

Surrender notice with introductory note

Environmental Permitting (England & Wales) Regulations 2010

Ruabon Chemical Works

Solutia UK Ltd
Ruabon Works
Cefn Mawr
Wrexham
LL14 3SL

Surrender notice number
EPR/NP3335GR/S005

Permit number
EPR/NP3335GR

Ruabon Chemical Works

Permit number EPR/NP3335GR

Introductory note

This introductory note does not form a part of the permit

The following notice is issued in accordance with regulation 25 and Part 1 of Schedule 5 of The Environmental Permitting (England and Wales) Regulations 2010 (S.I.2010 No. 675) (the Regulations) to surrender part of a permit issued under the Regulations to operate the regulated facility.

This is a Partial Surrender Notice for the majority of the existing Ruabon Chemical Works. The Partial Surrender Notice allows for the continued operation of a carbon filter unit for treating abstracted groundwater. Solutia UK Ltd operate a carbon filter unit to treat contaminated groundwater which is abstracted for reasons of slope stability and to prevent the escape of the contaminated ground water to surface water via other routes.

The Ruabon Chemical Works installation is owned by Solutia UK Ltd. DA Nano manufacture colloidal silica on land within the installation which is leased from Solutia UK Limited. The Solutia UK Ltd manufacturing operation closed in January 2009. DA Nano have complete operational control over all of the Directly Associated Activities of their manufacturing process at the Ruabon Chemical Works installation.

The specific items to be surrendered from the effective permit are:

- Associated activity of Process Water Treatment.
- Associated activity of site Power House.
- Associated activity of Compressed Air Generation.
- Associated activity of Waste Storage areas and site main waste drum storage compound.

The items remaining on the permit after the partial surrender will be:

- The Section 5.3 A(1)(c)(ii) activated carbon treatment of collected groundwater prior to its discharge to effluent drain for combining with site other effluent/storm water being transferred to storage within the waste water treatment plant (WWTP). The facilities comprise three proprietary – supplied carbon units, each containing approximately 2 cubic metres of activated carbon. Groundwater is collected from two dewatering borehole pumps and two low level drainage sumps. Outlets from the borehole pumps will be individually piped to two of the carbon units. The third carbon unit is connected to a shared manifold for the sump discharge pumps, i.e. Brook and Road culvert pumps.
- Weekly monitoring and analysis of the treated groundwater from the carbon filters will be undertaken by Solutia UK Ltd employees assigned to the DA Nano WWTP.
- The permit area will be reduced to cover only the footprint of the carbon filter units.
- Monthly sampling and analysis for the points monitoring the long term impact of historical ground contamination.

Treated effluent from the carbon filter unit is transferred to an on-site Waste Water Treatment Works, operated by DuPont Air Products Nano Materials Ltd under Permit number EPR/BV2689IE, where it joins with other effluent streams, is further treated and discharged to either the River Dee or Tref-y-Nant Brook. This discharge is subject to discharge limits contained in permit EPR/BV2689IE.

Following the closure of Solutia UK Limited operations, the remaining effluent streams are: i) DuPont Main plant (containing inorganics + acetic acid discharged to the River Dee as sodium acetate) ii) DuPont Formulations, Drumming Shed, Storage Drainage & Line/Vessel Flushings (containing inorganics + range of organics), iii) Solutia Process Water Treatment Plant back-wash, iv) DA Nano Boiler House effluent, v) Solutia bore hole water (following carbon absorption treatment, vi) WWTP Centrifuge centrate, vii) Surface Rainwater.

All streams except ii) will discharge via the WWTP to the River Dee. Stream ii) will be tankered off-site for treatment. The WWTP facilities allow the collection and storage of the above effluent

streams; pH adjustment; removal of gelled silica and other solids in a Primary Clarifier; effluent neutralisation using CO₂ and final solids-settling before discharge to the River Dee.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status Log of the permit		
Detail	Date	Comments
Application BQ4173	Received 14/08/03	
Additional Information	Received Nov. 03-Jan.04	Further Site Report information
Additional Information	Received 16/12/03	Releases to air
Additional Information	Received 11/12/03, 09/01/04	Hertel Services lease & location
Additional Information	Received 30/01/04	Units and minor operational changes
Additional Information	Received 05/03/04	Impact of released copper from Syton ion-exchange unit
Additional Information	Received 05/03/04	Site plan
Additional Information	Received 23/03/04, 01/04/04	Cadmium and Mercury in effluent
Permit BQ4173 determined	13/04/04	
Variation DP3232MG	Received 11/12/06	
Additional Information	Received 26/02/07, 26/02/07, 16/03/07	H2S abatement and limits
Additional Information	Received 07/03/07	Waste Water Treatment Plant operation
Additional Information	Received 14/05/07	Drg. 88CO1027 (revB)
Variation DP3232MG determined	24/05/07	
Transfer EPR/NP3335GR/T001	Received 22/10/08	
Transfer EPR/NP3335GR/T001	Effective 23/12/08	
Variation EPR/NP3335GR/V002	Received 29/11/08	
Additional Information	Received 03/12/08	Abstractor Meeting Notes
Additional Information	Received 08/12/08	Fish toxicity of organic chemicals
Additional Information	Received 12/12/08	Effluent Monitoring
Additional Information	Received 17/12/08	Drg 88/C01/048
Additional Information	Received 17/12/08	Taste & odour
Additional Information	Received 22/12/08	Water testing & GCMS
Additional Information	Received 12/01/09	Analytical methods BS numbering
Additional Information	Received 12/01/09	Updated Part A form
Additional Information	Received 14/01/09	Site organisation – Spring 2009
Variation EPR/NP3335GR/V002 determined	19/01/09	
Application EPR/NP3335GR/T003 (partial transfer of permit EPR/NP3335GR)	Duly Made 08/06/09	
EA request to extend determination date to 01/09/09	Sent 17/07/09	
Additional information	Received 20/07/09	Revised drg 88C01050 (rev.1) & new cover letter extending transfer area
Extension request agreed	Received 22/07/09	

Schedule 5 Request for Further Information	Sent 04/08/09	
Additional Information	Received 06/08/09	Response to Schedule 5 notice
Partial transfer determined EPR/NP3335GR	31/08/09	
Environment Agency Initiated Variation EP3035TW, initiated	30/03/10	
Variation Notice EPR/NP3335GR/V004	Issued 01/04/10	
Application EPR/NP3335GR/S005 (partial surrender of permit EPR/NP3335GR)	Duly Made 05/05/2010	
Surrender Notice EPR/NP3335GR/S005	Issued 03/11/2010	

Other Part A installation permits relating to this installation		
Operator	Permit Number	Date of Issue
DuPont Air Products Nano Materials Limited	BV2689IE	13/04/04
DuPont Air Products Nano Materials Limited	EPR/FP3939KF	31/08/09

End of Introductory Note

Surrender

Environmental Permitting (England and Wales) Regulations 2010

Surrender notice

Permit number

EPR/NP3335GR

Surrender number

EPR/NP3335GR/S005

Operator

Solutia UK Ltd

Registered office address

Corporation Road

Newport

South Wales

NP19 4XF

Company registration number 03295486

Regulated Facility

Ruabon Chemical Works

Cefn Mawr

Wrexham

LL14 3SL

The Environment Agency in exercise of its powers under Regulation 25 and Part 1 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations 2010 (SI 2010 No 675) accepts the partial surrender of this permit to the extent set out in schedules 1 to 3 of this notice.

This notice shall take effect from 03/11/2010

Name	Date
M Bischer	03/11/2010

Authorised on behalf of the Environment Agency

Schedule 1 – conditions to be deleted

All existing conditions and schedules of the Permit NP3335GR

Schedule 2 – conditions to be amended

None

Schedule 3 – conditions to be added

The following conditions are added to the permit

1 Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

2 Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.3 Operating techniques

- 2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- (b) If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan specified in schedule 1, table S1.2 or otherwise required under this permit, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3 Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 table S3.1.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.3 Monitoring

- 3.3.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in table S3.1;
 - (b) surface water or groundwater specified in table S3.2;
- 3.3.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.3.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.3.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.
- 3.3.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 table S3.1 unless otherwise agreed in writing by the Environment Agency.

4 Information

4.1 Records

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:

- (i) off-site environmental effects; and
- (ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.3 Notifications

4.3.1 The Environment Agency shall be notified without delay following the detection of:

- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
- (b) the breach of a limit specified in the permit; or
- (c) any significant adverse environmental effects.

4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and

- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

4.4 Interpretation

- 4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.
- 4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made “without delay”, in which case it may be provided by telephone.

Schedule 1 - Operations

Table S1.1 activities

Activity reference	Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
A1	Section 5.3 A(1)(c)(ii) Disposal of non-hazardous waste in a facility with a capacity of more than 50 tonnes per day by physico-chemical treatment.	Treatment of contaminated abstracted groundwater by carbon adsorption and filtration	From abstraction of contaminated groundwater, treatment in the three carbon filter units, and discharge to waste water treatment plant.

Table S1.2 Operating techniques

Description	Parts	Date Received
Application for Variation EPR/NP3335GR/V002 & EPR/NP3335GR/S006	EPR/NP3335GR/V002 - Document 3. The response to question 2a given in Doc 3 (pages 1-6) of the application. With additional information in EPR/NP3335GR/S006 – Documents 3, monitoring of the carbon filters will be done by Solutia employees assigned to the DA Nano WWTP	29/11/08 & 05/05/2010

Schedule 2 - Waste types, raw materials and fuels

Table S2.1 Raw materials and fuels	
Raw materials and fuel description	Specification
-	-

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements						
Emission point ref. & location	Parameter	Source	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
Ground Water Carbon Filter	Micro-pollutants	Outlet of any of the 3 Carbon Filters	Two consecutive weekly or resample results not to exceed: Hydroxy-Benzo-Thiazole = 20ppb Flectol A = 2ppb Others = 2 ppb	For 95% of all measured values of periodic samples taken over one month	Weekly	Gas chromatography-mass spectrometry - SCA blue book 50. ISBN 0117516171 HPLC with electrochemical detector
Ground Water Carbon Filter	Iron	Outlet of any of the 3 Carbon Filters	25 mg/l	For 95% of all measured values of periodic samples taken over one month	Weekly	BS EN ISO 11885:1998 BS EN ISO 17294- 2:2004
Ground Water Carbon Filter	Phenol - Monohydric	Outlet of any of the 3 Carbon Filters	0.2 mg/l	For 95% of all measured values of periodic samples taken over one month	Weekly	Gas chromatography-mass spectrometry - SCA blue book 50. ISBN 0117516171 HPLC with electrochemical detector

Table S3.2 Surface water or groundwater monitoring requirements

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Pontcysyllte Adit, Tref-y-nant Brook, Site Dewatering Boreholes, Brook Culvert Sump, Road Culvert Sump, Rhosymedre Quarry Leachate, Rhosymedre Quarry Borehole	TOC	Monthly	BS EN 1484: 1997 / SCA blue book 157 ISBN 0117529796	Analysis Monthly
Pontcysyllte Adit, Tref-y-nant Brook, Site Dewatering Boreholes, Brook Culvert Sump, Road Culvert Sump, Rhosymedre Quarry Leachate, Rhosymedre Quarry Borehole	Phenol	Monthly	Gas chromatography mass spectrometry -SCA blue book 50. ISBN 0117516171 HPLC with electrochemical detector	Analysis Monthly
Pontcysyllte Adit, Tref-y-nant Brook, Site Dewatering Boreholes, Brook Culvert Sump, Road Culvert Sump, Rhosymedre Quarry Leachate, Rhosymedre Quarry Borehole, River Dee Upstream, River Dee Downstream	Micro-pollutants	Monthly	Gas chromatography mass spectrometry/ HPLC with electrochemical detector	Analysis Monthly

Schedule 4 - Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Total Phenol mg/l	Pontcysyllte Adit. Tref-y-nant Brook, Site Dewatering Boreholes, Brook Culvert Sump, Road Culvert Sump, Rhosymedre Quarry Leachate, Rhosymedre Quarry borehole. Ground Water Carbon Filter Outlets	Quarterly	03/11/2010
TOC mg/l	Pontcysyllte Adit. Tref-y-nant Brook, Site Dewatering Boreholes, Brook Culvert Sump, Road Culvert Sump, Rhosymedre Quarry Leachate, Rhosymedre Quarry borehole	Quarterly	03/11/2010
Micro-pollutants	Pontcysyllte Adit. Tref-y-nant Brook, Site Dewatering Boreholes, Brook Culvert Sump, Road Culvert Sump, Rhosymedre Quarry Leachate, Rhosymedre Quarry b/h B3, River Dee Upstream, River Dee Downstream. Ground Water Carbon Filter Outlets	Quarterly	03/11/2010
Iron	Ground Water Carbon Filter Outlets	Quarterly	03/11/2010

Table S4.2 Reporting forms		
Media/parameter	Reporting format	Date of form
Water and Land	Form water 1	03/11/2010

Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution

To be notified within 24 hours of detection

Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit

To be notified within 24 hours of detection unless otherwise specified below

Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Solutia UK Limited

Schedule 6 - Interpretation

“Annex IIA” means Annex IIA to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on Waste.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“accident” means an accident that may result in pollution.

“annually” means once every year.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit..

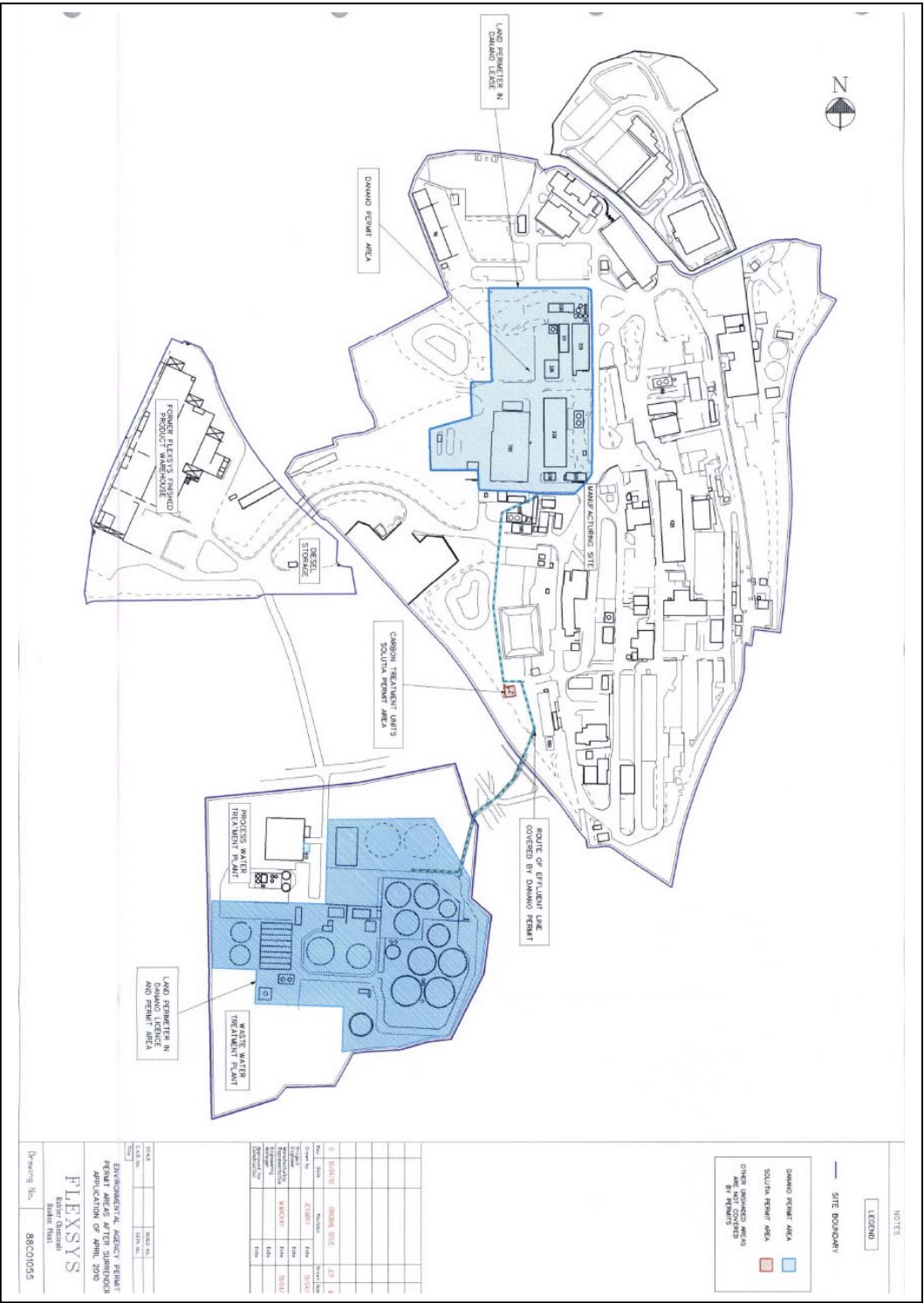
“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“year” means calendar year ending 31 December.

Schedule 7 - Site plan



END OF PERMIT

Permit Number:
Facility:

EPR/NP3335GR
Ruabon Chemical Works

Operator:
Form Number:

Solutia UK Ltd
Water1 / DD/MM/YY

Reporting of emissions to water (other than to sewer) and land for the period from 03/11/2010 to Permit Surrender

Emission Point	Substance / Parameter	Emission Limit Value	Reference Period	Result ^[1]	Test Method ^[2]	Sample Date and Times ^[3]	Uncertainty ^[4]
Ground Water carbon Filter Outlets - Outlet of the 3 Carbon Filters	Micro-pollutants	Two consecutive weekly or resample results not to exceed: Hydroxy-Benzo-Thiazole = 20ppb Flectol A = 2ppb Others = 2 ppb			Gas chromatography mass spectrometry -SCA blue book 50. ISBN 0117516171 HPLC with electrochemical detector	Sample and Analyse Weekly	
Ground Water carbon Filter Outlets - Outlet of the 3 Carbon Filters	Iron	25 mg/l			BS EN ISO 11885:1998 BS EN ISO 17294- 2:2004	Sample and Analyse Weekly	
Ground Water carbon Filter Outlets - Outlet of the 3 Carbon Filters	Total Phenol mg/l	0.2 mg/l			Gas chromatography mass spectrometry -SCA blue book 50. ISBN 0117516171 HPLC with electrochemical detector	Sample and Analyse Weekly	
Pontcysyllte Adit. Tref-y-nant Brook, Site Dewatering Boreholes, Brook Culvert Sump, Road Culvert Sump, Rhosymedre Quarry Leachate, Rhosymedre Quarry borehole.	Total Phenol mg/l	-			Gas chromatography mass spectrometry -SCA blue book 50. ISBN 0117516171 HPLC with electrochemical detector		
Pontcysyllte Adit. Tref-y-nant Brook, Site Dewatering Boreholes, Brook Culvert Sump, Road Culvert Sump, Rhosymedre Quarry Leachate, Rhosymedre Quarry borehole	TOC mg/l	-			BS EN 1484: 1997 / SCA blue book 157 ISBN 0117529796		
Pontcysyllte Adit. Tref-y-nant Brook, Site Dewatering Boreholes, Brook Culvert Sump, Road Culvert Sump, Rhosymedre Quarry Leachate, Rhosymedre Quarry borehole, River Dee Upstream, River Dee Downstream.	Micro-pollutants	-			Gas chromatograph mass spectrometry -SCA blue book 50. ISBN 0117516171 HPLC with electrochemical detector		

The result given is the maximum value (or the minimum value in the case of a limit that is 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.

Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed
(Authorised to sign as representative of Operator)

Date.....