COMPLEX BESPOKE PERMIT APPLICATION: NON-TECHNICAL SUMMARY

South Cornelly Power Station, Porthcawl Road, Bridgend, CF33 4RE

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1. Introduction

This Non-Technical Summary (NTS) has been prepared by UK Power Reserve Limited (UKPR) in support of a complex bespoke Medium Combustion Plant (MCP) and Specified Generator (SG) application for a small natural gas-fired electricity generating plant at South Cornelly Power Station, Porthcawl Road, Bridgend, CF33 4RE, hereafter known as "the Site".

In addition to this NTS, the following documents are included with this environmental permit application:

- Application forms: Part A, B2, B3 and F1
- Appendix A: Location Plan (South Cornelly)
- Appendix B: Site Plan (South Cornelly)
- Appendix C1: Air Quality Assessment 01.0024.051 v2 (South Cornelly)
- Appendix C2: AQ Model Data (South Cornelly)
- Appendix D1: Natura 2000 sites within 5km (South Cornelly)
- Appendix D2: SSSI & MNR within 2km (South Cornelly
- Appendix E: Directors of UKPR (South Cornelly)
- Appendix F: MCP SG Checklist (South Cornelly)
- Appendix G: SG TB Screening Tool v2.1 (South Cornelly)

2. Regulated Facility

The Site's location is given in Appendix A and is centred on grid reference SS 82043 79969. The Site is approximately 0.4 km south of South Cornelly within South Cornelly Trading Estate, accessed from Porthcawl Road.

The industrial estate is located within an existing industrial estate. The wider estate contains a number of different size and styles of industrial premises including larger single use buildings and smaller 'starter' type units. Beyond the estate are two limestone quarries.

A permit for the Site is being sought due to the Environmental Permitting (England and Wales) (Amendment) Regulations 2018. The aggregated net rated thermal input of the site is 24.13 MWth and therefore qualifies as a "Medium Combustion Plant" (MCP) under Schedule 25A and a "Specified Generator" under Schedule 25B.

The Site layout is shown in Appendix B and is comprised of 3 x 6.47 MWth and 1 x 4.72 MWth gas fuelled generators with emissions less than 500mg/Nm3 from a combined stack with a height of 25 m. They are expected to operate more than 50 hours per year under a balancing services agreement signed after 31st October 2017 which remains in place after December 2018. It is therefore considered that the Site is comprised of "Tranche A generators which become a Tranche B generator by virtue of signing up to a new capacity market of balancing services agreement after 31st October 2017 (which remains in place after December 2018)" with a compliance ELV date of 1st January 2019.

For the reasons set out above, the Site will require an MCP permit by 1st January 2024 and an SG permit by 1st January 2019, since extended to 30th June 2019 by Natural Resources Wales's regulatory decision. As such, this application is for an environmental permit that will satisfy the requirements of both Schedule 25A and 25B on the relevant dates.

3. Environmental Risk Assessment

3.1. Amenity and Accident Risk

Amenity and accident risks and their mitigation are managed by UK Power Reserve's ISO 14001:2015 accredited Environmental Management System (EMS).

3.2. Air Quality Assessment

An Air Quality Assessment has been undertaken by Isopleth, dated April 2019 (ref: 01.0024.051) and is provided in Appendix C. The assessment makes reference to any receptors identified within the Nature Conservation Designation Maps (Appendix D) as well as the existing air quality in the area, national air quality legislation, policy and guidance.

An assessment has been carried out to determine the local air quality impacts associated with the operation of the facility.

Detailed air quality modelling using the AERMOD 8 dispersion model has been undertaken to predict the impacts associated with stack emissions from the gas engines at the Site. Emissions from the stacks have been assumed to occur for the full year when comparing against short term and long-term air quality limits.

All impacts (human and ecological) are predicted to be below limit values at locations where the Air Quality Directive states that they must be applied.

3.3. Habitats Assessment

The online MAGIC maps tool from DEFRA has been checked to identify any protected areas within screening distances that would require a habitats assessment. This includes Special Protection Areas, Special Areas of Conservation and Ramsar sites within 5km and Sites of Special Scientific Interest and Marine Conservation Zones within 2km. The results are presented in Appendix D1 and D2, respectively, and have identified:

- Within 5km: There are 2 Special Protection Areas, Special Areas of Conservation, or Ramsar sites.
- Within 2km: There are no Site of Special Scientific Interest or Marine Nature Reserves.

A habitats assessment will therefore be required.

4. Energy Efficiency Directive

Schedule 24 of the Environmental Permitting Regulations does not apply in this case as the environmental permit is not being sought for a new operation. UKPR acquired the site in 2012 as an operational site. UKPR have been the legal operators since then. Therefore, it is classed as an "existing" MCP and as such the requirements of the Schedule 24 should not apply.

5. Key Technical Standards

The key technical standards have been used to design and operate the plant:

- NRW (2014) Environmental Management Toolkit: General Version Industry
- NRW/EA (2018) MCPD Guidance
- NRW/EA (2018) Specified Generators Modelling Guidance
- NRW/EA (2018) M5 Monitoring Requirements for the MCPD Specified Generators
- NRW/EA (2019) Specified Generator Guidance

6. Key Control Measures

The key control measures that are used to operate the plant are as follows:

- Operated in accordance with an ISO 14001:2015 accredited EMS.
- Engine control system allows UKPR to:
    - Monitor engine performance
    - Control air-fuel ratio
    - Actively and reactively control load

    - Meter power
    - Manage engine speed
    - Control voltage
    - Remotely control the system
- A preventative maintenance schedule will be implemented.
- Potentially polluting substances will be stored within tanks benefitting from secondary containment.
- Waste will be managed in accordance with the waste hierarchy and only sent to appropriately licensed facilities.
- Emissions to air will be monitored periodically to ensure compliance with limits are achieved.
- Gas engines will be stored within sound mitigating containers.

7. Conclusion

This information summarised within this report finds that South Cornelly Power Station is not predicted to significantly impact local receptors or the environment.