

# TECHNICAL NOTE

Project name MEG Derby Environmental Permitting  
Project no. 1620011104  
Client MEG Derby Ltd  
Memo no. 1  
Version 1  
To Simon Binyon  
From Richard Wood

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Checked by Lisa Jobling  
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## Review of H1 Requirements for discharges from MEG Derby Ltd – permit application EPR/RP3904MC/A001

Following submission of the application reference EPR/RP3904MC/A001 for an Installation Environmental Permit, the Environment Agency has requested additional information to allow the application to be duly made. The request includes the following:

- Resubmit the H1 emissions assessment tool amended to take account of emissions to water both for emissions to sewer and to surface water (the H1 has a function for sewage treatment reduction factors).

MEG Derby proposes to discharge wastewater from the Facility at two emission points: EP1; a discharge of 'clean' process water from the reverse osmosis process to a surface water course via an attenuation pond which will also handle rainwater; and EP2; a discharge of effluent treated at the Facility's effluent treatment plant to sewer, under a trade effluent discharge consent issued by Severn Trent Water.

A discussion of the approach to the H1 assessment for the discharges from the proposed development is set out below.

### 1 Discharge to Surface Water

The surface water drainage for the site is connected to the Dove Valley Park attenuation pond, as shown in the attached figure reference '151947\_R8003\_Estate Title Plan'. The connection is approximate but represents the direct linkage to the pond.

Environment Agency guidance on GOV.UK states:

You do not need a permit to discharge to an enclosed lake or pond. This means a lake or pond in which all of the following apply:

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- it contains water throughout the year, other than in extreme weather conditions
- it does not have an outfall that connects it to a watercourse, or has an outfall that only discharges in extreme weather conditions
- it is sealed or lined to prevent water draining into the ground or soaking into the surrounding soil

As a consequence, Ramboll considers that the standard H1 assessment approach would not be appropriate for the surface water discharge at this site. The pond provides attenuation for the industrial estate and is understood to have no outfall as there are no watercourses in the vicinity. There is potential for limited drainage to ground as part of the attenuation process, however the potential contaminants are limited to low levels of COD/BOD and suspended solids derived from Reverse Osmosis of incoming towns water.

It is important to note that the proposed surface water discharge is not related to the processing or bottling activities employed on site, but is generated from the management of the clean water inlets to site, in particular:

- Water treatment plant that pre-treats ground water abstracted at site for use on site
- Reverse Osmosis (RO) plant that treats the abstracted ground water or the towns mains supply

These 'clean' streams, derived from water generated in the local area, will be segregated from any processing streams (e.g. CIP effluent and general cleaning water) and are therefore have a low contamination potential.

The anticipated quality of the surface water discharge is expected to be:

pH: 7  
BOD<sub>5</sub>: Less than 5 mg/l  
TSS: Less than 5 mg/l

This is within the BAT-AELs for discharges to surface water, were the discharge to be to a controlled surface water such as a stream or river.

To provide appropriate control of the surface water discharge, MEG Derby Ltd has proposed the following:

- There will be an up-stream sampling point for the clean effluent streams (i.e. prior to any dilution with site surface water) to monitor the quality of the discharge to the attenuation pond and identify any potential issues in the RO process.
- Measured parameters will be COD (or online as TOC), TSS, Temperature and pH.

Discharge volume will be a maximum of 216 m<sup>3</sup>/day (excluding rainwater). For comparison, the receiving pond has an approximate surface area of 7,100m<sup>2</sup>.

## 2 Discharge to Sewer

All effluent from the production process (including CIP cleaning and general rinsing operations) are directed to an onsite Effluent Treatment Plant prior to discharge to the foul sewer. These streams will be treated using the standard BAT techniques of balancing and pH correction. The discharge rate to sewer is anticipated to be 172 m<sup>3</sup>/day.

The main process at the site is the production of soft drinks, using various concentrates, flavourings and carbonated water. There are no heavy metals or persistent organics present within the process. Caustic soda (NaOH) and acids (HCl or H<sub>2</sub>SO<sub>4</sub>) will be used for pH correction within the ETP and in the CIP process.

For the H1 assessment of discharges to sewer, it is assumed that standard 'sanitary' pollutants such as pH, COD/BOD, ammoniacal nitrogen and phosphates will all be captured and treated through the municipal treatment works and that the Annex D2 assessment is not appropriate. Annex D1 deals with more persistent pollutants expected to be present within the proposed discharge, and applies sewage treatment reduction factors based upon the expected removal rate within the receiving works. As stated above, the process does not contain any identified levels of persistent pollutants that would require such assessment, and as a consequence a H1 risk assessment in line with Annex D1 is not appropriate for this application.

## 3 Conclusion

Based upon the additional details presented above, a specific H1 assessment of the discharges to water and sewer from the site is not considered relevant due to the nature of the proposed discharges and their ultimate receiving points.