10 reasons not to trust Dato’ Abdul Rahman Dahlan, Minister for Urban Well-Being, Housing and Local Government on the Building of Incinerators in Malaysia – by Dr. Ong Kian Ming, MP for Serdang, on the 8th of November, 2014

Despite the many concerns raised by elected representatives and NGOs on the building of an incinerator at Taman Beringin, Kepong, the Minister for Urban Well-Being, Housing and Local Government, Dato’ Abdul Rahman Dahlan, is still proceeding with the tender process for this 1000-ton incinerator project. Furthermore, 2 other large incinerators – in Sungai Udang, Melaka and Bukit Payong, Johor – have also been announced by the Ministry.

The following are 10 reasons why the public cannot trust the Minister in whatever he says about the building of the incinerator in Kepong, whether it is in regards to the overall cost of the project, the transparency in the awarding of the project, the environmental safeguards that will be put in and the potential impact on the residents not just in Kepong but also in the surrounding areas as well as the rest of Kuala Lumpur.

1) The Minister has not bothered to visit the Bukit Tagar sanitary landfill even once

According to the Bukit Tagar Sanitary Landfill (BTSL) website, it has a waste capacity of 120 million metric tons.¹ Currently, it only takes in municipal waste from KL and a small amount of waste from the Selayang municipal council which totals 3000 tons per day. Even if the amount of municipal waste which BTSL takes in increases to 4000 tons per day, its capacity can last for 80 years.²

Hence, the National Solid Waste Management Department (NSWMD) is not saying the truth when it writes that:

“Keadaan ini menunjukkan bahawa jumlah sisa pepejal yang dihasilkan melebihi kapasitii yang dirancang untuk tapak pelupusan di Bukit Tagar. Ini membawa makna bahawa tempoh hayat tapak pelupusan tersebut akan menjadi lebih pendek daripada tempoh ia dirancang pada asalnya.”³

Vincent Tan himself has written that at the current capacity, the BTSL can last up to 130 years if it caters only to municipal waste from KL.⁴ In the same article, Vincent Tan has also confirmed that “the Minister has not met me or spoken to me, nor with the management of the Bukit Tagar sanitary landfill on the Kuala Lumpur incinerator project and any suggestion otherwise is entirely baseless and incorrect.” (See Figure 1 below)

If the Minister can take time to visit Germany to learn about their waste management system (see Figure 2 below) and also visit the Jeram sanitary landfill which takes in municipal waste from Selangor⁵, why can’t he take some time to visit the Bukit Tagar Sanitary Landfill in our own backyard which has won numerous environmental awards including the DFS Singapore Environmental Achievement Award (REGIONAL), the ASEAN Energy Award 2012 (Renewable Energy On-Grid Category) from the ASEAN CENTRE FOR ENERGY and the ASEAN Federation of Engineering Organizations Award 2008⁶? Is he not proud of the achievements of a home grown company which has received regional recognition?

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² The 40 year capacity from the BTSL website is if all the municipal waste in central Selangor is also included which is approximately 4000 tons per day.
⁴ http://www.thesundaily.my/news/1111419
If his Ministry can sponsor elected representatives, politicians and NGOs from KL and Selangor to visit incinerators in Japan, why can’t the Minister visit the Bukit Tagar Sanitary Landfill too? It would most certainly cost less money to drive to BTSL than to fly to Japan.\(^7\)

Ironically, the Minister has visited the Jeram sanitary landfill in Selangor operated by Worldwide Holdings, a Selangor GLC, but has not visited the Bukit Tagar Sanitary Landfill.\(^8\)

**Figure 1: Press Statement by Tan Sri Vincent Tan requesting the government of Malaysia not to build an incinerator in KL**\(^9\)

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\(^8\) [http://ww1.utusan.com.my/utusan/Kota/20140821/wk_02/Tapak-pelupusan-diperluas](http://ww1.utusan.com.my/utusan/Kota/20140821/wk_02/Tapak-pelupusan-diperluas) (Selangor does not come under the Solid Waste and Public Cleansing Management Act 2007 or Act 672 which means that waste collection and disposal is still controlled by the state and not the federal government)
2) The Minister has not revealed the cost of the incinerator project and who will be paying for it

The total cost for the construction of the incinerator in Kepong has been estimated at anywhere between RM600 million\(^1\) to RM1 billion\(^2\). The Minister clarified via twitter that the government won’t come up with a single sen for this incinerator project but that it would be built via a Private Finance Initiative (PFI). The government will only pay the tipping fee when the municipal waste is sent to the incinerator.\(^3\)

Currently, the tipping fee which BTSL charges DBKL is RM48 per ton. The tipping fee for the proposed incinerator will most certainly be higher than RM48 per ton. The operational costs for incinerators are higher than for sanitary landfills because of the more sophisticated technology involved even if some of the running costs can be recouped by selling energy back to the grid via the Feed in Tariff (FiT). According to figures provided by the Minister, the operational costs per ton for the small scale incinerators in Pangkor, Langkawi and Cameron Highlands ranges from RM207 to RM363 per ton.\(^4\) The incinerator in Kepong will have an operational cost of at least RM100 per ton. If the costs of construction also have to be recouped, then this amount will certainly increase.

In addition, the costs of disposing the fly ash from the burning of the municipal waste need to be included. Fly ash is classified as toxic or scheduled waste which costs approximately RM3000 per ton to dispose of at Kualiti Alam’s facility in Bukit Nenas, Negeri Sembilan.

Furthermore, the pre-qualification questionnaire (PQQ) documents showed that DBKL would be giving the operators of the incinerator a waste guarantee which means that compensation will be

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paid by DBKL if it fails to provide the operator with at least 1000 tons of municipal waste a day. This will also increase the tipping fee paid for by DBKL and ultimately by the residents of KL.

It would be naïve to assume that the tipping fee for municipal waste disposal would not increase as a result of the construction of the incinerator plant in Kepong. Hence, it is of paramount importance that the Minister disclose the expected cost of the incinerator project as well as the expected tipping fee which DBKL will have to pay to the concessionaire which is building and operating the incinerator.

3) The Minister has failed his promise to disclose details of the tender process for the incinerator project

In his reply to parliament during the budget debate on the 26th of November 2014, the Minister promised that he would disclose the tender documents and information for the incinerator project in Taman Beringin.

To repeat, this is what was said by the Minister during his Ministry’s response to the budget debate:

“So, once we – tender ini adalah tender antarabangsa, tender terbuka antarabangsa yang akan diiklankan dan akan pamerkan segala data Yang Berhomar hendakkan. You know Yang Berhomat, kita tidak mahu seperti mana yang saya katakan, kita mahu yang terbaik untuk rakyat dan penduduk Kuala Lumpur.” (pg. 176, DR26112013)

Not only did the Minister fail to disclose the details of the tender, he did not even name the companies that were shortlisted for the bidding. It was left to an unnamed source which was quoted by the Edge Financial Daily that the following four consortiums – UEM Environment-Mitsubishi Heavy Industries, Puncak Niaga-Hitachi Zosen, DRB-Malakoff-Sumitomo and MRCB-Hyundai Rotem – had been shortlisted for the incinerator project.15

At the same time, he issued an incredibly weak statement to justify why he could not disclose the tender documents. He said16:

“Before my explanation in parliament on 26 November 2013, Dr Nadzri informed me that the ministry will reveal tender documents that are within the parameters of what is allowed to be disclosed under normal tender procedures.

As a matter of public record, out of 33 Pre-qualification Questionnaires submitted, among the technologies identified for consideration are: Incineration, Gasification, Pyrolysis and Combined Technology.

Subsequently, the Detailed Environment Impact Assessment (DEIA) will be conducted based on whichever technology shortlisted from the above. The DEIA is expected to be completed in June 2015. Once the requirements set out by Department of Environment (DOE) have been fulfilled, the approval to the DEIA will be given.”

16 https://www.facebook.com/rahmandahlan.my/posts/553495338115414
That was the extent of his reply. No information about the cost of the project, the possible tipping fee, the waste guarantee, the names of the companies shortlisted, the nature of the waste sent to the incinerator, and other important information that is expected to be found in a tender document of this nature. In other words, he has been exposed as a liar for going against his own promise.  

4) **The Minister has not even fully implemented the plan to separate waste at source in KL**

Act 672 allows the Director General of the National Solid Waste Management Department (NSWMD) to make it mandatory to separate waste at source. This is an essential step to improve solid waste management in the country. More importantly, it is absolutely essential that waste be separated at source in order to improve the operational efficiency of an incinerator. Given that at least 50% of municipal waste in Malaysia is food waste and is not suitable to be burnt because it increases the amount of fuel that needs to be inserted into the incinerator, it is necessary for separation of waste at source be fully implemented before an incinerator can even be considered.

In addition, separation of source is necessary to prevent the burning of potentially hazardous material such as batteries and lamps which contains mercury which may be released into the atmosphere if it is incinerated.

In a parliamentary reply to Dr. Ong Kian Ming dated 12th of June, it was stated that separation of waste at source would begin in KL starting from September 2014. To date, there has been no public announcement, no media reports and no indication that separation at source has even started.

This calls into question the sincerity of the Minister and his Ministry in wanting to guarantee the welfare of the people by building the incinerator.

5) **The Minister has not provided any assurance that the Detailed Environmental Impact Assessment (DEIA) will not be like those for the failed incinerator projects in Pangkor, Tioman, Langkawi and Cameron Highlands**

The Minister has said that a Detailed EIA will be conducted and completed in June 2015 before approval is given to the building of the incinerator once the conditions of the DEIA have been met. But the same DEIA process was conducted for the small scale incinerator projects in Pangkor, Tioman, Langkawi and Cameron Highlands. The DEIA did not prevent the company which was awarded the project to build and operate these incinerators – XCN Technology – from badly operating and maintaining the incinerator in Pulau Pangkor as highlighted in the National Audit Report 2012.

In fact, a report specially prepared for the Ministry by the Faculty of Chemical Engineering, Universiti Teknologi Mara, gave glowing recommendations for the incinerator technology proposed by XCN technology even though it was unproven at that time (See Figure 3 below)

It is noteworthy that the DEIA contract for the Taman Beringin incinerator has been given to the same university namely, UTM. This should greatly concern the residents in and near Kepong since the presence of a DEIA report does not give them any assurance that the construction and

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subsequent operation of the incinerator plant will be safe. The poor operating conditions for the incinerator in Pangkor is proof of this (more on this later).

Figure 3: Recommendation by Universiti Teknologi Mara (UiTM) for the XCNT incinerator technology in a report prepared for the Ministry of Housing and Local Government (24 August, 2014)

6) The Minister has failed to provide reasons why the buffer zone for the proposed incinerator is less than the DOE guidelines

According to the Site Suitability Report prepared by UTM for the propose incinerator, it shows that the proposed site B does not fulfil the 500m buffer zone which is a requirement under the guidelines established by the Department of Environment (DOE). For Options B1 and B2, the proposed plant is 91.78m and 56.93m respectively from the Jinjang Utara residential area (See Figure 3A and 3B below). At the same time, Options B1 and B2 are also only 76.72m and 112.4m from an existing Shell and Petronas Petrol stations.
The lack of this buffer zone would not only put at risk the residents in nearby Jinjang Utara but could potentially be hazardous to those who frequent the two nearby petrol stations. It was only in November 2013 that a fire broke out at the Tuas incinerator plant in Singapore. If the same happened in the WtE plant at the proposed site, which is next to a major highway (MRR2) and in a high population density area, the lives of many people would be put at risk.

In addition, according to the KL Draft City Plan 2020, the propose WtE site also overlaps with future planned residential areas in the vicinity (Figure 5 below).

Figure 3A: Option B1 on Proposed Location Site

Figure 3B: Option B2 on Proposed Location Site

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Figure 4: Overlap between Site Option B and Future Residential Planning

Source: Draft Kuala Lumpur City Plan 2020

Figure 8-20: Future Residential Planning on Site Option B
7) The Minister has not even solved the environmental pollution arising from the non-functioning leachate treatment plant at the Waste Transfer Station in Taman Beringin and at the former landfill in Taman Wahyu

Every waste transfer station is supposed to have a functioning leachate treatment plant to treat the waste water that is produced when the waste is compressed and transferred from the smaller garbage trucks to the bigger garbage trucks before the waste is taken to the sanitary landfill.

During a site visit on the 30th of June, 2014, 4 water samples from around the Taman Beringin waste transfer station and the former landfill site at Taman Nanyang were taken for testing by an independent lab. I found that the leachate treatment plant at both sites were not working. The water that was being discharged at the discharge point at Taman Beringin and Taman Nanyang was black in colour and foul smelling. Not surprisingly, the results from the lab found that

The COD measurement for sample W2 outside the Taman Beringin WTS was 800, four times more than the DOE limit. The level of Arsenic for sample W3 outside Taman Nanyang was at 0.7, seven times the DOE limit. The Colour (ADMI) value for sample W2 was 448, more than twice the DOE limit. The measurement for W3 was 7500, which is 37 times the DOE limit. The Ammoniacal Nitrogen (or ammonia level) measurement for sample W2 was 37.1, almost twice the DOE limit of 20. The same measurement for W3 was 412.7, more than 20 times the DOE limit. 20

Table 1: Water Quality Measurements that are not compliant with DOE standards

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Sample W1</th>
<th>Sample W2</th>
<th>Sample W3</th>
<th>Standard B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Oxygen Demand (COD), mg/L</td>
<td>48</td>
<td>800</td>
<td>740</td>
<td>200</td>
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<tr>
<td>Biological Oxygen Demand (BOD), mg/L</td>
<td>5</td>
<td>90</td>
<td>80</td>
<td>50</td>
</tr>
<tr>
<td>Total Suspended Solids (TSS), mg/L</td>
<td>9</td>
<td>171</td>
<td>8</td>
<td>100</td>
</tr>
<tr>
<td>Arsenic, mg/L</td>
<td>0.05</td>
<td>0.06</td>
<td>0.70</td>
<td>0.10</td>
</tr>
<tr>
<td>Fluoride</td>
<td>1.2</td>
<td>8.0</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Colour (ADMI)</td>
<td>26</td>
<td>448</td>
<td>7500</td>
<td>200</td>
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<tr>
<td>Ammoniacal Nitrogen, mg/L</td>
<td>6.7</td>
<td>37.1</td>
<td>412.7</td>
<td>20</td>
</tr>
</tbody>
</table>

(Measurements in BOLD are over DOE Standard B)

Note: (1) Taman Beringin leachate treatment plant discharge point (2) Taman Nanyang former unsanitary landfill discharge point

More than one month later, on August 10th, when I revisited the site together with residents and reporters, the situation was unchanged (See photos from Figure 5). After I made a press statement and sent the lab results to the Department of Environment, Kuala Lumpur, I was informed that the DoE will take action against the operators of the leachate treatment plant and the Waste Transfer Station and to ensure that the waste water is properly treated before it is discharged into the nearby river (give reference and screenshot of letter from DOE).

Figure 5: Pictures from the Taman Nanyang and Taman Beringin discharge points

Water Sampling at the Taman Nanyang discharge point (30 June 2014)

Bad smells and black water at the Taman Beringin discharge point (10 August 2014)

But sadly, 3 months later, in November 2014, the situation at the Taman Beringin transfer station and the Taman Nanyang leachate treatment plant have not gotten any better (See photos in Figure 6 below).

Figure 6: Photos from Taman Nanyang and Taman Beringin taken on the 1st of November 2014
Discharge from the Taman Nanyang former unsanitary landfill

Discharge from the Taman Beringin Waste Transfer Station
If the Ministry cannot even ensure that the environmental standards at the current waste transfer station are in accordance to DOE standards, how can the public be reassured that the standards for the proposed incinerator will be any better?

8) The Minister has not solved the problems of the poorly functioning incinerator in Pangkor

In a visit to the Pulau Pangkor incinerator on the 15th of September 2014, the NGO which has been speaking out against the incinerator at Taman Beringin – Kami Taknak Insinerator (KTI) – together with elected representatives including the MP for Lumut Laksaman Imran Abdul Hamid and the ADUN for Pantai Remis Wong May Ing found the incinerator site to be poorly managed. Rubbish that was collected was not properly kept and there was no indication that the burning of the rubbish was well monitored and supervised. The smell of the entire site including in the control room was terrible and maggots were found to be feeding on the organic waste in the incinerator compound (See photos in Figure 7 below)

Figure 7: Photos taken from the Pangkor Incinerator visit on the 15th of September 2014

Mountains of trash piling up at the incinerator site

Unsorted rubbish inside the incinerator compound
Maggots in the drains outside the incinerator facility

What is more astounding is the fact that the new tender for operating the incinerator in Pangkor was awarded to XCN technology in April 2014 at a cost of RM3.56 million for 36 months (see Figure 8 below) even though there was ample proof from the pictures above as well as from the National Audit Report 2012 that XCN had failed time and time again to properly run the Pangkor incinerator.

Figure 8: Tender result for the operation of the Pulau Pangkor incinerator
9) The Minister has filed to provide assurance that the proper environmental enforcement mechanisms are in place to monitor the discharge of poisonous gases including dioxins and furans.

The National Solid Waste Department (NSWD) has tried to reassure the public via a special website on Waste-to-Energy (WtE) plants that the level of dioxins and furans as well as other air pollutants will be carefully and strictly monitored.21 This website even quoted the statistic that the dioxin levels at the Pangkor incinerator was 0.011ng TEQ/Nm3 in 2012 and 0.007ng TEQ/Nm3 in 2013, far below the international safe standard of 0.1ng TEQ/Nm3.

Given the current and past operating conditions of the Pangkor incinerator, it is hard to imagine that the dioxin and furan emissions were strictly monitored and measured especially since the other more obvious environmental issues such as the management of rubbish within and without the incinerator facility was atrocious and definitely not complaint with DOE standards.

In addition, the dioxin and furan measurements for the Kualiti Alam toxic or scheduled waste incinerator in Bukit Nenas, Negeri Sembilan, was not even reported in its yearly Environmental Sustainability even though the Deputy Minister said that the level of dixoins and furans are supposed to be monitored and measured on a monthly basis.22 (See Figure 9 below)

Figure 9: Stack Emissions Monitoring Results from UEM Enviro’s 2012 Environmental Sustainability Report - No measurement of dioxins and furans listed

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Given the track record of the government, can we really take the word of the Minister that the levels of air pollutants including dioxins and furans will be correctly and regularly measured and monitored?

10) The Minister has failed to make any progress on the recycling facility in KL

Under the KL Draft Plan 2020, two sites – Taman Lindungan Melati and Chan Sow Lin – were identified as sites for recycling center facilities while Taman Beringin was identified as a site for an incinerator (See Figure 10 below).

Figure 10: Sites for Recycling Center Facilities as well as an Incinerator in the KL Draft Plan 2020

Under the Greater KL / Klang Valley National Key Economic Area (NKEA), which is part of the Economic Transformation Program (ETP), apart from the proposed incinerator in Kepong, it also proposed the building of a Anaerobic Digestion plant in Sungai Besi (which is probably the Chan Sow Lin site in the KL Draft Plan 2020). However, according to the 2013 Annual Report for the ETP, this project has been delayed because of land related issues (See Figure 11 below)

Figure 11: Announcement of the delay to the Anaerobic Digestion plant in Sungai Besi

ETP 2013 Annual Report (pg. 39)
Why is it that the government is so keen to move so fast to build the incinerator plant but seems to be moving at a snail’s pace in building the proposed recycling center facilities at the two locations identified in the KL Draft Plan 2020? Why not build the recycling center facilities first to see how much waste can be reduced before deciding whether there is a need for an incinerator? The Minister and his Ministry clearly has their priorities wrong.

I will be raising most or all of these issues in next week’s budget debate for the Ministry of Urban-Well Being, Housing and Local Government. Hopefully, the Minister can convince me and the rest of the Malaysian public that what I’ve just outlined above is not true and that his word on the proposed incinerator in Taman Beringin, Kepong, can be believed.