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Report to the Policy and Finance Committee
from Rob Forlong, Manager, Consents Management

Medical Waste Limited – Dioxin Emissions

1. Purpose

To report to the Committee on the dioxin emissions from the Medical Waste Limited Incinerator on Miramar Wharf.

2. Background and History

Medical Waste incinerates medical and quarantine waste at its facility on Miramar Wharf. Our records show that the facility has been operating in its present form since 1987 (although an incinerator has existed there for many years).

In 1990 Medical Waste had its licence under the Clean Air Act 1972 renewed by the Department of Health. With the commencement of the Resource Management Act 1991, Medical Waste's licence became a deemed Discharge to Air permit, with an expiry date of 31 March 1995.

3. The Existing Resource Consent

In late 1994, Medical Waste applied to replace its Discharge to Air permit. The application was publicly advertised and eight submissions were received. The Public Health Service was concerned about the possibility of dioxin emissions and asked for the Assessment of Environmental Effects (AEE) to be peer reviewed.

WRC commissioned Dr Terry Brady of Woodward Clyde to peer review the Medical Waste AEE. Dr Brady reported that ambient concentrations of dioxins would be up to 30 times higher than that contributed by the incinerator. Most of the dioxin contributions would come from motor vehicles. He concluded that predicted concentrations of dioxins were "well below the acceptable levels" and that they "are not considered to have significant effects as a result of the operation of the incinerator".

The resource consent application did not go to a hearing, as all parties, including the Public Heath Service, were happy with the conditions.

Although the resource consent does not impose any limits on dioxin emissions, Medical Waste is required to monitor for dioxins annually.

It is important to note that in 1995, international guideline limits for dioxin were less stringent than they are now. Recently, there has been an international movement to decrease dioxin emissions from known sources such as waste incinerators. The primary reason for this approach is that dioxins are toxic, persistent in the environment, and bioaccumulative.

Since 1995, we have had a number of complaints (18 since the beginning of 1998) relating to smoke and odours from the Plant.

4. Monitoring

In November 1998, we noted that Medical Waste's dioxin tests had not been supplied. When asked where they were, Medical Waste told us that the results didn't seem right and they wanted to retest in the New Year. They thought that there might have been a fault in the testing regime (testing for dioxins is very complicated and extremely expensive).

Because of the costs, Medical Waste asked if the 1999 retest could count as the test for both 1998 and 1999 (i.e. that WRC cancel the 1998 tests). We said that this was not possible and that we required a test from each year. However, if Medical Waste thought there was a technical problem with the October 1998 tests they could do a new test to determine whether those results were accurate or merely a sampling fault.

In February 1999, when we still hadn't received any results from Medical Waste, we decided to do our own independent stack audit and include tests for dioxins. The testing was carried out in June 1999 and the results received in late August 1999.

Our tests showed a very high result for dioxins - one at *0.734* ng ITEQ.m^3 and one at *30.3* ng ITEQ.m^3. Since then we have received two further tests from Medical Waste limited. Those tests were carried out in July 1999 and were *51.4* ng ITEQ.m^3 and *32.6* ng ITEQ.m^3.

New Zealand does not have any dioxin standards. However, for comparative purposes, the UK and German guidelines are 0.1 ng ITEQ.m^3. Three of the four most recent tests are thus two orders of magnitude above international guideline levels.

We were very concerned about the results so we immediately consulted MfE's dioxin expert (Dr Simon Buckland) and the Public Heath Service. Both Dr Buckland and the Public Health Service told us that there does not appear to be an immediate acute heath risk.

In addition, we have telephoned those people who have complained about the incinerator in the past and written to all nearby residents to keep them informed of developments.

5. A Note on the International Guidelines

Internationally, acceptable levels for dioxins have plummeted in the past few years. For example, the World Health Organisation reduced the Tolerable Daily Intake by a factor of 10 last year.

The current international guidelines are not based on a scientific health risk assessment. Rather, a number of countries (beginning with Germany) decided for political reasons that they wanted to minimise all dioxin emissions. The guideline figure is essentially the best practicable option. It is based on the emission level that the better plants in Europe and North America could achieve.

While there is no dioxin emission standard or guideline in New Zealand, we understand that MfE are currently preparing an emission standard. We also understand that it is likely that the standard will be consistent with international guidelines.

6. What are the WRC's Options?

In a case such as this the WRC has a number of options. We could:

1. Do nothing and wait for the consent to expire in 2005;
2. Ask the Environment Court to place an interim enforcement order on the Plant requiring it to cease operations;
3. Exercise our right in November 1999 to review the consent conditions in light of the test results.

We immediately rejected option one as inappropriate.

We seriously considered option two (get a court order to stop the plant from operating), but rejected it because we would have to be able to demonstrate that the plant was a health hazard and placed people at immanent risk. Our advice from the Public Health Service and MfE is that the plant is unlikely to constitute an immediate acute health risk, particularly given that the international guidelines are based on a best practical option approach rather than a demonstrated health or environmental effect.

Our assessment is that if we attempted to close down the Medical Waste plant, it is likely that the WRC would be forced to pay a considerable sum in damages for lost production etc. as Medical Waste would be protected by their resource consent and we cannot prove an adverse health effect.

Hence we have chosen option three. This option will allow Medical Waste to put their side of the story to a hearings committee (using independent commissioners), which can hear all the evidence and make a determination.

I must stress that the review of consent conditions will not allow the Wellington Regional Council to close the plant down. What it will allow is for a hearings committee to determine:

1. Whether there should be a limit on dioxin emissions from the plant; and
2. What that limit might be.

Those matters will be decided after the Independent Commissioners have heard all the evidence from Medical Waste and submitters.

7. Other Compliance Issues relating to the Incinerator

Medical Waste has also had a number of non compliance events at the plant. The most serious of these are the occasional discharges of smoke and odour from the incinerator stack. We have not taken any formal enforcement action against the company because they have always acted very responsibly when advised of the problem and rapidly corrected the situation.

8. Recommendation

That the report be received and its contents noted.

Report prepared by:	Approved for submission:
ROB FORLONG Manager, Consents Management	JANE BRADBURY Divisional Manager, Environment