****Document ref: 5701-400

**MEG Derby Ltd**

**Dove Valley Park Soft drinks production facility**

**EPR Application**

**Reference: EPR/LP3607PT/A001**

**Non-Technical Summary**

**1.0 Description of the Plant Operation**

## **Product Storage**

The storage areas of MEG Derby Ltd. (DER) are basically divided into warehouses for finished products as well as for raw materials and supplies.

The granulated sugar used is stored in a silo.

Liquefied carbon dioxide and nitrogen are stored in the company’s own tanks.

Finished products are temporarily stored in the high-bay warehouse, regardless of the varieties and the location of the filling plants. Up to 20,000 Euro pallet storage spaces are available for this purpose.

## **Production**

In the production area, there are 4 filling lines (Lines 1–4).

Lines 2, 3, and 4 fill soft drinks and water (spring or mineral) in PET bottles with a capacity of 24,000 - 32,000 bottles per hour.

On Line 1, only water (spring or mineral) is filled in PET bottles up to 24,000 bottles per hour.

The production area consists of the following production stages:

* Water treatment for soft drink/water production

Treatment of the well water by iron and manganese removal, fluoride treatment and, if necessary, by reverse osmosis, which can also be used to treat city water for use as production water for soft drink production.

* Sugar solution

Sugar is supplied as a sugar solution in water for preparation of the mixture with brief heating and filtration.

* Base materials/concentrates and solutions

Base materials are delivered in containers. Likewise, various powders (e.g. citric acid) are delivered and dissolved in corresponding dissolving systems and temporarily stored in tanks/containers. Alternatively, ready-made concentrates can be delivered by tanker; these need only to be mixed with water and carbon dioxide.

* Preparation (syrup)

Production of the finished syrup by blending in the finished syrup filling plant using water, addition of base materials, dissolved sugar or using base materials delivered by tanker with treated water and subsequent intermediate storage.

* Main process:

The individual components are mixed with water, carbon dioxide and, if necessary, Velcorin® in an inline mixer and filled into PET bottles. The PET bottles are blown inline from blanks (preforms) into bottles and labelled after filling. After filling, the containers are signed by laser and fed to packaging (e.g. shrink-wrapping, palletizing). After packaging, the goods are transported fully automatically to the full-load warehouse and from there to the loading area.

The water supply for the production of the soft drinks/water comes from 4 wells.

For the DER site, there is a permit for the extraction and discharge of groundwater from 4 boreholes in the district for the production of mineral water and the filling of beverages issued by the EA.

The EA abstraction licence number is MD/028/0034/002

Further demand can be covered by city water.

## **Administration**

The administration wing is part of the production hall and adjoins the production area.

## **Disposal centre**

At the disposal centre, plastic waste such as PET bottles, films, cardboard, and paper, among other things, are pressed into bales for subsequent recycling/disposal.

## **Ancillary structures**

The ancillary structures primarily include the laboratory, chemical storage, workshop, process and operating technology units.

The process and operating technology includes compressors, reverse osmosis plants, an refrigeration plant (closed system), a steam boiler plant, and a caustic tank (for NaOH).

**2.0 Aqueous Discharge Streams**

**2.1 Discharge to the environment**

The first flush from the water treatment plant will be of very high quality and will therefore be discharged direct to the environment along with the site surface (rain) water.

Reverse osmosis concentrate, again being of very high quality, will also be discharged direct to the environment.

**2.2 Discharge to the public sewer**

Trade effluent streams will be collected in a Balance Tank of 1500 m3 capacity and discharged to the Severn Trent Water public sewer, for which a trade effluent consent has already been granted.

A 300 m3 capacity Divert Tank will also be installed to hold any streams likely to cause a breach of the trade effluent consent. Material from here will be introduced back into the Balance Tank at an appropriate rate, or otherwise removed by tanker for off-site disposal.

The Balance Tank will be provided with pH adjustment capability and will also be preceded by a screen for removal of general detritus (cable ties, hair nets, gloves, bottle caps etc).