



ASSESSMENT REPORT

Section 75W Modification

Weston Aluminium Trial Processing of Illicit Drug and Pharmaceutical Waste (DA-86-04-01-MOD 9 and 10397 of 1995-MOD 7)

1. BACKGROUND

This report is an assessment of a request to modify the Development Applications (DA-86-04-01 MOD 9 and 10397 of 1995 MOD 7) for an aluminium dross recycling facility in the Cessnock Local Government Area. This request has been lodged by Weston Aluminium pursuant to section 75W of the *Environmental Planning and Assessment Act 1979 (EP&A Act)*. It seeks to modify the development to allow for a 24 month trial of the processing of illicit drug and pharmaceutical waste at the facility's existing furnaces.

Weston Aluminium Pty Ltd (Weston Aluminium, the Proponent) owns and operates an aluminium dross recycling facility on 22 hectares of land at Kurri Kurri, in the Cessnock Local Government Area (see **Figure 1**).



Figure 1 – Site Location

The facility operates under two development consents:

- a consent issued by the Land and Environment Court in 1996 (10397 of 1995); and
- a consent issued by the then Minister for Planning in 2001 (DA-86-04-01).

Under these consents, Weston Aluminium is permitted to process up to 40,000 tonnes of dross aluminium and 35,000 tonnes of scrap aluminium per year for reuse in various industrial areas.

These consents have been modified on eight occasions to:

- alter various buildings;
- install a pre-processing facility within the western end of the existing approved ALDEX building;
- construct eight dross storage bays in an extension to the approved ALDEX building and to undertake some administrative amendments to allow for the Minister's and the Court's consents to be consistent;
- relocate Bag House 3;
- undertake spent potlining (SPL) processing trials;
- construct and operate a briquetting plant to enable the Proponent to process and compress ALDEX dust generated on-site into briquettes; and
- allow for the processing of up to 40,000 tonnes of second cut SPL on a permanent basis.

The facility is also regulated through an Environment Protection Licence (EPL No. 6423) from the Environment Protection Authority (EPA).

Weston Aluminium's site is surrounded by vacant land which acts as a buffer between the residential areas and the plant. The buffer area assists with the management of potential noise and air quality impacts.

The closest residential area is approximately 600m to the south east of the site, while the closest residence is approximately 400m to the south-west, within an industrial zone. Swamp Creek runs along the northern boundary of the site (see **Figure 1**).

1.1 Existing operations

As described above, the facility has approval to process up to 40,000 tonnes of aluminium dross and 40,000 tonnes of second cut SPL a year.

Aluminium Dross

Aluminium dross is a waste produced in the aluminium refining process. It can contain between 30-75 percent metallic aluminium, along with aluminium oxide, other metal oxides, traces of sodium aluminium fluoride and alloying metals. The dross is pre-processed to remove non-metallic material and impurities; it is then processed in rotary furnaces, prior to casting. Scrap aluminium is sorted and then remelted in a reverbaratory furnace prior to casting.

The facility receives aluminium dross and second cut SPL from the Tomago Aluminium Smelter which is located around 20 kilometres (km) east of the site.

Spent Potlining

Spent potlining (SPL) is a hazardous waste by-product of aluminium production. It is generated from the periodic de-lining of electrolytic cells.

SPL material contains cyanide and fluoride and can react with water to give off explosive gases. The material is classified as environmentally hazardous waste and also a dangerous good (it has the same dangerous good classification as aluminium dross) and is not permitted to be sent to landfill.

SPL is delivered either pre-crushed or uncrushed, and stored on the premises in accordance with the Australian Dangerous Goods Code. The treatment process is identical to that of dross treatment, however, as the recycling of dross and SPL produce different end products, the treatment of both materials is conducted separately.

1.2 Previous Trials

Weston Aluminium has received approval to undertake a number of previous trials as detailed below:

- *Small scale trial of mixed SPL (August 2010)*

On 5 August 2010, the Executive Director approved a modification application from Weston Aluminium to trial the processing of up to 40 tonnes of mixed SPL at its Kurri Kurri facility. The objective of this trial was to verify operations and to demonstrate emission control performance and compliance. The Department and the EPA recommended a range of conditions designed to monitor and report on the trial outcomes and minimise any potential impacts.

Weston Aluminium's Monitoring and Verification Report, submitted in accordance with the conditions of consent, concluded that the trial was successful. All of the measured emission concentrations were below regulatory compliance limits and the laboratory results showed negligible discharge concentrations.

- *Large Scale Trial of Second Cut SPL (November 2011)*

On 25 October 2011, the Acting Director-General approved a second modification application from Weston Aluminium for a large scale trial to process second cut SPL. The objective of this larger trial was to confirm processing requirements and explore potential beneficial end use opportunities for the treated material within different industrial processes.

The EPA and the Department were satisfied with the results in the post approval verification report (received in accordance with the consent requirements), which concluded that emissions satisfied the regulatory compliance limits throughout the trial.

- *Large Scale Trial of Mixed SPL (February 2013)*

On 17 February 2013, the Deputy Director-General approved a third modification application from Weston Aluminium for a larger scale mixed spent potlining processing trial. The objective was to evaluate the performance of the proposed treatment sequence, and to determine whether any additional processes are required to achieve a consistent product suitable for end-use market consumption.

Although notification of commencement was provided late 2014, the mixed SPL processing trial has not yet commenced. Further notification or an extension of time to complete the trial will be required.

2. PROPOSED MODIFICATION

In response to the contraction in the manufacturing sector in Australia, particularly the steel and aluminium industry, Weston Aluminium has been looking for opportunities to diversify its business.

As such, on 16 March 2015, Weston Aluminium lodged a request to modify both the Minister's and Court's consents under section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to trial the processing of up to 1,000 tonnes of illicit drug and 1,000 tonnes of pharmaceutical

waste, in existing furnaces, over a two year period. Pharmaceutical wastes would be derived from council and government return schemes, hospitals, dental service providers, medical centres, aged care centres and other similar facilities. Illicit drugs would be derived from confiscated and evidentiary material managed by the NSW Police Force.

Weston Aluminium's analysis has identified that some 5,000 tonnes of pharmaceutical waste and a minimum of 50 tonnes of illicit drug waste is generated in NSW per year. In NSW, both of these materials are required to be incinerated. The NSW Police Force has very limited storage capacity and avenues for the controlled destruction of illicit drugs. Domestic processing and disposal options for pharmaceutical wastes are also constrained as there is currently only one facility that is licensed to destroy these wastes in NSW.

Weston Aluminium is seeking approval for a two-year trial to evaluate the variability of waste streams, and to assess and verify the performance of the treatment sequence. The waste streams would be blended with dross, SPL and/or scrap furnace additions, as such the trial will also determine additional process requirements which may be required to achieve the thermal destruction of the waste, while still manufacturing a consistent product suitable for end-use market consumption from the processed dross and aluminium materials.

Existing plant and equipment, and associated controls (see **Figure 2**), currently used for the storage, handling and processing of aluminium dross and second cut SPL, would be used for the trial. No new physical works are required.

Pharmaceutical wastes would be sourced domestically, primarily from NSW, whereas illicit drug wastes would be sourced from NSW only.

The processing of illicit drugs would occur under NSW Police supervision immediately upon receipt. The pharmaceutical waste would be transported by licensed transport contractors and stored on-site until processing. The treatment process would include:

- thermal treatment of small quantities (<100 kg) of pharmaceutical and illicit drug blends with dross, SPL and/or scrap furnace additions;
- tapping of processed materials from the furnace into existing moulds or product bins to cool;
- collection and undercover storage of the cooled the ash residue;
- laboratory assessment of the residue;
- beneficiation into end-use products; and
- dispatch of finished product to customers.

Weston Aluminium is seeking a concurrent variation to its EPL.

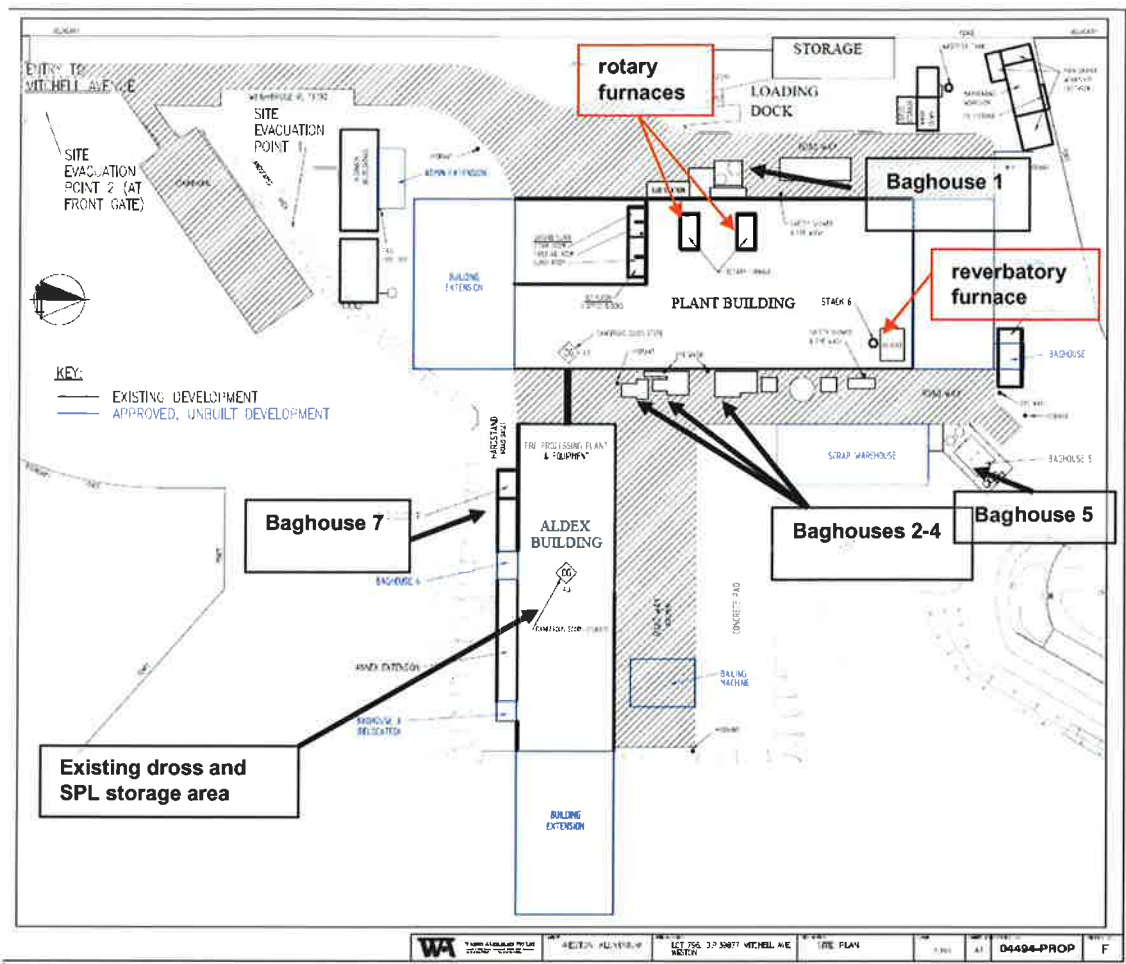


Figure 2: Existing site layout (existing furnaces are shown in red)

3. STATUTORY CONTEXT

3.1 Modification Request

Under clause 8J(8)(b) of the *Environmental Planning and Assessment Regulation 2000*, a development consent granted by the Minister under *State Environmental Planning Policy No. 34 - Major Employment-Generating Industrial Development* is to be modified under section 75W of the EP&A Act.

Under clause 8J(8)(d) of the *Environmental Planning and Assessment Regulation 2000*, a development consent granted by the Land and Environment Court, if the original consent authority was the Minister and the consent was granted under Part 4 of the Act before 1 August 2005, is to be modified under section 75W of the EP&A Act.

In accordance with clause 12 of Schedule 6A of the EP&A Act, section 75W of the EP&A Act as in force immediately before its repeal on 1 October 2011, continues to apply to any such modification. It should be noted that while the modification process is taking place under section 75W of the EP&A Act, any modified consent would remain a development consent under Part 4 of the EP&A Act.

Pursuant to section 75W(2) of the EP&A Act, the proponent may request the Minister to modify the development consent. Any request is to be lodged with the Secretary. A copy of the modification request may be found at Appendix A.

Section 75W(3) of the EP&A Act also provides that the Secretary may notify the proponent of environmental assessment requirements (SEARs) with respect to the proposed modification. Following an assessment of the modification request, it was considered that SEARs were not required.

Under Section 75W(4) of the EP&A Act, the Minister may modify the approval (with or without conditions) or disapprove the modification. The following report outlines the Department's assessment of the modification request.

3.2 Approval Authority

On 16 February 2015, the Minister for Planning delegated responsibility for the determination of section 75W modification requests to the Executive Directors who report to the Deputy Secretary, Planning Services where:

- the relevant local Council has not made an objection;
- a political disclosure statement has been made but only in respect of a previous related application; and
- there are less than 10 public submissions in the nature of objections.

The modification complies with the terms of the delegation as Cessnock City Council (Council) did not object to the proposal; a political disclosure has been made but only in respect to a previous application and three public submissions were received in the nature of objections. Accordingly, the Executive Director, Infrastructure and Industry Assessments may determine the request in accordance with the Minister's delegation.

4. CONSULTATION

The Department publicly exhibited the modification request from Thursday 7 May 2015 until Thursday 21 May 2015:

- on the Department's website;
- at the Department's Information Centre; and
- at Cessnock City Council's offices.

The Department also advertised the public exhibition of the modification in the Maitland Mercury, and notified agencies, previous submitters and local community groups in writing.

During the exhibition period, the Department received five submissions on the proposal: three from the public, one from the EPA and one from Council (see **Appendix B**). Neither Council nor the EPA objected to the request, however, all three public submissions objected.

4.1 Public Authority Submissions

The **EPA** raised no objections to the proposal and advised that current environmental management practices and controls at the premises are appropriate to address impacts of the trial. However, it recommended a range of conditions of approval including requirements to:

- notify of the commencement and completion of the trial;
- undertake the trial over a 24 month period;
- limit the volume of waste to be treated to 1,000 tonnes of illicit drug waste and 1,000 tonnes of pharmaceutical waste;
- monitor and record air quality emissions quarterly and whenever the pharmaceutical and illicit drug waste is being processed and submit an air quality monitoring report to the EPA following completion of the trial period;
- store all waste in a secure and enclosed area.

Council did not object to the proposal, however, it raised a number of concerns related to air emissions, the quantity of material to be processed, the source of the waste and social impact and the potential for crime. Council also requested that the Proponent undertake extensive community consultation.

The Department has considered the submissions in its assessment of the project and has incorporated the EPA's recommendations into the recommended conditions. The Department has also recommended a condition requiring the applicant to prepare a security protocol to address Council's concerns over the potential for crime.

4.2 Public Submissions

The Department received three submissions from the public, all of which objected to the project. Issues raised primarily related to potential air emissions and impacts on human health, increase in traffic through the township of Weston and concerns over any future applications to increase production capacity.

4.3 Response to Submissions

In response to the concerns raised by Council, a meeting was held on 7 July 2015 with representatives of the Department, Council and NSW Police in an endeavour to address Council's concerns.

Weston Aluminium lodged a response to submissions report (RTS) following the meeting on 16 July 2015 (**Appendix A**). The RTS included clarification and additional information in response to the submissions. The RTS also revised the scope of the modification by reducing the scale of the proposed illicit drug processing from 1,000 tonnes to 200 tonnes in response to Council's concerns.

On 26 August 2015, the Department received a submission from NSW Police confirming it has worked closely with Weston Aluminium for many years and has no concern in relation to security relevant to the destruction of illicit drugs at the site. Furthermore, it has minimal concern in relation to the security of pharmaceutical waste that may be stored at the facility during the trial, noting that the level of risk relating to the potential for crime is lower than that which would be associated with most hospitals and medical centres.

All outstanding issues are discussed in **Section 5** below.

5. CONSIDERATION

The Department has assessed the merits of the proposed modification. During this assessment, the Department has considered the:

- environmental impact statement and Director-General's assessment report of the original development application;
- previous modifications;
- existing conditions of consent;
- environmental performance of the facility;
- documentation supporting the proposed modification;
- submissions received;
- relevant environmental planning instruments, policies and guidelines; and
- requirements of the EP&A Act, including the objects of the Act.

The Department considers that the key issues associated with the proposed modification are social impacts and air quality. These issues are considered in detail below. An assessment of other issues is provided in Table 1.

5.1 Social Impact

Council raised concerns over the potential social impact of the modification, namely the potential for crime. Council's concerns predominately relate to the handling of pharmaceutical waste which, although unlikely, has the potential to contain material that could be used to manufacture illicit drugs (that is, pre-cursor material). Council is less concerned over illicit drug transport, handling and processing as it would be closely managed by NSW Police.

Weston Aluminium has advised that it has in place a number of security measures which would reduce the likelihood of crime including, boundary fencing, security cameras, patrols and back-to-base monitoring. Further, Weston Aluminium indicated that the site also operates 24 hours a day and as such has staff present at the facility.

Weston Aluminium also proposes to implement the following for the duration of the two-year trial:

- notification by waste suppliers prior to the transport of any pre-cursor material to site;
- segregation of such material from other wastes;
- the immediate processing of such material on receipt, or secure on-site storage; and
- supervision of both the storage and processing of this material by Weston Aluminium management.

Due to the nature of the proposed modification, the Department sought advice from NSW Police, particularly following the concerns raised by Council.

NSW Police provided a submission advising that it has no concerns in relation to the destruction of illicit drugs as this process is undertaken at the time of arrival and in the presence of armed police. NSW Police also had minimal concerns over the proposed treatment of pharmaceutical waste, primarily as it considered that the risk of people attempting to retrieve substances from the waste is very small and that the risk would be lower than that associated with the operation of the regions hospitals and medical centres. With the existing and proposed security measures, the Department accepts that the potential for crime is negligible.

To coordinate the existing and proposed security measures and to ensure their implementation, the Department has recommended a condition requiring Weston Aluminium to prepare and implement a security protocol for the transport, receipt, storage and processing of pharmaceutical waste. This protocol should form part of Weston Aluminium's Safety Management System (see the Hazards assessment in **Table 1**).

Given the temporary nature of the trial, the security measures described above and the fact NSW Police does not object to the trial, the Department concludes that the potential social impacts of the treatment of pharmaceutical waste can be appropriately managed.

5.2 Air Quality

The proposed thermal processing of illicit drugs and pharmaceutical waste has the potential to generate air pollutants which would need to be controlled.

As an existing facility which processes a range of hazardous materials, Weston Aluminium already has in place a range of controls to manage air emissions from all components of its operations. As well as baghouse filters to control emissions from the storage area, the facility has six additional stacks which operate to control emissions from the following parts of the facility:

- Stack 1: Rotary furnace;
- Stacks 2 - 4: capturing fugitive dust within the processing plant;
- Stack 3 (Baghouse 3): services the Rotary Cooler;
- Stack 5: Reverbatory furnace; and
- Stack 6: Gas combustion side of the reverbatory furnace.

The high capacity, lime scrubber fabric-filter baghouse complexes are fitted with high differential pressure alarms, spare bag sets as well as bag breakthrough detection systems. The lime scrubber system acts to remove acid-gases and dioxins/furans, while the fabric-filter baghouses remove particulates.

The facility operates under an EPL, as well as its development consents, which requires a comprehensive suite of monitoring to be undertaken at seven discharge/monitoring points. Historically, Weston Aluminium has operated well under its regulatory limits, **Figure 3** shows its air emission performance against the limits in its EPL.

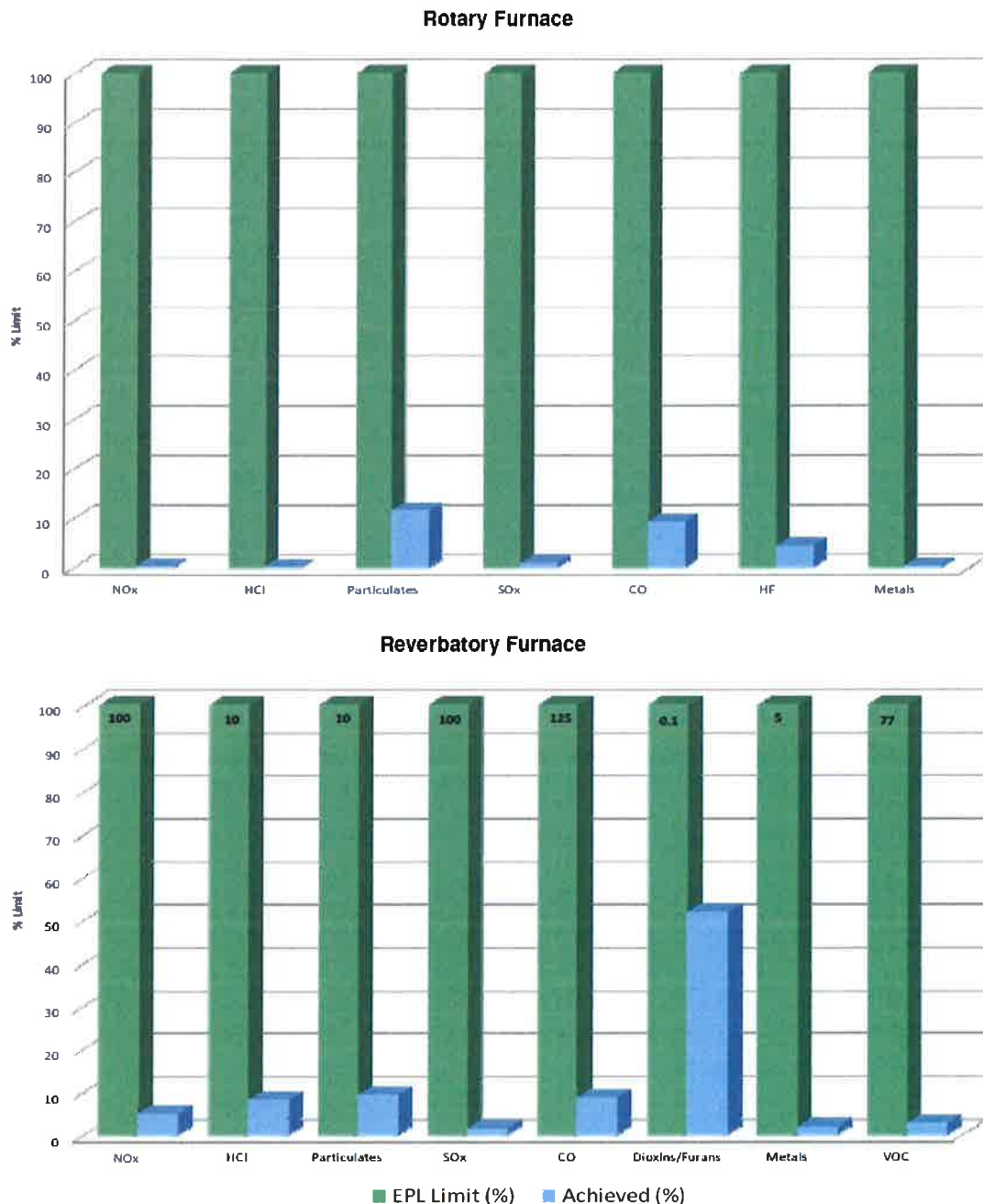


Figure 3: Air emission performance against regulatory limits

During the 24 month trial, illicit drug and pharmaceutical waste would be processed in existing furnaces (with existing emission control systems) in batches with dross, SPL and/or scrap metal. The volume of these wastes proposed to be processed per batch (generally <100 kg) is comparatively low and therefore emissions are unlikely to increase much beyond those experienced during standard operations. Notwithstanding, Council and public submissions raised some concerns over the potential for air emissions impacting the health of the local community.

The key emissions of concern expected to be generated during the trial are dioxins and furans from incineration of the pharmaceutical waste packaging. The remainder of the material, which is organic, is expected to break down to common products of combustion including carbon dioxide, oxides of nitrogen and water.

Weston Aluminium's EPL and development consent contain emission limits for dioxins and furans as well as nitrogen oxides. No change to Weston Aluminium's EPL limits would be required for the trial, however the EPA requested an increase in the monitoring frequency of dioxins and furans from yearly to quarterly. The Department also notes that, to allow Weston Aluminium to process the waste material in any of its three furnaces, Weston Aluminium is seeking a licence variation to include an emission concentration limit for dioxins and furans from stack 1 (the rotary furnace) for the duration of the trial, the limit would reflect the licence limit for stack 5 (the reverbatory furnaces).

The EPA did not raise any concerns regarding air emissions and confirmed it has no objection to the proposal subject to the following recommended conditions which require Weston Aluminium to:

- notify the EPA and the Department one week before the commencement of the trial and within two weeks after its completion;
- limit the length of the trial and the volume of waste to be processed;
- record all process conditions for the trial;
- undertake detailed monitoring of emissions and other parameters during the trial in accordance with the EPL;
- undertake emissions testing in accordance with the EPA's *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW*; and
- report on the air emissions from the trial.

The Department agrees with the EPA's recommended conditions and has incorporated them into the recommended modification instrument.

The Department has also recommended conditions to ensure that should monitoring results indicate that emissions exceed the levels prescribed in the EPL, then processing must cease. This should ensure that any impacts would be minimised.

Given that the facility already has adequate controls in place and the duration of the trial is limited, with the implementation of such conditions, both the Department and the EPA conclude that air emissions would be minimised and managed to an appropriate level.

5.3 Other Issues

A number of other issues were considered as a result of the modification request. These matters are discussed in **Table 1**.

Table 1 – Other Issues

Issue	Consideration	Recommendation
Source of waste	• Weston Aluminium proposes to receive waste material from facilities throughout NSW and potentially interstate. • Council advised that sourcing waste from Sydney was contrary to its Sydney Waste Policy which aims to prevent waste from Sydney being disposed of in the Cessnock Local Government Area. • The Department understands the purpose of the policy is to restrict the volume of Sydney waste disposed of in local landfills and to limit heavy vehicle movements on local roads.	No change to existing conditions

Issue	Consideration	Recommendation
	The Department has considered Council's concerns and has concluded that given the expected traffic volumes (see below), the quantity of waste to be processed and the proposed end-use of the processed material, the Policy does not apply to the proposal.	
Traffic	- Concerns were raised in a public submission over the potential impact of additional truck movements through the township of Weston. - The modification is only expected to generate two additional truck movements per week. - Weston Aluminium's 2001 approval anticipated that the facility would generate some 20 heavy vehicles a day. - Weston Aluminium advised that its current operations generate only a fraction of the anticipated volume and is not seeking a modification to approved traffic numbers. - The Department concludes that traffic impacts from the modification would be negligible.	No additional conditions relating to traffic have been recommended.
Hazards	- The processing of the proposed quantities of illicit drug and pharmaceutical wastes is not considered potentially hazardous development and would not increase levels of risk of the facility. - Notwithstanding, the existing Safety Management System and Emergency Plan should be updated to reflect the new activity and new materials at the site. The Department has recommended conditions to this effect.	The Department has recommended conditions requiring the Proponent: - to update its Emergency Plan and Safety Management System; and - to submit a report verifying that the Emergency Plan is effective and at least one emergency exercise has been undertaken and the Safety Management System is being implemented

6. CONCLUSION

The Department has assessed the modification request and found that the potential impacts can be appropriately managed.

As with the previous trials, the Department has recommended conditions to limit the duration of the trial and to ensure that should an exceedance of the current emission limits in the Environment Protection Licence be identified, the trial temporarily cease until the reason for the exceedance is identified and controlled. The Department has also recommended that Weston Aluminium prepare a security protocol to appropriately manage the handling of pharmaceutical wastes.

The Department is satisfied that with the implementation of both the existing and proposed conditions, any residual impacts would be appropriately managed. The EPA has also indicated that it is satisfied with the proposal.

The Department is also satisfied that the proposal would provide NSW Police an appropriate avenue for the destruction of illicit drugs, albeit short-term.

Consequently, the Department considers the proposal is in the public interest and should be approved, subject to conditions.

7. RECOMMENDATION

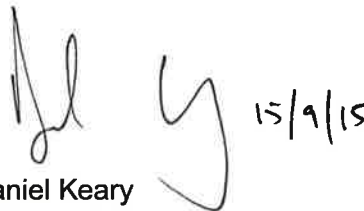
It is RECOMMENDED that the Acting Executive Director, Infrastructure and Industry Assessments:

- **consider** the findings and recommendations of this report;
- **approve** of the proposed modifications under Section 75W of the Act; and
- **sign** the attached notices of modification to the Ministerial development consent (DA-86-04-01 Mod 9) and to the Court consent (10397 of 1995 Mod 7) (**Appendix C**).

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