

## MINUTES OF THE MEETING

National Meeting for the Project "Management of Mercury and Mercury-Containing Waste"  
EMB-AQMTC Training Room  
16 February 2010

### A. Attendance

1. Alan C. Dinampo	-	PCAPI-VII
2. Dr. Eva S. Ocfemia	-	EMB-V
3. Ana Trinidad F. Rivera	-	EOHO-NCDPC-DOH
4. Michael S. Yu	-	Mabuhay Vinyl Corporation
5. Edwin A. Inciong	-	OH NAP
6. Tony H. Dizon	-	Eco-Waste Coalition
7. Melchor J. Vallecer Jr.	-	JORM
8. Mariano Desquitado	-	JES
9. Marietta V. Gomez	-	DOE
10. Raquel S. Hulinganga	-	DOE
11. Rodolfo	-	NCDPC-DOH
12. Ester A. Olivares	-	EMB-XIII
13. Alan B. de Gala	-	EMB- IX
14. Edgardo A. Alpay	-	Green planet Mgt., Inc.
15. Juvy P. Serafin	-	NSWMC
16. Teresita A. Tagorda	-	EMB- XI
17. Jenny S. Chua	-	Ecotech
18. Jennifer B. Vergara	-	Ecotech
19. Angelita T. Brabante	-	EMB-CO
20. Gilbert Q. Maximo	-	EMB-CO
21. Engr. Jose Barsaca	-	PHC
22. Mary Grace A. Kayanan	-	PHC
23. Gabbie C. Agarrado	-	Ban Toxics
24. Votaire M. Alba	-	BOI
25. Florencio Dominguez	-	EMB-CO
26. Florence V. Velasquez	-	EMB-NCR
27. Marissa Malabana	-	EMB-IV A
28. Karen A. Arago	-	San Lazaro Hospital
29. Ma Elena P. Cimagala	-	San Lazaro Hospital
30. Faye V. Ferrer	-	Healthcare Without Harm
31. Lloly V. de Jesus	-	Innogy Solutions
32. Dr. Emmanuel Centeno	-	PDA
33. Katrina Teodoro	-	Innogy Solutions
34. Nelia S. Granadillos	-	OSCH
35. Lily M. Baltazar	-	EMB-NCR
36. Arni N. Valdes	-	Dolomatrix Phils.
37. Kyla S. Matias	-	Dolomatrix Phils.
38. Marilou P. Avenido	-	Dolomatrix Phils.

39. Noel N. Valdes	-	Dolomatrix Phils.
40. Alex A. Villaraiz	-	Solvtech Consultancy Resources
41. Nellita A. Villaraiz	-	Solvtech Consultancy Resources
42. Juan Miguel B. Fuentes	-	CDC
43. Solon Rativo	-	EMB-CO
44. J. Salvador T. Passe, Jr.	-	EMB-CO
45. Edwin Romel Navaluna	-	EMB-CO
46. Irvin G. Cadavona	-	EMB-CO
47. Leonie H. Ruiz	-	EMB-CO
48. Geri Geronimo R. Sanez	-	EMB-CO

### *B. Highlights of Meeting*

1. Geri specifically mentioned PELMAT which I am the Board of Director. The main output that we have in PELMAT that would be relevant to the project is a policy study that was made by INNOGY through Lloly de Jesus on Lamp Waste Management. We all know that all fluorescent Lamps contain mercury. On the policy study, it contains all the relevant statistics to add to the contemporary data we have for mercury. But more than that, since PELMAT is closing down this year, the DOE also embarked on a new project which we call the Philippine Energy Efficiency Project and I think somehow you have heard that one of the components of this project is the distribution of 30 Million compact fluorescent lamps (CFLs) all over the country. Part of the component of the PEEP, as we call it, Lamp Waste Management Program. Under this program, we intend to put up a Lamp Waste Management Facility wherein we intend to recover fully the mercury from lamp waste. We are also partnering with Dolomatrix, they will be providing the management for that facility. Maybe towards the end of this year, the facility would be operational, we are just finalizing the Terms of Reference (TOR). When it comes to the procurement, that is standard but the challenge lies on how to make it work because we intend to make this a model for the rest of the country since this facility can only address about 6 million lamps out of the vast number that we have in the country. For the linear only, that doesn't include the CFLs, there about 25 million fluorescent lamps. The challenge in making this a viable business opportunity for investors because under this project we will be working it for 2 years, we intend to devolve it to the private sector for the application on the other parts of the country. We need to create a good collection system, there are models all around the globe, Italy for example. We also intend to coordinate with the Lighting Industry Association as well so that the recovered mercury can be reuse in the manufacture of lamps. Right now, what we are asking from EMB, particularly the policy to implement the EPR and also for those who are interested in working with us so that their mercury concerns could be addressed as long as our equipment can treat it. (R. Hulinganga)
2. Thank you for that ma'am. The reason why we convened this is to harmonize activities from other agencies. Our apologies for not involving you, we don't really know, whom to write to because this is small pockets of consultancy. We ensure that we will not fail to invite you this year on mercury. We are looking on the end goal, as part of this project output. We don't want to waste the funds and everything, I hope and maybe in the end of June or prior to convening another meeting just to update ourselves. By the time maybe, I can share what has happened during the Extraordinary Conference of the Parties since mercury is one of the main concern. Whatever will be the result of

this meeting, it will be a good discussion points or information that if ever there will be questions I have something to share in this particular conference from the Philippines. (G. Sanez)

### 3. Workshop Output of Group I:

We are tasked to identify sources of Mercury in the Philippines and then we prioritize the sources and the sectors. We choose actually, five sectors and sources. First is the primary virgin metal production, extraction and used of fuel and energy resources, other intentional use, waste water, consumer products with intentional use of mercury in industrial processes. We have data on your associated Mercury Action Plan for the Philippines page 1. We have that table wherein the percentage is indicated. We can see that primary virgin metal productions in terms of emissions is contributing 32%, extraction 20%, industrial and other intentional use 20%, waste water has 13% and consumer products with intentional uses of mercury in industrial processes, 10%. And then we identified the nine criteria. First is the opportunity for outreach, awareness training and then the estimated quantities from sources and then the comparative health risks which is both the environmental and the health, the organizational capacity which include the technical, organizational and the financial capability of the organization and then the willingness of the sector to implement and barriers of implementation. The next is the possibility of institutionalizing the legal framework and cost effectiveness. The other one is the priorities in the National Poverty Reduction Strategies or the National Development Plan. So what we did is to rate this five sources and we observe that they are all passing this criteria we have identified. So, how can we then prioritize the sources? What we did is to rank the different sources. The first is the primary virgin metal production mining because we can do a lot here. Second is the consumer because there are so many consumers that if we think of this area as to be included in the plan we can be in success here. Third is the unintentional use because this is negligible or it is easy to do. There are policies/regulations/speculations here that are strictly implemented however there are just some that are not covered so we place it as number four. We have place coal as number five because we have a very high demand for coal as an energy fuel and as you will note our capacity for coal energy fuel is really big and besides coal is not an expensive fuel and it is widely use internationally and locally and there are already clean coal technologies that we can use. Something like, we can reduce capacity that will greatly affect us, or we can go without more or less electric power generating capacity unless there are substitute energy fuels that will come in, maybe we can do something here. That's all for Group 1. (M. Gomez)

### 4. Workshop Output of Group II:

We focused on the mercury waste material either air, water or solid waste sources. We have also medical and dental waste, next is lamp waste, emissions, industrial facilities, crematoria etc. Waste water which includes brine water from geothermal exploration, laboratory waste waters and other industrial sources and then those industrial liquid level controls such as pressure gauges. We follow the format on the identified opportunities for waste minimization or prevention on how we eliminate this material so that there will be no waste, if we cannot eliminate them, shall we replace them with a more environmentally friendly material. If we cannot eliminate or replace them how can we control them? And then if you have residuals, how do we collect, store and dispose it properly. For all sources, this is the identified action plan, national law for mercury management coming from the healthcare. Strengthen IEC, today we commemorate what has happened to St. Andrews School, we also have Mercury Awareness Day every February 16. Each type of waste we identify

options as part of finalizing the action plan, one is the detailed inventory of medical and dental waste, although the AO 21 of DOH already provided guidance on how to do this and also as part of the preparatory document for the small quantity project, there will be data on the amount of medical or dental waste, however we thought that there's still a need to conduct a detailed inventory. Why do we need a detailed inventory for coming up with an action plan? You cannot have a very effective action or collection system or control system if you do not know how much waste you have. We also need to characterize mercury, as mentioned in the medical or dental waste it has different apparatus and component but in what form and shape, how can we treat and store them, I think it has different sizes and shapes. We are an archipelagic country, we have limited space and so we cannot continue storing. The other one is the long term storage option which I would like to clarify whether the policy of our government is no recovery or recycling from medical or dental waste containing mercury as such the remaining would be long term storage. For lamp waste, implement EPR, establish collection system that will work for the country. Permitting during transport, for example the medical waste at the heart center will be brought in a centralized storage facility, is there a need for a transport permit? To facilitate the ease of transport, is there a possibility of having a transport agreement that you would not get a transport permit in every transport activity that you would have, so those are the scheme being discussed. And then support to the amendment of RA 6969 at the senate. Now for the emissions on the industrial facilities, it has a clearer enforcement, except it is not that stringent on the monitoring of mercury from air emissions so that, we mainly focused on the emissions on the suspended particulates, SO<sub>2</sub> and O<sub>2</sub>. Regular monitoring of mercury emissions should be enforced so that we will be able to know the actual mercury present from industry emissions. Another is crematoria sources, do we require them with air pollution control device? (L.de Jesus)

5. There's a ruling on the Supreme Court that there is no absolute ban of incineration. If you can invest on the state of the art pollution control technology then incineration is not banned. So that is understatement because you will really spend too much money for that. (G. Sanéz)
6. Establishing acceptance criteria for the corpse. Can you suggest what we can do? (L. de Jesus)
7. You have seen in the presentation that there are two ways of spreading mercury, its either you vaporize it or you leach it in the groundwater. So in the issue of crematorium if there is only one tooth having contaminated with mercury, its either you pull it or place it in a receptacle. You are going to bury the receptacle provided that the container will not corrode for a long time because this will still leach into the ground. So those are the judgment calls or pragmatic decisions that we need to do in instituting a policy. The consciousness on mercury have grown and some of individuals who have fillings wanted to take it out. The exposure of mercury to dentist and to patients has increased because of the risk of releasing the vapor adding insult to injury. (G. Sanéz)
8. For the wastewater we already have an existing system that addresses it, the Clean Water Act. The industries, although this is easy to control once the government agrees, all we need is the time frame to totally ban because we already have a replacement like the gauges which is now digital. We have to be ready because these are big equipments. This is also an additional input to the CCO for mercury. If you are going to ban it you must also have an inventory so that you will be able to know the cost is needed for its final disposal, either storage or treatment. (L. de Jesus)

9. Thank you very much. At least we now have an idea on what we will do with mercury just like PCB. Rest assured that we are looking forward for a very successful implementation and operation of that destruction facility. In mercury, we can see that manometer is the bulk and it is also elemental. As I have presented this morning, what we are expecting is the strategic action plan. Is it storage only or final disposal? Would it be local or we ship it out? What would be the valuation that it is effective strategy in the action plan? (G. Sanéz)
10. We would just like to tell you that we have added the lead agencies and if you can see, its DENR-EMB and DOE coming in for the consumer products with intentional use of mercury because lamps are included here. (M. Gomez)
11. I just want to clarify the less opportunity passed regarding the extended producers responsibility. Its intention is to ask the importers of the lamps to be responsible for the cost that it will take to address the management of this lamp waste. We are going to impose an environmental fee and from there, the charges also present for the treatment and also certain amount for the motivation for people from the household sector to bring it to the junkshops and they get 50 centavos out of that and then the EPR of that will take care of that. (R. Hulinganga)
12. When you value something we must know the impact to the policy. Ones you dispose lamps, who will initially release the fund? Is it the government? Those are the things that needs to be detailed or what are the strategies. The idea is very bright but what we need is the doable and workable strategy. (G. Sanéz)
13. On the fluorescent, there is a need to strengthen the proper waste segregation just like Eco-waste. (G. Agarrado)
14. That's why we invited a representative from the Solid Waste Commission, there must be face and face out from RA 9003 to RA 6969. Today we are strengthening and intensifying the operation of MRF but who will and register and pay for the waste collected in the MRF? It will boil down into the economics of disposing something. There is no business as free in which you did not spend money. Should every house register as hazardous waste generator? Those are the issues and please help me finding answers to the strategies, that's why we have an action plan. (G. Sanéz)
15. Since we are in the topic of legislation, the groups presented earlier, as part of the action plan are the national legislations, particularly from our organization we would also like to bring out the

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