



ENVIRONMENT
AGENCY

Variation Notice with introductory note

Pollution Prevention and Control (England & Wales) Regulations 2000

**Knottingley Process Plant
and Knottingley Ferrous Sulphate
Blending Plant
Solvent Resource Management Ltd
Weeland Road
Knottingley
West Yorkshire
WF11 8DZ**

Variation Notice Number
PP3034XX

Permit number
TP3334SF

Knottingley Process Plant and Knottingley Ferrous Sulphate Blending Plant Permit Number TP3334SF

Introductory note

This introductory note does not form a part of the permit

The following notice is issued under regulation 17 of The Pollution Prevention and Control (England and Wales) Regulations 2000 (S.I.2000 No. 1973 (as amended) (the Regulations) to vary the conditions of a permit issued under the Regulations to operate an installation. The notice comprises schedule 1 containing conditions to be deleted, schedule 2 conditions to be amended and schedule 3 conditions to be added.

This Variation is issued in relation to a recent Court of Appeal Judgement, 28 June 2007, regarding Article 1(a) of the Waste Framework Directive. As a result, the Environment Agency accepts that so long as Product Grade Distillate fuel produced at the Knottingley site complies with an agreed specification it will no longer be classified as a waste.

The use of this material as a fuel in the boilers will no longer require the Operator to comply with the requirements of the Waste Incineration (England and Wales) Regulations 2002 SI 2002/2980.

Status Log of the permit

Detail	Date	Response Date
Application TP3334SF	Received 29/03/05	
Response to request for information	Request dated 22/07/05	Response received 12/08/05
Additional Information (Response to Schedule 4 Notice Requiring Further Information)	Request dated 9/08/05	Response received 14/10/05
Additional Information (Acceptable Waste Category Schedule)		Received 1/12/05
Additional Information (Specification of all fuels and wastes)		Received 14/12/05
Permit determined	16 December 2005	
Variation PP3034XX (Specification of PGD)	31 January 2008	
Variation PP3034XX determined	18 February 2008	

Other PPC permits relating to this installation

Operator	Permit Number	Date of Issue
Not applicable		

Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation

Holder	Reference Number	Date of Issue	Fully or Partially Superseded
Solvent Resource Management Limited	AG8489	30/06/1993	Fully superseded

Other existing Licences/Authorisations/Registrations relating to this site

Holder	Reference Number	Date of issue
Solvent Resource Management Limited	Water abstraction licence ref 2/27/18/008	30/05/03

End of Introductory Note

Variation Notice

Permit number

PP3034XX

Variation number

TP3334SF

The Environment Agency (the Agency) in exercise of its powers under Regulation 17 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973) hereby varies the permit held by you **Solvent Resource Management Limited** ("the operator"),

whose registered office s

Hendon Dock

Sunderland Tyne and Wear

SR1 2ES

company registration number **3890526**

to operate installation at

Weeland Road

Knottingley

West Yorkshire

WF11 8DZ

to the extent set out in schedules 1 to 3 of this variation notice .

The notice shall take effect from **18 February 2008**

Signed	Date

Mr. Ian Foster

Authorised to sign on behalf of the Agency

SCHEDULE 1 – CONDITIONS TO BE DELETED

1. All previous conditions, Tables and Schedules of Permit TP3334SF shall be deleted.

SCHEDULE 2 – CONDITIONS TO BE AMENDED

2. None.

SCHEDULE 3 – CONDITIONS TO BE ADDED

3. The following Conditions, Tables and Schedules shall be added to the Permit:

Conditions

1. General

1.1 Permitted activities

1.1.1 The Operator is authorised to carry out the activities and the associated activities specified in Table 1.1.1.

Table 1.1.1 Permitted activities		
Activity listed in Schedule 1 of the PPC Regulations / Associated Activity	Description of specified activity	Limits of specified activity
Section 5.4 A (1)(a) : Recovering by distillation of any oil or organic solvent.	Operation of the kettle, reboiler heat exchanger, distillation column and vent condensers, feed and product tanks.	From receipt of material for processing, through the distillation and separation process to the transfer of separated materials to storage or disposal.
Section 1.1A(1)(b)(iii): Burning of any fuel manufactured from, or comprising, any other waste in an appliance with a rated thermal input of 3MW or more but less than 50MW	Production of steam, for use in distillation processes, in one boiler with rated thermal input of 3.6 MW (boiler 3). Incineration of off gases from recovery plant secondary condenser in Boiler 3.	Co-incineration of waste, from the evaluation and receipt of waste fuel, through to storage, on-site pre-treatment facilities, waste systems, fuel systems, air supply systems, boiler, stack devices and systems for controlling incineration operations, recording and monitoring incineration conditions.
Section 5.3 Part A(1)(b) The disposal of waste oils other than by incineration or landfill in a facility with a capacity of more than 10 tonnes per day.	Operation of recovery plant for waste oil filters.	From receipt of raw materials, through sorting, size reduction, separation of components to storage of separated components for recycling.
Section 5.3 Part A(1)(b) The disposal of waste oils other than by incineration or landfill in a facility with a capacity of more than 10 tonnes per day.	Formulation of Secondary Liquid Fuel by blending process residues with waste materials.	From receipt of waste materials, process residues and additives, through blending and despatch of product.
Section 5.4 A(1)(c)(iii) : Recycling/reclamation of inorganic materials other than metals and metal compounds (R5).	Preparation of ferrous sulphate compounds from course hepta and mono hydrate ferrous sulphate. Operation of size reduction, mixing and blending plant. (Installation 2)	From receipt of raw materials, through to sieving, size reduction, blending and mixing, transfer to finished product storage, and transfer to export vehicles.
Directly associated activity.	Production of steam, for use in distillation processes, in two boilers with rated thermal input of 9 MW (boiler 4) and 6.6 MW (boiler 5).	From the evaluation and receipt of wastes, through to storage, on-site pre-treatment facilities for production of PGD, fuel systems, air supply systems, boiler, stack devices and systems for controlling combustion operations.

Directly associated activity.	Handling and storage of raw materials	From raw material unloading of bulk road tankers or drums/IBCs to transfer to tank farm, and from transfer from tank farm to distillation unit (kettle) feed tank. Handling and storage of entrainers or additives used to control pH, antioxidants, stabilisers etc in distillation unit.
Directly associated activity.	Handling and storage of recovered (product) solvents.	From transfer from distillation unit to tank farm, through subsequent blending to loading of bulk road tankers, IBC's or drums from tank farm or distillation unit.
Directly associated activity.	Handling and storage of wastes for disposal	From the production of waste materials through to storage of wastes, including contaminated materials and solidified distillation residues.
Directly associated activity.	Provision of heat to a thermal transfer system, in two gas fired boilers of rated thermal input of 0.76MW and 1.75MW. Gas oil is used as a standby fuel	Closed loop utility system used as a heat transfer medium in the distillation processes.
Directly associated activity.	Treatment of site surface water and process water in an aerobic effluent treatment plant before discharge to sewer.	From the collection of process effluent and site surface water in the Installation drainage network, through treatment of effluent to despatch of treated effluent to sewer

1.2 Site

- 1.2.1 The activities authorised under condition 1.1.1 for Installation 1 shall not extend beyond the Site, being the land shown edged in red, excluding the land edged in blue on the Site Plan at Schedule 5 to this Permit. The activities authorised under condition 1.1.1 for Installation 2 shall not extend beyond the Site, being the land shown edged in blue on the Site Plan at Schedule 5 to this Permit.

1.3 Overarching management condition

- 1.3.1 Without prejudice to the other conditions of this Permit, the Operator shall implement and maintain a management system, organisational structure and allocate resources that are sufficient to achieve compliance with the limits and conditions of this Permit.

1.4 Improvement programme

- 1.4.1 The Operator shall complete the improvements specified in Table 1.4.1 by the date specified in that table, and shall send written notification of the date of completion of each requirement to the Agency within 14 days of the completion of each such requirement.

Table 1.4.1: Improvement programme

Reference	Requirement	Date
IC1	The Operator shall undertake a period of monitoring of emissions of oxides of nitrogen from the boiler units, and based on the monitoring data undertake an environmental impact assessment for the emissions of oxides of nitrogen, paying particular attention to boiler 3. On completion of the assessment, the Operator shall submit a summary report in writing to the Agency, including a timetable for implementation of any improvements identified.	30 June 2008
IC2	The Operator shall undertake a review of the unabated releases to air from the Installations in particular the above ground storage tank breathing vents, the fugitive emissions from the moveable container / drum discharging area of the recovery plant and the empty container / drum crusher operations at the Installation. On completion of the review the Operator shall submit a summary report of the review to the Environment Agency identifying options for improvement, including a timetable for their implementation.	Completed
IC3	The Operator shall assess the secondary containment measures for potentially polluting substances that are stored on the site. Particular attention shall be paid to the siting of all storage containers (including tankage, drums and containers) on impermeable base and the provision of adequate bunds, with reference to the Environment Agency's Pollution Prevention Guidance note 11 (PPG 11). On completion of the assessment, the Operator shall submit a summary report in writing to the Agency, including a timetable for implementation of any improvements identified.	Completed
IC4	The Operator shall calibrate and verify the performance of Continuous Emission Monitors for release points and parameters as specified in Table 2.2.2 to BS EN 14181 and submit a summary report to the Environment Agency as evidence of compliance with the requirements of BS EN 14181.	Completed
IC5	The Operator shall submit a methodology to form the basis of calculation of releases to atmosphere from atmospheric storage tanks and process vents.	Completed
IC6	The Operator shall undertake an options assessment of methods for monitoring emissions to air from boiler 3, with the view to eliminating or reducing any uncertainty factor in the emission limit values resulting from the addition of dilution air, prior to the monitoring of flue gas. On completion of the assessment, the Operator shall submit a summary report in writing to the Agency, along with a timetable for implementing any improvements identified.	Completed

1.4.2 Where the Operator fails to comply with any requirement by the date specified in Table 1.4.1 the Operator shall send written notification of such failure to the Agency within 14 days of such date.

1.5 Minor operational changes

1.5.1 The Operator shall seek the Agency's written agreement to any minor operational changes under condition 2.1.1 of this Permit by sending to the Agency: written notice of the details of the proposed change including an assessment of its possible effects (including waste production) on risks to the environment from the Permitted Installation; any relevant supporting assessments and drawings; and the proposed implementation date.

- 1.5.2 Any such change shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation in accordance with that change, and relevant provisions in the Application shall be deemed to be amended.
- 1.5.3 When the qualification “unless otherwise agreed in writing” is used elsewhere in this Permit, the Operator shall seek such agreement by sending to the Agency written notice of the details of the proposed method(s) or techniques.
- 1.5.4 Any such method(s) or techniques shall not be implemented until agreed in writing by the Agency. As from the agreed implementation date, the Operator shall operate the Permitted Installation using that method or technique, and relevant provisions in the Application and the Site Protection and Monitoring Programme, as the case may be shall be deemed to be amended.

1.6 Pre-operational conditions

- 1.6.1 There are no pre-operational conditions

1.7 Off-site conditions

- 1.7.1 There are no off-site conditions

Operating conditions

2.1 In-process Controls

- 2.1.1 The Permitted Installation shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Table 2.1.1, or as otherwise agreed in writing by the Agency in accordance with conditions 1.5.1 and 1.5.2 of this Permit.

Table 2.1.1: Operating techniques		
Description	Parts	Date received
Application	The response to questions B2.1 and B2.2 of the Application Template, as given in pages 21 to 50 of the Application.	29 March 2005
Additional Information (Schedule 4 Notice response)	Responses to question C2.1 and C2.10 of the Application submitted as part of the Schedule 4 Notice response (from the first time on or after the 28 th December 2005 where waste is burned in the appliance)	14 October 2005
Additional Information	Acceptable Waste Categories Schedule for recovery	1 December 2005
Additional Information	Specification of all fuels and wastes	14 December 2005
Additional Information	Product Grade Distillate fuel specification	31 January 2007

- 2.1.2 The Permitted Installation shall, subject to the other conditions of this Permit, be operated using the techniques and in the manner described in the Site Protection and Monitoring Programme submitted under condition 4.1.8 of this Permit (as amended from time to time under condition 4.1.8), or as otherwise agreed in writing by the Agency.
- 2.1.3 Only the wastes specified in Schedule 6 shall be incinerated in the Permitted Installation, subject to limitations, in quantities not exceeding those specified for the waste types specified in Table 2.1.2.

Table 2.1.2: Permitted Waste Types		
Waste type	Limitations	Maximum throughput at specified location
Aqueous effluent – WT2	Aqueous waste contaminated with solvents, and waste solvents.	Boiler 3 – 4,500 tonnes/year
Off Gas – WT3	Off gas incinerated shall be from process and tank vents	Boiler 3 and Boiler 5 – no limitation on throughput

- 2.1.4 No condition applies.
- 2.1.5 No condition applies.
- 2.1.6 From the 28th December 2005, waste type WT2 shall not be charged to Boiler 3, or shall cease to be charged, if the combustion chamber temperature is below, or falls below 850 °C.
- 2.1.7 From the 28th December 2005, waste shall not be charged to Boiler 3, or shall cease to be charged, if:

- any continuous emission limit value in Table 2.2.2 is exceeded, other than under abnormal operating conditions; or
 - monitoring results required to demonstrate compliance with any continuous emission limit value in Table 2.2.2 are unavailable other than during a period of abnormal operation.
- 2.1.8 From the 28th December 2005, the Operator shall record the beginning and end of each period of abnormal operation.
- 2.1.9 From the 28th December 2005, during a period of abnormal operation, the Operator shall restore normal operation of the failed equipment or replace the failed equipment as rapidly as possible.
- 2.1.10 From the 28th December 2005, where during abnormal operation, any of the following situations arise, the Operator shall, as soon as practicable, cease the burning of waste until normal operation can be restored:
- continuous measurement shows that an emission exceeds any emission limit value in Table 2.2.2, or continuous emission monitor(s) are out of service, as the case may be, for a total of four hours uninterrupted duration;
 - the cumulative duration of abnormal operation periods over one calendar year exceeds 60 hours on a co-incineration line.
- 2.1.11 From the 28th December 2005, the Operator shall interpret the end of the period of abnormal operation as the earliest of the following:
- when the failed equipment is repaired and brought back into normal operation;
 - when the Operator initiates a shut-down of the waste combustion activity, as described in the Application;
 - when a period of 4 hours has elapsed from the start of the abnormal operation;
 - when, in any calendar year, an aggregated period of 60 hours abnormal operation has been reached for a given co-incineration line.
- 2.1.12 No condition applies.

2.2 Emissions

2.2.1 Emissions to air, (including heat, but excluding odour, noise or vibration) from specified points

- 2.2.1.1 This Part 2.2.1 of this Permit shall not apply to releases of odour, noise or vibration.
- 2.2.1.2 Emissions to air from the emission points in Table 2.2.1 shall only arise from the sources specified in that Table.

Table 2.2.1 : Emission points to air

Emission point reference or description	Source	Location of emission point – reference drawing DG001 L in Appendix 2.5 of Application
A1a	Still 1 condenser vent atmospheric	Point 1
A1b	Still 1 condenser vent vacuum	Point 1
A2	Still 2 condenser vent	Point 2
A3	Still 7 condenser vent	Point 3
A4	Still 4 condenser vent	Point 4
A5	Still 5 condenser vent	Point 5
A6	Still 6 condenser vent	Point 6
A7	Still 14 condenser vent	Point 7
A8	LUWA 1 vent atmospheric	Point 8
A9a	LUWA 2 condenser vent atmospheric	Point 9
A9b	LUWA 2 condenser vent vacuum	Point 9
A10	Recovery Plant Fume burner vent	Point 10
A11	No.3 Boiler stack (Co-incinerator)	Point 11
A12	No.4 Boiler stack	Point 12
A13	No.5 Boiler stack	Point 13
A14	Geka boiler stack (thermal fluid heater)	Point 14
A15	Beverley boiler stack (thermal fluid heater)	Point 15
A21-25	Cooling tower vents	Point 16 (noted as 5 together and 1 at the recovery plant)
A27	Recovery Plant cooling tower vent	Point 16 (noted as being 5 together and 1 at the recovery plant)

2.2.1.3 The limits for emissions to air for the parameter(s) and emission point(s) set out in Table 2.2.2 shall not be exceeded.

Table 2.2.2 : Emission limits to air and monitoring

Emission point reference	Parameter	Limit (including reference period) ¹	Monitoring frequency	Monitoring method
A11	Particulate matter	10 mg/m ³ daily average ¹⁰	Continuous measurement	BS EN 13284-2 ^{8 6}
A11	Total Organic Carbon (TOC)	18 mg/m ³ daily average ¹⁰	Continuous measurement	BS EN 12619 ^{8 6}
A11	Total Organic Carbon (TOC)	36 mg/m ³ ½-hr average ¹⁰	Continuous measurement	BS EN 12619 ^{8 6}
A11	Hydrogen chloride	18 mg/m ³ periodic over minimum 1-hour period ¹⁰	Bi-annual	BS EN 1911
A11	Hydrogen fluoride	2 mg/m ³ periodic over minimum 1-hour period ¹⁰	Bi-annual	USEPA Method 26/26A
A11	Carbon monoxide	90 mg/m ³ daily average ¹⁰	Continuous measurement	ISO 12039 ^{8 4}
A11	Carbon monoxide	180 mg/m ³ ½-hr average ¹⁰	Continuous measurement	ISO 12039 ^{8 4}
A11	Sulphur dioxide	50 mg/m ³ periodic over minimum 1-hour period ¹⁰	Bi-annual	BS 6069-4.1
A11	Oxides of nitrogen (NO and NO ₂ expressed as NO ₂)	650 mg/m ³ daily average ¹⁰	Continuous measurement	ISO 10849 ^{8 5}
A11	Cadmium & thallium and their compounds (total) ²	0.06 mg/m ³ periodic over minimum 30 minute, maximum 8 hour period ¹⁰	Bi-annual	BS EN 14385
A11	Mercury and its compounds ²	0.06 mg/m ³ periodic over minimum 30 minute, maximum 8 hour period ¹⁰	Bi-annual	BS EN 13211
A11	Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V and their compounds (total) ²	0.6 mg/m ³ periodic over minimum 30 minute, maximum 8 hour period ¹⁰	Bi-annual	BS EN 14385
A11	Dioxins / furans (I-TEQ)	0.12 ng/m ³ periodic over minimum 6 hours, maximum 8 hour period ^{3 10}	Bi-annual	BS EN 1948

Note 1 : See Section 6 for reference conditions.

Note 2: Metals include gaseous, vapour and solid phases as well as their compounds (expressed as the metal or the sum of the metals as specified). Sb, As, Pb, Cr, Co, Cu, Mn, Ni and V mean antimony, arsenic, lead, chromium, cobalt, copper, manganese, nickel and vanadium respectively.

Note 3: The I-TEQ sum of the equivalence factors to be reported as a range based on: All congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limit as a maximum.

Note 4: The Continuous Emission Monitors used shall be such that the values of the 95% confidence intervals of a single measured result at the daily emission limit value shall not exceed 10%. Valid half-hourly average values shall be determined within the effective operating time (excluding the start-up and shut-down periods if no waste is being incinerated) from the measured values after having subtracted this value of the confidence interval (10%). Where it is necessary to calibrate or maintain the monitor and this means that data is not available for a complete half-hour period, the half-hourly average shall nonetheless be considered valid if measurements are available for a minimum of 20 minutes during the half-hour period. (The number of half-hourly averages so validated shall not exceed 5 per day). Daily average values shall be determined as the average of all the valid half-hourly average values within a calendar day. The daily average value will be considered valid if no more than five half-hourly average values in any day have been determined not to be valid. No more than ten daily average values per year shall be determined not to be valid.

Note 5: As Note 4, except that the value of the confidence interval is 20% in place of 10%.

Note 6: As Note 4, except that the value of the confidence interval is 30% in place of 10%.

Note 7: As Note 4, except that the value of the confidence interval is 40% in place of 10%.

Note 8: MCERTS certification to the appropriate ranges and determinands is a demonstration of compliance to the applicable standards.

Note 9: The certification range for MCERTS equipment should be 1.5 times the daily emission limit value.

Note 10: Emission limits apply from the first time on or after the 28th December 2005 where waste is burned in boiler 3.

2.2.1.4 Total emissions to air from emission points set out in Table 2.2.1 in any year of a substance listed in Table 2.2.3 shall not exceed the relevant limit in that Table.

Table 2.2.3 Annual limits

Substance	Limit – kg
Volatile Organic Compounds from emission points A1 through A10	15,000 (Compliance by mass balance or suitable surrogate method as agreed in writing with the Environment Agency)

2.2.2 Emissions to water (other than groundwater), including heat, from specified points

2.2.2.1 This Part 2.2.2 of this Permit shall not apply to releases of odour, noise or vibration or to releases to groundwater.

2.2.2.2 Conditions 2.2.2.3 - 2.2.2.6 shall not apply to emissions to sewer.

2.2.2.3 No emission from the Permitted Installation shall be made to water.

2.2.2.4 No condition applies.

2.2.2.5 No condition applies.

2.2.2.6 No condition applies.

Emissions to sewer

2.2.2.7 Emissions to sewer from the specified emission points in Table 2.2.7 shall only arise from the source(s) specified in that Table.

Table 2.2.7 Emission points to sewer

Emission point reference or description	Source	Sewer
S1 as detailed on drawing reference DG001C (Knottingley Works site drains and sewers).	Effluent treatment plant and storm water	Yorkshire Water plc

2.2.2.8 No condition applies.

2.2.2.9 No condition applies.

2.2.2.10 No condition applies.

2.2.3 Emissions to groundwater

2.2.3.1 No emission from the Permitted Installation shall give rise to the introduction into groundwater of any substance in List I (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).

2.2.3.2 No emission from within the Permitted Installation shall give rise to the introduction into groundwater of any substance in List II (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)) so as to cause pollution (as defined in the Groundwater Regulations 1998 (S.I. 1998 No. 2746)).

2.2.3.3 For substances other than those in List I or II (as defined in the Groundwater Regulations 1998 (SI 1998 No.2746)), the Operator shall use BAT to prevent or where that is not practicable to reduce emissions to groundwater from the Permitted Installation provided always that the techniques used by the Operator shall be no less effective than those described in the Application,

2.2.4 Fugitive emissions of substances to air

2.2.4.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to air from the Permitted Installation in particular from:

- storage areas
- buildings
- pipes, valves and other transfer systems
- open surfaces

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.5 Fugitive emissions of substances to water and sewer

2.2.5.1 Subject to condition 2.2.5.2 below, the Operator shall use BAT so as to prevent or where that is not practicable to reduce fugitive emissions of substances to water (other than Groundwater) and sewer from the Permitted Installation in particular from:

- all structures under or over ground
- surfacing

- bunding
- storage areas

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.5.2 There shall be no release to water that would cause a breach of an EQS established by the UK Government to implement the Dangerous Substances Directive 76/464/EEC.

2.2.6 Odour

2.2.6.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce odorous emissions from the Permitted Installation, in particular by:

- limiting the use of odorous materials
- restricting odorous activities
- controlling the storage conditions of odorous materials
- controlling processing parameters to minimise the generation of odour
- optimising the performance of abatement systems
- timely monitoring, inspection and maintenance
- employing, where appropriate, an approved odour management plan

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.2.6.2 No condition applies.

2.2.6.3 No condition applies.

2.2.7 Emissions to land

2.2.7.1 This Part 2.2.7 of this Permit shall not apply to emissions to groundwater.

2.2.7.2 No emission from the Permitted installation shall be made to land.

2.2.7.3 No condition applies.

2.2.8 Equivalent parameters or technical measures

2.2.8.1 The Operator shall comply with the requirements specified in Table 2.2.11, which supplement or replace emission limit values in accordance with Regulation 12(8) of the PPC Regulations.

Table 2.2.11 Equivalent parameters and technical measures

Parameter or measure	Requirement or description of measure, and frequency if relevant
Use of Emission Point A10	The Operator shall record the time that emission point A10 is used as a release point for process fumes.
Boiler 3 aqueous waste specification	When burning aqueous waste the feed specification shall be limited to the maximum specification detailed in the Specification of all Fuels and Wastes.
Product Grade Distillate (PGD) fuel specification	When burning PGD the feed specification shall be limited to the specification detailed in letter received on 31.01.07 unless otherwise agreed in writing by the Agency.

2.3 Management.

- 2.3.1 A copy of this Permit and those parts of the application referred to in this Permit shall be available, at all times, for reference by all staff carrying out work subject to the requirements of the Permit.

Training

- 2.3.2 The Permitted Installation shall be supervised by staff who are suitably trained and fully conversant with the requirements of this Permit.
- 2.3.3 All staff shall be fully conversant with those aspects of the Permit conditions which are relevant to their duties and shall be provided with adequate professional technical development and training and written operating instructions to enable them to carry out their duties.
- 2.3.4 The Operator shall maintain a record of the skills and training requirements for all staff whose tasks in relation to the Permitted Installation may have an impact on the environment and shall keep records of all relevant training.

Maintenance

- 2.3.5 All plant and equipment used in operating the Permitted Installation, the failure of which could lead to an adverse impact on the environment, shall be maintained in good operating condition.
- 2.3.6 The Operator shall maintain a record of relevant plant and equipment covered by condition 2.3.5 and for such plant and equipment:
- 2.3.6.1 a written or electronic maintenance programme; and
 - 2.3.6.2 records of its maintenance.

Incidents and complaints

- 2.3.7 The Operator shall maintain and implement written procedures for:
- 2.3.7.1 taking prompt remedial action, investigating and reporting actual or potential non-compliance with operating procedures or emission limits.
 - 2.3.7.2 investigating incidents, (including any malfunction, breakdown or failure of plant, equipment or techniques, down time, any short term and long term remedial measures and near misses) and prompt implementation of appropriate actions; and
 - 2.3.7.3 ensuring that detailed records are made of all such actions and investigations.
- 2.3.8 The Operator shall record and investigate complaints concerning the Permitted Installation's effects or alleged effects on the environment. The record shall give the date and nature of complaint, time of complaint, name of complainant (if given), a summary of any investigation and the results of such investigation and any actions taken.

2.4 Efficient use of raw materials

- 2.4.1 The Operator shall -
- 2.4.1.1 maintain the raw materials table or description submitted in Section 2.3 of the Application and in particular consider on a periodic basis whether there are suitable alternative materials to reduce environmental impact;

- 2.4.1.2 carry out periodic waste minimisation audits and water use efficiency audits. If such an audit has not been carried out in the 2 years prior to the issue of this Permit, then the first such audit shall take place within 2 years of its issue. The methodology used and an action plan for increasing the efficiency of the use of raw materials or water shall be submitted to the Agency within 2 months of completion of each such audit and a review of the audit and a description of progress made against the action plan shall be submitted to the Agency at least every 4 years thereafter; and
- 2.4.1.3 ensure that incoming water use is directly measured and recorded.

2.5 Waste Storage and Handling

- 2.5.1 The Operator shall design, maintain and operate all facilities for the storage and handling of waste on the Permitted installation such that there are no releases to water or land during normal operation and that emissions to air and the risk of accidental release to water or land are minimised.
- 2.5.2 No condition applies.

2.6 Waste recovery or disposal

- 2.6.1 Waste produced at the Permitted Installation shall be:
 - 2.6.1.1 recovered to no lesser extent than described in the Application; and
 - 2.6.1.2 where not recovered, disposed of while avoiding or reducing any impacts on the environment provided always that this is not done in any way that would have a greater effect on the environment than that described in the Application.
- 2.6.2 The Operator shall maintain the waste recovery or disposal table or description submitted in Sections 2.11 and 3.5 of the Application and in particular review the available options for waste recovery and disposal for the purposes of complying with condition 2.6.1 above.
- 2.6.3 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, composition, origin, destination (including whether this is a recovery or disposal operation) and where relevant removal date of any waste that is produced at the Permitted Installation.
- 2.6.4 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, composition, origin and delivery date of any waste that is received for disposal or recovery at the Permitted Installation.

2.7 Energy efficiency

- 2.7.1 The Operator shall produce a report on the energy consumed at the Permitted Installation over the previous calendar year, by 31 January each year, providing the information required by condition 4.1.2.
- 2.7.2 The Operator shall maintain and update annually an energy management system which shall include, in particular, the monitoring of energy flows and targeting of areas for improving energy efficiency.

2.7.3 The Operator shall design, maintain and operate the Permitted Installation so as to secure energy efficiency, taking into account relevant guidance including the Agency's Energy Efficiency Horizontal Guidance Note as from time to time amended. Energy efficiency shall be secured in particular by:

- ensuring that the appropriate operating and maintenance systems are in place;
- ensuring that all plant is adequately insulated to minimise energy loss or gain;
- ensuring that all appropriate containment methods, (e.g. seals and self-closing doors) are employed and maintained to minimise energy loss;
- employing appropriate basic controls, such as simple sensors and timers, to avoid unnecessary discharge of heated water or air;
- where building services constitute more than 5% of the total energy consumption of the Permitted Installation, identifying and employing the appropriate energy efficiency techniques for building services, having regard in particular to the Building services part of the Agency's Energy Efficiency Horizontal Guidance Note H2; and

maintaining and implementing an energy efficiency plan which identifies energy saving techniques that are applicable to the activities and their associated environmental benefit and prioritises them, having regard to the appraisal method in the Agency's Energy Efficiency Horizontal Guidance Note H2.

2.8 Accident prevention and control

2.8.1 The Operator shall maintain and implement when necessary the accident management plan submitted or described in Section 4.6 of the Application. The plan shall be reviewed at least every 2 years or as soon as practicable after an accident, whichever is the earlier, and the Agency notified of the results of the review within 2 months of its completion.

2.9 Noise and vibration

2.9.1 The Operator shall use BAT so as to prevent or where that is not practicable to reduce emissions of noise and vibration from the Permitted Installation, in particular by:

- equipment maintenance, eg. of fans, pumps, motors, conveyors and mobile plant;
- use and maintenance of appropriate attenuation, eg. silencers, barriers, enclosures;
- timing and location of noisy activities and vehicle movements;
- periodic checking of noise emissions, either qualitatively or quantitatively; and
- maintenance of building fabric,

provided always that the techniques used by the Operator shall be no less effective than those described in the Application, where relevant.

2.9.2 Emergency alarms/ sirens shall only be tested between the hours of 10:00 and 17:00 Monday to Friday and not on any Public Holiday.

2.9.3 No condition applies.

2.10 On-site monitoring

- 2.10.1 The Operator shall maintain and implement an emissions monitoring programme which ensures that emissions are monitored from the specified points, for the parameters listed in and to the frequencies and methods described in Tables 2.2.2 unless otherwise agreed in writing, and that the results of such monitoring are assessed. The programme shall ensure that monitoring is carried out under an appropriate range of operating conditions.
- 2.10.2 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in Table 2.2.2, the Operator shall perform a QAL2 test as specified in BS EN 14181 at least every three years and when there are significant changes to either the process, the fuel used or to the CEMs themselves.
- 2.10.3 Where Continuous Emission Monitors are installed to comply with the monitoring requirements in Table 2.2.2, the Operator shall perform an Annual Surveillance Test (AST) at least annually, as specified within BS EN 14181.
- 2.10.4 The Operator shall carry out environmental or other specified substance monitoring to the frequencies and methods described in Table 2.10.1.

Table 2.10.1 : Other monitoring requirements

Emission point reference or source or description of point of measurement	Substance or parameter	Monitoring frequency	Monitoring method
A11	temperature	continuous ²	As described in the Application
A11	pressure	continuous ²	As described in the Application
A11	oxygen content	continuous ²	As described in the Application
A11	water vapour content	continuous ²	As described in the Application
A11	Dioxin-like PCBs (WHO-TEQ ¹ Humans / Mammals)	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)
A11	Dioxin-like PCBs (WHO-TEQ ¹ Fish)	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)
A11	Dioxin-like PCBs (WHO-TEQ ¹ Birds)	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)
A11	Specific individual polycyclic aromatic hydrocarbons (PAHs) as specified in condition 6.1.1	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	Procedure shall use BS ISO 11338-1 and BS-ISO 11338-2.
A11	Dioxins / furans (WHO-TEQ ¹ Humans / Mammals)	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)
A11	Dioxins / furans (WHO-TEQ ¹ Fish)	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)
A11	Dioxins / furans (WHO-TEQ ¹ Birds)	Bi-annual periodic measurement, average value over sample period of between 6 and 8 hours.	To be determined utilising sampling and analytical techniques developed for dioxins/furans (BS EN 1948)
Flue gas outlet from near inner wall of furnace on boiler 3	Temperature (°C)	Continuous ²	Traceable to National Standards

Note 1: The TEQ sum of the equivalence factors to be reported as a range based on: All congeners less than the detection limit assumed to be zero as a minimum, and all congeners less than the detection limit assumed to be at the detection limit as a maximum.

Note 2 : Monitoring of specified parameters is required from the first time on or after the 28th December 2005 where waste is burned in boiler 3.

- 2.10.5 The Operator shall carry out monitoring of the process variable listed in Table 2.10.1 to the frequencies and methods described in that Table.
- 2.10.6 No condition applies.
- 2.10.7 The Operator shall notify the Agency at least 14 days in advance of undertaking monitoring and/ or spot sampling, where such notification has been requested in writing by the Agency.
- 2.10.8 The Operator shall maintain records of all monitoring taken or carried out (this includes records of the taking and analysis of samples instrument measurement (periodic and continual), calibrations, examinations, tests and surveys) and any assessment or evaluation made on the basis of such data.
- 2.10.9 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme in condition 2.10.1 of this Permit and the environmental or other monitoring specified in condition 2.10.4 shall have either MCERTS certification or MCERTS accreditation (as appropriate) unless otherwise agreed in writing. Newly installed CEMs or CEMs replacing existing CEMs, shall have MCERTS certification and have an MCERTS certified range which is not greater than 1.5 times the daily emission limit value (ELV) specified in Table 2.2.2, unless otherwise agreed in writing. The CEM shall also be able to measure instantaneous values over the ranges which are expected during all operating conditions, unless otherwise agreed in writing. If it is necessary to use more than one range setting of the CEM to achieve this requirement, the CEM shall be verified for monitoring supplementary, higher ranges.
- 2.10.10 There shall be provided:
- 2.10.10.1 safe and permanent means of access to enable sampling/monitoring to be carried out in relation to the emission points specified in Schedule 2 to this Permit, unless otherwise specified in that Schedule; and
 - 2.10.10.2 safe means of access to other sampling/monitoring points when required by the Agency.
- 2.10.11 The Operator shall carry out the on-going monitoring identified in the Site Protection and Monitoring Programme submitted under condition 4.1.8, unless otherwise agreed in writing by the Agency.
- 2.10.12 The Operator shall, within 6 months of the issue of this Permit, in accordance with and using the format given in the Land Protection Guidance:
- 2.10.12.1 collect the site reference data identified in the Site Protection and Monitoring Programme submitted under condition 4.1.8, and
 - 2.10.12.2 report that site reference data to the Agency,
 - unless otherwise agreed in writing by the Agency.

2.11 Closure and decommissioning

- 2.11.1 The Operator shall maintain and operate the Permitted Installation so as to prevent or minimise any pollution risk, including the generation of waste, on closure and decommissioning in particular by:-
- 2.11.1.1 attention to the design of new plant or equipment;
 - 2.11.1.2 the maintenance of a record of any events which have, or might have, impacted on the condition of the site along with any further investigation or remediation work carried out; and

- 2.11.1.3 the maintenance of a site closure plan to demonstrate that the Permitted Installation can be decommissioned avoiding any pollution risk and returning the site of operation to a satisfactory state.
- 2.11.2 Notwithstanding condition 2.11.1 of this Permit, the Operator shall carry out a full review of the Site Closure Plan at least every 4 years.
- 2.11.3 The site closure plan shall be implemented on final cessation or decommissioning of the Permitted activities or part thereof.
- 2.11.4 The Operator shall give at least 30 days written notice to the Agency before implementing the site closure plan.

2.12 Multiple operator installations

- 2.12.1 This is not a multi-operator installation

2.13 Transfer to effluent treatment plant

- 2.13.1 No transfers to effluent treatment plant are controlled under this part of this Permit.
- 2.13.2 No condition applies.

Records

- 3.1 The Operator shall ensure that all records required to be made by this Permit and any other records made by it in relation to the operation of the Permitted Installation shall:-
- 3.1.1 be made available for inspection by the Agency at any reasonable time;
 - 3.1.2 be supplied to the Agency on demand and without charge;
 - 3.1.3 be legible;
 - 3.1.4 be made as soon as reasonably practicable;
 - 3.1.5 indicate any amendments which have been made and shall include the original record wherever possible;
 - 3.1.6 be retained at the Permitted Installation, or other location agreed by the Agency in writing, for a minimum period of 4 years from the date when the records were made, unless otherwise agreed in writing; and
 - 3.1.7 where they concern the condition of the site of the Installation or are related to the implementation of the Site Protection and Monitoring Programme, be kept at the Permitted Installation, or other location agreed by the Agency in writing, until all parts of the Permit have been surrendered.

Reporting

- 4.1.1 All reports and written and or oral notifications required by this Permit and notifications required by Regulation 16 of the PPC Regulations shall be made or sent to the Agency using the contact details notified in writing to the Operator by the Agency.
- 4.1.2 The Operator shall, unless otherwise agreed in writing, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:-
- 4.1.2.1 in respect of the parameters and emission points specified in Table S2 to Schedule 2;
 - 4.1.2.2 for the reporting periods specified in Table S2 to Schedule 2 and using the forms specified in Table S3 to Schedule 3;
 - 4.1.2.3 giving the information from such results and assessments as may be required by the forms specified in those Tables; and
 - 4.1.2.4 to the Agency within 28 days of the end of the reporting period.
- 4.1.3 The Operator shall submit to the Agency a report on the performance of the Permitted Installation over the previous year, by 31 January each year, providing the information listed in Tables S4.1 and S4.2 of Schedule 4, assessed at any frequency specified therein, and using the form specified in Table S3 to Schedule 3.
- 4.1.4 The Operator shall submit an annual performance report on the functioning and monitoring of the incineration plant in a format agreed with the Environment Agency by the 31st January each year. The report shall, as a minimum requirement, give an account of the running of the process and the emissions into air and water compared with the emission standards in the Waste Incineration Directive, as required by Article 12(2) of the Waste Incineration Directive. The first report shall be submitted by the 31st January 2007.
- 4.1.5 The Operator shall review fugitive emissions, having regard to the application of Best Available Techniques, on an annual basis, or such other period as shall be agreed in writing by the Agency, and a summary report on this review shall be sent to the Agency detailing such releases and the measures taken to reduce them within 3 months of the end of such period.
- 4.1.6 Where the Operator has a formal environmental management system applying to the Permitted Installation which encompasses annual improvement targets the Operator shall, not later than 31 January in each year, provide a summary report of the previous year's progress against such targets.
- 4.1.7 The Operator shall, within 6 months of receipt of written notice from the Agency, submit to the Agency a report assessing whether all appropriate preventive measures continue to be taken against pollution, in particular through the application of the best available techniques, at the installation. The report shall consider any relevant published technical guidance current at the time of the notice which is either supplied with or referred to in the notice, and shall assess the costs and benefits of applying techniques described in that guidance, or otherwise identified by the Operator, that may provide environmental improvement.
- 4.1.8 The Operator shall, within three months of the date of this permit, submit a detailed Site Protection and Monitoring Programme, in accordance with and using the appropriate template format given in the Land Protection Guidance. The Operator shall implement and maintain the Site Protection and Monitoring Programme (SPMP) submitted under this condition, and shall carry out regular reviews of it at a minimum frequency of every 2 years. The results of such reviews and any changes made to the SPMP shall be reported to the Agency within 1 month of the review or change.
- 4.1.9 No condition applies

Notifications

- 5.1.1 The Operator shall notify the Agency **without delay** of:-
- 5.1.1.1 the detection of an emission of any substance, which exceeds any limit or criterion in this Permit, specified in relation to the substance;
 - 5.1.1.2 the detection of any fugitive emission, which has caused, is causing or may cause significant pollution;
 - 5.1.1.3 the detection of any malfunction, breakdown or failure of plant or techniques which has caused, is causing or has the potential to cause significant pollution; and
 - 5.1.1.4 any accident, which has caused, is causing or has the potential to cause significant pollution.
 - 5.1.1.5 any incident which has led to a period of abnormal operation of incineration or co-incineration plant as defined in Section 6 Interpretation.
- 5.1.2 The Operator shall submit written confirmation to the Agency of any notification under condition 5.1.1, by sending:-
- 5.1.2.1 the information listed in Part A of Schedule 1 to this Permit within 24 hours of such notification; and
 - 5.1.2.2 the more detailed information listed in Part B of that Schedule as soon as practicable thereafter;
 - 5.1.2.3 for notifications of incidents of abnormal operations under condition 5.1.1.5, only the information listed in Part C of that Schedule;
- and such information shall be in accordance with that Schedule.
- 5.1.3 The Operator shall give written notification as soon as practicable prior to any of the following:-
- 5.1.3.1 permanent cessation of the operation of part or all of the Permitted Installation;
 - 5.1.3.2 cessation of operation of part or all of the Permitted Installation for a period likely to exceed 1 year; and
 - 5.1.3.3 resumption of the operation of part or all of the Permitted Installation after a cessation notified under condition 5.1.3.2.
- 5.1.4 The Operator shall notify the Agency, as soon as reasonably practicable, of any information concerning the state of the Site which adds to that provided to the Agency as part of the Application or to that in the Site Protection and Monitoring Programme submitted under condition 4.1.8 of this Permit.
- 5.1.5 The Operator shall notify the following matters to the Agency in writing within 14 days of their occurrence:-
- 5.1.5.1 where the Operator is a registered company:-
 - any change in the Operator's trading name, registered name or registered office address;
 - any change to particulars of the Operator's ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary)
 - any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up;
 - 5.1.5.2 where the Operator is a corporate body other than a registered company:
 - any change in the Operator's name or address;
 - any steps taken with a view to the dissolution of the Operator.
 - 5.1.5.3 In any other case: -
 - the death of any of the named Operators (where the Operator consists of more than one

- named individual);
 - any change in the Operator's name(s) or address(es);
 - 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 them being in a partnership, dissolving the partnership;
- 5.1.6 Where the Operator has entered into a Climate Change Agreement with the Government, the Operator shall notify the Agency within one month of:-
- 5.1.6.1 a decision by the Secretary of State not to re-certify that Agreement.
 - 5.1.6.2 a decision by either the Operator or the Secretary of State to terminate that agreement.
 - 5.1.6.3 any subsequent decision by the Secretary of State to re-certify such an Agreement.
- 5.1.7 Where the Operator has entered into a Direct Participant Agreement in the Emissions Trading Scheme which covers emissions relating to the energy consumption of the activities, the Operator shall notify the Agency within one month of:-
- 5.1.7.1 a decision by the Operator to withdraw from or the Secretary of State to terminate that agreement.
 - 5.1.7.2 a failure to comply with an annual target under that Agreement at the end of the trading compliance period.
- 5.1.8 The Operator shall notify the Agency in writing, of any known or planned introduction or material emission from the permitted installation to water or sewer, that may increase the concentration of any "dangerous substance", as defined in List I and List II of the Dangerous Substances Directive, 76/464/EEC, and its daughter directives.

Interpretation

6.1.1 In this Permit, the following expressions shall have the following meanings:-

“Abatement equipment” means that equipment dedicated to the removal of polluting substances from releases from the Installation to air or water media.

“Abnormal operation” means any technically unavoidable stoppages, disturbances, or failures of the abatement plant or the measurement devices, during which the concentrations in the discharges into air and the purified waste water of the regulated substances may exceed the normal emission limit values. It includes the time taken for the plant to stabilise after the repair or replacement has been carried out. For the purposes of this Installation “Abnormal operation” relates to the operation of Boiler 3.

“Annual release” means the total release during any calendar year commencing 1 January.

“Annually” for reporting/sampling means after/during each year and, when sampling, with at least 4 months between each sampling date.

“Application” means the application for this Permit, together with any response to a notice served under Schedule 4 to the PPC Regulations and any operational change agreed under the conditions of this Permit.

“APC residues” means air pollution control residues.

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

- water supplied to the site; or
- where more than 50% of the water used at the site is directly abstracted from ground or surface water on site, the abstracted water; or
- where the Permitted Installation uses no significant amount of supplied or abstracted water, the precipitation on to the site.

“BAT” means best available techniques means the most effective and advanced stage of development of activities and their methods of operation which indicates the practical suitability of particular techniques to prevent and where that is not practicable to reduce emissions and the impact on the environment as a whole. For these purposes: “available techniques” means “those techniques which have been developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the cost and advantages, whether or not the techniques are used or produced inside the United Kingdom, as long as they are reasonably accessible to the operator”; “best” means “in relation to techniques, the most effective in achieving a high general level of protection of the environment as a whole” and “techniques” “includes both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned”. In addition, Schedule 2 of the PPC Regulations has effect in relation to the determination of BAT.

“Bi-annual” or *“6 monthly”* means twice per year with at least five months between tests.

“CEM” means Continuous emission monitor.

“CEN” means Comité Européen de Normalisation.

“Class A or Class B” in relation to volatile organic compounds is as defined in Agency Guidance for Speciality Organic Chemicals S4.02, Appendix 3.

“Co-incineration line” means all of the co-incineration equipment related to a common discharge to air location.

“Commissioning” relates to the period after construction has been completed or when a modification has been made to the plant or the raw materials when the Permitted Installation process is being tested and modified to operate according to its design.

“Daily” means, for sampling purposes, a 24 hour period starting at 7.00 am.

“Daily average” for releases of substances to air means the average of half-hourly averages over a calendar day during normal operation. Where any of abnormal operation, start-up or shut-down occur during the day in such a way that there are less than 43 half-hourly averages recorded during normal operation, no daily average shall be recorded for that day.

“Day” means a 24 hour period starting at 7.00 am.

“Dioxin and Furans” means polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.

“ELV” means emission limit value.

“Fugitive emission” means an emission to air or water (including sewer) from the Permitted Installation which is not controlled by an emission or background concentration limit under conditions 2.2.1.3, 2.2.2.4, 2.2.2.5, 2.2.2.8 or 2.2.2.9 of this Permit.

“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.

“Installation 1” means Knottingley Process Plant, operated by Solvent Resource Management Ltd.

“Installation 2” means Knottingley Ferrous Sulphate Blending Plant, operated by Solvent Resource Management Ltd.

“ISO” means International Standards Organisation.

“Land Protection Guidance” means the version of the Agency guidance note “H7 - Guidance on the Protection of Land under the PPC Regime: Application Site Report and Site Protection and Monitoring Programme”, including its appended templates for data reporting, which is current at the time of issue of the Permit.

“ $L_{Aeq,T}$ ” means the equivalent continuous A-weighted sound pressure level in dB determined over time period, T.

“ $L_{A90,T}$ ” means the A-weighted sound pressure level in dB exceeded for 90% of the time period, T.

“ L_{AFmax} ” means the maximum A weighted sound level measurement in dB measured with a fast time weighting.

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

“Monitoring” includes the taking and analysis of samples, instrumental measurements (periodic and continual), calibrations, examinations, tests and surveys.

“PAH” means Poly-cyclic aromatic hydrocarbon, and comprises Anthanthrene, Benzo[a]anthracene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Benzo[b]naph(2,1-d)thiophene, Benzo[c]phenanthrene, Benzo[ghi]perylene, Benzo[a]pyrene, Cholanthrene, Chrysene, Cyclopenta[c,d]pyrene, Dibenz[a,h]anthracene, Dibenz[a,i]pyrene Fluoranthene, Indo[1,2,3-cd]pyrene, Naphthalene.

“PCB” means Polychlorinated Biphenyl. Dioxin-like PCBs are the non-ortho and mono-ortho PCBs listed in condition 6.1.5.

“Permitted Installation” means the activities and the limits to those activities described in Table 1.1.1 of this Permit.

“PPC Regulations” means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000 No.1973 (as amended) and words and expressions defined in the PPC Regulations shall have the same meanings when used in this Permit save to the extent they are specifically defined in this Permit.

“Quarterly” for reporting/sampling means after/during each 3 month period, January to March; April to June; July to September and October to December and, when sampling, with at least 2 months between each sampling date.

“Sewer” means sewer within the meaning of section 219(1) of the Water Industry Act 1991.

“Shutdown” is any period where the plant is being returned to a non-operational state and there is no waste being burned.

“Staff” includes employees, directors or other officers of the Operator, and any other person under the Operator’s direct or indirect control, including contractors.

“Start-up” is any period, where the plant has been non-operational, after igniting the burner until waste has been fed to the co-incinerator to initiate steady-state conditions.

“TOC” means Total Organic Carbon. In respect of releases to air, this means the gaseous and vaporous organic substances, expressed as TOC. In respect of Bottom Ash, this means the total carbon content of all organic species present in the ash (excluding carbon in elemental form).

“Waste Incineration Directive” means Directive 2000/76/EC on the incineration of waste.

“Waste oil” has the same meaning as in Directive 75/439/EEC.

“WHO” means the World Health Organisation.

“Year” means calendar year ending 31 December.

“6 monthly” for reporting/sampling means after/during each 6 month period, January to June; July to December and, when sampling, with at least 8 weeks between each sampling date.

“mg/m³” means milligramme per cubic metre.

“kg” means kilogramme.

“t” means tonne.

“MWh” means megawatt hour.

- 6.1.2 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.
- 6.1.3 Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means:-
- 6.1.3.1 in relation to gases 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
 - 6.1.3.2 in relation to gases 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
 - 6.1.3.3 in relation to gases from co-incineration plants the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3%.
- 6.1.4 Where any condition of this Permit refers to the whole or parts of different documents, in the event of any conflict between the wording of such documents, the wording of the document(s) with the most recent date shall prevail to the extent of such conflict.
- 6.1.5 For dioxins/furans and dioxin-like PCBs the determination of the toxic equivalence concentration (I-TEQ & WHO-TEQ for dioxins/furans, WHO-TEQ for dioxin-like PCBs) stated as a release limit and/or reporting requirement, the mass concentrations of the following congeners have to be multiplied with their respective toxic equivalence factors before summing.

TEF schemes for dioxins and furans				
Congener	I-TEF(1990)	WHO-TEF (1997/8)		
		Humans / Mammals	Fish	Birds
Dioxins				
2,3,7,8-TCDD	1	1	1	1
1,2,3,7,8-PeCDD	0.5	1	1	1
1,2,3,4,7,8-HxCDD	0.1	0.1	0.5	0.05
1,2,3,6,7,8-HxCDD	0.1	0.1	0.01	0.01
1,2,3,7,8,9-HxCDD	0.1	0.1	0.01	0.1
1,2,3,4,6,7,8-HpCDD	0.01	0.01	0.001	<0.001
OCDD	0.001	0.0001	-	-
Furans				
2,3,7,8-TCDF	0.1	0.1	0.05	1
1,2,3,7,8-PeCDF	0.05	0.05	0.05	0.1
2,3,4,7,8-PeCDF	0.5	0.5	0.5	1
1,2,3,4,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,7,8,9-HxCDF	0.1	0.1	0.1	0.1
1,2,3,6,7,8-HxCDF	0.1	0.1	0.1	0.1
2,3,4,6,7,8-HxCDF	0.1	0.1	0.1	0.1
1,2,3,4,6,7,8-HpCDF	0.01	0.01	0.01	0.01
1,2,3,4,7,8,9-HpCDF	0.01	0.01	0.01	0.01
OCDF	0.001	0.0001	0.0001	0.0001

TEF schemes for dioxin-like PCBs			
Congener	WHO-TEF (1997/8)		
	Humans / mammals	Fish	Birds
Non-ortho PCBs			
3,4,4',5-TCB (81)	0.0001	0.0005	0.1
3,3',4,4'-TCB (77)	0.0001	0.0001	0.05
3,3',4,4',5 – PeCB (126)	0.1	0.005	0.1
3,3',4,4',5,5'-HxCB(169)	0.01	0.00005	0.001
Mono-ortho PCBs			
2,3,3',4,4'-PeCB (105)	0.0001	<0.000005	0.0001
2,3,4,4',5-PeCB (114)	0.0005	<0.000005	0.0001
2,3',4,4',5-PeCB (118)	0.0001	<0.000005	0.00001
2',3,4,4',5-PeCB (123)	0.0001	<0.000005	0.00001
2,3,3',4,4',5-HxCB (156)	0.0005	<0.000005	0.0001
2,3,3',4,4',5'-HxCB (157)	0.0005	<0.000005	0.0001
2,3',4,4',5,5'-HxCB (167)	0.00001	<0.000005	0.00001
2,3,3',4,4',5,5'-HpCB (189)	0.0001	<0.000005	0.00001

Schedule 1 - Notification of abnormal emissions

This page outlines the information that the Operator must provide to satisfy conditions 5.1.1 and 5.1.2 of this Permit.

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 PPC Regulations.

Part A

Permit Number	
Name of Operator	
Location of Installation	
Location of the emission	
Time and date of the emission	

Substance(s) emitted	Media	Best estimate of the quantity or the rate of emission	Time during which the emission took place

Measures taken, or intended to be taken, to stop the emission	
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Part B

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 or harm which has been or may be caused by the emission	
The dates of any unauthorised emissions from the Permitted Installation in the preceding 24 months.	

Part C

Permit Number	
Name of Operator	
Location of Installation	

For multi-line plants, indicate which line(s) was (were) subject to abnormal operation.	
Time at which abnormal operation commenced	
Time at which abnormal operation ceased	
Duration of this incidence of abnormal operation	
Cumulative abnormal operation duration in current year (at end of present incidence)	
Reasons for abnormal operation	
How did the abnormal operation end? (e.g. plant repaired, reaching maximum permitted duration, initiation of shutdown, etc.)	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Solvent Resource Management Limited

Schedule 2 - Reporting of monitoring data

Parameters for which reports shall be made, in accordance with conditions 4.1.2 and 4.1.3 of this Permit, are listed below.

Table S2: Reporting of monitoring data			
Parameter	Emission point	Reporting period	Period begins
Total volatile organic compounds, kg	A1-A10 (combined total)	Annually	01/01/06
Sulphur dioxide mg/m ³	A11	Every 6 months	01/01/06
Total Organic Carbon (TOC) mg/m ³	A11	Every 6 months	01/01/06
Oxides of nitrogen mg/m ³	A11	Every 6 months	01/01/06
Hydrogen chloride mg/m ³	A11	Every 6 months	01/01/06
Hydrogen fluoride mg/m ³	A11	Every 6 months	01/01/06
Particulates mg/m ³	A11	Every 6 months	01/01/06
Carbon monoxide mg/m ³	A11	Every 6 months	01/01/06
Cadmium & Thallium and their compounds (total) mg/m ³	A11	Every 6 months	01/01/06
Mercury and its compounds mg/m ³	A11	Every 6 months	01/01/06
Antimony, Arsenic, Lead, Chromium, Cobalt, Copper, Manganese, Nickel and Vanadium and their compounds (total) mg/m ³	A11	Every 6 months	01/01/06
Dioxins/furans (I-TEQ)	A11	Every 6 months	01/01/06
Dioxin-like PCBs (WHO-TEQ Humans/Mammals)	A11	Every 6 months	01/01/06
Dioxin-like PCBs (WHO-TEQ Fish)	A11	Every 6 months	01/01/06
Dioxin-like PCBs (WHO-TEQ Birds)	A11	Every 6 months	01/01/06
Poly-cyclic aromatic hydrocarbons (PAHs)	A11	Every 6 months	01/01/06
Dioxin / furans (WHO-TEQ Humans/Mammals)	A11	Every 6 months	01/01/06
Dioxin / furans (WHO-TEQ Fish)	A11	Every 6 months	01/01/06
Dioxin / furans (WHO-TEQ Birds)	A11	Every 6 months	01/01/06
Use of emission point A10	A10	Every month	01/01/06
Water usage	Permitted Installations	Annually	01/01/06
Energy usage	Permitted Installations	Annually	01/01/06
Waste disposal and/or recovery.	Permitted Installations	Annually	01/01/06

Note 1: Process control parameters have been specified under monitoring requirements, however these parameters shall **not** normally be required to be reported, but shall be available for inspection at the site.

Schedule 3 – Forms to be used

Table S3: Reporting Forms		
Media / parameter	Form number	Date of form
Air: Periodic monitored emissions bi-annually	Agency Form / TP3334SF / A1 / October 2005	February 2008
Air: Continuously monitored emissions of particulate matter	Agency Form / TP3334SF / A2 / October 2005	February 2008
Air: Continuously monitored emissions of TOC	Agency Form / TP3334SF / A3 / October 2005	February 2008
Air: Continuously monitored emissions of Carbon monoxide	Agency Form / TP3334SF / A4 / October 2005	February 2008
Air: Continuously monitored emissions of oxides of nitrogen	Agency Form / TP3334SF / A5 / October 2005	February 2008
Air : Continuously monitored emissions of hydrogen chloride	Agency Form / TP3334SF / A6 / October 2005	February 2008
Air: Annual emissions	Agency Form / TP3334SF / A7 / October 2005	October 2005
Air: Use of emission point A10	Agency Form / TP3334SF / A8 / October 2005	October 2005
Energy (Knottingley Process Plant)	E1	October 2005
Energy (Knottingley Ferrous Sulphate Blending Plant)	E2	October 2005
Waste Return (Knottingley Process Plant)	R1	October 2005
Waste Return (Knottingley Ferrous Sulphate Blending Plant)	R2	October 2005
Water usage (Knottingley Process Plant)	WU1	October 2005
Water Usage (Knottingley Ferrous Sulphate Blending Plant)	WU2	October 2005
Performance indicators	PI1	October 2005

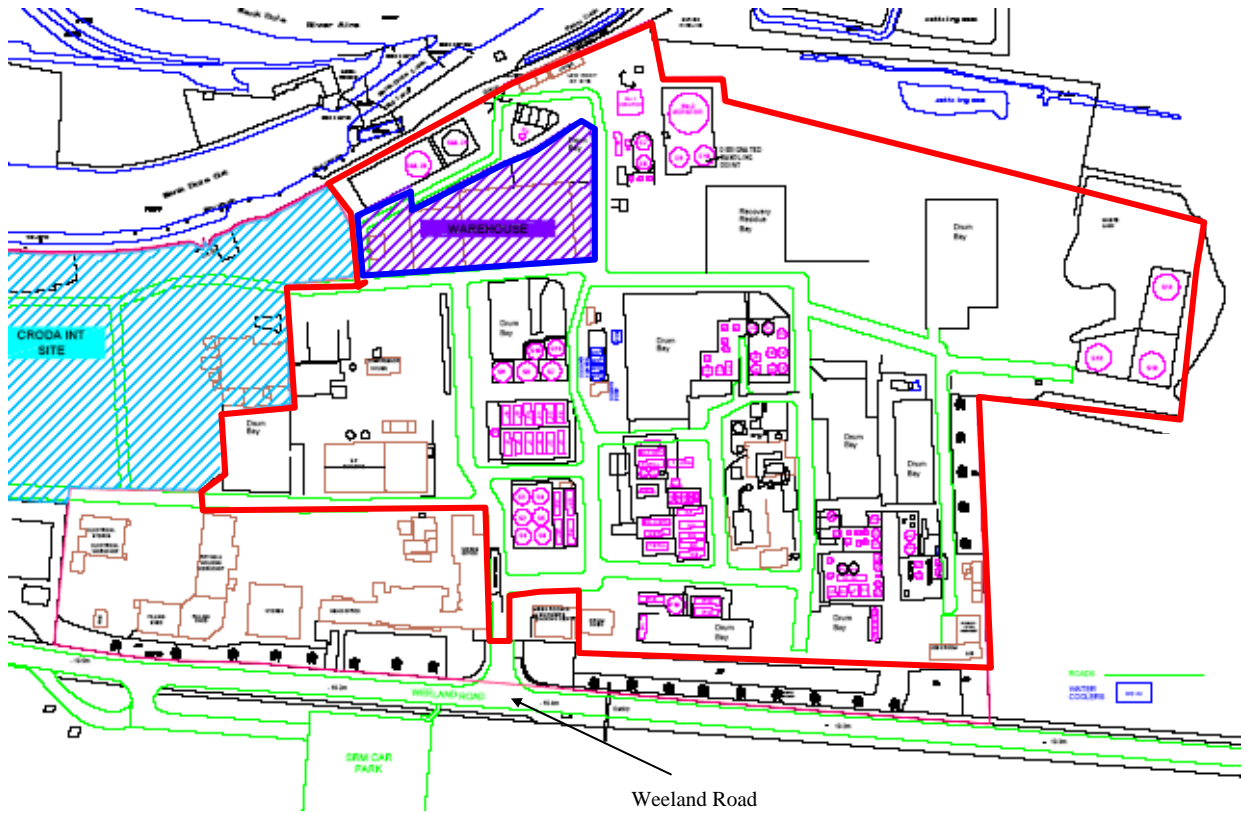
Schedule 4 - Reporting of performance data


Data required to be recorded and reported by Condition 4.1.3. The data should be assessed at the frequency given and reported annually to the Agency.


Table S4.1: Annual Production/Treatment	
Production of recovered organics	tonnes
Production of recovered solvent fuel for use on site	tonnes
Production of Secondary Liquid Fuel for export	tonnes
Production of ferrous sulphate product	tonnes

Table S4.2: Performance parameters		
Parameter	Frequency of assessment	Performance indicator
Energy Consumption of Knottingley Process Plant	Annually	MWh/t of recovered product
Energy Consumption of Knottingley Ferrous Sulphate Blending Plant	Annually	MWh/t of product
Emission Point A10 usage (operational time of emission point A10 compared to total operational time of the installation)	Annually	%

Schedule 5 - Site plan



-  Installation 1 – Knottingley Process Plant

-  Installation 2 – Knottingley Ferrous Sulphate Blending Plant

Schedule 6 - List of Permitted Wastes

Permitted Waste Types		
Description	European Waste Catalogue Number (where available) or other specification	Waste type as defined in Table 2.1.2
Liquid combustible wastes containing dangerous substances	EWC 190208 / EWC 190210	WT2 – aqueous waste contaminated with solvents, and waste solvents (typically alcohols, with esters, ketones and hydrocarbons).
Combustible wastes other than those mentioned in EWC 190208 and EWC 190209	EWC 190210 / EWC 190211	WT3 – fume/vapour typically consisting of toluene, xylenes, esters, alcohols and hydrocarbons
Wastes received at the Permitted Installation that meet the specifications of WT2	EWC codes shall be recorded by the Operator	WT2

END OF PERMIT