Submission to NSW Department of Planning concerning application number SSD 15_7396 – proposed hazardous waste incinerator at 129 Mitchell Avenue, Kurri Kurri

In summary, our objections to the proposal as presented are:

1. The stated justification for the project, that "NSW urgently needs treatment capacity to process these wastes locally" has no basis in fact. There is no pressing need to approve an additional clinical and related waste treatment facility in NSW and approval should be reserved for the most appropriate locations to site an incinerator. The proposed site at Mitchell Avenue may be commercially expedient for the applicant, however, being located 800m straight line distance from the nearest residences, there would be far better site location options from a public health perspective. The applicant's own documentation acknowledges there are alterative potential sites that could be considered.

2. The application indicates that in clause 3.3.2 that 5,600 tonnes per annum of Class 6.2 wastes are to be processed at the facility. In the order of 5,000 tonnes of this will have to be regular Clinical waste that could and should be treated by less environmentally impactful methods, e.g. autoclaving.

3. The proposed waste and washed bin storage areas are manifestly inadequate. The stated maximum quantities of stored wastes provided in Table 2 "Materials at the Project" in Appendix J Preliminary Hazard Analysis are incompatible with the stated annual waste throughput volumes and the maintenance needs of a waste incinerator.
4. The proposed method of treating water from bin washing and the washing down of bunded areas is not adequate.

5. The pre-shredding of waste without the provision of dust extraction equipment, and in the case of non-cytotoxic infectious waste, a HEPA filter. In the case of Cytotoxic waste both a HEPA and a carbon filter should be deployed.

Supporting explanation:

1. Claim re Need for Clinical Waste Treatment Capacity

The EIS documentation states:

Under the heading "Objectives and Project Need"

"The thermal waste treatment plant would provide a disposal option for a variety of wastes that cannot be disposed of via other means and required destruction for environmental and community health reasons".

Under the heading "Alternatives"

"Thermal treatment is the accepted, and often the only, method for the disposal of medical and various other wastes within NSW"

"Few other suitable management options are available for some of these wastes (e.g. biomedical or quarantine)".

In section 1.5

"NSW urgently needs treatment capacity to process these wastes locally"

The current operating capacity in Australia and in NSW to treat medical waste currently being generated is more than adequate. There is currently a surplus of treatment capacity and current capacity should be adequate to meet generated waste volumes for many years in the future.

The vast majority of medical waste can be treated by other means other than incineration, such as by autoclave. There is already servicing NSW for medical waste for which incineration is not mandated:

- An autoclave located in Kooragang running at less than half capacity
- An autoclave at Yatala servicing northern NSW running at less than half capacity
- Three autoclaves in Sydney, one at Unanderra and one in the ACT servicing southern NSW most running at less than half capacity

All of the above autoclaves, plus one additional facility in Sydney can also treat Quarantine waste. Quarantine waste treatment is not limited to autoclaving and incineration, additional options are available e.g. fumigation.

Only 6% of the infectious (Class 6.2) medical waste emanating from public healthcare must be incinerated according to information issued to parties tendering to the NSW State government for the provision of medical waste treatment. The total mass of medical waste requiring incineration, including pharmaceuticals, emanating from all healthcare facilities in NSW is about 500 tonnes per annum.

There are existing medical waste incinerators that have spare capacity currently processing medical wastes that must incinerated located at:

- Silverwater in Sydney
- Willawong in Brisbane
- Dandenong South and Laverton in Melbourne
- Kilburn in Adelaide
- Welshpool in Perth

Pharmaceutical waste arising from pharmaceutical manufacturing in NSW has been in decline for the past decade due to the progressive cessation or scaling back of local manufacturing by the majority of international pharmaceutical companies. The total volume of waste Scheduled pharmaceutical material generated in NSW from all sources is now below 2,000 tonnes per annum.
A medical waste incinerator in the ACT that was damaged by a fire in 2006 has not been recommissioned due to a lack of need for the incineration capacity in the market.

Any Clinical and related wastes leaving NSW are leaving for commercial reasons and not capacity reasons. A very small portion of the Clinical wastes generated in NSW are processed interstate to save, for example, transporting waste collected at Murwillumbah all the way back to Kooragang or Sydney when it can be processed nearby in Brisbane.

The applicant itself identifies that there is no surplus of waste being generated near this location and is promoting the interstate transport of hazardous wastes as it states in the EIS document "Wastes would likely originate from **across NSW and potentially from interstate**".

The EIS application has not specifically identified or nominated any waste material that cannot currently be destroyed by an appropriate means. In particular the EIS has not identified any waste that its proposed equipment, which is no different in concept and

technology to many other incinerators in operation in Australia, will be able to successfully treat waste that other similar equipment is not already treating.

The facts are that there is not only no "urgent need", there is no "need" at all for another medical waste incineration facility on capacity or waste processing capability grounds. The only need that has been EIS has clearly identified and is not to be disputed is the commercial interests of the applicant, in the words of the EIS itself:

> *"Since 2011, WA has been progressively diversifying the activities that the WA Site can support in order to maintain an economically viable operation".*

2. Waste Storage

According to clause 6.4.4 of the EIS the proposal includes a 200m2 secure storage area and a 450 m2 refrigerated storage area. A reference is made to racking, but no pallet racking is depicted in the drawings and pallet racking is not likely to be suitable for 120l, 240l and 660l mobile garbage bins which the EIS states will be the main mode of waste storage.

The waste handling area may be able to support a further 300m2 of unencumbered unrefrigerated storage space. The EIS states that the maximum waste levels will be as follows:

Stream	Waste Code	Stated Maximum Quantity Stored (Tonnes)	Storage Method	DG Class	Un No.
Clinical waste	R100	40	240l wheelie bins or 2m^3 bins or similar	6.2	UN 3291
Cytotoxic waste	R100	20	Sealed 120L or 240L wheelie bins or 2m3 bins, or similar.	6.2	UN 3291
Cytotoxic waste (bulk)	R130	22	Sealed 120L or 240L wheelie bins, or similar.	6.1	UN 2811 & UN 2810
Pharmaceutical waste	R120 & R140	20	Sealed 240L wheelie bins, palletised cartons, pails or drums, or similar.	Various	Various
Solvents and Paints	Various	50	Sealed packages and drums	3	Various
Quarantine Waste	R150	40	Sealed 240L wheelie bins, palletised cartons, pails or drums, or similar		

The application states that the .projected throughput of proposed plant is 8,000t p.a., of which approximately 70% or 5,600 tonnes per annum of Class 6.2 Clinical and Cytotoxic waste.
The dimensions of a 240l Sulo mobile garbage bin is 585mm wide by 730mm deep, hence the bin occupies 0.427 m2 of floor space. The average net weight of a Clinical waste in NSW is less than 20kg, hence 240l Clinical waste bins hold less than 47kg per square metre of floor space. 660l bins hold a bit more and 120l bins a bit less per square metre than a 240l bin.

If the plant were able to run 365 days per year, then the 5,600 tonnes of Clinical waste per annum represents 767 x 240l Clinical waste bins each day. For each full bin requiring processing an empty bin will need to be stored until it is collected. This requirement alone requires at least 327 m2 refrigerated plus 327m2 of unrefrigerated floor space.

Given the statement in clause 13.4.2 of the EIS that "The anticipated operating hours would be 24 hours per day, 7 days per week. All the truck movements would be made between 7am and 3pm, from Monday to Friday" by 3pm Friday, enough waste would have to be held on site to feed the incinerator for the 64 hour internal until the next truck arrives at 7am Monday morning. This would necessitate, for Class 6.2 wastes alone, 873 m2 of refrigerated floor space. The storage issues though extend beyond this.

Incinerators require, not infrequently, maintenance that requires the shutting down of the incinerator. Waste incinerators accepting waste streams of a varied calorific nature and from disparate generating sources are challenged by frequent temperature fluctuations.

Repair work to refractories etc. will at times require the cooling down of the incinerator prior to work refractory replacement, followed by a controlled and gradual drying out and heating up of the new refractory material. Shut down durations of two weeks are common for waste incinerators, major work can involve the loss of three weeks of average throughput.

Based on the applicants projected throughput of 8,000t p.a., on occasions it may be necessary for 480 tonnes of waste to be stockpiled on the site. The applicant does not appear to have considered this or any contingency for equipment downtime. Hospitals and other sites generating Class 6.2 wastes in particular often have no more than two days storage space for infectious wastes, some facilities can only hold half a day's waste. The receiving facility needs to provide the storage buffer for processing equipment downtime.

It is difficult to envisage how AS1940 separation distances for Class 3 liquids will be maintained for 50 tonnes of solvents and paints in the waste storage and staging areas provided, even without the pressure from the storage of large quantities of empty plastic Clinical waste bins and full Clinical waste bins. The documentation does not appear to make any attempt to demonstrate how this will be achieved.

3. Waste Water Treatment

The proposed bin washing outlined in clause 6.4.8, i.e. a Gross Pollutant Trap (GPT) and subsequent sediment trap appears to be inadequate.

A large quantity of detergents and disinfectants will be required to wash 800 plus 240l bins per day. In addition to this, given that waste to be received includes solvents, oily rags, quarantine wastes that may contain cooking oils etc., then the washing down of storage areas, equipment and bins is likely to further pollute the trade waste water.

The proposed pre shredding of waste prior to incineration is a further cause for concern. Liquid and fine powdered pharmaceuticals etc. could be released during the shredding process and the clean-up of these is likely to result in these materials finding their way into the trade waste exiting the site.

4. Pre-shredding Waste

The shredding of waste of pharmaceutical waste can result in the release of fine airborne powders which, in the proximity of an incinerator can and will result in fires.
The shredding of infectious wastes creates aerosols and a consequent health risk. Treatment methods for Clinical wastes involving shredding, most notably the Matrix process, all used and had mandated by the EPA the capture of aerosols and air extraction to a HEPA filter.

The shredding of cytotoxic wastes is highly undesirable, for obvious reasons.