



Northern Territory Government

Department of Infrastructure, Planning and Environment

PART A - INFORMATION FOR THE PUBLIC

Draft PER Guidelines

Natural Fuel (Darwin)

Biodiesel Plant – East Arm

May 2004

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Purpose

This section of the guidelines has been developed to assist members of the public and other interested parties in preparing comments on the Draft Guidelines for the preparation of a PER for the Proposed Biodiesel Plant at East Arm Port.

The object of these Guidelines is to identify those matters that should be addressed in the PER. The Guidelines are based on the initial outline of the proposal in the NOI. The Guidelines, however, are not necessarily exhaustive. They should not be interpreted as excluding from consideration any matters which are currently unforeseen that emerge as important or significant from scientific studies or otherwise during the preparation of the PER and the public consultation process.

1. Exhibition Time

The Draft Guidelines will be on exhibition until 18th of June, which is 14 days from the date advertised.

Once the PER has been submitted (based on the Final Guidelines) an opportunity for the public to comment on the PER will be available for a maximum period of 28 days.

2. Description of Proponent

The proponent is Natural Fuel (Darwin) Pty Ltd.

3. Description of Proposal

What

Natural Fuel (Darwin) Pty Ltd propose to build a processing plant to manufacture biodiesel, a fuel derived from natural vegetable oil (palm/coconut oil) that can be used to replace mineral diesel fuel. Approximately 105 000 tonnes of biodiesel will be produced per year.

Where

The proposed location of the biodiesel plant is within the East Arm Port Development located 4km SSE of Darwin. The site is currently slated for reclamation. It is a bunded area within the port development currently filled with water. The proposal will take up an area of 45m x 80m within the proposed 5ha lease area.

The reclamation of this area is the subject of separate environmental assessment.

When

Development of this project will occur on completion of the approval process. Completion of the first stage of the development is planned prior to June 2005. The

development of additional plants will be considered depending on market factors. A lease of 30 years has been requested from the Darwin Port Authority (DPA), however, the proponent expects that the project will operate well beyond this timeframe.

Project Details

The Process

Vegetable oil is reacted with alcohol (methanol) in the presence of an alkaline catalyst resulting in the production of methyl esters (biodiesel) and glycerin. The conversion is achieved in mixer-settler units which provide sufficient time for the two immiscible reaction product phases to separate. The ester-rich phase is upgraded to the final Biodiesel product by washing with water and is then vacuum-dried. The heavier glycerin-rich phase is distilled and refined to Pharmaceutical grade glycerin. The majority of methanol is recovered for reuse during purification of the biodiesel and distillation of the glycerin.

The following waste products will be produced by the proposal:

Air

- Nitrogen
- Boiler Stack Gas
- Cooling Tower vapour
- Fugitive Emissions – eg methanol.

Solid By-Products

- Fatty Matter – 58kg/hr
- Distillation residue – 176 kg/hr
- Used activated Carbon – 2kg/hr

Water

- Waste water

Noise

- Noise generated by electric drives - <85 dBA at 1 meter
- Noise generated by traffic – road deliveries limited to business hours.

Infrastructure/Transportation/Storage

The development consists of a processing plant and associated infrastructure including storage tanks, pipelines and control and administration buildings. Transportation of vegetable oil the short distance from the docking area at East Arm Port to the processing plant will occur via a pipeline. Product will be also transported via the same pipeline to ships for international customers. Transport to domestic customers is likely to occur via rail. A truck service bay will be available for local customers.

Glycerin by-products will be sold to existing markets in Australia and overseas.

Approximately three 5 million litre tanks will be used to store vegetable oil, 2 biodiesel tanks totalling 15 million litres and several smaller chemical tanks will be utilised.

The following products will be stored on site:

- Up to 15 million litres of vegetable oil.
- Up to 15 million litres of Biodiesel product.
- Approximately 15 tonnes caustic soda.
- Approximately 90 tonnes hydrochloric Acid.
- Methanol.

4. Administration Details

The Project Officer is Ms Cymbaline from the Office of Environment and Heritage, Department of Infrastructure, Planning and Environment (DIPE). The contact telephone number is (08) 8924 4216 and facsimile number (08) 89244 4053, e-mail: cymbaline@nt.gov.au.

Copies of the Final Guidelines will be posted on the DIPE website www.ipe.nt.gov.au/enviro.

Copies of the PER will be available to the public for purchase from the proponent.
Comments on the PER should be forwarded to the nominated Project Officer.