Annual performance report for Pyros Environmental Ltd/ Tradebe Fawley Ltd – Permit No. HP3835UZ – Year 2009

1. Introduction

Name of Company	Pyros Environmental Limited and Tradebe Fawley Limited
Name of Plant	Fawley High Temperature Incinerator
Permit Number	HP3835UZ/ FP3435KW
Address	Charleston Road Hardley, Hythe Hampshire SO45 3NX
Phone	023 8088 3016
Contact name	Chris Dunckley
Position	Technical and Compliance Manager

Pyros Environmental Ltd has been operating the Fawley site since May 2007 when the High Temperature Incinerator and the adjacent Waste to Energy Incinerator were divested from Veolia Environmental Services. Pyros Environmental Limited went into administration on 17th July 2009 when Willacy Guinard Holdings, part of the Tradebe Group, purchased the business and assets of Pyros Environmental including the high temperature incinerator. Willacy Guinard Holdings Limited changed their company name to Tradebe Fawley Limited at the end of the calendar year.

Fawley HTI (High Temperature Incinerator) plant incinerates waste materials commonly arising from the agrochemical, fine chemical, clinical (pharmaceutical), petrochemical or engineering industries. Significant quantities of redundant chemicals in small quantities arising from the use in schools, universities and research and development establishments are also incinerated.

If you wish to comment on this report or to obtain further copies, please contact Chris Dunckley.

2. Plant description

The site has been processing hazardous waste since 1977. The currently operated High Temperature Incinerator (HTI) was commissioned in 1990. The site undertakes operations and activities in the treatment of hazardous waste including:

- The administration of waste management activities
- The reception, storage and preparation of wastes prior to incineration
- The incineration process
- The exhaust gas cleaning process
- The treatment and handling of liquid effluents

- The handling of solid waste residues

The HTI plant is designed to process approximately 45,000 tonnes of hazardous waste per annum. The plant also disposes of small quantities of low level radioactive and clinical wastes. Waste is delivered to the site using road transport and is received in liquid, solid or sludge form, in bulk tanker, drums, cardboard kegs, plastic or heavy duty paper sacks, small glass bottles and in IBC containers. Wastes generally comprise of off-specification raw materials or products, process effluents, unwanted by-products and time expired products.

The HTI plant is a rotary kiln design that has the capability of handling a wide range of wastes. The incineration process produces two primary waste streams: slag ash which is a combustion process waste and filter cake which is the solids waste extracted from the water used to clean the combustion gases.

The process is controlled by a semi-automated system which ensures that the optimum operating conditions are maintained in order to meet emission limits set by the Authorisation. Automated control systems maintain the incineration process at the correct temperature and ensure that the waste residence time within the kiln is such that the waste is disposed of with due regard to environmental impact and compliance with permit conditions.

3. Summary of plant operation

The HTI plant processed 26,775 tonnes of waste in 2009 during 5,947 operational hours. Table 3.2 shows the waste throughput for the year. The wastes the plant handles are hazardous wastes that must be incinerated as they cannot be sent to landfill, and they fall into the categories shown in the table. Waste throughput is summarised in Figure 3.1.

The residues produced by incineration are incinerator ash and filter cake. These are non-hazardous wastes and can be sent to landfill. Table 3.1 shows the residues produced during 2009. These residues are analysed in the onsite laboratory before being taken to landfill. Such residues are not suitable for recycling despite discussions with aggregate facilities about ways that this may be possible.

Significant outages are listed in Table 3.3; these are hours when the plant was not operational and were mainly due to necessary repair work. Overall, the plant was operational for 68% of the available hours in 2009.

Table 3.1: Residues Produced in 2009

Type of residue	Amount (tonnes)	Recycled (te)	Landfilled (te)
Incinerator ash/slag	4658	0	4658
ETP filter cake	1700	0	1700

Table 3.2: Waste Throughput 2008

Waste type	EWC code	2009 throughput/tonnes
Wastes resulting from excavation, mining, quarrying, and physical and chemical treatment of minerals	01 05	26
Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing	02 01	109
Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard	03 01	4
Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal	05 01, 05 07	2678
Wastes from inorganic chemical processes	06 01, 06 02, 06 03, 06 04, 06 08, 06 10, 06 13	282
Wastes from organic chemical processes	07 01, 07 02, 07 03, 07 04, 07 05, 07 06, 07 07	6446
Wastes from the manufacture, formulation, supply and use of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks	08 01, 08 03, 08 04, 08 05	623
Wastes from the photographic industry	09 01	25
Wastes from thermal processes	10 08, 10 10	50
Wastes from chemical surface treatment and coating of metals and other materials; non ferrous hydrometallurgy	11 01, 11 03	8
Wastes from shaping and physical and mechanical treatment of metals and plastics	12 01	105
Oil wastes and wastes of liquid fuels (except edible oils, 05 and 12)	13 01, 13 02, 13 03, 13 05, 13 07, 13 08	1533
Waste organic solvents, refrigerants and propellants (except 07 and 08)	14 06	146
Waste packaging, wiping cloths, filler materials and protective clothing not otherwise specified	15 01, 15 02	911
Wastes not otherwise specified in the list	16 02, 16 03, 16 04, 16 05, 16 06, 16 07, 16 08, 16 09, 16 10	1006
Construction and demolition wastes (including excavated soil from contaminated sites)	17 01, 17 03, 17 04, 17 05, 17 09	35
Wastes from human or animal healthcare and/or related research (except kitchen and restaurant wastes not arising from immediate healthcare)	18 01, 18 02	2262
Wastes from waste management facilities, offsite waste water treatment plants and the preparation of water intended for human consumption and water for industrial use	19 01, 19 02, 19 03, 19 11, 19 12	10034
Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions	20 01	60
Any waste authorised under the Radioactive Substances Act		71

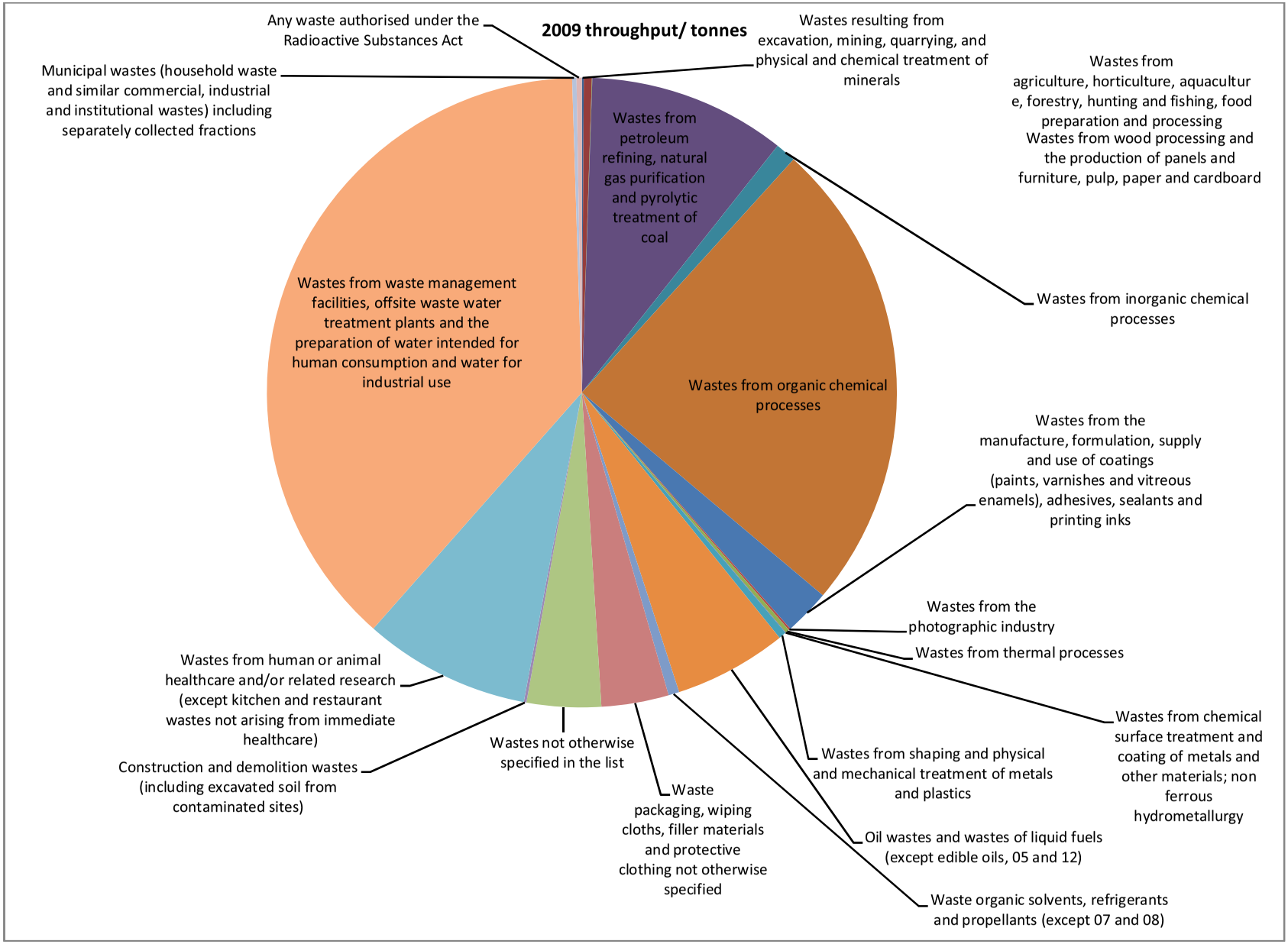

2009 throughput/ tonnes
Any waste authorised under the Radioactive Substances Act
Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions
Wastes resulting from excavation, mining, quarrying, and physical and chemical treatment of minerals
Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing
Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard
Wastes from petroleum refining, natural gas purification and pyrolytic treatment of coal
Wastes from inorganic chemical processes
Wastes from organic chemical processes
Wastes from waste management facilities, offsite waste water treatment plants and the preparation of water intended for human consumption and water for industrial use
Wastes from the manufacture, formulation, supply and use of coatings (paints, varnishes and vitreous enamels), adhesives, sealants and printing inks
Wastes from the photographic industry
Wastes from thermal processes
Wastes from chemical surface treatment and coating of metals and other materials; non ferrous hydrometallurgy
Wastes from shaping and physical and mechanical treatment of metals and plastics
Oil wastes and wastes of liquid fuels (except edible oils, 05 and 12)
Waste organic solvents, refrigerants and propellants (except 07 and 08)
Waste packaging, wiping cloths, filler materials and protective clothing not otherwise specified
Wastes not otherwise specified in the list
Construction and demolition wastes (including excavated soil from contaminated sites)
Wastes from human or animal healthcare and/or related research (except kitchen and restaurant wastes not arising from immediate healthcare)

Table 3.3: Significant Outages During 2009

Month	Duration /hours	Reason for outage
January	120	Shutdown for CA fan repairs
	86	Deslagger repairs
February	171	Deslagger repairs
	74	Quench throat dig out
March	81	Deslagger repairs
April	75	Quench throat
	26	Kiln bearing repair
May	74	Annual shutdown
June	720	Shut down for repairs including re-bricking of kiln
July	500	Annual shutdown
	160	Kiln Roller repairs
August		No significant shutdowns
September		No significant shutdowns
October	158	Deslagger repairs
November	69	Mini shutdown for quench, scrubber, deslagger shelf and spin vane
December	34	Deslagger Repairs

4. Summary of plant monitoring

The site operates under a EPR permit issued by the Environment Agency and all emissions to air, water and land are monitored throughout the year and reported to the Agency. The emission limit values in the permit are set according to the emission standards in the Waste Incineration Directive (2000/76/EC on the incineration of waste).

Emissions to Air

Emissions to air from the flue stack are monitored using Continuous Emissions Monitoring System (CEMS). This equipment operates continuously and monitors particulate matter, total organic carbon, hydrogen chloride, carbon monoxide, sulphur dioxide and oxides of nitrogen (NO_x). The total masses of these pollutants emitted to air in 2009 are shown in table 4.1.

Table 4.1: Continuously Monitored Emissions to Air

Pollutant	Total emitted in 2009 (kg)
Particulate matter	707
Total Organic Carbon	477
Hydrogen Chloride	152
Carbon monoxide	5479
Sulphur dioxide	516
Oxides of nitrogen	23139

Strict limits are adhered to for half hourly, hourly and daily emissions of the substances monitored by the CEMS, and the CEMS data is reported monthly to the Environment Agency. An Annual Monitoring Summary for the CEMS

data is shown in Table 4.2; further detail can be found in the appendix (section 8).

The CEM system reports the concentration of each emission in milligrams per cubic metre (mg/m^3). The annual half-hour maximum is the highest value recorded over any half-hour period during the year. The annual half-hour mean is the average of all the half-hour values recorded during the year. The annual daily maximum is the highest value recorded over any 24 hour period during the year.

ELV stands for Emission Limit Value. Each emission to air (with the exception of carbon monoxide) has a half-hour average ELV, for example the limit for particulate matter is 30 mg/m^3. If the concentration of particulate matter exceeds this value over a half hour period then the emission has to be reported to the Environment Agency as an exceedance. There is also a daily average ELV. For particulate matter this is 10 mg/m^3, and if the concentration of particulate matter measured over a 24 hour period exceeds this value then it must be reported to the Environment Agency as an exceedance.

The exceedances reported during 2009 are listed in section 5.

Table 4.2: Annual Monitoring Summary of CEMS Data

Emission	Half-hour average ELV	Annual 1/2 hour maximum	Annual 1/2 hour mean	Daily average ELV	Annual daily maximum	Annual daily mean
Particulate matter	30	30	4	10	9.4	3.8
Total Organic Carbon (TOC)	20	20	2.5	10	5.9	2.4
Hydrochloric Acid (HCl)	60	13	0.8	10	4.7	0.8
Carbon Monoxide (CO)				50	49	26
Sulphur Dioxide (SO_2)	200	69	2.7	50	5.7	2.6
Oxides of Nitrogen (NO_x)	400	278	118	200	185	120

The continuous emissions monitoring system was functioning normally throughout 2009.

Other emissions to air are monitored periodically by an external contractor. Table 4.2 shows the average results of the two biannual checks in 2009 for cadmium and thallium, mercury, other metals (antimony, arsenic, chromium, cobalt, copper, lead, manganese, nickel, tin and vanadium), dioxins/furans, PCB's (polychlorinated biphenyls) and PAH's (polycyclic aromatic hydrocarbons). Periodically monitored emissions to air are reported to the Environment Agency and must fall within the limits stated in the PPC permit.

Table 4.2: Periodically Monitored Emissions to Air

Pollutant	Results of spot test	Limit
Cadmium & thallium	<0.006 mg/m^3/hour	0.05 mg/m^3 over a minimum 30 minute period
Mercury	0.007 mg/m^3/hour	
Other metals	0.237 mg/m^3/hour	0.5 mg/m^3 over a minimum 30 minute period
Dioxins/furans	0.024 ng/m^3/hour	0.1 ng/m^3 over a minimum 6 hour period
PCB's	0.0178 ng/m^3/hour	No limit applies
PAH's	0.0063 µg/Nm^3/hour	No limit applies

Emissions to Water

Treated waste water from the HTI plant is discharged to Southampton Water after testing for pH, suspended solids, ammoniacal nitrogen, various metals, phosphate and temperature. The flow rate is also monitored and must remain below a given limit. All of these parameters are monitored continuously; Table 4.3 shows the monthly average values for 2009 and (where appropriate) the total released to water during the year.

Spot checks are carried out bi-annually on the site's waste water. The water is sampled and sent for independent analysis for various organic compounds. Table 4.4 shows the results for these periodically monitored emissions to water, along with the concentration limits allowed in the site's permit. Many compounds were below the limit of detection, meaning that they were not present in high enough concentrations to be detected by the test method. Exceedances were recorded for BOD and COD during routine sampling. A liquid TOC analyser has been purchased to evaluate whether this can provide suitable screening for these determinands in the required timescale, additionally the agency is looking into other examples of best practice to enable a quick screening process.

At the time of writing this report Tradebe is still awaiting the results on the lower limit of detection analsyis for Tributyl Tin, Triphenyl Tin, Endrin and Isodrin which are with external analysis bodies. These results were, however, below the limit of detection on the standard analysis. Some of these limits remain in review with the Environment Agency as some limits are below current laboratory limits of detection.

Table 4.3: Continuously Monitored Emissions to Water

Parameter	**Monthly average 2009** µg/l unless otherwise noted	**Total emitted in 2009**
pH	8.3 (pH)	n/a
Total suspended solids	6.6	1172
Ammoniacal nitrogen	33	486
Total copper	22	4
Total chromium	25	5
Total zinc	70	12
Total nickel	111	20
Total lead	7	1
Total cadmium	2	0.4
Total iron	137	24
Total aluminium	70	12
Total mercury	0.5	0.08
Total arsenic	20	4
Total phosphate	1851	330
Flow rate	$20m^3/hr$	178046

Table 4.4: Periodically Monitored Emissions to Water

*Determinands marked * are awaiting further analysis as Limit of Detection is higher than limit*

Substance	**Average Concentration (µg/litre)**	**Permit limit (µg/litre)**
1,2-Dichloroethane	0.1	5
Aldrin	0.006	0.01
Atrazine	0.0285	0.06
Azinphos-methyl	0.002	0.01
Dichlorvos	0.002	0.2
Dieldrin	0.006	0.01
Endosulfan	0.012	0.03
Endrin	0.006*	0.005
Fenitrothion	0.002	0.08
Hexachlorobenzene	0.002	0.03
Hexachlorobutadiene	0.002	0.06
Hexachlorocyclohexane (All isomers)	0.008	0.02
Malathion	0.002	0.08
PCBs (Polychlorinated biphenyls)	0.013	0.7
Pentachlorophenol and its compounds	0.05	0.7
Simazine	0.2	0.06
DDT (All isomers)	0.012	0.025
Tributyl tin and triphenyl tin taken together	0.01125*	0.002
Trichlorobenzene (All isomers)	0.018	0.2
Trifluralin	0.01	0.1
Azinphos-ethyl	0.002	0.01
Carbon tetrachloride	0.1	12
Chloroform	0.115	12
Fenthion	0.002	0.02
Parathion	0.002	0.02
Parathion-methyl	0.002	0.02
Tetrachloroethylene	1.46	10
Isodrin	0.0055*	0.005
1,1,1 trichloroethane	0.1	40
Trichloroethylene	0.1	10

5. Summary of plant compliance

As described in section 4, the plant operates under a EPR permit which states the maximum allowed emission of a given substance over a half hourly, hourly and daily period. Any emissions which exceed this limit are non-compliant and must be reported to the Environment Agency with an explanation of the likely cause and the actions that have been taken to solve the problem. Table 5.1 shows the exceedances for 2009.

The plant has had 2 exceedances on VOCs and one on Carbon Monoxide. For both of these exceedances, the plant CEMS has not picked up the higher levels detected by the external contractor. QAL3 testing of the analyser has shown no deviation from the target value suggesting the analyser was performing well. A request has been made to the external monitoring company to perform the QAL2 test in Q1 of 2010 to further evaluate any problem.

The plant also reported an exceedance on COD and BOD in the trade effluent. A liquid TOC analyser has been bought to evaluate whether suitable screening tests can be put in place. Simultaneously, the agency is looking to provide other examples of BOD/ COD testing protocols.

The plant was in compliance with the permit conditions for all other emissions to air and water.

Table 5.2 shows environmental complaints received by the Fawley site during 2009. All complaints about the site are fully investigated and any findings are reported the complainant. Note that the Fawley site consists of the High Temperature Incinerator covered in this performance report as well as the Waste to Energy Incinerator, which is covered in a separate report (see section 7).

Notable amongst the environmental complaints were a spate related to the receipt and storage of egg vaccine waste. Action taken in association with the customer saw a managed storage and processing approach that controlled the problem.

EVS openings – Tradebe/ Pyros had 14 instances of EVS openings during 2009. Analysis of the trips led to the following corrective action being taken.

- Weather protection for scrubber damper limit switches
- Review of Safety Shutdown System self diagnosis aspects showed a potential for momentary loss of signal to process control system, this has been resolved.
- Training and instruction on cleaning quench sprays
- Replacement of spray nozzles

Since these actions have been undertaken only 2 notifications have been required showing significant improvement.

The plant received no enforcement actions by the Environment Agency in 2009.

Table 5.1: Exceedances Notified to the Environment Agency

Date	Time	Exceedance							Comments	Reported
		Value	Type	Media	Limit	1/2 hourly	Daily	Periodic		
21/04/2009	09.38 - 13.38	111 mg/m^3	CO	Air	100			x	Simultaneous CEMS results within limits. Confidence intervals questioned.	C Dunckley
21/04/2009	13.50 - 17.50	25 mg/m^3	VOC	Air	20			x	Simultaneous CEMS results within limits. Confidence intervals questioned.	C Dunckley
02/09/2009	-	> 70 mg/l	BOD	Water	60			X	Spot test. Being retested. Review of water contamination ongoing.	C Dunckley
Aug-09	-	270.34 mg/l	COD	Water	160			X	Being retested. Review of water contamination ongoing.	C Dunckley
01/12/2009	12.25-16.25	51 mg/m^3	VOC	Air	20			X	Simultaneous CEMS results within limits.	M Barker

Table 5.2: Environmental complaints

Incident Date	Nature of Complaint	Details	Action taken
14/02/2009	Odour	Sulphide smell lingering over gate 1	No cause apparent on investigation, source likely elsewhere
19/05/2009	Odour	Received a call from neighbouring site regarding an odour complaint. He could not describe the smell or give any details - the wind direction was w / sw at a speed of 6/8mph.	Internal inspection conducted and could find no cause for the smell.
29/05/2009	Noise	Complaint of loud banging throughout night for past week. Complainant said he had just driven to gate and identified sound coming from site.	Both plant shutdown. Walked around site to investigate, only noise that could be heard was reception hopper filter. Turned off air to reception hopper.
10/08/2009	Odour	H_2S smell reported. Egg wastes have been "ballooning" and leaking gas from some sort of fermentation process. A localised smell around the area of eggs was detected, which due to nature of H2S could have carried.	Swollen IBCs prioritised. Discussions with customer ongoing (originally picked up with ULR). Complainant phoned to discuss and seemed happy that it had been looked in to.
16/08/2009	Odour	Neighbouring site DSM had received a number of complaints re sulphide smell. Novartis egg wastes that had "ballooned" and were still leaking gas in the storage area are the most likely cause.	Complainant informed that we were processing vaccine waste and there was no health risk to anyone at their site. Email sent with apologies and explanation of prioritised processing for remaining swollen IBCs.
17/08/2009	Odour	Sulphide smell. Egg wastes that had "ballooned" and were still leaking gas in the storage area are the most likely cause.	Email sent with apologies and explanation of prioritised processing for remaining swollen vaccine waste IBCs.

17/08/2009	Odour	The duty process engineer had recieved a number of complaints re sulphide smell. Egg wastes that had “ballooned” and were still leaking gas in the storage area are the most likely cause.	Complainant informed that we were processing vaccine waste and there was no health risk to anyone at their site. Email sent with apologies and explanation of prioritised processing for remaining swollen IBCs.
27/08/2009	Odour	Strong egg smell reported. Located on site (although not in the areas that egg smells from storage would normally be detected). However, smells' similarity meant egg waste likely cause. The smell was transitory (approximately 5 minutes). Egg IBCs looked in good order and work on the shredder was not causing an issue. The shredder vent system was operational.	Email of findings found sent to site and cc’ed to other local sites.
01/09/2009	Odour	Strong egg smell across site reported returning later in the day. No obvious cause from egg material but refuse derived fuel material was quite odorous.	RDF job is a one off. Site representatives coming on Tradebe site visit, verbal report given then.
20/11/2009	Odour	Neighbouring site employees described a visible cloud and an eggy/burning smell.	Inspection of site to see if a cause could be identified. None found although eggs were being processed via DSL at the time.

6. Summary of plant improvements

Table 6.1 outlines the internal conditions which fell within 2009, the response to each and any consequential environmental improvement.

Future plans leading to environmental improvement include improved segregation of the waste types stored on the site.

Table 6.1: Improvements made in 2009

Improvement	Driver	Comment
Reduction in fossil fuel usage	Site Improvement Program	Improvements to gas cleaning plant and deslagger have reduced the requirement to shut down and hence a reduction in fossil fuel usage
Reduction in Electricity Usage	Site Improvement Program	Electricity usage measured both in absolute and per tonne of waste has dropped over the year. Factors affecting this include reduction in downtime from gas cleaning plant upgrades and deslagger repairs and replacing the previous shredder with a more efficient version
Reduction in Fugitive Emissions	Site Improvement Plan	Fugitive emissions from the shredder were reduced by an improvement in the material handling techniques of new shredder
Reduction in Water Usage per tonne of waste	Site Improvement Plan	Improvements made to water management increasing the re-use of water onsite

7. Energy, water and process chemical usage

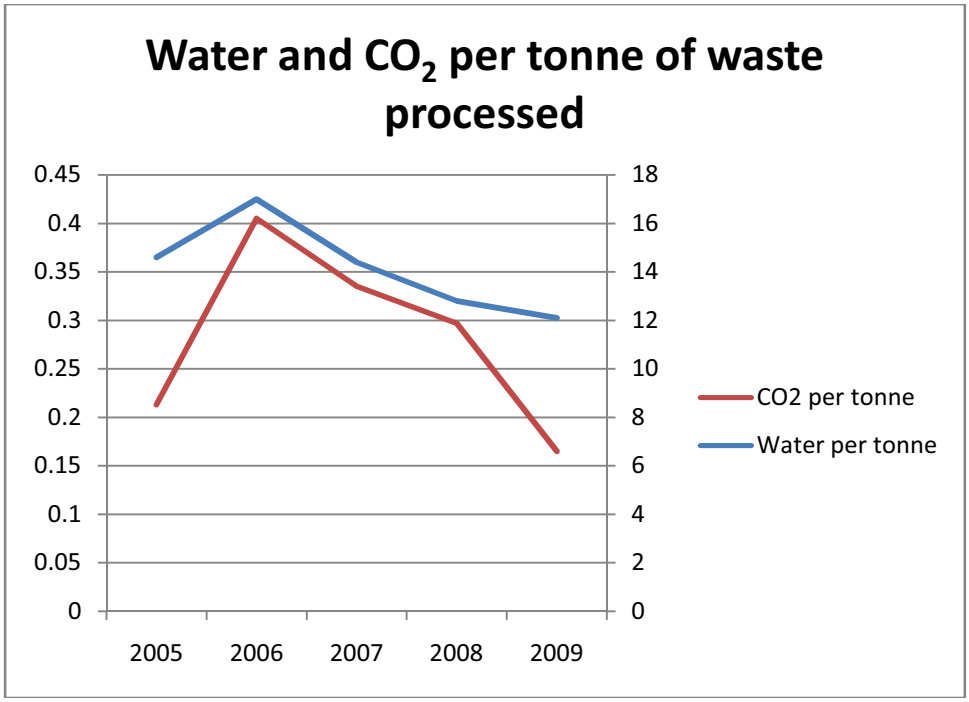
Tradebe monitors raw material and energy usage primarily by tonnage processed and participates within a climate change agreement (CCA) overseen by the Chemical Industries Association. Despite failing to achieve 2008 target levels, 2009 levels were achieved based on improvements made since the original agreement in 2001. Targets within the Site Improvement Plan of reduction of fossil fuel usage and energy usage have been achieved, notably by 2 particular projects:

The SID shredder is capable of delivering a more consistent feed to the kiln using less power than the original KOMAR shredder.

The spin vane separator has removed the requirement to shutdown on a regular basis to clean the Wet Electrostatic Precipitators which has reduced the number of shutdowns required. This reduction of shutdowns has reduced the amount of time the plant is not burning waste but still operating and burning fuel. This has given Tradebe a saving in both electricity and fuel usage per tonne.

Whilst overall water usage has increased, on a usage per tonne basis has reduced over the year following a further review on the suitability of waters for alternative uses led to an increase in the re-use of water on site.

Process chemical usage is monitored on a usage per tonne of waste incinerated; however the usage of chemicals is closely related to the type of material incinerated. For this reason Tradebe put the emphasis on tighter controls of process chemicals ensuring that where chemicals are required, they are dosed in an appropriate fashion.



8. Summary of information made available

To find out more about Tradebe please contact Chris Dunckley at the address shown in section 1. Our website is www.tradebe.com.

Please see also the performance report for Fawley Waste to Energy Incinerator (Annual performance report for Pyros Environmental/ Tradebe Fawley – Permit No. TP3935UL – Year 2009).

Environment Agency
Environmental information is available to the public though the Public Registers, these are located at the Environment Agency's local offices.

Hampshire and Isle of Wight Area Office
Colvedene Court,
Wessex Business Park,
Wessex Way,
Colden Common,
Winchester,
Hampshire, SO21 1WP

Telephone: 08708 506 506
Website: www.environment-agency.gov.uk

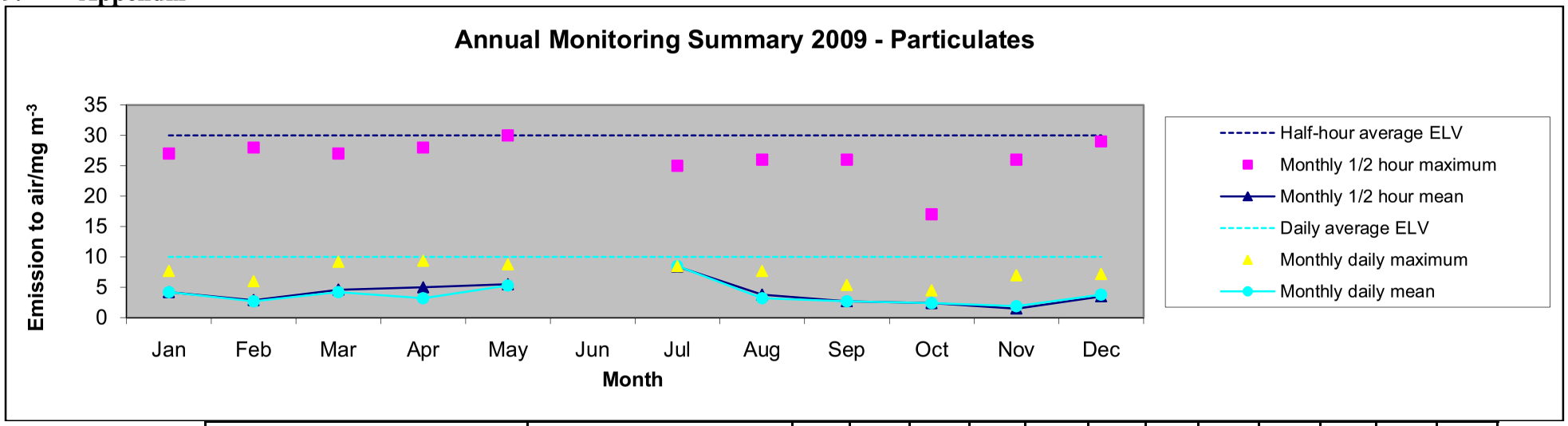
Public Registers can also be accessed online:
http://www2.environment-agency.gov.uk/epr/index.asp

New Forest Environmental Protection Liaison Committee Meetings

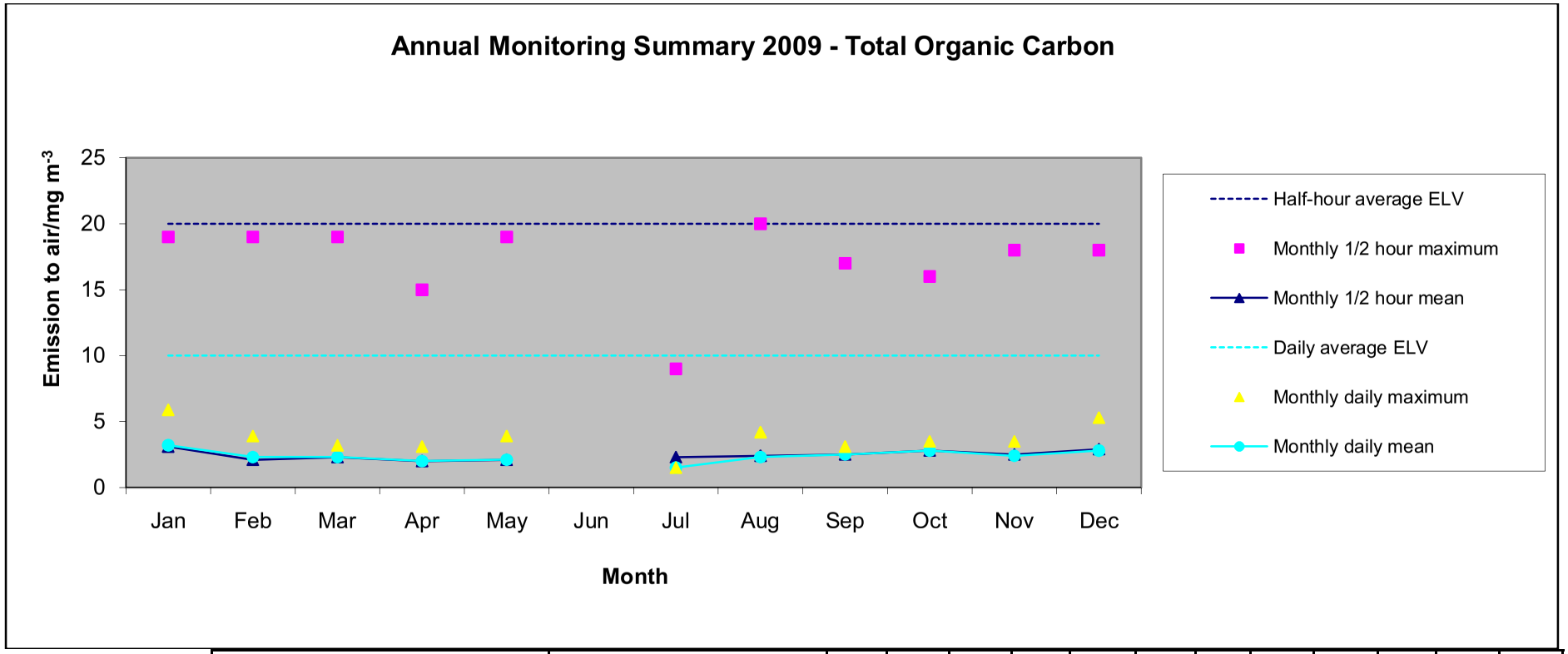
Contact name: Jan Debnam at the New Forest District Council
Telephone: (023) 8028 5389
E-mail: jan.debnam@nfdc.gov.uk

A representative from Tradebe Fawley Ltd attends the New Forest District Council's New Forest Environmental Protection Liaison Committee meetings. These are held across the New Forest area, and are open to the public. Meetings are held quarterly. For details of the next meeting please contact Jan Debnam.

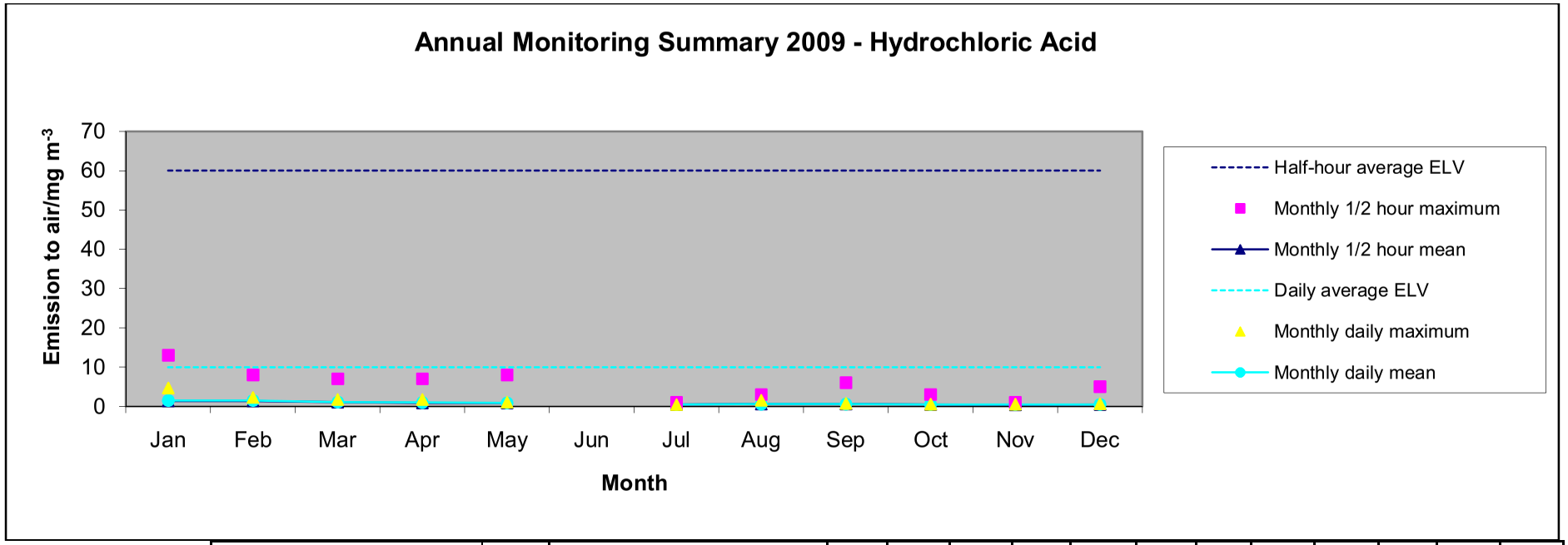
9. Appendix



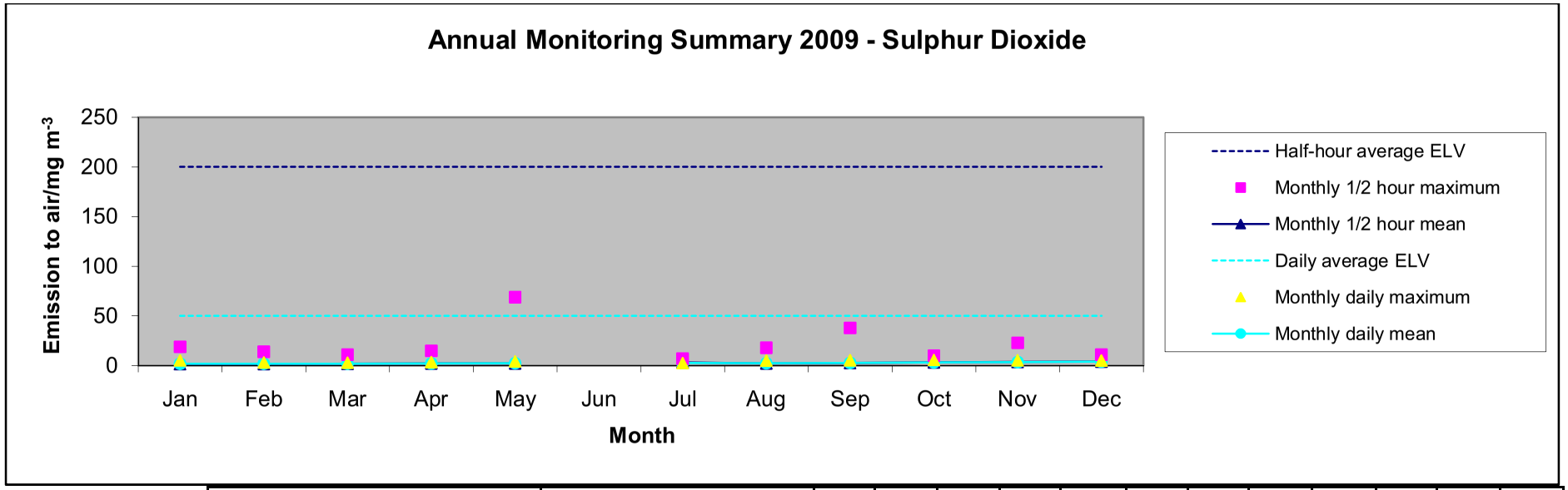
Particulates	**Annual summary**		Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Half-hourly average			Half-hour average ELV	30	30	30	30	30	30	30	30	30	30	30	30
	Annual 1/2 hour maximum	30.0	Monthly 1/2 hour maximum	27	28	27	28	30		25	26	26	17	26	29
	Annual 1/2 hour mean	4.0	Monthly 1/2 hour mean	4.2	2.9	4.6	5	5.5		8.4	3.8	2.7	2.4	1.5	3.5
Daily average			Daily average ELV	10	10	10	10	10	10	10	10	10	10	10	10
	Annual daily maximum	9.4	Monthly daily maximum	7.7	6	9.2	9.4	8.8		8.5	7.7	5.4	4.5	7	7.2
	Annual daily mean	3.8	Monthly daily mean	4.2	2.7	4.2	3.2	5.3		8.5	3.2	2.7	2.4	1.9	3.8



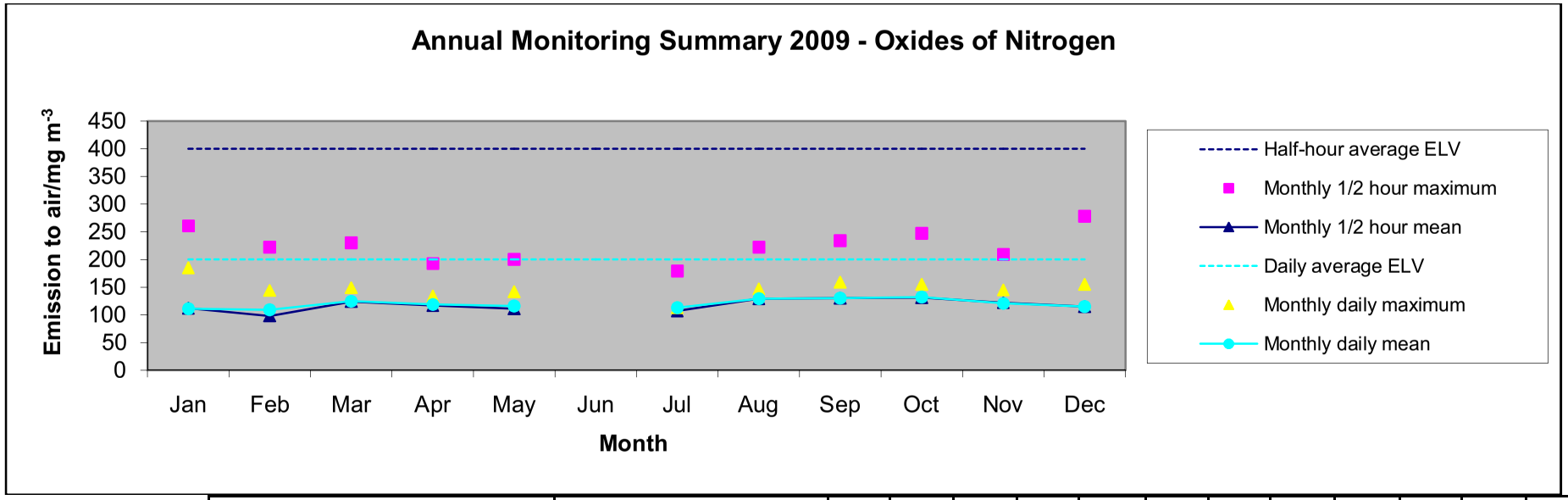
TOC	**Annual summary**		Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Half-hourly average			Half-hour average ELV	20	20	20	20	20	20	20	20	20	20	20	20
	Annual 1/2 hour maximum	20.0	Monthly 1/2 hour maximum	19	19	19	15	19		9	20	17	16	18	18
	Annual 1/2 hour mean	2.5	Monthly 1/2 hour mean	3.1	2.1	2.3	2	2.1		2.3	2.4	2.5	2.8	2.5	2.9
Daily average			Daily average ELV	10	10	10	10	10	10	10	10	10	10	10	10
	Annual daily maximum	5.9	Monthly daily maximum	5.9	3.9	3.2	3.1	3.9		1.5	4.2	3.1	3.5	3.5	5.3
	Annual daily mean	2.4	Monthly daily mean	3.2	2.3	2.3	2	2.1		1.5	2.3	2.5	2.8	2.4	2.8



HCl	**Annual summary**		Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Half-hourly average			Half-hour average ELV	60	60	60	60	60	60	60	60	60	60	60	60
	Annual 1/2 hour maximum	13.0	Monthly 1/2 hour maximum	13	8	7	7	8		1	3	6	3	1	5
	Annual 1/2 hour mean	0.8	Monthly 1/2 hour mean	1.4	1.4	1.1	0.9	0.9		0.5	0.6	0.6	0.5	0.4	0.5
Daily average			Daily average ELV	10	10	10	10	10	10	10	10	10	10	10	10
	Annual daily maximum	4.7	Monthly daily maximum	4.7	2.3	1.8	1.8	1.1		0.5	1.6	0.8	0.6	0.6	0.7
	Annual daily mean	0.8	Monthly daily mean	1.5	1.5	1.1	1	0.9		0.5	0.6	0.6	0.5	0.5	0.5



SO_2	Annual summary		Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Half-hourly average			Half-hour average ELV	200	200	200	200	200	200	200	200	200	200	200	200
	Annual 1/2 hour maximum	69.0	Monthly 1/2 hour maximum	19	14	11	15	69		7	18	38	10	23	11
	Annual 1/2 hour mean	2.7	Monthly 1/2 hour mean	1.7	1.8	1.9	2.3	2.3		3.4	2.3	2.7	3.4	3.7	4.1
Daily average			Daily average ELV	50	50	50	50	50	50	50	50	50	50	50	50
	Annual daily maximum	5.7	Monthly daily maximum	5.2	3.2	3	3.5	4.3		2.6	5.1	5.4	5.7	5.3	5.1
	Annual daily mean	2.6	Monthly daily mean	1.9	2	1.9	2.2	2.3		2.6	2.4	2.7	3.3	3.6	4



NO_x	Annual summary		Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Half-hourly average			Half-hour average ELV	400	400	400	400	400	400	400	400	400	400	400	400
	Annual 1/2 hour maximum	278.0	Monthly 1/2 hour maximum	261	222	230	193	200		179	222	234	247	209	278
	Annual 1/2 hour mean	117.8	Monthly 1/2 hour mean	112	98	124	117	111		107	129	130	131	122	115
Daily average			Daily average ELV	200	200	200	200	200	200	200	200	200	200	200	200
	Annual daily maximum	185.0	Monthly daily maximum	185	144	149	134	142		113	147	159	155	145	155
	Annual daily mean	120.0	Monthly daily mean	111	109	125	119	116		113	129	130	132	121	115