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Ms Libby Chaplin  
CEO  
Australian Battery Recycling Initiative

By email: [libby@batteryrecycling.org.au](mailto:libby@batteryrecycling.org.au)


### **Used Lead Acid Battery Collection & Recycling in Australia**

Dear Libby

As you are aware, it has been Dodd's position that it is more environmentally sound, more economically efficient and safer to export whole ULAB recovered in Western Australia for recycling than to transport them 4,000 km by road, rail, road across Australia. This is particularly pertinent when more than half of Australia's annual ULAB arisings are only "broken" in Australian facilities and the lead, including the hazardous lead waste (paste) extracted in that process, representing approximately 75% by weight of the ULAB, is exported to the same smelters overseas.

We acknowledge that when the Alexandria and Wagga Wagga processing facilities, which broke, smelted and refined ULAB were both operating with a combined processing capacity of 140,000 tonne p.a., there was sufficient technical capacity to process Australia's annual ULAB arisings and dispose of the hazardous waste in Australia.

We have, however, never seen any evidence to support the view that processing capacity has any influence on the rate of ULAB recovered for recycling. This position has been reinforced during the past eighteen months when the prices paid for ULAB by Australia's processors/breakers have declined so significantly to render the collection of ULAB in much of Western Australia economically unviable.



Following the closure of the Alexandria facility, (85,000 tonne p.a.) and the acquisition of the Wagga Wagga facility by the RAMCAR Group in 2018, the subsequent significant reduction in the price paid for ULAB by Enirgi Power Storage Recycling (Enirgi) and DGL Environmental, formerly Hydromet Corporation, (DGL) and concern about the economic viability of recovering ULAB from regional areas of Western Australia, we again applied for a permit to export ULAB to an appropriately licensed processing facility in Korea.

Our Application was subsequently refused earlier this year and in the Statement of Reasons dated 13 February 2020, the Delegate of the Minister stated in Para 1: -

*"I made this decision on the basis of regulation 16(4) of the OECD Regulations, because I determined that the 6,000 tonnes of ULABs that are the subject of the permit application could be disposed of safely and efficiently using **a facility** in Australia, that such disposal would be consistent with the environmentally sound management of the waste and, having regard to the desirability of using facilities in Australia for the disposal of hazardous waste, the waste should be disposed of using **that facility** rather than according to the export proposal."*

Although the Department of Environment's (the Department) decision acknowledged there is only one facility in Australia that could dispose of the ULAB it seems to reflect the most basic of mathematical calculations - as Enirgi was licensed to process 70,000 tonne p.a. but had only been able to attract around 60,000, it had the capacity to process Dodd's 6,000 tonne. It would also seem that the decision failed to address what happens to the remainder of Australia's annual ULAB arisings estimated at 150,000 tonne.

Following that decision, Dodd lodged an Application in the Administrative Appeals Tribunal (AAT) for a review of the Minister's decision. The Hearing took place on 9 – 10 November with the decision expected to be handed down by Christmas.

Although an arduous and expensive exercise, the process leading up to the formal Hearing and the Hearing itself has provided considerable insight into the ULAB collection and recycling industry in Australia.

#### **Annual ULAB Arisings**

There have been numerous reports, including the following, which have sought to quantify Australia's annual ULAB arisings.

2010	Warnken ISE	122,218
2013	GHD Report	143,000
2014	Institute for Sustainable Futures	137,000 (2012/13)
2015	Mark Frecheville Consulting	137,000
2020	Battery Stewardship Council	154,490 (2017-18)

We consider the foregoing reports compiled by credible independent parties, including the Battery Stewardship Council with whom ABRI is closely aligned, support the general view that Australia's current annual arisings approximate 150,000 tonne.

In Statements lodged in the AAT, tonnages processed in 2019 were as follows: -

Enirgi	57,676 tonne
DGL	44,025 tonne
V-Resource	12,000 tonne
Lex Enviro	6,000 tonne
<b>Total</b>	<b>119,701 tonne</b>

These statistics, we hasten to add pre-COVID, would indicate that in excess of 30,000 tonne, or approximately 20% of ULAB arisings in Australia are either not being collected for recycling, inappropriately stockpiled or exported illegally.

Our main concern is that the foregoing tonnages expose a very different picture to the one painted in a Power Point presentation to the Hon. Minister (and/or her advisors) last year in which ABRI asserted that 96% of ULAB in Australia were collected for recycling, a percentage also adopted by the Battery Stewardship Council in its report dated 22 June 2020.

Although Dodd considered that the percentage was on the "high side" at the time, it is clear from the foregoing that it is currently not the case.

We are at a loss to understand why the Department doesn't simply request the four ULAB processors/part-processors report annually on the tonnage of ULAB recycled or broken and the State from which the ULAB were consigned.

Given, ABRI's stated objective is "to promote the collection, recycling and safe disposal of all batteries," we are interested to understand what ABRI attributes to the decline and what action it proposes to address the issue.

#### **Prices Paid by Enirgi & DGL**

The following would tend to support the view that declining recovery rates is as a direct result of a significant reduction in the price paid for ULAB by Enirgi and DGL.

Furthermore, there is more and more evidence, some admittedly circumstantial, of an increase in illegal exports as a result of globally competitive pricing available from ULAB processors throughout Asia and Europe approximating \$500 per tonne more than those paid by Enirgi and DGL.

In Statements lodged in the AAT, DGL acknowledges that it has reduced the average price paid for ULAB from 33.2% of LME in FY2019 to 26% of LME in 2020.

At an average price of Lead of AUD2,600, that equates to \$187 per tonne or an annualised reduction of \$8.241 million in the amount DGL has paid to their ULAB suppliers.

Calculation 44,025 tonne p.a. x \$26 per 1% of LME x 7.2 = \$8,241,480

In Statements to the AAT, Enirgi acknowledged that it has reduced its price from 30% of LME in November & December 2019 to its current price of 27% of LME.

Calculation 57,676 tonne p.a. x \$26 per 1% of LME x 3 = \$4,498,728

With \$12.7m p.a. less being paid to collectors for ULAB, it is not difficult to understand why ULAB recovery rates are declining and, in all probability, illegal exports increasing.

Of concern is the fact that both Enirgi and DGL stated in the AAT that they are unable to increase their prices and operate profitably.

Logically, if neither Enirgi nor DGL is able to increase the prices they pay for ULAB and those prices preclude ULAB from being recovered from much of rural and regional Western Australia, what action does ABRI propose to achieve its stated objectives?

#### **ULAB Processing in Australia**


In Statements to the Tribunal and on its website, Enirgi states that it recycles 96% - 97% by weight of the ULAB into valuable reusable products/materials, which we have no reason to dispute and acknowledge is consistent with "best practice" internationally.

This is supported by the Battery Stewardship Council Report which refers to Material Yield Rates of 95 – 97%.

However, that is in stark contrast to DGL, which states that, as a percentage by weight of the ULAB: -

Lead paste	45%	exported overseas as hazardous waste
Lead grid	30%	exported overseas
Polypropylene	5%	sold to a local recycler for re-use
Balance	20%	consigned to landfill in Australia

That is, ONLY 5% of the ULAB recycled for reuse in Australia, 20% to landfill in Australia and 75% exported in very much the same way as proposed by Dodd.



It would seem that the Battery Stewardship Council and possibly ABRI, presumably based on the performance of the Wagga Wagga facility, has presented Australia's ULAB recycling industry in a considerably more favourable light than the facts support.

The reality is that the recycling of less than half of Australia's annual ULAB arisings meet the environmental performance being promoted by ABRI.

Furthermore, in a Statement dated 19 June 2020, Mr Perera (DGL) states: -

*"It is worthwhile noting that Hydromet's Laverton North facility in Victoria has lead smelting and refining capabilities and was operational up until June 2018. However, we have elected to curtail the smelter and refinery due to rising natural gas, electricity and chemical prices that make the operation uneconomical."*

DGL's solution to its economic viability issue is to submit Applications for permits to export the lead extracted from its battery breaking facilities in Unanderra and Laverton North, including the hazardous lead paste, and sell it at globally competitive prices available from overseas processors, again in very much the same way as proposed by Dodd.


As stated previously, Enirgi processed 57,676 tonne of ULAB in 2019, logically extracting, at a total of 70 – 75% by weight, 40,000 – 44,000 tonne of lead grid and paste to smelt and refine.

In a report by Mark Frecheville Consulting commissioned by Enirgi in 2015, Enirgi's furnace capacity at Wagga Wagga was reported to be 78,000 tonne p.a.

Although Enirgi disclosed at the AAT Hearing that it is able to process DGL's lead paste it has elected not to because it requires additional processing to the lead paste Enirgi extracts through its own breaking operation.

Despite claiming underutilisation of its Wagga Wagga facility, it is clearly more attractive for Enirgi (RAMCAR) to negotiate a contract for DGL to export its lead paste to a RAMCAR subsidiary in the Philippines than to object to DGL's Applications for export permits or seek to process the lead paste at Wagga Wagga and achieve improved plant utilisation.

This would seem to be in conflict with Enirgi's long held concerns about "Australia's international obligations under the Basel Convention," the "desirability of using facilities in Australia" and the failure of battery breaking facilities to undertake any form of recycling.



In a letter of objection dated 16 September 2016 sent to the NSW Department of Planning and Environment in response to a Development Application to establish a Battery Breaking Facility in Ingleburn NSW (Ledox Australia), Enirgi wrote: -

*"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."*

Although we agree with Enirgi's views on battery breaking, we do not agree that exporting hazardous waste is in direct conflict with the Basel Convention, which states in Article 4.2.(d): -

*"Ensure that the transboundary movement of hazardous wastes and other wastes is **reduced** to the minimum **consistent with the environmentally sound and efficient management of such wastes**, and is conducted in a manner which will protect human health and the environment against the adverse effects which may result from such movement;"*


Neither do we agree that exporting hazardous waste is in conflict with the Hazardous Waste (Regulation of Exports and Imports) Act 1989 – the purpose of which is stated on the Department's website.

*"The main purpose of the Hazardous Waste (Regulation of Exports and Imports) Act 1989 ('the Act') is to **regulate** the export, import and transit of hazardous waste to ensure that hazardous waste is disposed of safely so that human beings and the environment, **both within and outside Australia**, are protected from the harmful effects of the waste."*

Neither human health nor the environment will be protected if ULAB are not collected for recycling and they are not currently being collected in much of Western Australia.

#### **Export Permits**

As mentioned earlier, DGL states it processed 44,025 tonne in 2019, which was not dissimilar to 2018 when it processed 39,465 tonne from which the hazardous lead paste extracted represents approximately 45% by weight or just under 20,000 tonne per annum.



In 2019, DGL submitted 7 Applications for permits to export hazardous lead waste (paste) derived from ULAB to 7 different smelters in 6 different countries totalling 83,000 tonne.

Then in 2020, DGL submitted a further 8 Applications for permits to export to 8 different smelters in 5 different countries totalling 79,200 tonne.

The tonnage in both years represents approximately 4 times the tonnage of lead paste DGL extracts from ULAB in its battery breaking facilities located in Unanderra and Laverton North.

Having received a ruling dated 13 July 2017 from the Department confirming that the metallic lead grid is not a hazardous waste, it is unlikely that DGL would have included the grid in Applications submitted since that ruling (refer attached).

Given there are a number of conditions attaching to Export Permits, including a requirement to provide the Department with a copy of the Movement Form and Certificate of Recovery/Disposal for every shipment exported under permits granted, it would seem the actual tonnages exported would be, if not already known, available to the Department.

Although a different issue altogether, it is of particular interest to Dodd that the hazardous lead waste extracted from ULAB collected in Western Australia, transported 4,000 km by road, rail, road to DGL's facility in Unanderra for "breaking" and exported to a RAMCAR subsidiary in the Philippines is actually shipped back through the Port of Fremantle in Western Australia.

Tends to present the term "Circular Economy" in a different light!!

### **Illegal Exports**

You may recall in July this year we provided evidence of an illegal export of ULAB ex the port of Fremantle.

Just today we have been advised that a container of ULAB shipped by the same individual was intercepted in Malaysia and returned to Fremantle. We understand Australian Border Force officers advised the exporter to arrange for the ULAB to be collected from the Australian Border Force holding yard and a scrap metal dealer has subsequently been authorised to pick them up.

We would be interested to learn why the ULAB have not been confiscated and what fines, if any, have been imposed by Australian Border Force, the Australian Marine Safety Authority for a breach of the IMDG Code and/or the Department of Environment for a breach of the Act.

Although it is difficult to obtain firm evidence, we are aware of illegal exports of ULAB ex the port of Fremantle to Malaysia, Vietnam and Indonesia.

Is it ABRI's intention to initiate contact with these authorities recommending strong action be taken to discourage others involved in exporting ULAB illegally?

Finally, it is clear from the foregoing that: -

- a) Neither Enirgi nor DGL have been able to attract sufficient ULAB to feed their unutilised capacity.
- b) Neither Enirgi nor DGL are able to increase the prices they pay for ULAB and remain profitable.
- c) At current prices it is not economically viable to recover ULAB from many regional and rural areas of Western Australia, primarily because of the high cost of freight both intrastate and interstate.

Whether there is sufficient processing capacity in Australia or whether it is desirable to use those facilities is really a moot point if the ULAB are not collected and are left to rot behind farm shed, on isolated cattle stations and mine sites.

Losing focus on the primary objective of recovering batteries for recycling in a country as vast as Australia while pursuing aspirational objectives such as the development of a Circular Economy within Australia is myopic.

We respectfully request the ABRI Executive Committee consider the foregoing and confirm its position on the issues raised.

Yours truly



 C D Dodd  
Managing Director





Mr Ryan Aisher  
Hydromet Corporation Pty Ltd  
11 Boden Road  
SEVEN HILLS NSW 2147

## WASTE STATUS OF METALLIC LEAD GRID FROM USED LEAD ACID BATTERIES

Dear Mr Aisher

Thank you for your enquiry about the hazardous waste status, under the *Hazardous Waste (Regulation of Exports and Imports) Act 1989*, of metallic lead grid from used lead acid batteries (the material).

Based on the information you have provided, the Department of the Environment and Energy (the Department) is of the view that the material is not a hazardous waste and therefore does not require a hazardous waste permit for its export. The Department's view is that the appropriate Basel Convention code for the material is B1020 - Clean, uncontaminated metal scrap, including alloys, in bulk finished form (sheet, plate, beams, rods, etc), of: ... Lead scrap (but excluding lead-acid batteries). In forming this view, the Department took the following factors into account:

- The process to produce the material is a deliberate one that is integral to producing metallic lead grid from used lead acid batteries.
- The material will require minimal reprocessing, through resizing, to be used as a direct feedstock for offshore smelting operations.
- The use of the material as a feedstock for smelting operations is not likely to generate greater quantities of residual waste when compared to lead ores.

Please note that the above advice is specific to the metallic lead grid that is to undergo secondary smelting and our advice may change if there is any change to the material, or processes used to treat the material. Please also be aware that, as the material is to be shipped to an overseas facility for processing, you will need to obtain the necessary import and transit approvals from the relevant Competent Authorities, if this is a requirement of the importing or transit countries.

Yours sincerely

Khokan Bagchi  
Acting Director  
Hazardous Waste Section

13 July 2017