



Review of Fugitive Emissions January to December 2016

**Permit EPR/BV5386IX
Variation EPR/BV5386IX/V003**

Annual Review of Fugitive Emissions

Background

During 2006 no fugitive emissions were reported and in 2007 there were a small number of incidents reported where a number of automotive batteries had been inadvertently dropped in external areas. This had resulted in small amounts of dilute sulphuric acid being spilled however, the areas where they occurred were on surfaces of hard standing which allowed for immediate cleaning to take place and no environmental damage resulted.

At the time, the Sales Company were also based at the Ebbw Vale site, however, in mid 2010, it was relocated to Swindon, UK.

From 31st December 2012, only a small stock of automotive and motorcycle batteries are required on site as the testing laboratory remains at the Ebbw Vale site.

In 2013 there were two small fires in extraction units, in 2014 some dilute sulphuric acid was spilt onto an internal floor during transfer to a waste acid tank and in 2015 a small glass container of nitric acid was damaged while being delivered by a supplier.

All had minimal impact on the environment.

Previous 12 Months - January to December 2016

1. Automotive and Motorcycle Battery Storage Areas

Large quantities of automotive batteries are not stored on site, however, small quantities of both automotive and motorcycle batteries are stored near the battery test room in factory No.2 as battery testing remains an activity performed on the site.

In addition, the factory and surrounding grounds are provided with adequate amounts of spill response kits and materials which are tailored to suit each individual area depending on the environmental risk posed and are themselves subject to regular inspection.

2. 2016 Environmental Incident Reports

On reviewing the incident database for 2016, 4 environmental incidents were recorded since the previous report, as follows:-

- 2.1 A small amount of sodium hydroxide overflowed from the main storage tank into the bund at factory No.2 trade effluent plant when a system pump was inadvertently connected to operate in reverse. It was dealt with immediately with no lasting effect.
- 2.2 A constant monitor alarmed at oxide mill No. 5 due to a small fire in the filter housing. The incident was reported to Natural Resources Wales.
- 2.3 During a routine environmental audit, some Lead was identified around some extraction locations.
Action was taken immediately to address the matter.
- 2.4 The gear box on a delivery lorry broke whilst on site and resulted in some oil being spilled onto the road surface.

It was dealt with by the on-site Emergency Response Team again with no damage being caused to the environment.

3. Ambient Monitoring

In 2015, the site joined with another local Lead company on the same industrial estate to share the operational costs and Lead results obtained from a local school which is officially classified as a human sensitive receptor in the area where the plant is located.

Individual monthly ambient monitoring results at the school have all remained fairly consistent between January and December 2016 with the highest result being 0.109 $\mu\text{g}/\text{m}^3$ in January 2016. As at 31st December 2016, the annual mean result was 0.038 $\mu\text{g}/\text{m}^3$ which is within the limit set by the air quality objective.

Site ambient Lead in air results at the south west monitor have been inconsistent with the highest monthly result being 0.394 $\mu\text{g}/\text{m}^3$ in May 2016. At the end of December 2016, the annual mean result was 0.117 $\mu\text{g}/\text{m}^3$ which is a small increase from 0.108 $\mu\text{g}/\text{m}^3$ recorded in December 2015.

Site ambient Lead in air results at the north east monitor have also been inconsistent with the highest monthly result being 5.59 $\mu\text{g}/\text{m}^3$ in March 2016. At the end of December 2016, the annual mean result was 0.667 $\mu\text{g}/\text{m}^3$ which is an increase from 0.107 $\mu\text{g}/\text{m}^3$ recorded in December 2015.

The incident discussed at point 2.2 above may have contributed to it, however, there were also higher than normal monthly results at both monitors in May 2016 which could not be accounted for and suggest a high Lead particulate level may have entered the site.

Also, all appropriate staff are periodically reminded of the need to exercise due care when carrying out external work which has a potential to result in a fugitive Lead emission to air and has previously been the subject of formal toolbox talks.

In addition, an Environmental, Health, Safety and Quality Awareness update has also been provided in November 2016.

4. Integrity Inspections of Internal Drain Systems and Associated Pits

The company use a large drainage system in all battery production areas which guide trade effluent water towards the effluent treatment plants.

Annual leak testing of the systems in 2016 has not revealed any problem with their integrity, however, factory No.1 main external acid tanks are planned for re-painting and factory No.2 main external acid bund requires a minor repair to the floor.

The Factory No. 4 bund was repaired in 2016, however, there are plans to re-locate it to a different location along with a new bund, later in 2017.

There is unlikely to be any fugitive emission from them.

5. Trade Effluent and Stack Emission Results

In 2016, the sampling of trade effluent undertaken at effluent discharge points S1 and S2 has been satisfactory with the exception of 2 samples which were taken by the water company, however, in both cases, the plants were closing down and the matter was discussed with the water company, therefore, there is unlikely to have been a fugitive emission from them.

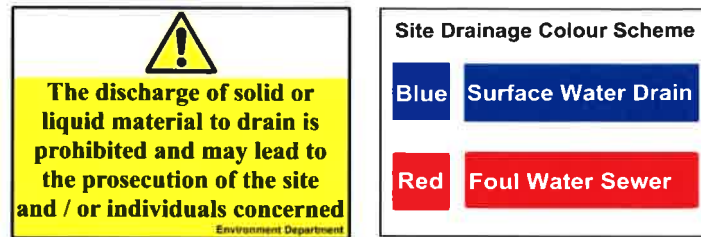
In 2016, stack sampling results have also been within permitted limits.

6. Reviews and Improvements to Further Minimise the Risk of Fugitive Emission

A further review has also been undertaken in line with items identified in previous reports with regard to other potential sources of fugitive emission to air, land and water with a view to further minimise the risks as follows:-

- 6.1 All external doors continue to be closed wherever possible.
- 6.2 Forklift trucks continue to be cleaned on a frequent basis.
- 6.3 Lead components transported between factories are protected by covers so as to minimise any external Lead risk during transportation.
- 6.4 A review of internal Lead production processes has been on-going throughout 2016 in order to improve general housekeeping standards throughout the site which will benefit both environmental and health and safety performance. In addition, internal risk assessments and safe working methods continue in a review programme which also maintain operator awareness and an update of Health, Safety, Environment and Quality Awareness was also undertaken in November 2016.
- 6.5 Regular checks of Lead, pH and sulphate levels at effluent plants S1 and S2 continue to be performed.
- 6.6 Contractor awareness of environmental permit requirements for the site is continuing in the site induction training programme along with monitoring of risk assessments/method statements in morning accountability meetings.
Contractor's identification badges continue to be colour coded and the expiry date is now included to make it easier to identify when their next refresher training is due.
Annual induction training continues to be a requirement for all contractors including those who regularly attend the site.
- 6.7 Daily inspections of external Lead abatement equipment introduced in August 2008, is continuing. The fitting of weatherproof curtains around some dust catchment points are also considered to further minimise the risk of fugitive emission of Lead to air during maintenance of the catchment systems.

6.8 In 2009, new environmental warning signs were placed at all main entrances in respect of surface water drains. Similarly, signage was also placed around the site in regard to site drain colours. These signs have been rechecked to ensure they remain clearly visible in all appropriate areas:-



6.9 A warning sign continues to be displayed at the waste compactor as below in order to keep awareness raised and the area is also monitored by a Closed Circuit Television Camera (CCTV). The site CCTV system was last expanded in 2012.

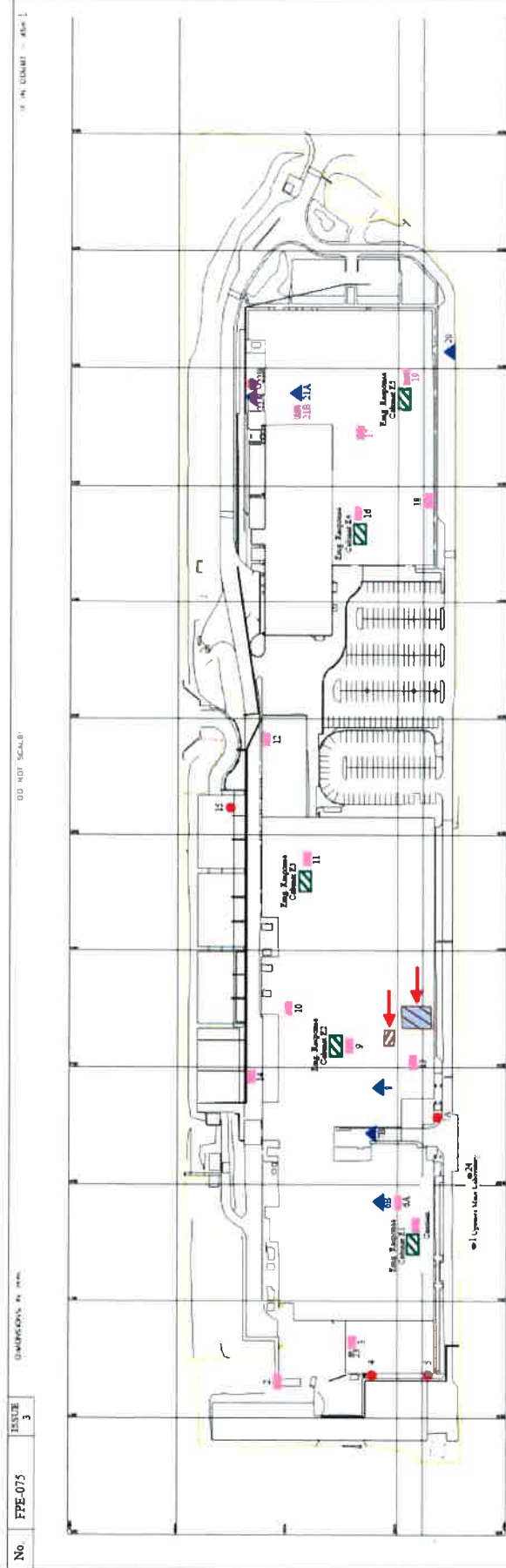
The site now has lead waste stored inside so as to prevent the possibility of Lead contaminated rain water run-off.



Finally, the company remains fully committed to continuous improvement of its processes with regard to the prevention of all potential fugitive emissions that could arise from its work activities.

End of report.

Appendix A - Updated Site Plan Including Spill Response Equipment



- KEY**
- Spill Kit
 - Dammat Mat Station
 - ▲ Calcium Carbonate Powder
 - BDH Chemical Spill Kit
 - Internal Emergency Response Cabinets
 - Internal Storage of Automotive and Motorcycle Test Batteries

Building	Location	Kit Ref	Type
Factory 1	Main Upstairs Laboratory (West)	1	BDH Kit
Factory 1	Main Upstairs Laboratory (East)	24	BDH Kit
Factory 1	Resin Stores	2	CSK7
Factory 1	Warehouse (Office)	23	BDH Kit
Factory 1	Warehouse	3	CSK7
Factory 1	O/S Factory No.1 Warehouse (North)	4	Dammitt
Factory 1	O/S Factory No.1 Warehouse (South)	5	Dammitt
Factory 1	Lead Recycling Area	6A	CSK6
Factory 1	Lead Recycling Area	6B	Cal Carb
Factory 2	O/S Bulk Acid Storage Area	7A	Dammitt
Factory 2	O/S Bulk Acid Storage Area	7B	Cal Carb
Factory 2	Caustic Tank	8	Cal Carb
Factory 2	E2 Assembly West	9	MSK8
Factory 2	Assembly, 24 Hour Storage Area	10	MSK8
Factory 2	E3 Recharge Area	11	MSK8
Factory 2	Warehouse	12	CSK7
Factory 2	Acid Mix Area	13	CSK8
Factory 2	O/S Waste Oil/Antifreeze Area	14	MSK7
Factory 2	O/S Top Disused Car Park (East)	15	Dammitt
Factory 3	Inj Mould Print M/C	16	MMK2
Factory 3	Jip & Tool Mould Area	17	MMK2
Factory 3	Storage Compound	18	MSK7
Factory 4	Assembly / Inspection	19	MMK8
Factory 4	O/S Effluent Plant	20	Cal Carb
Factory 4	Acid Bulk Mix Area	21A	Cal Carb
Factory 4	Acid Bulk Mix Area	21B	CSK8
Factory 4	O/S Bulk Acid Storage Area	22A	Cal Carb
Factory 4	O/S Bulk Acid Storage Area	22B	Dammitt

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