16 September 2016

The Secretary
Department of Planning and Environment
NSW Government

Reference: Ingleburn Battery Recycling Facility Proposal
10 Lancaster Street, Ingleburn NSW 2565
Applicant: Ledox Australia

Submission in Response to proposed Battery Recycling Facility, Ingleburn NSW

The following response to the proposed Battery Recycling Facility at Ingleburn NSW and it's supporting Environmental Impact Statement as exhibited for public comment is presented in objection to the project.

We understand that the Development Application seeks consent for a lead acid battery recycling facility at the site. The proposed battery recycling facility will receive car batteries, and the like, from distribution agents. The batteries will be broken down and recoverable hazardous lead plates and lead sludge exported overseas for re-processing.

We have a number of objections to the proposal which are outlined in this letter. We would be happy to clarify or elaborate any issue contained in this letter as we operate world's best practice used lead acid battery recycling facilities in Australia and understand the environmental and operational aspects of the proposed battery breaking facility.

There are a number of statements in the Application which are in accurate and should either be clarified or not relied on when considering the Application.

The following comments are presented in response to the Environmental Impact Statement.

EIS Section 1.3

The objective of the project is stated as "Address the ongoing problems of used automobile batteries polluting our environment".

> We submit that current used lead acid battery recycling facility capacity within Australia exceeds the annual supply of waste batteries and that no automobile batteries are lost to landfill. Australia has a mature lead acid battery recycling network established across the waste industry sectors resulting in a recycle rate at 98+% in recent years. Indeed, there is no evidence that used lead acid batteries are polluting the environment. This is an unsupported statement.

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An objective of the project is stated as “Deliver a facility to meet a recognised need in a location in close proximity to transport networks and away from residential areas”

> We submit that there is no need for the proposed lead recycling facility in Sydney, as all of Australia’s used lead acid batteries are sufficiently processed within our shores by current facilities.
>
> We submit that the proposed facility is not “away from residential areas” but rather in close proximity to residential homes.
>
> The EIS lists the nearest residential premises as close as 240m from the site. The proposed facility is also in close proximity to other sensitive receptors such as Ingleburn Public School, Macquarie Fields High School, James Meehan High School, Bardia Public School, Ingleburn Fair Shopping Centre and The Pines Academy Child Care Centre.

EIS Section 1.4.1

Option 2 – Do nothing

The reasons given for this option are;

“The diversion of waste from landfill, is recognised by Government as making an important contribution to the targets for dealing with waste.

It is therefore considered that the ‘Do Nothing’ scenario is not appropriate given the established need to reduce dependence on traditional landfill waste management operations which have been found to be inefficient as a long term sustainable solution to Sydney’s expanding population and waste generation.”

> There is no evidence to support the statement that used lead acid batteries are currently being dumped in waste management operations. We repeat that current processing capacity in Australia, particularly on the Eastern seaboard, is sufficient to process all of the available used lead acid batteries.
>
> The proposed facility in not ‘Best Available Technology’ in that the proposal states that waste water from the process, containing sodium sulphate [Na2SO4] will be sent off-site for disposal [section 3.1.3]. This will increase the amount of waste going to landfill, should batteries be recycled at this facility, compared to other existing facilities in Australia that do use ‘Best Available Technology’ and produce base material for laundry detergent from said waste liquor.
>
> The proponent claims a used battery contains 10% by weight lead sulphate [PbSO4]. In fact a used lead acid battery contains on average 40% lead sulphate. Thus for the proposed 18,000 tonne per year facility, the amount of contained sodium sulphate in the waste liquor would equate to 3,370 tonne of solid waste sent to landfill. Other facilities in Australia would recycle this material and save the 3,370 tonne from landfill disposal.
>
> Further, the sodium sulphate is a highly soluble salt, which if sent to a landfill would dissolve during the first rain shower. The proposed process generating the waste liquor does not state

any on-site treatment process to remove dissolved impurities that the liquor will contain, which include pollutants and toxins such as Arsenic, Cadmium, Antimony, Lead, Nickel and Selenium used in battery manufacture.

The proponent states that the acid drained from the batteries will be collected by a suitably licenced disposal company (section 3.1.1). Hence this waste stream will not be recycled but disposed of. It is most likely this waste will be reacted with lime to produce gypsum, which will be sent to landfill, creating a further 1,000 tonne of landfill.

Thus overall, this proposal will actually increase waste to landfill by 4,370 tonne each year of operation in total compared to current recycling options available in Australia.

EIS Section 1.4.1

Option 3 – Alternative Designs

The proponent states that "Alternative technology for this type of operation was not considered as the proposed facility represents best practice for the recycling of lead acid automotive batteries."

We submit that the technology proposed is not Best Practice.

The proposed technology does not in fact undertake any form of recycling.

The proposed technology merely breaks apart the battery into its individual components. The material derived from this process is still classified Hazardous Waste. Furthermore, the proponent is stating that they are planning on exporting this hazardous waste which is in direct conflict to the Basel Convention, to which Australia is a signatory at the Federal level. In short, the Basel convention states that a country will not export Hazardous waste when in-country treatment options exist.

Best available technology would be that the proponent not export the Hazardous waste overseas but actually recycle the material within Australia.

EIS Section 3.1.3

The Proponent states that "The lead contained within the recycled batteries is sulphate based, primarily compromising lead sulphate (PbSO4), which is a toxic substance. This requires treatment via chemical reaction (see below) to convert the lead sulphate sludge into a carbonate-based material, primarily being lead carbonate (PbCO3), which is a more stable form of lead and more suitable for handling and shipment."

The Proponent does not specify what testing regime will be in established to ensure that there is no trace sulphur / sulphate left in the lead carbonate prior to shipment overseas. Presumably all product will be tested for environmental compliance by a NATA accredited laboratory prior to shipment. Non-compliant product should be recycled back to the desulphurisation process for reprocessing to meet product specification.

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EIS Section 3.4

The Proponent states a 30,000 L acid tank will be installed external to the building.

> Sydney is located in an area of high rainfall. We are concerned that any bunding installed around the tank will not remain free of rainwater and therefore ready to capture acid should the tank or associated equipment fail or rupture. The storage of external acid tanks pose potential contamination risks to stormwater and natural bodies of water, such as the nearby Bunbury Curan Creek. This risk of environmental harm requires the implementation of appropriate stormwater environmental controls and site capture / first flush systems.

EIS Section 3.4

The Proponent states "Air concentrations should be maintained so that the blood level is less than 0.06 mg per 100 g of blood".

> Converting 0.06mg of lead per 100g of blood to standard units used in Australia, results in 57 ug/dL. The regulated WorkCover NSW limit for workers undertaking lead risk work is currently 50 ug/dL.
>
> Hence the proponent is planning to operate above the regulated limit and at an extremely high level of lead blood poisoning for its workforce. The current regulated limit of 50 ug/dL is currently under review and is likely to drop to 40 or 30 ug/dL. Significant engineering and administrative controls must be implemented to ensure the ongoing health and wellbeing of the workforce.

EIS Section 6.5.2

In table 10, the Proponent lists the forecast weekly truck movements.

Table 10 – Forecast Weekly Truck Movements

Delivery Type		Typical Truck Type	Forecast Truck Numbers	Total Truck Movements (two way)
Inbound Goods	Old batteries	Up to 12.5m heavy rigid vehicle	Up to 3 movements per week	6 (3 in / 3 out)
Outbound Goods	Polyethylene Separators		Up to 1 movement per week	2 (1 in / 1 out)
	Lead and sludge Plates		Up to 3 movements per week	6 (3 in / 3 out)
	Acid		Up to 2 movements per week	4 (2 in / 2 out)
	Waste Water		Up to 1 movement per week	2 (1 in / 1 out)
Total	-	-	**4.5 movements per week**	**20 (10 in / 10 out)**

Source: GTA Consultants

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We submit that the listed truck movements are false and that the true truck movements will be considerably higher.

We note that the proponent will use only a 12.5m ridged heavy vehicle and not use single semi-trailers or B-doubles.

For example, the use of a 12.5m vehicles, limits the delivery to 14 tonne in total and 14 pallet spaces. A typical pallet weighs 40 kg, thus total tonnage of 'old batteries' will be limited to 13.44 tonne per truck movement.

Based on Table 10, the 3x movements in per week of 'old batteries' would limit input to 40.3 tonne per week. Based on these maximum deliveries per week, for a 50 week year the proponent would only receive 2,015 tonnes of 'old batteries'. This is only a fraction of the 18,000 tonne per year proposed. In fact, this equates to only 11 % of the capacity sought.

For the proponent to receive 18,000 tpy of 'old batteries' by 12.5m heavy ridged vehicle there would need to be a minimum of 2,678 total truck movements (1,339 in / 1,339 out) per year. For a 50 week year, the proponent would generate not a maximum of 3 movements per week, as listed in Table 10, but in fact 54 movements per week (26 in / 26 out). This is a 900% increase compared to data presented by proponent.

Similar errors are perpetuated with the other delivery types listed in Table 10.

Overall, we estimate the total traffic movements for material inputs and material outputs equates to more than 5,700 per year, or more than 114 movements per week. Significantly more than the 20 listed in Table 10 by the proponent.

These corrections to the amount of traffic will require a review of risk assessment in Table 35.

The volume of vehicles entering and exiting the site and associated forklift movements during unloading and loading operations contribute significantly to the safety and health risk of the workforce and community and environmental harm via generation of airborne lead and fugitives lead emissions from the premises and trackage of lead materials and paste to stormwater and natural waters. The impact of vehicle movement to and from the site is significantly understated requiring greater risk management.

EIS Section 6.6.3

The Proponent states "It is estimated the worst case $L_{Aeq, 15min}$ reverberant sound pressure level within the building would be approximately 85 dbA, assuming the main roller doors at the front of the building are open during operations".

We submit that operating a lead risk facility should be conducted in an enclosed and ventilated building. By stating that the building roller doors will be open during operation the proponent is allowing fugitive emissions to occur as part of normal operating practice. This is a sub-standard environmental practice, which poses an unacceptable lead risk to the community, particularly the children in residential homes in close proximity to the lead operation.

EIS Section 6.8.2

The Proponent states that the process will generate 300L per tonne of batteries recycled.

> We submit that this is a waste of a valuable resource (drinking water), which will go to waste and require treatment. Other battery recycle facilities in Australia consume less than half of this amount of water to recycle batteries and recycle the water rather than dispose of it. This operational approach is not consistent with Best practice and sustainably friendly operation.

Summary

When viewed in the context of existing used lead acid battery recycling operations in Australia, particularly those located on the Eastern seaboard:

(1) there is no evidence that the facility will reduce the level of used lead acid batteries finding their way into waste management (landfill) operations and therefore no evidence that the facility will protect the environment in any way. In fact, the operation will significantly increase the production of waste into the environment;
(2) the proposal is significantly inaccurate in terms of type and volume of annual waste production;
(3) the proposal is significantly deficient in terms of the handling and disposal of waste generated by the operation;
(4) the proposal is misleading and/or inaccurate in terms of effects the operation will have on the local community (eg understatement of truck movements, noise and proximity to residences and public sites);
(5) approval of the facility would be contrary to Australia's stated objectives for enacting the Basel Convention (pursuant to the Hazardous Waste (Regulation of Exports and Imports) Act 1989), as it implicitly promotes the export of hazardous waste which can otherwise be safely and economically recycled in Australia through existing recycling facilities;
(6) the proposed facility is not state of the art or best practice. It simply proposes to break batteries into various components and then forward those components on for disposal or overseas for recycling. Compared to existing state of the art recycling facilities particularly those operated by Enirgi, it is a low cost, high risk, high environmental impact project. To that end we would welcome a tour of our recycling facilities to show how a state of the art, low environmental impact, used lead acid battery full recycling facility operates (including on site water recycling, near zero emissions from smelting and low to non-existent lead in blood levels), and the benchmarks for operation of such a facility.

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