

ACTPLA (via epdcustomerservices@act.gov.au)
PO BOX 365 MITCHELL ACT 2911

Dear Sir / Madam,

**PROPOSAL APPLICATION NUMBER 201600038; BLOCK 11, SECTION 21, 36
COURANGA CRESCENT, HUME - FOY GROUP PLASTIC TO LIQUID FUEL
FACILITY**

The enclosed document addresses a number of concerns I have concerning the draft EIS prepared by FOY Group (FOY) in support of their proposal to build a "Landfill Diversion Facility" at 36 Couranga Street, Hume in the ACT.

Everything in this submission is intended to apply to this proposed facility from design to decommissioning and remediation of the site (i.e. apply equally to FOY and whatever companies, agencies or individuals subsequently own or operate the facility).

At the beginning, I should point out the document provided by FOY cannot be considered independent. It does not comply with the intent for environmental impact statements articulated in the Environmental Protection and Biodiversity Act (EPBC Act) 1999. Under the legislation, the intent of an EIS is a protection for the environment and the community and it is intended to provide the minister or planning authorities with the correct level of information and survey on which to make sound and credible planning decisions. Under the EPBC Act the precautionary principle applies and an independent EIS should form part of the basis to that decision.

Furthermore, I consider this proposal to have serious fundamental flaws. In particular, at what point did the ACT Government create, by its actions, public policy that it was in the best interests of its environmental targets, the environment itself, or the people living and working near this site, that waste should be imported into the ACT from Queensland, New South Wales and Victoria? It would appear the ACT produces insufficient of this type of waste to make the process commercially viable without doing so. The EIS does not attempt to address the holistic environmental impact from this proposal except in the most simplistic terms.

Please acknowledge receipt of this submission to the address above.

FOY GROUP LTD'S "LANDFILL DIVERSION FACILITY" IN HUME, ACT ISSUES WITH THE EIS

1. Let's be honest about this proposal

The proponents call this a "Landfill Diversion Facility" which sounds good on first blush.

In practice it is a fuel refinery. It breaks down plastic into "gas and liquids resembling crude oil".¹ When operating it will produce more than 205,000 litres of fuel per day (the equivalent of processing, conservatively, some 2,000 'barrels' of oil) and hold 1,890,000 litres of fuel above ground on site.

2. Inadequate Community Consultation

The community consultation for this proposal has been ad-hoc and inadequate. One community consultation meeting was held at Rose Cottage on 30 August 2016. The meeting was poorly attended because there was insufficient advertising. The planned letter-box drop was wholly ineffective.

Despite the relatively small numbers at the single community consultation session, the FOY representatives obviously got the message the community is genuinely concerned about this proposal. It is my understanding FOY subsequently offered to meet with individuals (with and without their consultants, Purdons, present) but this is not community consultation it is attempting to persuade one individual at a time.

The 974-page EIS had been in production for months, and the company indicated they have been discussing this with the ACT government for a similar period, but I was only able to get a copy the day prior to the meeting. I then had to lodge this response to ACTPLA by 23 September 2016. This seems unfair on individuals like me who live in the area and will be directly affected by the proposed facility but get three weeks to assimilate the often contradictory information provided and then address such a complex topic.

It is my understanding that FOY is required to finalise their EIS after comments are received on the draft. How does FOY intend to socialise the finalised document? How much notice will the residents of Theodore, Calwell, Gilmore, Chisholm, Gowrie, Macarthur, Fadden, the AMC and the owners of premises in Hume be given to consider the final EIS? Will Queanbeyan Council, the residents of Jerrabomberra and the developers of Tralee and residents of Googong (all of whom will be affected by this proposal regardless of the fact they happen to reside a few kilometres across the border) be given the opportunity to participate and comment?

¹ <http://igenenergy.com.au> (IGE website)

3. Site Selection

The site selection appreciation was flawed.

There was no careful appreciation or justification for the selection of this site – it was simply an available block of land.

FOY representatives volunteered at the community consultation meeting that the “ACT Planning was easier to deal with...” [presumably than those of larger State governments] (or words to that effect). This does not excuse the ACT government, the LDA and ACTPLA from applying due diligence to the proposed use of the land. As will be seen below, whilst the zoning may technically allow this facility, it is completely inappropriate on this site.

Logically, if waste has to be trucked in from Queensland, New South Wales and Victoria to make this facility viable, it would make more sense to build smaller, decentralised facilities closer to the sources of the waste and closer to the purchasers of the fuel. FOY representatives suggested their Berkeley Vale facility was very successful – why not replicate that model in Brisbane, Sydney and Melbourne? If Berkeley Vale is as successful as FOY intimated, why has the company not expanded there and concentrated its operations on an existing site?

4. Fuel Farm

FOY propose to store 1,890,000 litres of fuels (diesel, petrol and natural gases) above ground on site. FOY has not demonstrated in their EIS the consequences of catastrophic fire or explosion at the facility. It is insufficient for the proponents of the EIS to dismiss these issues with a desk-top assessment. The all-too-real consequences of human error, act of sabotage or terror, can be seen in the Mitchell fire in 2011.

In Victoria, the recommended separation distances from any petroleum refinery i.e. a facility ‘refining oil or gas, producing hydrocarbon fractions or liquefying gas’ is 2,000m. This site is 1,300 metres from existing residences in Gilmore, 1,900 metres from Macarthur Pre-School, 2,000 metres from Chisholm shops and immediately adjacent to an important regional distribution freight hub and other businesses in Hume.

Furthermore, 540 metres away from the proposed refinery, across the border in Tralee, Queanbeyan planning regulations would classify this facility as a **'liquid fuel depot'** which is a sub-class of a **'heavy industrial storage establishment'** which requires case-by-case consideration – especially when the facility is close to sensitive watercourses such as the creeks running into Jerrabomberra Creek. The fact that the ACT’s planning legislation is less well-formed than the States does not excuse the ACT Government, ACTPLA or the LDA from exercising due diligence in considering this proposal for what it really is – a heavy industrial fuel refinery and large-scale commercial fuel storage facility. How has FOY been able to justify the proximity to existing and planned residences and businesses in the face of this clearly well-thought out guidance to the contrary from other planning agencies? Just because the ACT planning regulations are mute on the subject does not excuse due diligence on the part of the directors in assessing the suitability of the site.

What precautions has FOY developed to put in place and practice 'shelter-in-place' and evacuation drills for the suburbs most likely to be effected by a catastrophic fire or explosion on the site? Depending on which way the wind is blowing, this could encompass the ACT suburbs of Theodore, Calwell, Gilmore, Chisholm, Gowrie, Fadden and Macarthur; the incarcerated inhabitants of the Alexander Maconochie Centre; and the NSW suburbs of Jerrabomberra and Tralee. Of particular concern, what provisions has FOY made with the ACT government to evacuate the AMC should a fire in the fuel farm result in toxic smoke blowing North along the Monaro Highway? Who will bear the cost of such an evacuation? How frequently will the evacuation be rehearsed? Who will bear the cost of rehearsing such an evacuation? The same questions apply to the South Care Helicopter Flight. Given the recent fire in Hume, the same questions need to be asked about the company's thoughtful preparation for evacuating the business precinct in the event of fire or explosion. Has FOY discussed this proposal with the Hume Traders Association? How does FOY plan to promulgate and practice evacuations from Hume?

Finally in the event of a catastrophic fire or explosion, what does FOY intend to do to test for toxic substances in the air shed and surrounding suburbs and paddocks immediately after the incident? How long after such an incident will FOY continue to test individuals exposed to toxic smoke?

5. Site security

The EIS omits any mention of security. It would appear the directors of FOY have not consulted any specialist agencies with expertise in this area, which seems negligent given the increase, world-wide, in the use of terror by politically or ideologically motivated groups – and they are proposing to construct probably the largest target in the ACT.

Let us be clear. Given the current world security climate, asymmetric warfare by those who seek to express their views through violence is a fact of life that is unlikely to change in the foreseeable future. Face these facts: this facility is a target. In this day and age, burying one's head in the sand and asserting that "maintaining a low public profile" is a mitigation measure² is criminally negligent.

This fuel refinery is an attractive target on several levels: it is a "soft" target with minimal security; operating 24/7 and sited well away from first responders. It is also in the nation's capital: a small city with easy access; a large community of itinerant foreign nationals from which to seek shelter or aid; host to the representatives of dozens of foreign governments (themselves targets or sympathisers or simply a critical audience). Hoping a large above ground fuel farm and novel plastics-to-fuel conversion facility will escape unwanted attention in the age of the internet is naïve and negligent.

One lorry-sized truck bomb would destroy the above ground fuel tanks and refinery. Equally, the facility is only 350 metres from the Monaro Highway, well within range of the simplest rocket propelled grenades fired from the back of flatbed truck or ute. In either case, the ensuing fire would release toxic fumes from fuel and plastic waste (itself containing up to 6% tainted waste by volume) stored on the premises. The danger of

² FOY Group Limited, Environmental Impact Statement dated 27 July 2016, p90

secondary explosion and toxic smoke billowing over adjacent suburbs and industrial precinct would hamper efforts to rescue any workers and put out the fire. In the right conditions, especially in a Canberra summer, the fire would readily spread through Hume and surrounding suburbs. In sum: a world-class disaster in the making.

The EIS makes no assessment of the potential loss of life, harm to the environment or damage to property in surrounding suburbs should this facility be destroyed by deliberate action (or for that matter, industrial accident).

From a security perspective, this site is simply not suitable for a facility of this type and size; there are too many innocent collateral targets nearby. This facility needs to be in a country area, remote from nearby potential collateral damage. It needs to be at the end of a single long road with positive control of vehicles approaching the site (i.e. vehicle identification and searching occurs outside the facility with human authority required to move into the facility).

What will FOY do to ensure the safety and security of the site? Will there be a 24/7 security team on-site in Hume? How large will that team be? Will the security team be armed? Will berms be constructed around all fuel tanks to try to minimise the risk of one bomb destroying the entire facility? Will trucks be stopped and searched on the road outside the premises, or will they be allowed inside before being searched? Will FOY hire a specialist security consultancy to advise them on their final EIS? Will FOY openly discuss these risks with the residents of Theodore, Gilmore, Chisholm, Macarthur, Gowrie, Fadden, Tralee and Jerrabomberra and the business owners in Hume?

6. Treatment of contaminated feedstock

The EIS is vague on this subject and representatives of FOY failed to give an adequate explanation at the single community consultation presentation on 30 August 2016.

The EIS indicates in para 5.1.4.2 that contracts for feedstock (ie. plastic waste to be processed) have been let. The contract allows contaminants of up to:

- 5% (ie. 10 tonnes per 200 tonnes) of polyethylene terephthalate (PET)
- 1% (ie. 2 tonnes per 200 tonnes) of polyvinyl chloride (PVC)
- 5% (ie. 10 tonnes per 200 tonnes) of organic and dust content
- 15% (ie. 30 tonnes per 200 tonnes) of "moisture content"

As up to 52 tonnes of any 200 tonnes can be contaminated, how does FOY propose to deal with more than one quarter of each days feed load being unsuitable? Will contaminated waste be shipped back to the point of origin? (FOY representatives indicated at the community consultation meeting this would be the case.) If this is indeed the case, how long will it be kept on site until consigned back to the supplier? Will the contaminated waste be left out in the elements? If so, what is the maximum time it will be allowed to accumulate? Has an estimate been made of the additional cost in fuel and greenhouse gases to ship 'moisture content' back to its point of origin? What is this cost? What action will FOY undertake to ensure there is no odour from the waste lying around in their facility? How much will it cost (in additional greenhouse gases and diesel

fuel) to send the contaminated waste back to the suppliers in Queensland, NSW and Victoria? Does FOY intend to dump contaminated waste in ACT landfill? If so, has the ACT Government agreed to this? Does FOY intend to dump solid waste from the pyrolysis in ACT landfill? If so, has the ACT government agreed to this? How does FOY intend to ensure only contaminated waste from the ACT is returned to the ACT? (i.e. no contaminated waste from interstate inadvertently gets sent to an ACT waste supplier for dumping in ACT landfill.) What is the actual mechanism by which contaminated waste is found on the conveyor belt and then removed? Is a human operator involved in the process? If so, how much room is there for human error? How will any one 200 tonne daily 'load' (presumably from various sources) be tested to determine if it has 1.9 tonnes of PVC or 2.1 tonnes of PVC? (the former being permissible to process, the latter not.) Will FOY report to the public how much waste material has been returned to their suppliers? When there is a commercial imperative to keep the burners going (as explained at the community consultation presentation) the likelihood of processing contaminated waste seems high. Will FOY report to the public and the EPA on the amount of contaminated waste that actually gets processed? Who will independently validate this data and by what means? Will the independent validation be made publicly available?

7. Environmental concerns

FOY claim the emissions will be minimal as it is a "closed system". The EIS discusses the use of flares to burn off fugitive emissions at the stack so one must ask the definition of a 'closed system' when clearly something is venting into the atmosphere.

How will FOY assure the community that the emissions from the facility are actually held below the promised level?

Where will emission monitoring occur? (On the stack, or in the suburbs around the facility in south-eastern Tuggeranong, southern Woden, Jerrabomberra, Hume, Tralee and up the Monaro corridor towards the AMC?) I would like to know what independent agency will monitor the emissions in real-time? Will the real-time emissions data be made available to the public? What penalty regime will be in place if the emissions exceed those stated in the EIS? After how many instances of exceeding the stated emissions will the site be shut down permanently? What penalty regime will be in place for a failure of the real-time monitoring system to record or report data? After how many instances of recording data failure will the site be shut down? (The reason for this caution is not whimsy. There has been a chronic failure of ACT government air-samplers in Monash and Civic for many years to the point where they have produced no reliable data. If FOY propose a system of real-time monitoring it needs to be addressed as an integral part of system safety, not as an after-thought that never works.)

Furthermore, what conditions is the ACT Government imposing on the proponent to progressively reduce the level of emissions from the site? (eg. as a condition of the sale of the land, the company should be required to reduce fugitive emissions by 10% every year in the first five years of operation; this research to be conducted in the ACT.)

Feeding up to 30 tonnes of "moisture content" into the reactors each day would presumably release oxygen which would contribute to oxidation and burning rather than

pyrolysis. This will no doubt contribute to unwanted hydrocarbons which will need to be removed from the fuel. Where will these hydrocarbons go? FOY suggests they will be destroyed, however, what steps are FOY taking to assure the public this is the case? Has an impartial agency such as the CSIRO been invited to test FOY's Berkeley Vale facility and have they certified the process does not release harmful hydrocarbons? If not, it seems premature to look to expand to a much larger facility before the technology is proven harmless to the environment.

Finally, in the interests of openness and transparency, will FOY invite an authoritative, independent agency such as the CSIRO to critically review the final EIS and attest to its accuracy? Will FOY make that finding public?

8. Public Health Issues – Air Emissions

Australia's population is aging and the effects of reduced air quality and incidence of increasing asthmatic and bronchial conditions on older people is probably not well understood.

There are a number of schools in the immediate area (Macarthur Pre-School, Fadden Primary, Holy Family, Chisholm High and several more within 10 km). The effects of reduced air quality and incidence of increasing asthmatic and bronchial conditions on young children, particularly the very young, is also not particularly well understood.

Will FOY model the cumulative impact of increased greenhouse gases in higher concentrations at the surrounding suburbs and business precinct and at those schools? If not, ACT Health and ACTPLA should insist on doing so.

ACT EPA Draft Separation Distance Guidelines for Air Emissions (November 2014) recommends at least a 1,500 m separation from 'Petroleum Storage Facilities' where 'petroleum products are stored in tanks with a total storage capacity exceeding 2,000 cubic metres'. Can FOY articulate on what grounds they decided to ignore this requirement given:

- firstly, the planned separation distance is one-quarter of the established Victorian planning figures on safety grounds;
- the total storage capacity at the proposed facility barely misses the ACT threshold but would probably exceed it with one fuel tanker on site;
- the site is very close to existing businesses at Hume, Rose Cottage and the solar farm; and
- the proposed site is well within 1,500 m of suburbs.

In particular, the EIS makes no mention of PM₁₀ and PM_{2.5} the existence of which is now well known and also widely recognised as not receiving sufficient treatment in planning standards. Can FOY explain why they have chosen to ignore consideration of PM₁₀ and PM_{2.5}? Did FOY consult with ACT Health on the subject of modeling PM₁₀ and PM_{2.5} emissions? What assurances does FOY offer the community that the subject of PM₁₀ and PM_{2.5} emissions will be adequately assessed in the final EIS? What independent authoritative agency will review their findings? Has FOY had an independent test

conducted for the emission of PM₁₀ and PM_{2.5} at their Berkeley Vale plant? On what basis is FOY offering an assurance that processing waste plastic (as opposed to blended fuels) will not result in the emission of PM₁₀ and PM_{2.5}? What is the impact on the output of PM₁₀ and PM_{2.5} from ingesting contaminated waste? In particular, what common items found in plastic recycling bins are likely to result in the emission of PM₁₀ and PM_{2.5}?

9. Hours of Operation

The processing plant will operate 24/7. What assurances does the community have that vehicular movement in and out of the site will be restricted to the hours set out in the EIS, ie. 0600 – 1000 Mon-Fri and 0800 – 1630 Sat-Sun? What penalties will be in place for truck movements outside these hours? Who will monitor truck movements and enforce penalties?

10. Future Operation

What assurances does the public have that FOY will not immediately or over time increase the amount of waste imported and processed each day?

The EIS states at para 2.2, “At the time of writing, FOY does not intend to expand outside of the four modules processing approximately 200 ton/day of waste plastic into liquid fuels”. This is insufficient.

What is “approximately 200 tons/day”?³ Is 300 tonnes / day “approximately” 200 tonnes? Is 400 tonnes per day? FOY need to express this critical dimension unambiguously as:

“Not more than 200 tonnes per day at Hume”.

This change needs to be made globally throughout the EIS and subsequent Development Application.

Once FOY has done so, the ACT Government needs to declare this an upper limit that cannot be exceeded. What penalties will be in place for processing more than 200 tonnes in any 24 hour period? Who will independently monitor and report on the ingress of waste matter to the refinery? As it will quickly become impossible to account for how much waste has come in and is mixed with waste held on the premises (the result of removal from contaminated loads if nothing else) how will FOY account to an external agency that it is not consuming more than 200 tonnes of waste per 24 hour period? What independent agency will be charged with monitoring this key performance indicator?

Once the site is built, what assurances does the public have that FOY will not simply add additional reactors at the site? Will the ACT Government give an undertaking up-front that any such application to do so will be denied? Certainly it would be a cost-effective approach by the company to scale up the operation on site. The extra reactors would

³ Presumably the authors intended ‘200 tonnes/day’.

consume additional waste to produce additional fuel – along with all of the associated vehicular movements and emissions that go with it.

What assurances does the community have that FOY will not decide to process different material at some future date? In particular, according to information on the internet, it is possible to ingest tyres in these reactors. FOY representatives said at the community consultation meeting that they did not intend to do so. Will FOY state this in their final EIS and will this undertaking be binding on all future operators of the plant?

11. Electricity Generation on Site

IGE (a company associated with FOY) has Indirectly Fired Gas Turbines (IFGT) as one of its core technologies. What assurances does FOY offer that it will not install IFGTs on site thus becoming a *de facto* power station? What assurances does FOY offer the public they will not begin generating additional revenue by selling power to the national grid (using either gases produced in the reactors and/or additional biomass)? The proximity of a sub-station near Rose Cottage seems fortuitous if this was indeed the company's intention. FOY needs to declare in its final EIS and Development Application that it will not now, or at any time in the future, commence power-generating on site.