##### MEG Derby Ltd

**Dove Valley Park**

**Soft drinks manufacturing facility**

**Environmental**

**Management System**

**ARL Consulting Limited**

**September 2021**

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**Doc Ref: 5701-404**

1. **Introduction**

This document describes the background and objectives for the proposed management system to be in place at Dove Valley Park to support the operation of the new effluent treatment plant. During the initial phase of operation it will be an ‘in house’ bespoke management system that will be developed to help ensure the continued safe and reliable operation of the proposed effluent plant.

It will be developed in conjunction with ARL Consulting Ltd based on extensive experience of operating other plants throughout the UK food and drink sector.

It should be noted that, in the medium term, MEG Derby will be seeking ISO 14001 accreditation for this management system.

This document also needs to be read in conjunction with document reference *5701-402 Risk Assessment*

1. **Objectives**

This management system shows how MEG Derby will minimise risks of pollution from all site activities. Operators will follow the management system and keep it up to date. Operators and management will assess the management system to monitor the effectiveness of the operations and make changes to it when we can see ways of improving it. This will help to achieve and maintain compliance with the environmental permit.

The overall outcome of the management system will be that the Dove Valley Park facility will be effectively managed, operated and maintained to minimise the risks of pollution. We will have processes and procedures to deal with:

* accidents
* incidents
* near misses
* non-conformances
* complaints

The overall outcome of the operation of these company-wide systems will be that each relevant activity will be subject to effective management that will identify and minimise risks of pollution arising from accidents / incidents / near misses / non-conformances and complaints.

MEG Derby will ensure that we have an effective management system by following the Plan Do Check Act (PDCA) cycle. This cycle represents a continual process of review and improvement of performance. For example, if we have a non-compliance action plan, by monitoring our compliance scores we will identify what the recurring problems on our site are. We can then identify how to improve our operations.

The main principles of the PDCA cycle that MEG Derby will follow are as follows:

**Review** our management system:

 • operator regularly reviews the management system to ensure fit for purpose

 • any environmental policy implemented and action plans carried out

 • update procedures and control measures

 • report (site) environmental performance where needed

 • external certification or verification. (ISO 14001 will be implemented at Dove Valley Park in the future)

**Plan** our management to establish our environmental baseline and obligations:

 • carry out an environmental review and risk assessment

 • identify requirements for compliance with all environmental permits and applicable environmental legislation

 • set objectives to maintain and improve environmental performance and compliance action plan

**Check** our management system to ensure it is being followed:

 • control and monitor environmental performance and management system

 • monitoring and measurements

 • review continual improvements and corrective actions

 • carry out internal audits

 • ensure compliance with legal requirements

 • record our checks.

**Do** - implement and operate our management system:

 • establish procedures and control measures to manage and comply with all permits and other obligations

 • communicate requirement to staff, contractors and external parties

 • staff and contractors are trained and competent to carry out responsibilities

 • establish and work to maintenance schedule

 • test accident and emergency plans

 • keep accurate and clear records.

In order to improve our environmental performance, we need to understand the impacts of our activities. We will then develop a set of objectives appropriate to our operation. We will need to know if our objectives are being met.

Targets when used properly can be useful indicators of our performance, but to be effective they need to be SMART.

**Specific**: Each target will be clearly stated and address one issue

**Measurable**: Each target must be quantifiable and the results definitive. (e.g. 10% reduction in power use)

**Achievable**: Each target must be realistic – we will not set targets that cannot be met

**Relevant:** Each target will be related to our environmental objectives that we have defined

**Time restricted**: There is a clearly defined deadline or end date for delivery for each target. We will revise our targets as part of the review and continual improvement process.

**Implement the management system (Do)**

When we have developed our action plans or development programmes, we will implement them. This may require further training. We will identify roles and responsibilities in the management system and make sure everyone is clear about them.

A key area in reducing environmental impacts at MEG Derby will be the use of a Planned Preventative Maintenance (PPM) system instead of a reactive one. This will help improve operational reliability and reduce impacts on the environment. The amount of waste generated by sudden breakdowns is usually greater and takes more resources to fix than a PPM programme for the equipment we operate.

In the event of a breakdown, the level of impact on the plant operation, as well as the environment, will vary depending on the equipment. We will define the levels of impact and criticality using techniques such as the Failure Mode Effect Analysis (FMEA) to determine:

1. The type of failures that may occur and the causes and effects of failure.

2. How often failures are likely to occur, over a set period of use (for example hours run).

3. The effective maintenance options available. For example, manufacturers often provide servicing schedules, but we may need to change the recommended period based on operational experience.

**Check of our management system**

Regular monitoring and measuring of our operational activities will help us to evaluate the level of compliance with our permit and relevant legislation. Where there are problems we can immediately consider how to address them.

We will record all results and any decisions or actions taken because of these results. Internal audits will allow us to monitor the effectiveness of procedures and operations.

Things to do at **Check** stage

 • internal audits

 • independent (second or third party) audits.

Outcomes

 • checks are carried out to ensure that the management system is being implemented as intended

 • preventative and corrective actions are undertaken to minimise breaches (non-compliances).

**Review of our management system (Act)**

The results of internal audits will provide MEG Derby managers and directors with an opportunity to look at how effective the management system is and to consider any actions or changes to improve it. We will regularly review our management system to ensure it is appropriate and being implemented.

We will review our management system when:

 • there are changes on site, in our activities and/or equipment

 • if we are applying for a variation to our permit

 • if there is an accident, complaint or breach of our permit.

Once we have reviewed the outcomes for one period; we can plan the objectives and targets for the next. Once we have established our management system after one full review period, we may decide to use external auditors and to achieve certification to a recognised standard or scheme.

Things to do at **Review** stage

 • Review the content of our management system regularly including any supplementary plans, for example noise or odour plans.

 • Keep a record of all changes to our management system.

 • Determine whether our objectives, and any targets, have been met and report on them. • Carry out performance monitoring, measurement and reporting. We may look to use appropriate key performance indicators KPIs for example feedback from staff and stakeholders such as the local community

**Outcomes (evidence)**

 • The management system is kept up to date.

 • The management system is continually improved.

1. **Management System Detail**

All operators to be given training in the main technical issues associated with the operation of a trade effluent plant and domestic plant at Dove Valley Park, including all mechanical, electrical, instrumentation and the process engineering background to the plant.

All employees will have formal training records which will be signed off by management and kept up to date as appropriate.

1. Operators will engage in the concept of continual improvement and will be encouraged to make suggestions for plant and operational improvement of the plant at all times.
2. Operators need to be made aware of the sensitivity of the receiving water and hence why and how the consent has been structured. They need to be aware of how their actions can have a direct impact on the operation of the plant and hence the associated impact on the river.
3. Operators must be trained in the maintenance of all sampling and monitoring equipment which has been installed as a tool in ensuring the appropriate quality of effluent discharge.
4. As part of their duties, operators are required to complete a Daily Log Sheet which demonstrates how all of the operational facets of the plant are interlinked. Importantly, this must not be just seen as a ‘tick box’ exercise but as a way of the operators understanding the basics of plant operation and process chemistry.
5. All operators’ logs should be kept for reference as and when required. Operators are also encouraged to enter the main analytical and other operational parameters on a spreadsheet to help with trending as a useful analytical tool.
6. Should operators notice or suspect an operational issue which could impact on the quality of the discharge, there will be a clear operational protocol which must be followed to ensure the quality of the final discharge is not compromised. This will include clear lines of communication and reporting to management should they be required, and also to the EA when necessary.
7. Operators will be aware of the protocol for start-ups, shut downs, and variations in materials or influent received.
8. Systems will be in place to deal with complaints from the public, in order to investigate the reason for the complaint and to communicate to the public what has happened and how such issues will be minimised in the future.
9. Procedures will be in place to cover:
* Operator holidays or sick leave
* New staff members
* Temporary agency cover

It is essential that the importance of the effluent plant at Dove Valley Park, as a key element of the overall site operation, is conveyed to all new or temporary staff members.

1. Operators to be aware of the potential for accidents and emergencies and how they may impact the performance of the ETP – and in particular the health of the biomass. There must be a clear and formalised protocol as to how such incidents are to be dealt with to ensure that the plant integrity is protected and that the quality of effluent discharge is not compromised.
2. Site production staff must be aware of the implications of their actions and the need to ensure that spills (solid and/or liquid) within the production area are not passed into the drains as the ‘easy option’. This protocol should cover both the trade effluent drains and also the domestic drainage into the Severn Trent foul sewer.

The management system will be a constantly evolving document and is part of the overall site continual improvement plan. The following Health and Safety elements will be incorporated into a site wide Management System.

1. All operators to be given full training relating to all health and safety issues associated with the plant. This will include, but not be limited to:
* Working with hazardous chemicals and understanding the product data sheets.
* Use of appropriate PPE
* Working at heights
* Working in confined spaces
* Heavy lifting procedures
* Safe use of forklift trucks

All employees will have formal health and safety records which will be signed off by management and kept up to date as appropriate.



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