

BRADWELL SITE

PROPOSED CHANGES TO PERMIT PR2TS/E10760C

BRAD/EN/REP/106

Prepared by: P. Haley pp C. Calvert Date: 04/17/15

Print Name: P. HALEY C. Calvert

Title: Safety & Environment Engineer

Agreed by: [Signature] Date: 14.07.15

Print Name: RICHARD KENSATI

Title: ENVIRONMENTAL COORDINATOR

Authorised For Issue: [Signature] Date: 04/17/15

Print Name: P. HALEY

Title: Head of Environment

**BRADWELL SITE**

**PROPOSED CHANGES TO PERMIT PR2TS/E10760C**

**BRAD/EN/REP/106**

During the current decommissioning phase, plant and structures are being constructed and dismantled to take the site into Care and Maintenance.

Since the demolition of the barrier wing walls at the outfall structure, the current discharge route for the site is almost blocked with silt from the Blackwater Estuary. Work has been completed under licence from the Marine Management Organisation to remove up to a total of 1000m<sup>3</sup> of silt and four new 180mm diameter pipes have been installed through the existing East Outlet culvert to provide a discharge route for the Care and Maintenance stage of the site's lifetime. Included within that work package was the removal of silt from the West Inlet culvert and this was to maintain the current discharge route.

It is proposed that the current discharges permitted under permit number PR2TS/E10760C for secondary treated sewage effluent and trade effluent deriving from water treatment, the radioactive effluent treatment plant and non-radioactive aqueous effluent will be made through the newly installed pipes should the current discharge route become completely blocked. As a result of the need to use the new discharge lines at some point in the future, a variation is required to the existing Environmental Permit. The site is seeking the variation to include provision for the existing permit descriptions and conditions to be maintained until discharges need to be made through the new lines. At this point, only the descriptions, limits and conditions specified for the new lines are to be effective. The proposed date for the current arrangements to end is 31 December 2016 and the date for the new arrangements to come into place is 1 January 2017. Should the proposed dates change, the site will advise the Environment Agency as soon as possible on when the switch from the current permit limits and conditions to those specified for discharges made through the new lines are required.

Although the dispersion will change, the composition of the effluent will not. The application is supported by a modelling study and risk assessment for the dispersion. Table 1 summarises the current activities and proposed additions to permitted discharge arrangement for Environmental Permit PR2TS/E10760C.

Table 1: Current activities and proposed additions

<b>Parameter</b>	<b>Current Activity</b>	<b>Proposed Additions</b>
Effluent Name	Secondary treated sewage effluent and trade effluent deriving from water treatment, circulating sea water use to flush and disperse all liquid effluent, the radioactive effluent treatment plant and non-radioactive aqueous effluent	Secondary treated sewage effluent and trade effluent deriving from water treatment, the radioactive effluent treatment plant and non-radioactive aqueous effluent
Maximum daily discharge volume	Maximum daily discharge is 504,900m <sup>3</sup> /day	Maximum daily discharge is 50,000 m <sup>3</sup> /day
Maximum rate of discharge	5843.75 litres per second	303.06 litres per second
Monitoring Point NGR	TM 00060 08880	Final Delay Tank: TM 00288 08797 Main Drains Pit: TM 00006 08822

**REFERENCES**

- 1) BRAD/EN/REP/113 Effluent Discharge Arrangements: Initial Dilution (including HR Wallingford Report EBR4908-RT009-R04-00, June 2014)
- 2) BRAD/EN/REP/108 Environmental Risk Assessment for Aqueous Effluent