Our reference : EF13/3921; DOC16/282523-01
Contact : Mr Andrew Helms, (02) 6332 7604

Ms Joanna Bakopanos
Team Leader – Industry Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY, NSW, 2001

Attention: Ms Pamela Morales

2 August 2016

Dear Ms Bakopanos

BORG PANELS – PROPOSED EXPANSION OF OBERON FACILITY (SSD 7016)

I refer to your email of 8 June 2016 requesting that the Environment Protection Authority (EPA) provides comment on the exhibited Environmental Impact Statement (EIS) prepared for the proposed 'Borg Panels Timber Panels Processing Facility Expansion, Oberon' (the Project).

As requested, the EPA has considered the EIS for the Project in relation to the environmental issues for which the EPA has the primary legislative responsibility, being air, noise, surface water and waste management.

Please find in Attachment 1 the EPA's assessment of the EIS, which includes general comments on the adequacy of the impact assessment, recommendations regarding the provision of additional information and where practicable, recommended conditions of consent if approval is recommended by the Department of Planning & Environment (DPE). Attachment 2 provides additional EPA comment on the air assessment.

It is the EPA's expectation that it will be provided with a copy of any 'Response to Submissions Report' prepared for the Project and adequate opportunity for the EPA to provide further recommendations to the DPE in relation to the Project. Further, the EPA requests the opportunity to review the draft Secretary's Environmental Assessment report for the Project and to comment on any conditions of consent, should approval be recommended by the DPE.

Furthermore, should consent be granted under the provisions of the *Environmental Planning and Assessment Act 1979*, the proponent will be required to make a separate application to the EPA to vary Environment Protection Licence No. 3035 to reflect the conditions of project consent.

Should you have any enquiries in relation to this matter please contact Mr Andrew Helms at the Central West (Bathurst) Office of the EPA by telephoning (02) 6332 7604.

Yours sincerely

DARRYL CLIFT
Head Central West Unit
Environment Protection Authority

Attachment 1: EPA comment on EIS prepared for SSD 7016
Attachment 2: Specific EPA comments on the Air Quality Impact Assessment (Appendix F of EIS)

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Attachment 1: EPA comment on Environment Impact Assessment

Noise:

Comments:

- The Noise Impact Assessment (NIA), prepared by Global Acoustics (appendix H of the EIS), states that the current operations at the Borg Panels facility are approaching the noise limits stipulated in the Environment Protection Licence number 3035 (the Licence) for the premises.
- The noise impact assessment predicts that the combination of noise producing activities generated within the existing factory and that generated by the plant associated with the particle board expansion will likely result in an exceedance of the licence noise limits. To ensure that this does not occur Borg Panels has committed to achieving sound power level reductions at three key plant items in the existing factory, namely the Conti 1 dryer fan (a 7 dB sound power reduction required), the booster fan drive (a 7 dB sound power reduction) and at the main fibre transport fan (a 6 dB sound power reduction).
- The EPA notes that under various modelled scenarios reported by Global Acoustics that there are predicted exceedances of noise limits during the day time period which are invariably the result of the operation of mobile wood chippers. Section 13.3 of the EIS states that the mobile wood chippers do not form part of the 'normal' operations at the site and that potential noise exceedances can be avoided through management practices including restricting the use of mobile wood chippers under certain meteorological conditions.

EPA's recommended conditions of project consent:

- That there are no changes to the existing noise limits stipulated by environment protection licence 3035 (the licence) for the day, evening and night time periods.
- The existing evening operational noise limit on the licence (50 dBA) will apply for construction works being undertaken between the proposed 6:00 pm to 7:00 pm period.
- That there are respite periods for construction activities, such as rock breaking, which result in noise levels 75 dBA or more at any non-industrial location as per Section 4.1.1 of the *Interim Construction Noise Guidelines* (DECC 2009).
- The modification on the licence of noise condition L4.3b) to replace the existing reference to '2 metres/second' with '0.5 metres/second' to recognise the observations in the NIA that the site is largely flat and that drainage flows are not considered applicable.
- The modification of condition L4.1 on the Licence to recognise the Industrial Noise Policy's distinction between Sunday and Public Holiday day time hours being different to that of Monday through Saturday (i.e. Sunday and Public Holiday day time being 8:00 am to 6:00 pm).
- The EPA recommends that the following specific conditions be applied to the use of mobile wood chippers on the premises:-
    - The operation of mobile wood chippers are not permissible on the premises from six (6) months following the commissioning of the Particle Board factory unless the mobile wood chipper(s) operates within an acoustically treated enclosure.
    - No mobile wood chipper can be operated in the open when winds are from the northern hemisphere (i.e. when winds are from the west through to the east or winds from 270°, through 0°, to 90°).

- Two or more mobile wood chippers are not to operate simultaneously when winds are from the south-west through to the south-east (i.e. 225°, through 0°, to 135°).
- The preparation of a mobile wood chipper operation management plan. The plan would include the documentation of the above requirements and other measures that will be implemented (prior to the cessation of all mobile wood chipper operations on the premises) to limit their operation to periods of breakdown or maintenance of the permanent wood debarkers/chippers.

- The requirement for Borg Panels to implement all necessary noise mitigation measures at the Conti 1 dryer fan, the booster fan drive and the main fibre transport fan, and other plant as appropriate, in order to achieve the noise levels proposed in the NIA.
- That Borg Panels undertakes noise compliance testing within three (3) months following the commissioning of all elements of the proposal to demonstrate achievement of the sound power levels used in the NIA.
- Updating the site noise model (as described in the NIA) based on the results of the compliance monitoring and the implementation of all feasible and reasonable mitigation measures, to the satisfaction of the DPE and the EPA, if the updated model indicates non-compliance with the noise limits for the premises. This report must be provided to the DPE and the EPA within six (6) months of commissioning of all elements of the proposal.

Water:

Comments:

- The EPA notes in the EIS (Section 15.0 and Appendix J – 'Water Cycle Impact Assessment') that Borg Panels proposes to:-
  - undertake works to further segregate the clean-water run-on to the premises (from the south and west of the premises) from the site derived run-off;
  - provide additional retention time and treatment for surface water derived from the adjacent Oberon Timber Industry factories (Structaflor and Highland Pine Panels); and
  - construct a first flush stormwater basin with a minimum design capacity of 6 ML.
- In addition, an emergency catchment pond and two smaller emergency catchment dams (formerly sediment basins) will be created, with appropriate isolation gates, to assist in the management of any spills or firefighting water. The EPA supports these proposed upgrades to the clean and dirty water management at the premises and notes the recommendation in Appendix J to construct these dams/ponds prior to the commencement of earthworks associated with the site expansion proposal.
- Section 4.1.1 of Appendix J of the EIS states that key sources of pollution from the redevelopment of the premises are likely to come from the increase in roof and other impermeable surface areas; the storage of logs in the log yards, general handling and transport of woodchips and general traffic movements on site. The likely key pollutants were stated as being tannins (tannic acid), total suspended solids and total nitrogen and phosphorous. The EPA, noting that an additional two log yards will be operating as part of the expanded operations, expects that an increase in the roof area will not contribute to pollution from the premises and instead be a key contributor to on-site stormwater harvesting.);
- Section 6.0 of Appendix J of the EIS states that a stormwater harvesting and reuse scheme will be deployed at the premises utilising the existing water treatment plant however Section 15.3 of the EIS states that '*it is also recommended that the harvesting of stormwater be investigated*' which implies that the proposed 200 m^3/day drawn from the various stormwater basins (as per section 5.1.2 of Appendix J) is not necessarily a certainty. The potential absence of surface water harvesting may negatively impact upon the volume and quality of water leaving the site via a licensed discharge point.

- Comment is made in Section 15.3 of the EIS of the need to review the 100% water quality limits on the licence for pollutants discharged from the premises citing natural environments that have higher total suspended solid concentrations in times of rainfall and which exceed the 50mg/L limit currently on the licence. The EPA considers that the comparisons are not valid given that Borg Panels is in full control of the surface water flow within the premises and the range of contaminants that make up total suspended solids discharging from the premises (predominantly wood particles of various sizing) are not likely to reflect a natural range of sediments in surface water flow. On this basis the EPA will not consider varying the Licence to replace the 100% limit with a 95% limit. Water quality limits should not be seen as a target, rather they are an upper range within which a licensee may operate. It is the EPA's expectation that licensees will do everything that is reasonable and feasible to achieve the best water quality outcomes possible at their premises.

Further information required from Borg Panels:

- Confirmation that stormwater harvesting will be deployed as part of the surface water management practices at the premises.

EPA's recommended conditions of project consent:

- Borg Panels must update (or prepare if such a plan is not available) the Water Management Plan for the premises which reflects the new site layout and operating plant. The plan must also include procedures for the inspection and maintenance of all surface water management structures (including emergency pollution control catchments).
- Surface water runoff from all log yards and wood chip processing areas must report through an appropriately designed and sized gross pollutant trap prior to discharging to the site surface water system.
- An application will need to be made to the EPA, should project consent be granted, to vary the Licence to relocate the site surface water discharge point to the new first flush basin.

Waste:

Comments:

- The Secretary Environmental Assessment Requirements (SEARs) required that the EIS provide details on the quantities and classification of all waste streams to be generated on site; details of waste storage, handling and disposal; and details on all waste streams to be brought on to the site for alternative fuel purposes. The EPA considers that little to no information has been provided on waste storage and handling on site and no details or commentary on waste streams to be used as alternative fuels.
- The EPA notes from Table 16 under Section 16.2 'Potential Impacts' (from waste) of the EIS that an additional 128,000 L of waste water will be generated per annum as a result of the operation of the wet electrostatic precipitator at the new particle board dryer plant (96,000 L per year) and a wet scrubber at the Conti 2 press line (32,000 L per year). There is no detailed discussion on how this water will be managed at the waste water treatment plant nor the plant's capacity to treat this waste water in addition to the load from the existing facility other than a brief sentence in Section 4.4.2 of Appendix J of the EIS ('Water Cycle Impact Assessment'). Section 4.4.1 of Appendix J appears to indicate that the treatment plant is for 'treating' water (through the reverse osmosis plant or otherwise) to be returned to the factory rather than treating waste water prior to discharge to trade waste or on-site storage.
- The EPA also notes in Section 14.2 of the EIS that there is the potential for hydrocarbon contamination in the soils around the former fuel depot and that no assessment has been undertaken to ascertain whether this is the case.

Further information required from Borg Panels:

- Details of expected volumes of waste material generated at the facility at any one time (including bark and waste board) and how and where this material will be stored.
- Confirmation from Borg Panels that the waste water treatment plant has the capacity to treat the additional volume of waste water produced as a result of the commissioning of the wet electrostatic precipitator and the wet scrubber.
- Confirmation from Borg Panels whether the resulting additional treated volume of waste water has been incorporated within the existing/proposed surface water storage system at the facility (i.e. in addition to the potential volumes of water stored in these same dams/ponds following surface water runoff and rainfall events).

EPA's recommended conditions of project consent:

- The current waste conditions described in Environment Protection Licence No. 3035 (conditions L3.1 and L6.1) for the Borg Panels Oberon facility are considered appropriate for the proposed expansion at the premises. Should consent be granted for the proposal Borg Panels will need to make an application to the EPA to vary the Licence should it seek to import waste wood material on to the site (used pallets, etc) for use as a raw material in the Particle Board plant.
- The EPA recommends that DPE conditions any project consent to include the need for Borg Panels to undertake an assessment of the contamination status of that part of the premises (former Lot 1, DP 1085563) that comprised the former fuel depot and to provide a statement as to the suitability of this portion of the premises for its intended use. Should the investigation not indicate the suitability of the site then appropriate remedial action must be undertaken prior to the construction of the dryer and flaker plant with a report detailing the works undertaken, including the results of any soil and/or groundwater validation sampling, provided to DPE and the EPA.

Air Quality:

Comments:

- The EPA has undertaken an assessment of the report titled '*Air Quality Impact Assessment – Proposed Particle Board Plant – Borg Manufacturing Pty Limited, Oberon (May 2016)*' (AQIA) prepared by Stephenson Environmental Management Australia and presented as Appendix F of the EIS. The EPA considers that the AQIA is incomplete and does not provide a thorough assessment of the impacts to the air environment from the proposed modification to the Borg Panels facility.

- The EPA therefore is currently not in a position to recommend any conditions of project consent on the basis that insufficient information has been provided in the Air Quality Impact Assessment in the EIS.

Further information required from Borg Panels:

- The EPA's assessment of the AQIA and additional information requirements are provided in **Attachment 2**.

Attachment 2: EPA Assessment of AQIA

Summary

The assessment of impacts to the air environment from the proposed modification to the Borg Panels facility is incomplete. Although incomplete, the air assessment predicts the proposal fails to meet the EPA's air quality impact criterion for formaldehyde.

The EPA recommends that the following additional details be provided:

1. Description of the existing and proposed processes. This is needed to characterise all emissions from the site.
2. Confirmation that all air quality regulatory obligations will be met.
3. The methodology used for the assessment.
4. Modification of the proposal to mitigate the exceedences predicted by the assessment.

Documents reviewed

- '*Borg Construction Pty Ltd Environment Impact Statement Timber Processing Facility (Particle Board)*', June 2016 – (EIS).
- Appendix F to the Environmental Impact Statement, '*Air Quality Impact Assessment Proposed Particle Board Plant Borg Manufacturing Pty Ltd Oberon NSW*' – (AQIA).

1. Process description

Section 6.1 of the EIS provides a general process description but is not detailed enough to demonstrate that all potential emissions to the air have been listed and characterised. Borg Panels proposes to modify their current MDF facility and build and operate a Particle Board (PB) facility.

The proposed modification to existing plant includes the construction of a new stack; the installation of a wet scrubber on the Conti-2 press line; and the diversion of emissions to provide thermal destruction of formaldehyde (95%) – namely the paper treater emissions are diverted to the Conti-2 heat plant and the Conti-1 roof vent emissions are diverted to the Conti-1 heat plant.

The change to the emissions from the heat plants following these diversions has not been stated. Furthermore, evidence has not been provided to establish the destruction efficiency of the heat plants for formaldehyde, and no detail has been provided regarding the thermal destruction process.

Modification of the MDF facility may result in it belonging to Group 6 (Schedule 4, *Protection of the Environment Operations (Clean Air) Regulation 2010* (POEO (Clean Air) Regulation). If so, the POEO (Clean Air) Regulation specifies that thermal treatment of a principal toxic air pollutant in a Group 6 treatment plant requires that the emissions for treatment be held at a temperature of at least 980°C for at least 2 second (clauses 47-52).

The description of the proposed PB facility provided in section 6 of the EIS notes the use of hot oil and of hydraulic oil to provide the heat and pressure for the ContiRoll (area 7). It is not clear how the oil is to be heated, nor the energy source for generating hydraulic pressure.

Figure 4-3 (AQIA) provides a schematic of the proposed PB facility but with insufficient resolution to allow clear identification of the elements in the proposal.

Further detail is required to demonstrate that all potential emissions to air have been listed and characterised in order to define regulatory requirements, evaluate emissions, interpret assessment results, and evaluate whether proposed controls are appropriate.

The following further information and supporting data is required:

- Detailed process flow including any flow between the MDF plant and the PB plant.
- Flow balance for both plants.
- Mass balance calculation for both plants to support emissions estimates.
- Emission data for the current operations related to emission estimates for the modified plant.
- Evidence of the efficiency of thermal destruction of formaldehyde.
- The source of the energy for heat and pressure to the PB ContiRoll.
- Test reports and manufacturers performance guarantees.

2. Regulatory requirements

The AQIA does not provide a detailed discussion or assurance of compliance with regulatory obligations. The EPA advises that current regulation requires meeting limits set out in:

- the *Protection of the Environment (Clean Air) Regulation* 2010;
- all environment protection licences; and
- the associated *'Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales'* (Approved Methods) [1].

The POEO (Clean Air) Regulation requires that new and modified plant meets Group 6 limits. The current (unmodified) MDF plant is in Group 4. Further, emissions need to be sufficiently low in order to meet impact assessment criteria outside the plant boundary, and, as set out in the Approved Methods, principal air toxic pollutants must be reduced to the maximum extent practicable.

While emission test results were not provided in the EIS or AQIA, previous correspondence from Borg panels to the EPA shows that emissions from the Conti-1 heat plant exceeded licence limits for particulate matter in 2015 and on average for the previous four years.

The AQIA requires:

- a comparison of existing plant performance with existing licence limits (at standard conditions); and
- a demonstration that principal toxic air pollutants are controlled to the maximum extent achievable.

3. Air Quality Assessment Methods

Meteorology

The AQIA states that meteorology used in dispersion modelling was generated from running the MM5 model for the year 2014 and then processing the output using AERMET to generate appropriate data for AERMOD.

MM5 is a prognostic mesoscale model run from standard meteorology data. The AQIA does not set out its configuration. Neither domain size or grid resolution is stated. No justification is given for modelling 2014, and no comparison is made with observations to demonstrate its suitability.

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[1] *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* is available at http://www.epa.nsw.gov.au/resources/air/ammodelling05361.pdf

No information is provided regarding the processing undertaken in AERMET. Further, there is no demonstration that the meteorological modelling provides representative meteorology. This can be established by comparing model output to observations not used in the modelling.

Further information is required setting out:-

- the configuration for MM5 – type of run, domain size and grid interval, time-step;
- the accuracy of MM5 for this domain;
- AERMET configuration – what method was used to process MM5 data and whether observations were included;
- justification for the choice of 2014 as a representative year – usually by considering at least five years of observed data, preferably contiguous and recent;
- demonstration that the modelled meteorology is representative by comparing it to observed meteorology; and
- an explanation of how the unexpectedly very low frequency of calm winds is representative of the meteorology controlling dispersion of plant emissions.

Emissions

The AQIA states that the pollutants of most potential concern from the proposal are particulate matter, nitrogen dioxide, and formaldehyde. Emission rates for these pollutants used in the dispersion modelling are set out tables 5-1 and 5-2 (modified MDF plant) and tables 7-1 and 7-2 (proposed particle board plant) in the AQIA.

Additional information is needed to support the emissions estimates:-

- a clear description of plant processes to ensure all potentially significant emissions have been captured;
- stack test reports showing current emissions and how modified emissions relate to them;
- demonstration that estimates are conservative, noting previous sampling results and explaining any improvements;
- emission points related to process description to demonstrate that all sources have been included and properly characterised;
- a clear documentation of all assumptions used to calculate emission rates; and
- manufacturer's performance specifications and guarantees.

NO_2 conversion

Conversion of NO to NO_2 has been done assuming a 40% conversion. This is not a method described in the Approved Methods. Alternative methods are permitted, but require robust justification. No such justification is provided.

Assessment requires either use of a listed method for estimating NO_2, or robust justification for the alternative method used.

Cumulative assessment (increment plus background)

The AQIA fails to present ambient data from which to establish baseline air quality and enable cumulative prediction of impacts. It also fails to consider other emissions sources in the region such as proximate premises emitting similar substances, and power stations.

Additional information is needed to provide a comprehensive estimate of impacts to the air environment as set out in section 5 of the Approved Methods. The impacts labelled "cumulative" in section 9 are the

assessed impacts for the full proposal – modified MDF plant and new PB plant. They do not estimate the cumulative impact to the airshed.

4. Predicted Impacts

The pollutants assessed in the AQIA are nitrogen dioxide (NO_2), particles, and formaldehyde (HCHO). Assessment of impacts are provided for the modified MDF plant alone, and for both the modified MDF plant and the proposed PB plant. Impacts from the full proposal are labelled "cumulative". Ambient data have not been provided and there is no assessment of the total impact of the proposal.

Nitrogen dioxide

Maximum impact from the proposal within the model domain is a one-hour concentration of 225 $\mu g/m^3$ and annual increment of 4 $\mu g/m^3$. These are less than the project criteria of 246 $\mu g/m^3$ and 62 $\mu g/m^3$ respectively.

There are other sources of nitrogen dioxide in this locality, and the potential for emissions from this facility to combine with emissions from other industry near Oberon and the coal-fired power station to the north. There is potential for exceedence of the one-hour nitrogen dioxide criterion.

Assessment of the total impact of the proposal consistent with guidance in section 5 of the Approved Methods is needed to determine whether the existing and proposed plant may exceed the one-hour nitrogen dioxide criterion.

Particles

Maximum impact from the proposal within the model domain is set out in the table below.

	TSP (annual) ($\mu g/m^3$)	**PM_{10} (annual)** ($\mu g/m^3$)	**PM_{10} (24-hour)** ($\mu g/m^3$)
Impact assessment criterion	90	30	50
Maximum impact (proposal)	8	4	25

The maximum impacts are well below the impact assessment criteria, but there is no assessment of the total impact of the proposal and the predicted 24-hour increment is significant. Cumulative assessment is needed to assess whether emissions from the plant could exceed the PM_{10} criteria.

Formaldehyde

Maximum impact from the proposal within the model domain is a one-hour concentration of 0.03mg/m^3. This exceeds the impact assessment criterion of 0.02 mg/m^3.

As set out in sections 2.4.4 and 7.7 of the Approved Methods, maximum impact greater than an impact assessment criterion requires further control or mitigation sufficient to meet the impact assessment criteria.

Formaldehyde is a principal air toxic pollutant and, as set out in the Approved Methods, requires control to the maximum extent achievable through the application of best practice process design and emission control.