Appendix C2 5C – Non Technical Summary

Industrial Chemicals purchased the Stoneness road site in 1999, with the eventual aim of moving from its headquarters located less than 3 miles away in Titan Works, Hogg Lane, Grays (a site it had owned & operated from since the mid 1970's). The planning of the eventual move to the Stoneness Road site, has taken a number of years to get to this point. Various manufacturing processes at the Titan Works site, which whilst in operation would be far too costly to build a new plant, commission a new plant (with a steady operating team) and then cease production at Grays & either move staff to the Stoneness Road facility or make them redundant. The nature of the Zeolite business & the water treatment business especially with supply to the various water companies in the United Kingdom means that due to the internal commissioning system along-side the qualification process for each company, this is not a move that can be made quickly.

In 2016, the last batch of Zeolite (main product at the Titan Works Site) was produced; this was as a result of a steady decline in demand (due to the customer beginning to reformulate their product). The size and manufacturing capabilities of the Zeolite plant at Grays, meant that a build and transfer to the Stoneness Road facility was neither practical nor feasible. However now is the time to get the permitting permissions in place for the remaining products to be transferred to the Stoneness Road facility along with its Multi Product Protocol.

The West Thurrock site, on the corner of Stoneness Road and Oliver Road has been owned by Industrial Chemicals since the late 1990's. Prior to this, the site was owned and operated by National Power (now known as npower, as part of the RWE group) and prior to that the CEGB (Central Electricity Generating Board), with a power station on the site which had been designed to burn Coal, Oil and Gas

Since acquiring the site, the company has been developing products and building plants that are part of the company's ethos with regard to the future of the company and the types of products it supplies. In line with current regulations the company operates three of the permitted 4 processes that are permitted under the IPPC/EP regulations. All the other existing processes do not come under the umbrella of the current regulations.

Industrial Chemicals Limited is one of the main suppliers of flocculants & coagulants to the water industry and its products are used to treat/clean both foul water and also drinking water. The company currently supplies every water company within the United Kingdom & Northern Ireland.

To that end the aim of this permit variation is to be as encompassing as possible with also the aim to future-proof the permit with regards to increasing the permitted area, introduction of new processes that are linked to both process 3 & process 4, also increase the manufacturing capacity of processes 3 & 4 plus include the use new raw material (due to global shortages of one of the raw materials) and also the including of an evaporating system on Process 4 to clean one of the raw materials prior to use. The other aim of this permit variation is to include the Directly Associated Activity (DAA) from Industrial Power to allow it to supply energy to Process 3, Steam to Process 4 & Process 2, plus chilled water to other processes on site that require chilled water. The linking of the DAA, also then allows the boiler blow-down water to cut through using existing surface water drains to have access to the interceptor to enable discharge to the river Thames. The Industrial Chemicals site already has permission to discharge boiler blow down water & waste water from Process 3 into

the River Thames and the National Grid site, adjacent to the whole site also has this permission. As part of this variation, there is also the notification that, Process 1 is no longer in operation and the unrequired reactor and two storage vessels have since been removed. All other vessels that were used by the plant have remained in situ, but have had their contents changes (all necessary checks have been made to ensure that suitable products are being stored within these tanks). Industrial Chemicals would like to keep the process on the permit, to retain the ability to re-locate the plant if product demand meant that the plant had to become operational again. Due to how the design & layout was determined for the Industrial Power Ltd permit application, land was taken without the full realisation that some of it already was permitted under the guise of process one in the existing EPR/BJ7298IF permit. This issue has been discussed with the site inspector and members of the central permitting team. This area of land is not yet to be surrendered, but at a suitable point in time it has been agreed that it will be surrendered or transferred (whatever makes more sense). The reasoning behind this thought is that the original area had never been built on and Industrial Chemicals do not want to surrender the actual process of process 1, as although this product and its subsequent MPP are not in use on this site at the moment. One of Industrial Chemicals proud ideals, is that it has always been able to adapt to the current customer demand and at time market requirements & keeping this process within the site permit, allows if either production demands it, transport costs/fuel usage dictates, the need for a plant within the southern area of the United Kingdom, then this plant & process can be re-instated/rebuilt with minimal effort and supply could happen within months. Currently all demand for this product is located in the northern areas of the United Kingdom and that is why it was transferred to the Selby site (reduced fuel consumption & transport miles = reduction in carbon footprint).

As this permit variation aims to be encompassing of all Industrial Chemicals Limited manufacturing lines, for some of the proposed processes, the exact location on the site as to where the plants would be located, have yet to be decided. The table below details the new products to be manufactured, if a location has been decided and also the order of build (but not the timeline). Processes 5, 6 & & have had their construction locations determined and these can be found in appendix C2 5aii. However, Processes 8 & onwards, their locations are yet to be determined. Industrial Chemicals will submit, 3 months prior to commissioning to the Environment Agency or sooner the proposed locations of these processes and any other information that may be required as part of the permit issue (also known as improvement conditions).

Order of build	Process number if applicable	Product to be Manufactured	Existing Process to be linked to
1		DAA link for energy, steam, etc	Industrial Power Limited Permit as a DAA
2	Process 7	Sulphuric Acid Evaporation	Process 4 – supply of purified Sulphuric acid
3	Process 5	Ferrous chloride	Process 3 – supply of Hydrochloric acid
4	Process 6	Ferric chloride	Process 3 – supply of Hydrochloric acid
5	Process 8	Poly Aluminium chloride	Process 3 – supply of Hydrochloric acid
6	Process 9	Sodium silicate	Process 3 – supply of Sodium hydroxide

7	Process 10	Sodium citrate	Process 3 – supply of Sodium hydroxide
8	Process 11	Aluminium sulphate	Process 4 – Supply of Sulphuric acid
9		MPP products	Process 1, 3 & 4.

The manufacturing methods for processes 5 & 6 will be identical to those carried out at the Runcorn facility (permit No.) , process 10 has the potential of being made either by dissolving sodium citrate granules in hot water or by reacting Citric acid with Sodium hydroxide and then diluting down to the correct strength with water. Poly Aluminium chloride & Sodium Silicate are currently both manufactured under permit at the Titan works Site (DP3637SG) and have operated without harm to the environment for over 25 years. Both processes 8 & 9 use final products from process 3. The permit variation will also expand on the existing MPP, to enable the MPP from the Titan Works Site to be included at the Stoneness Road facility. Products from the above table from order of build 5, currently their build locations have yet to be determined. In view of this, Industrial Chemicals will notify the Environment Agency once the decisions have been made.