Clearcircle Metals Ireland Ltd

Part of Clearcircle Environmental Group

PROCEDURE TITLE: **SURFACE WATER MANAGEMENT**

PROCEDURE NUMBER: **EHSP061**

OWNER: **Environment Health and Safety**

REVISION HISTORY

REV LEVEL	DATE OF ISSUE	DESCRIPTION OF CHANGE	AMENDED BY	APPROVED BY
A	16/06/2014	New Procedure	AMcG	M BERGIN

SURFACE WATER MANAGEMENT

1.0 PURPOSE

To define the methodology and procedures for managing surface water at the facility.

2.0 SCOPE

This procedure describes the infrastructure, operational procedures and maintenance required for managing surface water at the facility to ensure compliance with permit conditions and discharge consents.
This procedure applies to Galway Metal Company Oranmore facility Waste Permit No WFP-11-G-0005-01 and trade effluent discharge license S/80/12.

3.0 RESPONSIBILITY

3.1 It is the responsibility of Group EHS Manager to ensure that all employees and contractors concerned are familiarised with this procedure. It is the responsibility of Galway Metal Company Ltd general manager to ensure the implementation of this procedure.

4.0 REFERENCE

Site Hazard Plan
EHSP003 Accidental Release Procedure
EHSP004 Incident Reporting Procedure
EHSP005 Environmental Complaints Procedure
EHSP006 Communication Procedure
QEHSP008 Emergency Response Procedures
EHSP026 External Reporting Of Environmental Incidents
EHSF007 Accident /Incident Report

5.0 DEFINITIONS

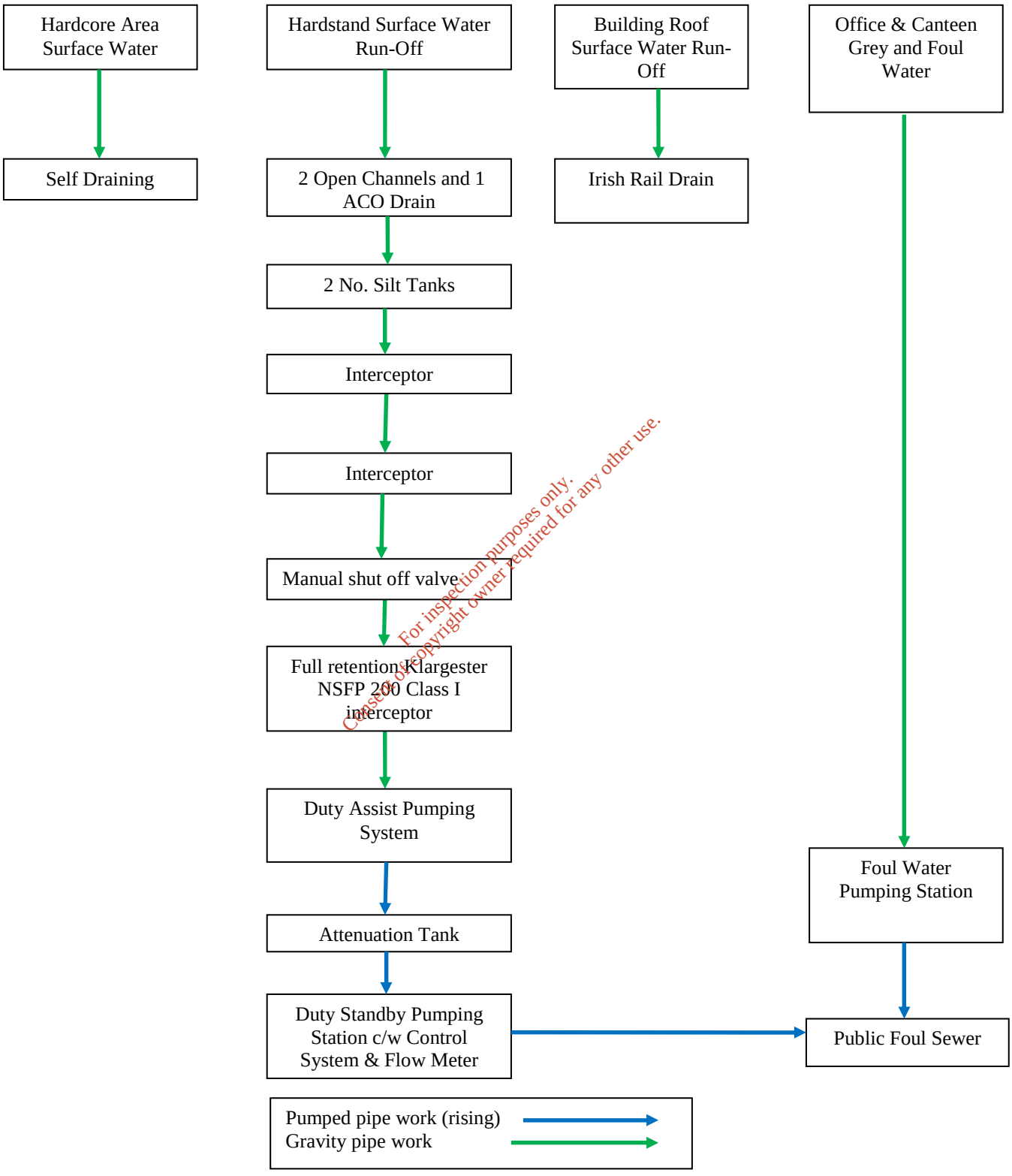
5.1 MSDS- Material Safety Data Sheet. Located in Environmental Manager's Office, reception and workshop.
5.2 COSHH Assessments – Control of Substances Hazardous to Health. Located in Environmental Manager's Office, reception and workshop.
5.3 PPE- Personal Protective Equipment

6.0 INFRASTRUCTURE

The surface water management infrastructure employed at Galway Metal Company includes the following and its function and interaction is best described by flow chart.

- 2 open channels, ACO drain & underground pipes
- 2 silt tanks
- 3 stage interceptor system
- Manual shut off valve
- Duty assist pumping system
- Attenuation tank
- Access ladder & safety railing
- Pump house
- Duty and standby pumping system
- Control system
- Flow meter
- Pipe work and access manholes
- Building gutters and down pipes
- Foul water pumping station

Galway Metal Company Surface Water Management Infrastructure Flow Chart



7.0 OPERATIONAL PROCEDURE

7.1 The surface water management system at Galway Metal Company is designed to be fully automated with minimal human input. The system will operate in auto for the majority of the time but can be operated manually if required, i.e. in the event of a fire the pumping system can be shut off and sluice valve closed for fire water retention. Pumps can also be operated manually for testing pumps. Daily and weekly inspections will be completed with recording of critical surface water management variables including totalised flow.

7.2 Surface water run-off from the concrete hard stand in the north east corner of the yard drains along the surface to an ACO drain and is piped to the surface water treatment system. The remainder of the yard area drains along surface to 2 open channels which run the length of the yard from north to south. Both channels discharge to individual silt tanks before entering a 3 stage interceptor system with the latter being a full retention Klargestor NSPF 200 Class I interceptor.

Outfall from the Klargestor enters a sump containing a duty assist pumping system. Water is pumped from sump to attenuation tank, float switches in the sump control the rate of pumping by switching on one or two pumps based on demand. This system is equipped with a high level alarm connected to a telemetry system which sends text messages to key site personnel advising of problem.

Water from attenuation tank is discharged to public sewer at a rate of 4l/s. A duty standby pump arrangement is positioned in pump house adjacent to tank. This system is controlled by float switches which turn on and off pumps. Attenuation tank is also equipped with high level alarm connected to telemetry system

3 stage interceptor system

Control centre for Duty Assist Pumping System

Duty Assist Pumping System Control Cabinet

Duty Assist Pumps both in automatic mode

Attenuation Tank & Auxiliary Structures

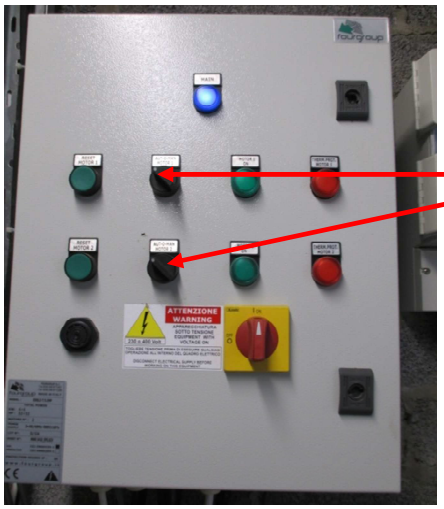
Access ladder & safety railing

Attenuation tank

Pump house

Duty Standby Pumping Station c/w Control System & Flow Meter

Flow Meter



Duty Assist Pumps both in automatic mode

8.0 MAINTENANCE

The following maintenance regime will be employed at the site with details recorded in form EHSF061

Infrastructure	Maintenance Activity	Maintenance Frequency
Open Channels (2 No.)	Inspection for integrity and presence of any objects with immediate removal of same	Daily
ACO Drain	Inspection for build up of sludge, if there is a build up of sludge drain to be cleaned	Weekly
Silt tanks (2 No.)	Inspection, Measurement of silt depth. If depth from top of grid to silt level is at or greater than 1.7m then silt traps will be desludged with sludge material retained for appropriate disposal	Weekly
Silt tanks (2 No.)	Complete clean out and removal of silt/sludge. Contractor Rilta Environmental Ltd and sludge disposal to Rilta hazardous waste facility EPA licensed W0192-02.	4-6 weeks
Interceptor	Inspection and determination of oil depth.	Weekly
Interceptor	Complete clean out and removal of sludge and oil. Contractor Rilta Environmental Ltd and sludge/oil disposal to Rilta hazardous waste facility EPA licensed W0192-02.	4-6 weeks
Klargestor	Empty Full retention Klargester NSFP 200 Class I interceptor and change coalescent filters	Quarterly
Duty assist pumping system	Check pumps power supply at PLC board. Visual inspection of sump to ensure that there is no floating debris present. Verify that water level is acceptable and that & float switches are functioning correctly, If unsure lift chain with float switch and verify that pumps switch on. Verify pumps are in auto. Verify operation of pumps, i.e. switch pumps to manual for 30 seconds and verify pumps operate.	Daily
Attenuation Tank Discharge	Complete discharge analysis for parameters specified in trade effluent discharge license S/80/12	Quarterly
Access ladder & safety railing	Inspection for defects	Daily
Pump house	Inspection – ensure access doors are locked, check for pump house leaks.	Daily
Duty standby pumping system, control system & flow meter	Check pumps power supply at PLC board. Check for pump and pipe work leaks,, i.e. water on floor or wet piping joints during pumping. Verify pumps are in auto. Verify operation of pumps, i.e. switch pumps to manual for 30 seconds and verify pumps operate and flow meter displays a flow of max 4 litres/sec.	Daily
Flow meter	Record totalised flow in form EHSF061.	Weekly
Building gutters and down pipes	Inspection for defects	Weekly
Discharge to Irish Rail Drain	Check discharge, verify that discharge is of good water quality	Daily
Discharge to Irish Rail Drain	Complete discharge analysis for parameters specified in Waste Permit No WFP-11-G-0005-01	Quarterly