



### Objection

|                          |   |
|--------------------------|---|
| Objector:                | Mr Patrick Dwyer  |
| Organisation Name:       | DEISE PREMIUM AQUACULTURE LTD                                   |
| Objector Address:        | Ballyhack, Arthurstown, New Ross, Co. Wexford.                  |
| Objection Title:         | Objection #OS010241 - 3rd party objection for Reg No:[P0606-04] |
| Objection Reference No.: | OS010241  |
| Objection Received:      | 06 March 2022   |
| Objector Type:           | 3rd Party   |
| Oral Hearing Requested?  | No  |

### Application

|            |                                |
|------------|--------------------------------|
| Applicant: | SSE Generation Ireland Limited |
| Reg. No.:  | P0606-04                       |

See below for Objection details.

Attachments are displayed on the following page(s).

To whom it may concern,

**Regarding:** Objections to a Proposed Determination on a Licence Application P0606-04

Firstly, all previous submissions made by our company still stand.

EPA state: It should first be noted that the discharges currently licensed are of a similar physicochemical nature to that which had been authorised under the operation of the heavy fuel oil fired plant; however, both the volume and chlorine concentration limits were significantly reduced under the revised licence issued in 2011, which licensed the operation of the CCGT.

This is incorrect and is the core untruth in this whole new licence process. For the first licence P0606-01 it is stated in a file associated with that licence application that abstracted water is chlorinated during two periods per day, to give a residual free chlorine of 0.5mg/l. It also states that the length of chlorination periods are maximum 1.5hrs. The EIS of 2009 states that: It is anticipated that approximately 5 litres per day of Sodium Hypochlorite may be used on occasions. They further state:- It should be noted that use of biocides is currently very infrequent and this situation is unlikely to alter once the new CCGT plant has been commissioned.

Even if 5 litres were used each day for 365 days this would equate to 1825 Litres of hypochlorite per annum (or approximately 1.825T) per annum. The current operation and that which is now proposed is for **continuous chlorination**. In a covering letter issued by the applicant in 2021 (along with a resubmitted EIS from 2009) the applicant states that they need to use between 0 to 5 cubic metres per day of sodium hypochlorite. This is considerably different from the 'unlikely to alter once the new CCGT plant has been commissioned' statement. Based on these figures the annual usage could be theoretically as high as 1825 T/annum of hypochlorite (or a maximum of a 1000 fold increase compared to pre 2015. This is 3.47L of hypochlorite per minute as compared to 5 litres per 2015. It was stated that an average dosing rate is 2L per minute. This equates to 1048Tonnes per annum. The applicant I believe is seeking to use 1000 T/annum.

Thus despite the EPA repeatedly trying to portray usage of sodium hypochlorite as being lower than in historical years passed the truth is the complete opposite. Thus regulating the residual chlorine level at SW2 by grab (formerly weekly and now proposed daily) does not regulate in any way the overall quantity of sodium hypochlorite use by the applicant. As a result the destruction of phytoplankton (the basis of the ecosystem) is unregulated. It is this loss of primary productivity that is causing a collapse in shellfish (mussels and oysters) in Waterford Estuary along with any lethal and sub-lethal impacts from Chlorine Produced Oxidants on shellfish and their larvae. The shift from a proposed 5 T per annum usage of sodium hypochlorite (2009 EIS) to the now 1000T per annum is not a typographic error but a deliberate upscaling in the use of this chemical since 2015. Hence the estuary is in the crisis that it now finds itself due to this huge upscaling in the use of sodium hypochlorite by the power station. For the EPA to not even impose hourly, daily, Weekly, monthly and yearly limits of the quantity of sodium hypochlorite that can be used is in effect giving the applicant carte blanche to use this chemical at will as a daily grab will not necessarily detect breaches of residual chlorine limits and it certainly will not detect Chlorine Produced Oxidants and bromoform. This type of regulation paves the way for the continued destruction of primary productivity in the estuary. The elevated Dissolved inorganic nitrogen levels that the WFD sampling has detected in the estuary may be more of a result from the **lack of phytoplankton** to assimilate the DIN rather than elevated levels from agriculture. It appears that the old way of dosing cooling water may actually have caused considerably less **harm to the receiving environment that the current continuous dosing regime**. To refer to Best Available Technology (BAT) is once again misdirection by the EPA. Surely a recirculating cooling system using less than 5% of the current level of water abstraction is the BAT. The power industry around the world is moving towards such cooling methods. A once through cooling system with continuous

dosing with sodium hypochlorite is not the BAT for an estuary such as Waterford Estuary. Such a destructive cooling method would be more appropriately situated in a location that would allow for coastal seawater to be abstracted and not transitional water in an estuary with important species and habitats. The EPA are fully aware of this but are willing to push the problem down the line for several more years when they state that:

**Agency response:** The EPA does not restrict the quantity in use at the installation but regulates the emission of chlorine discharged to the estuary by way of emission limits for chlorine concentration and volume flow. In line with BAT and in order to reduce chlorine emissions in cooling water discharges, the RD (Condition 7.4) requires an efficiency assessment of raw materials used in all processes including biocide dosing.

**Agency response:** The issue of alternatives is addressed in the EIS submitted with the application and in Section 15 of this report. Condition 2.2.2.7 of the RD (Schedule of Environmental Objectives and Targets) also requires the licensee to examine practicable options for the reduction of chlorine emissions to water including alternatives to the use of biocide for maintaining the cooling water system as per BAT for industrial cooling systems.

For the EPA not to regulate sodium hypochlorite usage per hour/per day/per week) per month etc at the dosing stage as opposed to the discharge point SW2 is turning a blind eye to the problem. A daily grab sample is only cosmetic and not effective. All records of sodium hypochlorite usage and purchases should be made available to the public on a live web page.

The EPA state there has been no change to any relevant environmental quality standards and objectives since the last review of the licence. Is there an EQS for killing phytoplankton? No. But it doesn't mean to say that it is good for the ecosystem in Waterford Estuary. All phytoplankton entering the cooling water intake are 100% killed. This is stated in previous EPA documentation. When one considers the high suspended solids caused by dredging (another EPA licenced activity) primary productivity is hampered in the estuary already before further damage is done by the powerstation. How can the powerstation in years gone by use non-continuous hypochlorite dosing for discrete periods each day and using much smaller volumes of bleach and still perform efficiently in those years? Surely there is a **rationale to take a step back to their previous dosing regime rather than push forward with a licence** that will ratify the current damage that is being inflicted daily by the powerstation. All of this done without a full EIA being undertaken to assess the current dosing regime. Instead an EIS from a 2009 EIA is rolled out and covered by a covering letter in 2021 and with piecemeal limited studies to get it over the line. Is this really environmental regulation in 2022? If it is then it is truly shambolic and certainly doesn't have **environmental protection at the heart of it.**

Regards,  
William & Patrick Dwyer  
Company Directors  
Deise Premium Aquaculture Ltd.