

**Surface Water Discharge
4th Quarter Monitoring Report 2023**

Flemings Fireclays Ltd.
The Swan
Athy
Co. Kildare

IPPC Licence No. P0527-01

October 2023

1.0 Introduction

Flemings Fireclays Ltd. was issued with an Integrated Pollution Control Licence (Reg. No. P0527-01) on the 23rd April 1999. The site has one licenced emission point at SW3 which has an emission limit value for Suspended Solids. The company are also required to carry out quarterly monitoring at four other surface water points for total suspended solids and chemical oxygen demand as requested by the Agency in an inspection report dated 30/04/07. A further requirement to measure Metals, including Aluminium on the five sampling points was requested by the Agency in an inspection report dated 09/10/09.

The surface water points to be monitored at the site are:

SW1	New kiln discharge point to stream
SW2	Old kiln discharge point to stream
SW3	Settlement pond outlet from quarry
SW4	Stores and grinding area discharge point
SW5	Final discharge point of all SW into River Clough

2.0 Methodology

A grab sample was taken by Seamus Holland of Flemings Fireclays on the 18th of October 2023, from surface water monitoring locations SW2, SW3, SW4 & SW5. The samples were analysed by ALS Environmental, Hawarden, Deeside, UK for COD, Suspended Solids and Metals.

3.0 Results

3.1: SW3 Licenced Emissions to Water Results

PARAMETER	UNITS	SW3	Env. Quality Standards for SW	IPPC Licence Emission Limit Value	IPPC Licence Compliance
Suspended solids	mg/l	4.65		25mg/l	Compliant
COD	mg/l O ₂	<7			
Aluminium (diss.filt)	µg/l	<10	200 ug/l		
Antimony (diss.filt)	µg/l	<1			
Arsenic (diss.filt)	µg/l	0.786	25 ug/l		
Boron (diss.filt)	µg/l	<10	2000 ug/l		
Cadmium (diss.filt)	µg/l	<0.08	5 ug/l		
Chromium (diss.filt)	µg/l	<1	30 ug/l		
Copper (diss.filt)	µg/l	0.617	30 ug/l		
Iron (Dis.Filt)	mg/l	<0.019	1 mg/l		
Lead (diss.filt)	µg/l	<0.2	10 ug/l		
Manganese (diss.filt)	µg/l	7.32	300 ug/l		
Mercury (diss.filt)	µg/l	<0.01	1 ug/l		
Nickel (diss.filt)	µg/l	1.49	50 ug/l		
Selenium (diss.filt)	µg/l	<1			
Sodium (Dis.Filt)	mg/l	3.59	150mg/l		

3.2: Additional Monitoring Results

PARAMETER	UNITS	SW2	SW4&SW5	Env. Quality Standards for SW
COD	mg/l	14.3	10.4	
Suspended solids	mg/l	2	3	
Aluminium (diss.filt)	µg/l	10.5	15.4	200 ug/l
Antimony (diss.filt)	µg/l	<1	<1	
Arsenic (diss.filt)	µg/l	0.841	0.567	25 ug/l
Boron (diss.filt)	µg/l	74.9	19.8	2000 ug/l
Cadmium (diss.filt)	µg/l	<0.08	<0.08	5 ug/l
Chromium (diss.filt)	µg/l	<1	<1	30 ug/l
Copper (diss.filt)	µg/l	0.913	1.18	30 ug/l
Iron (Dis.Filt)	mg/l	<0.019	0.0462	1 mg/l
Lead (diss.filt)	µg/l	<0.2	<0.2	10 ug/l
Manganese (diss.filt)	µg/l	30.2	40.9	300 ug/l
Mercury (diss.filt)	µg/l	<0.01	<0.01	1 ug/l
Nickel (diss.filt)	µg/l	1.49	1.64	50 ug/l
Selenium (diss.filt)	µg/l	<1	<1	
Sodium (Dis.Filt)	mg/l	9.2	6.6	150mg/l

4. Conclusion

The surface water discharge at Flemings Fireclays Ltd. is compliant with the sites IPPC Licence emission limit values. Quarterly monitoring will continue in January/ February 2024 for the 1st Quarter 2024.



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CERTIFICATE OF ANALYSIS

Date of report Generation: 30 October 2023
Customer: QED Engineering Ltd
Sample Delivery Group (SDG): 231023-44
Your Reference:
Location: Flemings Fireclays
Report No: 709224
Order Number:

We received 3 samples on Monday October 23, 2023 and 3 of these samples were scheduled for analysis which was completed on Monday October 30, 2023. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.
Incorrect sampling dates and/or sample information will affect the validity of results.
The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

Approved By:

A handwritten signature in blue ink, appearing to read 'Sonia McWhan'.

Sonia McWhan
Operations Manager



