PCU54007

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Dear Mr VanDeWalle

RE: s75W Modification (MOD 2) of PA 07_0066 - Park Pty Ltd (formerly Manildra Park)

I refer to your electronic mail message to the Environment Protection Authority (EPA) on 6 June 2014 seeking a submission from the EPA regarding the proposed modification to consent for s75W Modification (MOD 2) of PA 07_0066 - Park Pty Ltd (formerly Manildra Park).

Requirements of Protection of the Environment (Clean Air) Regulation 2010.

The EPA recommends Department of Planning and Environment (DPE) consider if the requirements of the Protection of The Environment (Clean Air) Regulation 2010 would apply to the development in determining this application.

Submission

Proposed modification of the roof design of storage tanks for marine fuel oil, diesel and biodiesel

Park Fuels have a 2007 planning approval for a marine fuel storage/distribution and biodiesel production facility that includes requirements for internal floating roofs (IFR) on storage tanks. The original approval included the storage of methanol. The company now intends to store biodiesel instead of methanol at the site. The company is seeking approval to remove requirements for IFRs on Tanks T-1, T-2 (combined storage capacity of 51 ML) and T-7 (0.5 ML) and instead use a fixed roof tank construction.

Information provided

A letter is provided from Pacific Environment Limited who conducted the Air Quality Impact Assessment (AQIA) for the original approved plant layout. This letter indicates that results of the original AQIA were an order of magnitude below the relevant EPA assessment criteria, and that due to the very low vapour pressures of the fuels to be stored emissions are likely to be minimal. No additional assessment has been conducted.

Park Fuels have also included MSDS for the three fuels to be stored: marine fuel oil, diesel and biodiesel (soy methyl ester and fatty acid methyl ester).

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EPA Regulatory requirements for large storage tanks

The Protection of the Environment Operations (Clean Air) Regulation 2010 specifies the requirements for large storage tanks having a capacity of 150 kilolitres or more. In the regulation a volatile organic compound (VOC) is defined having *a vapour pressure greater than 2mm of mercury (0.27 kPa) at 25°C and 101.3 kPa.*

Clause 63 of the regulation sets out the requirements for large storage tanks as follows:

63 Control equipment for large storage tanks

(1) This clause applies to any large storage tank situated anywhere within the Sydney, Newcastle or Wollongong Metropolitan Area.
(2) The following control equipment is required to be fitted to any large storage tank to which this clause applies:
(a) a drainage system comprising a small sump or tundish fitted under each water draw-off valve and connected to a totally enclosed drain,
(b) if the volatile organic liquid stored in the tank has a vapour pressure of or below 75 kilopascals:
(i) a floating metal roof that, under normal operating conditions, floats on the surface of the liquid, or
(ii) a floating cover constructed of material impervious to vapour that, under normal operating conditions, floats on the surface of the liquid inside a fixed roof, or
(iii) a vapour disposal or recovery system of the kind referred to in subclause (6),

(8) Subclauses (6) and (7) do not apply to large storage tanks on scheduled premises (within the meaning of Part 5) that belong to Group 6 (within the meaning of that Part).

Are IFR/IFC required?

The following is a summary of the information provided in the MSDS:

Fuel	Vapour pressure (Hg at 25°C and 101.3 kPa)	Requires IFR/IFC under clause 63 of the Clean Air Reg
Marine Oil	<2	No
Biodiesel	<5	Yes
Residual fuel oil	<2	No

From the information provided it can be seen that there is a regulatory requirement for an internal floating roof tank or cover for the proposed biodiesel storage tank if the vapour pressure is as stated in the MSDS. However the letter from PEL indicates that the National Toxicology Program for the US Department of Health and Human Services specifies fatty acid methyl ester (biodiesel) as having a vapour pressure of <2mm Hg, which is consistent with EPA's brief review of soy methyl ester and fatty acid methyl ester MSDS available online.

Recommended condition

1. All fuels stored or mixed in the tanks identified as T-1, T-2 and T-7 must have a vapour pressure of less than 2mm of mercury (0.27 kPa) at 25°C and 101.3 kPa at all times.
2. Prior to loading the tanks identified as T-1, T-2 and T-7 the licensee must have conducted a vapour pressure test on the fuel to be loading into the tanks to confirm it complies with the condition.

If you require any further information regarding this matter please contact me on (02) 4908 6816.

Yours sincerely

20 JUN 2014

MARK HARTWELL
Head Regional Operations Unit - Hunter
Environment Protection Authority