




BRADWELL SITE

FLOW MONITORING (AE A2 OT4)

BRAD/EN/REP/191

Prepared by:  Date: 09/08/2016  
Print Name: RICHARD MENSATI  
Title: ENVIRONMENTAL COORDINATOR

Agreed by:  Date: 09/08/16  
Print Name: CORINNE CALVERT  
Title: ENVIRONMENTAL CO-ORDINATOR

Authorised For Issue:  Date: 9/8/16  
Print Name: P. VALEY  
Title: Head of Environmental

## 1. Purpose

This document is in response to the Environment Agency's request to provide an operating technique to meet condition 2.3 "A2 OT4 (Flow Monitoring)" for the Mixed Effluent permit PR2TS/E10760C<sup>1</sup>. This operating technique ensures that the measured volume of effluent discharge is credible and consistent with the description provided in the environmental risk assessment BRAD/EN/REP/108<sup>2</sup>.

## 2. Volume of Discharge Effluent Measurement

In order to accurately measure the volume of effluent discharged to the estuary, the site uses an Environment Agency's Monitoring Certification Scheme (MCERTS) accredited flowmeter to record the volume of discharges. This process is controlled by a management control process which ensures that measurements adhere to steps outlined in a Quality Plan.

As part of the MCERTS accredited process and to provide further assurance, the volume of effluent discharged is also calculated from the variance in levels within the Final Monitoring Delay Tank 1 (FMDT 1) before and after a discharge. This is achieved by recording the initial level in the FMDT 1 at the start of a discharge and the level on completion of a discharge. The volumes of effluent discharged, recorded from the two processes (i.e. from the MCERTS accredited flowmeter and the difference in levels in the FMDT 1 before and after a discharge) are compared to ensure the difference is within an acceptable error of margin which should not be more than 8%. This is carried out by suitably qualified and experienced personnel and controlled by a Quality Plan.

Discharge will be made using a pump with a maximum capacity of 40m<sup>3</sup>/hr for a period of 45 minutes within an optimum discharge window of an hour after high water to two and half hours after high water.

## REFERENCE

---

- 1 Environment Agency 2016. Mixed Effluent Permit Number PR2TS/E10760C
- 2 BRAD/EN/REP/108 2015. Environmental Risk assessment for Aqueous Effluent.