon (TOC) mg/l	No Limit	Quarterly	34	TOC Analysis using Hach Lange Tubes	05/03/2014 11:00:00	
	Total Phenol (mg/l)	No Limit	Quarterly	0.03	HPLC with Electrochemical Detector	08/01/2014 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
	2,6-Dimethylphenol		Quarterly	0			
	4-Acetylmorpholine		Quarterly	0			
	Aniline		Quarterly	0			
	Hydroxybenzothiazole		Quarterly	64.7		05/03/2014 11:00:00	
	2,4-Dichloroaniline		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholinyl Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	13.8		05/03/2014 11:00:00	
	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 (Mo)		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 01/01/2014 to 31/03/2014

Emissions to Water

Emission Point	Substance/Parameter (ppb)	Emission Limit Value	Reference Period	Result ⁽¹⁾	Test Method ⁽²⁾ Solvent Extraction with analysis by GC/MS	Sample Date and Time ⁽³⁾	Uncertainty ⁽⁴⁾ See repeatability data for micropollutants
River Dee Upstream (Note 1)	Aniline		Quarterly	0			
	Benzothiazole		Quarterly	0			
	2,4-Dichlorophenol		Quarterly	0			
	Dimorpholinyl Ketone		Quarterly	0			
	Ethoxybenzene		Quarterly	0			
	4-Ethylmorpholine		Quarterly	0			
	Fiecol A		Quarterly	0			
	Methyl BTH Sulphone		Quarterly	0			
	Methyl Sulphy 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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Reporting of Emissions to Water (other than to Sewer) for the period from 01/01/2014 to 31/03/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reference Period	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Time ⁽³⁾	Uncertainty ⁽⁴⁾
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-Ethynmorpholine		Quarterly	0			
	Fleclo 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			

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:

(authorised to sign as representative of the Operator)

Date:

07/04/2014

Permit Number: EPR/NP3335GR

Operator: Solutia UK Ltd

Facility: Rubabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/01/2014 to 31/03/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reporting Period	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Time ⁽³⁾	Uncertainty ⁽⁴⁾
Ground Water Carbon Filter (Brook & Road Culvert)	Total Phenol (mg/l)	0.2	Quarterly	0.01	HPPLC with Electrochemical Detector	06/01/2014 09:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Total Iron (mg/l)	No Limit Set ⁽⁵⁾	Quarterly	3.83	SCA Blue Book Method	03/03/2014 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 (Mo)		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: 07/04/2014

Solutia UK Limited

Facility: Ruabon Chemical Works

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/01/2014 to 31/03/2014

Emissions to Water

Emission Point	Substance/Parameter	Emission Limit Value	Reporting Period	Result ⁽¹⁾	Test Method ⁽²⁾	Sample Date and Time ⁽³⁾	Uncertainty ⁽⁴⁾
Ground Water Carbon Filter (Middle Borehole)	Total Phenol (mg/l)	0.2	Quarterly	0.01	HP-PLC with Electrochemical Detector	06/01/2014 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	SCA Blue Book Method	13/01/2014 09:00:00	
	Micro Pollutants (ppb)	Note 1			Solvent Extraction with analysis by GC/MS		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			
	Fiecol A		Quarterly	0			
	Methyl Benzothiazole		Quarterly	0			
	O-phenetidine		Quarterly	0			
	Phenyl Salicylate		Quarterly	0			
	Phthalimide		Quarterly	0			
	P-Phenetidine		Quarterly	0			
	Sulphur (Mo)		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 14 days for each sample.

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:

07/04/2014

Permit Number: EPR/NP3335GR

Facility: Ruabon Chemical Works

Operator:

Solutia L. limited

Form Number: Water 1

Reporting of Emissions to Water (other than to Sewer) for the period from 01/01/2014 to 31/03/2014

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	06/01/2014 09:00:00	Method uncertainty is ± 0.007 mg/l at 0.06 mg/l
	Total Iron (mg/l)	No Limit Set ⁽⁵⁾	Quarterly	15.3	SCA Blue Book House	06/01/2014 09:00:00	
	Micro Pollutants (ppb)	Note 1			Solvent Extraction with analysis by GC/MS		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 (Mo)		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: 07/04/2014

REPEATABILITY DATA FOR MICROPOLLUTANTS

Component	Linearity 95% confidence through zero, R^2	Repeatability, r			
		6mg/l	10mg/l	16mg/l	40mg/l
	Range: 5 - 40 mg/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
Phenylisothiocyanate	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
Fiecol 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 BTB	0.996	0.14	0.49	1.12	3.05
Me BTB Sulphone	0.997	0.20	0.46	0.95	2.84

