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Natural  
Resources  
Wales**

## **Permit with introductory note**

The Environmental Permitting (England & Wales) Regulations 2016

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**Solutia UK Limited**

**Cefn Mawr (Former Flexys 'Ruabon'  
Works)  
Wrexham  
LL14 3SL**

Permit number

**EPR/NP3335GR**

# **Cefn Mawr (former Flexys 'Ruabon' Works)**

## **Permit number EPR/NP3335GR**

### **Introductory note**

#### **This introductory note does not form a part of the permit**

The main features of the permit are as follows.

Solutia UK Limited operate three carbon filtration units to treat groundwater which is abstracted for reasons of slope stability and to prevent the escape of groundwater, which contains iron and organic compounds, to surface water via other routes. Groundwater is abstracted from two de-watering boreholes and two collection sumps before being passed through the carbon filtration units for treatment. The function of the carbon filtration units is to absorb trace plant-related organic compounds in the groundwater and they don't act to remove iron.

Solutia UK Limited also operate a Groundwater and Stormwater Storage Facility (GSSF). This facility receives water from two sources: (i) treated groundwater from the carbon filtration units; and (ii) rainwater collected by the site's surface water drainage system. Both sources of water are transferred to the GSSF via pipeline, where they are combined and held in storage tanks before being discharged to the River Dee via pipeline.

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

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
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	

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
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 application 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 and Taste & Odour
Additional information received	22/12/08	Water testing and GCMS
Additional information received	12/01/09	Analytical methods BS numbering and 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	
Environment Agency request to extend determination date to 01/09/09	17/07/09	
Additional information received	20/07/09	Revised drg. 88C01050 (rev.1) & new cover letter extending transfer area
Extension request agreed	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	

**Status log of the permit**

Description	Date	Comments
Environment Agency Led Variation EP3035TW (EPR/NP3335GR/V004), 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 05/05/10	
Partial Surrender Notice EPR/NP3335GR/S005 issued	03/11/10	
Environment Agency Led Variation (EPR/NP3335GR/V006) initiated	31/07/12	Emission limit for Fe discharge from the outlet of the carbon filters reversed to an objective level
Environment Agency Led Variation determined EPR/NP3335GR/V006 Permit EPR/NP3335GR	26/10/12	Varied permit issued
Agency variation determined EPR/NP3335GR/V007	25/03/13	Agency variation to implement the changes introduced by IED
Application EPR/MP3335GR/V008 (variation and consolidation)	Duly made 11/12/14	Application to vary and update the permit to modern conditions
Variation determined	23/06/15	Varied and consolidated permit issued in modern condition format
Application EPR/NP3335GR/V009	Duly made 06/11/17	Minor technical variation to puncture the secondary trough & sump to allow rainwater to soak naturally to ground.
Variation determined	28/11/17	Varied permit issued
Regulation 61 Notice sent to the Operator	05/04/19	Issue of a Notice under Regulation 61(1) of the EPR. Natural Resources Wales initiated review and variation to vary the permit following the publication of the revised Best Available Techniques (BAT) Reference Document (BRef) for Waste Treatment.
Regulation 61 Notice response	30/09/19	Response received from the operator.
Additional information received	11/11/20	Response from operator to RFI sent 26/08/20
NRW Initiated Variation determined EPR/NP3335GR/V010	28/07/21	Varied and consolidated permit issued.

End of introductory note

# Permit

The Environmental Permitting (England and Wales) Regulations 2016

Permit number  
**EPR/NP3335GR**

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/NP3335GR/V010 authorising,

**Solutia UK Limited** (“the operator”),  
whose registered office is

**Corporation Road  
Newport  
South Wales  
NP19 4XF**

company registration number **03295486**

to operate an installation at

**Cefn Mawr (former Flexys ‘Ruabon’ Works)  
Wrexham  
LL14 3SL**

to the extent authorised by and subject to the conditions of this permit.

Name	Date
Holly Noble	28/07/2021

Authorised on behalf of Natural Resources Wales

# **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.

## **1.2 Energy efficiency**

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
  - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
  - (c) take any further appropriate measures identified by a review.

## **1.3 Efficient use of raw materials**

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
  - (b) maintain records of raw materials and water used in the activities;
  - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
  - (d) take any further appropriate measures identified by a review.

## **1.4 Avoidance, recovery and disposal of wastes produced by the activities**

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
  - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and

- (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.
- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

## **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”).

### **2.2 The site**

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in red on the site plan at schedule 7 to this permit.

### **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 Natural Resources Wales.
  - (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 2.3.2 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.3 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
  - (a) the nature of the process producing the waste;
  - (b) the composition of the waste;
  - (c) the handling requirements of the waste;
  - (d) the hazardous property associated with the waste, if applicable; and
  - (e) the waste code of the waste.
- 2.3.4 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

## **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 tables S3.1 and S3.2.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Where a substance is specified in schedule 3 table S3.1 or S3.2 but no limit is set for it, the concentration of such substance in emissions to water from the relevant emission point shall be no greater than the background concentration.
- 3.1.4 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

### **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 Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
  - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

### **3.3 Odour**

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
  - (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to odour, submit to Natural Resources Wales for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
  - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.



### **3.4 Noise and vibration**

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of Natural Resources Wales, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.
- 3.4.2 The operator shall:
- (a) if notified by Natural Resources Wales that the activities are giving rise to pollution outside the site due to noise and vibration, submit to Natural Resources Wales for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
  - (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

### **3.5 Monitoring**

- 3.5.1 The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in schedule 3 to this permit:
- (a) point source emissions specified in tables S3.1 and S3.2;
  - (b) surface water or groundwater specified in table S3.3;
  - (c) following mixing of stormwater and groundwater in the Stormwater and Groundwater Storage Facility the Operator shall carry out an analytical monitoring programme according to Table S3.4.
- 3.5.2 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.
- 3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by Natural Resources Wales.
- 3.5.4 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 tables S3.1, S3.2, S3.3 and S3.4 unless otherwise agreed in writing by Natural Resources Wales.

### **3.6 Pests**

- 3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.
- 3.6.2 The operator shall:
- (a) if notified by Natural Resources Wales, submit to Natural Resources Wales for approval within the period specified, a pests management plan which identifies and minimises risks of pollution, hazard or annoyance from pests;

- (b) implement the pests management plan, from the date of approval, unless otherwise agreed in writing by Natural resources Wales

## **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 Natural Resources Wales, 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 Natural Resources Wales.

### **4.2 Reporting**

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

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production /treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by Natural Resources Wales, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

- 4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to Natural Resources Wales, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 Within 1 month of the end of each quarter, the operator shall submit to Natural Resources Wales using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

## 4.3 Notifications

4.3.1 For the activities referenced in schedule 1, table S1.1

- (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
- (i) inform Natural Resources Wales,
  - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
  - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) in the event of a breach of any permit condition the operator must immediately—
- (i) inform Natural Resources Wales, and
  - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1(a)(i), or 4.3.1(b)(i) where the information relates to the breach of a limit specified in the permit, 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 Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.

4.3.4 Natural Resources Wales 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.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

In any other case:

- (a) the death of any of the named operators (where the operator consists of more than one named individual);
- (b) any change in the operator's name(s) or address(es); and
- (c) any steps taken with a view to the operator, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) Natural Resources Wales shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 Natural Resources Wales shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.3.7 Where the operator has entered into a climate change agreement with the Government, Natural Resources Wales shall be notified within one month of:

- (a) a decision by the Secretary of State not to re-certify the agreement;
- (b) a decision by either the operator or the Secretary of State to terminate the agreement; and
- (c) any subsequent decision by the Secretary of State to re-certify such an agreement.

## **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 "immediately", 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 and WFD Annex I and II operations	Limits of specified activity and waste types
AR1	Section 5.4 A(1)(a)(ii) Disposal of non-hazardous waste in a facility with a capacity exceeding 50 tonnes per day by physico-chemical treatment	Treatment of contaminated abstracted groundwater by carbon adsorption.	From abstraction of contaminated groundwater, treatment in the three carbon filter units, and discharge to the Ground and Stormwater Storage Facility
<b>Directly Associated Activity</b>			
Groundwater and Stormwater Storage Facility			

**Table S1.2 Operating techniques**

Description	Parts	Date Received
Part Transfer Application EPR/PP3231WL/T001	Document entitled "Doc 2: Transfer Description – Form D2, Question 3b", section 3.0 "ETP facilities", section 4.0 "ETP Operation" and section 5.0 "Ground Conditions". Document entitled "Doc 3: Management Systems – Form D2, Question 4d".	11/12/14
Application for Variation EPR/NP3335GR/V008	Document entitled "Doc 5: Management Systems – Form C2, Question 3d" and "Doc 7: Operating Techniques – Form C3, Question 3a".	11/12/14
Application for Variation EPR/NP3335GR/V009	Document entitled "Non-technical Summary – 2017 10 – Effluent Transfer Lines"	25/10/17
Response to regulation 61(1) Notice – request for information dated 05/04/2019 detailing how the Operator will comply with the BAT conclusions for Waste Treatment, under Directive 2010/75/EU of the European Parliament and of the Council	All relevant sections	30/09/19
Additional information for regulation 61(1) Notice	All relevant sections of RFI dated 26/08/20	11/11/20

## Schedule 2 - Waste types, raw materials and fuels

**Table S2.1 Raw materials and fuels**

Raw materials and fuel description	Specification
-	-

## Schedule 3 (a) – Emissions and monitoring effective until 16 August 2022

**Table S3.1 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements**

Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Monitoring frequency	Monitoring standard or method
W1, W2	Groundwater and Storm-water storage Facility	Maximum Flow Rate	92.5 l/s	Continuous	On-line electromagnetic flow meter
		Maximum Discharge Volume	8000 m <sup>3</sup> /day	Continuous	On-line electromagnetic flow meter
		Micro-pollutants	No limit set	Quarterly	Solvent extraction with analysis by GC-MS (VOC and SVOC)
		Total Phenol	0.2 mg/l	Quarterly	SCA blue book 50 ISBN 011751671
		Total tetrachloroethene	2.5 µg/l	Quarterly	Solvent extraction with analysis by GC-MS
		Total Organic Carbon (TOC)	No limit set	Quarterly	BS EN 1484 SCA blue book 157 ISBN 0117529796

**Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements**

Emission point ref. & location	Source	Parameter	Limit (incl. Unit)	Monitoring frequency	Monitoring standard or method
Groundwater Carbon Filter	Outlet of any of the 3 carbon filters	Micro-pollutants	No limit set	Twice yearly	Solvent extraction with analysis by GC-MS (VOC and SVOC)
Groundwater Carbon Filter	Outlet of any of the 3 carbon filters	Total Iron	No limit set	Twice yearly	BS EN ISO: 11885:1998 BS EN ISO 17294-2:2004
Groundwater Carbon Filter	Outlet of any of the 3 carbon filters	Total Phenol	No limit set	Twice yearly	SCA blue book 50 ISBN 011751671

**Table S3.3 Surface water or groundwater monitoring requirements**

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method
Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Total Organic Carbon (TOC)	Twice yearly	BS EN 1484 SCA blue book 157 ISBN 0117529796
Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Total Phenol	Twice yearly	SCA blue book 50 ISBN 0117516171
Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Micro-pollutants	Twice yearly	Solvent extraction with analysis by GC-MS (VOC and SVOC)

**Table S3.4 Effluent Monitoring Programme**

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
W1, W2	Total Iron	Weekly	Total Iron Analysis using colormetric (Hach Lange FerroVer) test method	Confirmation of predicted concentrations of Total Iron of 5 mg/l.
W1, W2	Total Iron	Quarterly	BS EN ISO 11885:1998 BS EN ISO 17294-2:2004	Confirmation of predicted concentrations of Total Iron of 5 mg/l.



## Schedule 3 (b) – Emissions and monitoring effective from 17 August 2022

Table S3.1 Point Source emissions to water (other than sewer) and land – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (incl. unit)	Reference Period	Monitoring frequency	Monitoring standard or method
W1, W2	Groundwater and Storm-water storage Facility	Maximum Flow Rate	92.5 l/s	-	Continuous	On-line electromagnetic flow meter
		Maximum Discharge Volume	8000 m <sup>3</sup> /day	Total daily volume	Continuous	On-line electromagnetic flow meter
		Micro-pollutants	No limit set	24-hour flow proportional composite	Quarterly	Solvent extraction with analysis by GC-MS (VOC and SVOC)
		Total Phenol	0.2 mg/l	24-hour flow proportional composite	Quarterly	SCA blue book 50 ISBN 011751671
		Total tetrachloroethene	2.5 µg/l	24-hour flow proportional composite	Quarterly	Solvent extraction with analysis by GC-MS
		Total Organic Carbon (TOC)	60 mg/l	24-hour flow proportional composite	Monthly	BS EN 1484 SCA blue book 157 ISBN 0117529796
		Total Suspended Solids (TSS)	60 mg/l	24-hour flow proportional composite	Monthly	BS EN 872

**Table S3.2 Point source emissions to sewer, effluent treatment plant or other transfers off-site– emission limits and monitoring requirements**

<b>Emission point ref. &amp; location</b>	<b>Source</b>	<b>Parameter</b>	<b>Limit (incl. Unit)</b>	<b>Monitoring frequency</b>	<b>Monitoring standard or method</b>
Groundwater Carbon Filter	Outlet of any of the 3 carbon filters	Micro-pollutants	No limit set	Twice yearly	Solvent extraction with analysis by GC-MS (VOC and SVOC)
Groundwater Carbon Filter	Outlet of any of the 3 carbon filters	Total Iron	No limit set	Twice yearly	BS EN ISO: 11885:1998 BS EN ISO 17294-2:2004
Groundwater Carbon Filter	Outlet of any of the 3 carbon filters	Total Phenol	No limit set	Twice yearly	SCA blue book 50 ISBN 011751671

**Table S3.3 Surface water or groundwater monitoring requirements**

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method
Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Total Organic Carbon (TOC)	Twice yearly	BS EN 1484 SCA blue book 157 ISBN 0117529796
Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Total Phenol	Twice yearly	SCA blue book 50 ISBN 0117516171
Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Micro-pollutants	Twice yearly	Solvent extraction with analysis by GC-MS (VOC and SVOC)

**Table S3.4 Effluent Monitoring Programme**

Location or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
W1, W2	Total Iron	Weekly	Total Iron Analysis using colormetric (Hach Lange FerroVer) test method	Confirmation of predicted concentrations of Total Iron of 5 mg/l.
W1, W2	Total Iron	Quarterly	BS EN ISO 11885:1998 BS EN ISO 17294-2:2004	Confirmation of predicted concentrations of Total Iron of 5 mg/l.

## Schedule 4 (a) – Reporting until 16 August 2022

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
Waste		Annually	01/06/15
Maximum Flow Rate l/s	W1	Quarterly	01/06/15
Maximum Discharge Volume m <sup>3</sup> /day	W1	Quarterly	01/06/15
Micro-pollutants	W1	Quarterly	01/06/15
Total Phenol mg/l	W1	Quarterly	01/06/15
Total Tetrachloroethene µg/l	W1	Quarterly	01/06/15
Total Organic Carbon (TOC) mg/l	W1	Quarterly	01/06/15
Total Iron mg/l	W1	Quarterly	01/06/15
Total Phenol mg/l	Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Twice yearly	01/06/15
Total Organic Carbon (TOC) mg/l	Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Twice yearly	01/06/15
Micro-pollutants	Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Twice yearly	01/06/15
Micro-pollutants	Groundwater Carbon Filter Outlet	Twice yearly	01/06/15
Total Iron mg/l	Groundwater Carbon Filter Outlet	Twice yearly	01/06/15
Total Phenol mg/l	Groundwater Carbon Filter Outlet	Twice yearly	01/06/15

Table S4.2: Annual production/treatment	
Parameter	Units
-	-

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Energy usage	Annually	MWh

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Waste Return	R1	01/03/04
Water (excluding sewer) and Land	Form number Water 1 or other form as agreed in writing by Natural Resources Wales	23/06/15
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	28/07/21

## Schedule 4 (b) – Reporting effective from 17 August 2022

Table S4.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Emissions to water Parameters as required by condition 3.5.1	W1, W2	Quarterly	1 January
Emissions to sewer, effluent treatment plant or other transfers off-site Parameters as required by condition 3.5.1	Outlet of any of the 3 carbon filters	Every 6 months	1 January
Surface water monitoring Parameters as required by condition 3.5.1	Tref-y-Nant Brook and Pontcysyllte Adit Middle and South De-watering Boreholes Brook Culvert and Road Culvert Sumps Rhosymedre Quarry Leachate Groundwater Borehole (B3)	Every 6 months	1 January
Effluent monitoring Parameters as required by condition 3.5.1	W1, W2	Quarterly	1 January

Table S4.2: Annual production/treatment	
Parameter	Units
Total amount of water treated	m <sup>3</sup>

Table S4.3 Performance parameters		
Parameter	Frequency of assessment	Units
Energy usage	Annually	MWh
Generation of residues	Annually – starting 17 <sup>th</sup> August 2022	Tonnes
Generation of waste water	Annually– starting 17 <sup>th</sup> August 2022	m <sup>3</sup>

Table S4.4 Reporting forms		
Media/parameter	Reporting format	Date of form
Water (excluding sewer) and Land	Form number Water 1 or other form as agreed in writing by Natural Resources Wales	23/06/15
Water and Land	Form Water 2 or other form as agreed in writing by Natural Resources Wales	17/08/22
Energy usage	Form energy 1 or other form as agreed in writing by Natural Resources Wales	28/07/21
Other performance indicators	Form performance 1 or other form as agreed in writing by Natural Resources Wales	17/08/22
Waste Subject to Conditions 4.2.5	Waste tonnage return form from the Natural Resources Wales website or other form as agreed in writing by Natural Resources Wales	N/A



# 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 activity that gives rise to an incident or accident which significantly affects or may significantly affect the environment**

#### **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 permit condition**

#### **To be notified within 24 hours of detection**

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

<b>(c) In the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment:</b>	
<b>To be notified within 24 hours of detection</b>	
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.	

<b>Name*</b>	
<b>Post</b>	
<b>Signature</b>	
<b>Date</b>	

\* authorised to sign on behalf of the operator

## Schedule 6 - Interpretation

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

*“Annex I”* means Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

*“Annex II”* means Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

*“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.

*“authorised officer”* means any person authorised by Natural Resources Wales 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.

*“background concentration”* means such concentration of that substance as is present in:

- for emissions to surface water, the surface water quality up-gradient of the site; or
- for emissions to sewer, the surface water quality up-gradient of the sewage treatment works discharge.

*“best available treatment, recovery and recycling techniques”* shall have the meaning given to it in the document published jointly by the Department for Environment, Food and Rural Affairs, the Welsh Assembly Government and the Scottish Executive on 27th November 2006, entitled “Guidance on Best Available Treatment, Recovery and Recycling Techniques (BATRRT) and Treatment of Waste Electrical and Electronic Equipment (WEEE).

*“bioaerosol threshold limits”* means the maximum acceptable bioaerosol concentrations at the nearest sensitive receptor, or at an equivalent distance downwind of the composting operations, which are attributable to the composting operations. The maximum acceptable concentrations are respectively 1000 and 500 CFU m<sup>-3</sup> for total bacteria and *Aspergillus fumigatus*.

*“building”* means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

*“compost”* means solid particulate material that is the result of composting, which has been *sanitised* and *stabilised*, and which confers beneficial effects when added to soil, used as a component of growing media or used in another way in conjunction with plants.

*“composting”* means the biological decomposition of organic materials, under conditions that are predominantly aerobic and that allow the development of thermophilic temperatures as a result of biologically produced heat.

*“disposal”* or *“D”* means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

*“emissions to land”* includes emissions to groundwater.

*“EP Regulations”* means The Environmental Permitting (England and Wales) Regulations SI 2016 No.1154 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.

*“hazardous waste”* has the meaning given in the Hazardous Waste (Wales) Regulations 2005 (as amended)

*“hazardous substance”* means a substance classified as hazardous as a consequence of fulfilling the criteria laid down in parts 2 to 5 of Annex I to Regulation (EC) No 1272/2008

*“Industrial Emissions Directive”* means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

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

*“Pests”* means Birds, Vermin and Insects.

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

*“recovery” or “R”* means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

*‘residue’* means the solid waste generated by the waste treatment activity and is not directly related to the type of waste treated in the plant

*“Waste Framework Directive” or “WFD”* means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

*“Waste Treatment BAT Conclusions”* means the BAT Conclusions for the Waste Treatment sector published as a Commission Implementing Decision EU 2018/1447 in the Official Journal of the EU on 17 August 2018

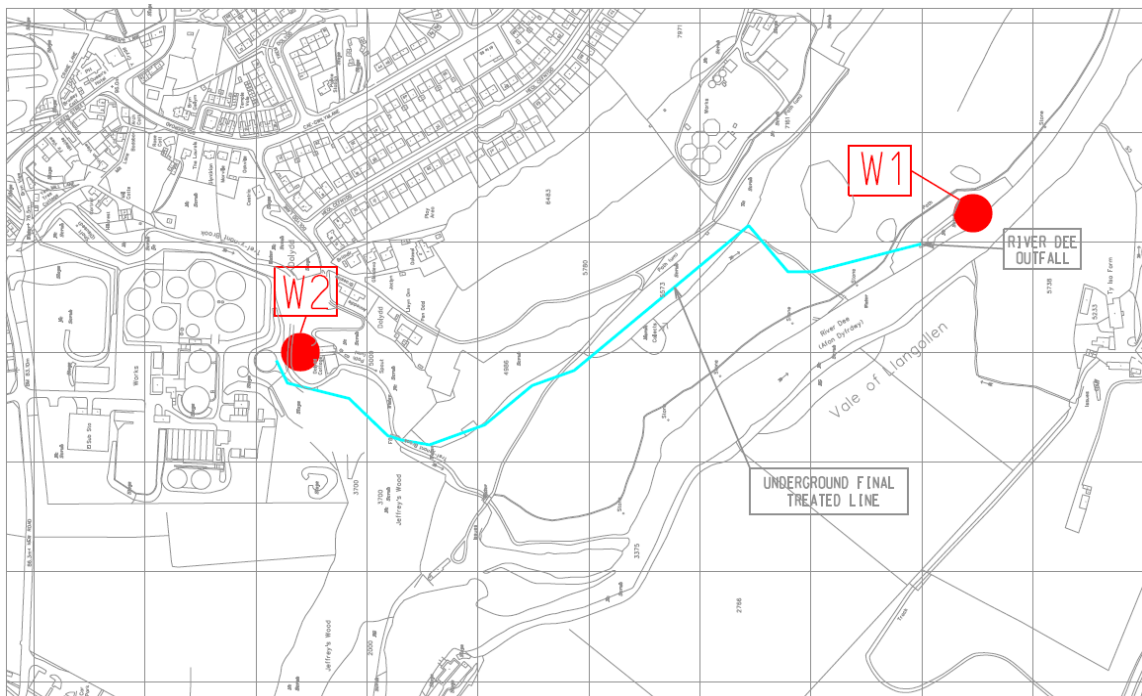
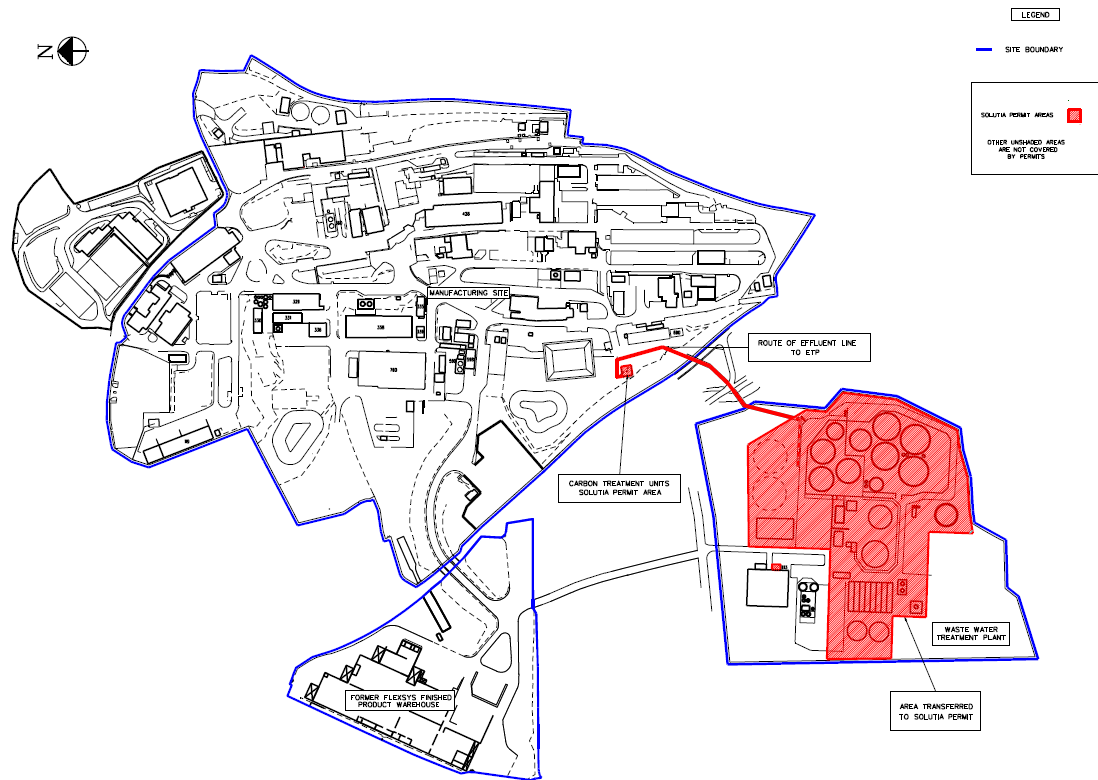
*“year”* means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- (a) in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid and gaseous fuels, 6% dry for solid fuels; and/or
- (b) in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

# Schedule 7 - Site plan



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END OF PERMIT

Permit Number: EPR/NP3335GR

Operator: Solutia UK Limited

Facility: Cefn Mawr (former Flexys 'Ruabon' Works)

Form Number: Water2 / 17/08/2022

**Reporting of emissions to water (other than to sewer) and land for the period from DD/MM/YYYY to DD/MM/YYYY**

Emission Point	Substance / Parameter	Emission		Reference Period	Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
		Limit Value						
W1 and W2	Maximum Flow Rate	92.5 l/s	-			On-line electromagnetic flow meter		
W1 and W2	Maximum Discharge Volume	8000 m <sup>3</sup> /day	Total daily volume			On-line electromagnetic flow meter		
W1 and W2	Micro-pollutants	No limit set	24-hour flow proportional composite			Solvent extraction with analysis by GC-MS (VOC and SVOC)		
W1 and W2	Total Phenol	0.2 mg/l	24-hour flow proportional composite			SCA blue book 50 ISBN 011751671		
W1 and W2	Total tetrachloroethene	2.5 µg/l	24-hour flow proportional composite			Solvent extraction with analysis by GC-MS		

Emission Point	Substance / Parameter	Emission		Result <sup>[1]</sup>	Test Method <sup>[2]</sup>	Sample Date and Times <sup>[3]</sup>	Uncertainty <sup>[4]</sup>
		Limit Value	Reference Period				
W1 and W2	Total Organic Carbon (TOC)	60 mg/l	24-hour flow proportional composite		BS EN 1484 SCA blue book 157 ISBN 0117529796		
W1 and W2	Total Suspended Solids (TSS)	60 mg/l	24-hour flow proportional composite		BS EN 872		

- [1] 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.
- [2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with Natural Resources Wales is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.
- [3] 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.
- [4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed .....  
(Authorised to sign as representative of Operator)

Date.....

Permit Number:     EPR/NP3335GR

Operator:             Solutia UK Limited

Facility:             Cefn Mawr (former Flexys 'Ruabon' Works)

Form Number:        Energy1 / 28/07/21

**Reporting of Energy Usage for the year YYYY**

Energy Source	Energy Usage		
	Quantity	Primary Energy (MWh)	Specific Usage (MWh/unit output)
Electricity *	MWh		
Natural Gas	MWh		
Gas Oil	tonnes		
Recovered Fuel Oil	tonnes		
TOTAL	-		

\* Conversion factor for delivered electricity to primary energy = 2.4

Operator's comments :

Signed .....  
(Authorised to sign as representative of Operator)

Date.....

Permit Number: EPR/NP3335GR

Operator: Solutia UK Limited

Facility: Cefn Mawr (former Flexys 'Ruabon' Works)

Form Number: Performance1 / 17/08/2022

Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY

Parameter	Units
Total amount of water treated	m <sup>3</sup>
Generation of residue waste	Tonnes
Generation of waste water	m <sup>3</sup>

Operator's comments :

Signed .....  
(Authorised to sign as representative of Operator)

Date.....