 UK BATTERY INDUSTRIALISATION CENTRE	NMP Solvent Management Arrangements			HSE-PR-B019-000
Effective Date	05/08/2025	Process Owner	Head of HSE	Version 2

1. Purpose

The process used by UKBIC for the management of N-methyl-2-pyrrolidone (NMP), which is solely used in the manufacture of cathode electrode.

This document covers the requirements set out in the Environmental Permit issued by Warwick District Council (WDC), Permit Reference: 81.

2. Scope

This document only covers the delivery, storage, usage and waste disposal of NMP, which is only used in the manufacture of cathode electrode.

3. Responsibilities

Managing Director

To ensure that adequate resource is available to comply with the associated permit

Health, Safety and Environment Department

To be the main contact and communication point for all matter relating to the permit and contact with WDC.

To notify WDC yearly of the total solvent usage and inform WDC if there are any events which is likely to have an effect on the local community.

Support risk management and provide suitable and sufficient PPE to employees and that the equipment is safe.

Report internally at the Annual Review meeting, and support the business to ensure the permit is complied with.

Logistics


To log all incoming NMP into the ERP system and track quantities and usage throughout the reporting period.

Process: To compile work instructions on the usage of NMP and all associated equipment

4. Records

For record retention duration see control of records procedure QA-PR-C004-000

Quality Record	Media	Document Number	Location

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5. Process

Order

The nature of UKBIC is that there is not a standard product or regular order for NMP.

UKBIC customers will use the facility to produce their own products and supply their own chemicals for this process.

Delivery

All incoming NMP will be managed by Logistics, they will book in, unload and store the delivery in the bunded storage areas. They will also move virgin NMP to the solvent delivery point, move waste and empty IBC around the site. Ensuring that all waste is stored in the waste area and load all waste when required for disposal via waste contractor.

Storage

Virgin NMP – Stored in bunded store on waste area

Process NMP – Stored on bunded delivery platform

Mixing Waste – Pumped to bunded store (IBC)

Condensate Waste – Gravity feed into bunded store (IBC)

Waste – Stored on hard standing chemical storage area

Use

Virgin NMP is used only in the mixing of cathode slurry and for cleaning of the cathode mixing vessel. This is automatically pumped into the mixing room from the external delivery system. The NMP is used to aid the binding process of the slurry to the foil. The coated foil is then heated to dry the coating, during this process the NMP is evaporated from the coating and condensed back into the liquid. Any residual NMP after this process is captured on a carbon bed.

All waste is collected into waste IBC's. These IBC are either new IBC or empty IBC's from the virgin supply. All waste is moved to the storage area and collected via a licensed waste contractor. At this moment there is no route to enable recycling of NMP.

Emissions

An external accredited company will conduct 4x monitoring sessions a year with the report being sent to UKBIC and WDC

Disposal

IBC's will be removed from site by current waste contractor


6. Total Usage

Input

How much is brought on to site

Output

emitted to air, whether directly or via abatement equipment

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discharged to water, whether directly or via water treatment
sent away in waste
lost by spills, leaks etc
leaving the installation in the product.

Table of Data Points

Permit Requirement	UKBIC Data Source
I1 = Solvent Input	Total Volume Received
08 = Solvent Sent for Recovery	Solvent sent via Waste Carrier
07 = Solvents Sold to 3 rd Party	Noting in Place at Present
06 = Residual Solvents in Empty Containers, drums etc	IBC will be used for waste so residual will be part of 07
05 = Removed in Abatement	Condensate solvent collected as waste
01 = Emission in Waste Gasses	Monitored via external provider (Socotec) 4 times per year when system is operational. Report data to be used for O1
Sum of above = UKBIC Fugitive Emissions	

7. References

Environmental Operating permit No 81 issued by Warwick District Council (WDC)

8. Revision History

Issue	Date	Description of Changes	Updated By	Approved By
1	23 February 2021	New Procedure	N Porter	M Cutler
2	24 January 2023	IMS doc number applied and updated to latest template	A Carey	M Cutler
3	25 August 2025	Changes from N Methyl-2-Pyrrolidene to N-methyl-2-pyrrolidone, some minor format changes	S Gardner	S Gardner