TECHNICAL AND FINANCIAL REPORT FOR EUROPEAN ENVIRONMENTAL BUREAU

A REPORT OF LOCAL, NATIONAL, REGIONAL AND INTERNATIONAL ACTIVITIES IN ADDRESSING THE MERCURY CHALLENGES FACING SOUTH AFRICA

PHASE THREE REPORTING

Written: Euripides Euripidou (Rico)
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Background

Following the first phase of EEB mercury funded activities, groundWork undertook a variety of activities during Phase II aiming to try better understand the extent of mercury activities and pollution in South Africa, and, to better assess the impact of these mercury on the South African public. A number of specific activities were defined and initiated in order to achieve this goal (and these are outlined in the Phase II final report), however some of these activities were ongoing and not completed. In order to achieve this goal a more proactive "hands on" approach was required involving actual mercury activities to better assess and address the mercury situation in South Africa.

Summary

The groundWork Phase I Proposal recognised that the awareness of the general public on mercury issues in South Africa is generally poor. groundWork had previously been working with hospitals and civil society organisations and the public to inform their thinking on waste management and the dangers of mercury in hospitals. However the state environmental regulator the DEAT (The Department of Environment and Tourism) were found to have limited understanding of mercury impact on public health in South Africa beyond the Thor Chemicals incident.

Furthermore the historical Thor chemicals mercury stockpile and clean up incident had still not been addressed by the end of the Phase II reporting period, and, an environmentally sound disposal process had still not been undertaken by the South African regulator (DEAT)

UNEP COMTRADE date shows that there are many anomalies in reporting mercury exports to and from South Africa indicating that mercury flows into Southern Africa from South Africa where it is probably used in the ASM sector.

The South African Mercury Assessment Program has now reached a stage of maturity and regular participation from a broad range of stakeholders which will allow us to make better judgements in reducing mercury releases and emissions in South Africa.

The National Department of Health are also now in a better position to assess the potential risk from mercury containing measuring devices.

Table I below outlines the activities and actions that were identified to meet the challenge of addressing knowledge gaps in the South African context. The following is a report for the EEB/GroundWork Phase III Mercy Research Project.

Table 1: Summary of groundwork/EEB mercury Phase III activities for period 1/11/06 - 31/11/07

	Activity	Actions	Deliverables
1	Lobby the DEAT to be more proactive on a position on mercury in South Africa	A1: Lobby for mercury activities to be included South African National Chemical Profile prepared by the Department of Environment and Tourism (DEAT) as a priority pollutant with priority actions. A2: Lobby the DEAT's to take a more proactive role in mercury assessment in South Africa A3: Engage with the DEAT to identify and determine priority activities for mercury assessment for South Africa	D1 short report on, activities, amendment to the South African National Chemical Profile D2 & D3 organise a meeting with DEAT, write a short report on outcomes
2	Participate in the South African Mercury Assessment Program (SAMA) Steering Committee	A1: Initiate discussions/activities on the phase out of mercury containing measuring devices in state hospitals with the Department of Health A2: Initiate discussions/activities on the phase out of mercury containing measuring devices in private hospitals with the Hospital managers under the SAMA program A3: Initiate discussions/activities on the phase in of cleaner coal combustion technologies in coal fired power stations and cement works under the SAMA program to reduce mercury emissions A4: Assess and track legislative processes on mercury in South and Southern Africa	D1 Report on mercury phase out activities D2 Report on proposed activities D3 Report on proposed activities D4 Report on proposed activities D5: Review and critique standards for air, water, land
3	Quantify and assess mercury imports into South Africa	A1: Determine mercury imports into and exports from South Africa and how these are distributed and used	D1 Report on SA mercury imports/exports
4	Follow up Thor Chemicals process	A1: Evaluate/assess disposal options A2: Undertake Conceptual Site Model (CSM) of the facility and health risk assessment (potential) of the residents nearby. This will be a conceptual risk assessment hypothesizing linkages between sources of pollution, the pathways they might potentially follow and the receptors they may potentially affect – if there is any chance these linkages are complete we will notify and lobby the regulator to take action and investigate these in depth (taking samples etc.)	D1 report from Thor study –disposal options and CSM health assessments
5	Follow up groundWork greening hospitals project and assess mercury and health care waste management in these 2 hospitals	A1: Follow up and report what phase out activities related to mercury have taken place in these hospitals A2: Lobby DoH for National Policy on mercury in health care phase out	D1 Report on procurement policies, phase out activities D2 Report on status of mercury

			equipment use in health care
6	Track and make comments on Environmental Impact Assessments (EIA's) for proposed coal fired power stations and push for better abatement technologies, monitoring, evaluation and regulation.	A1: Lobby the regulator for inclusion of mercury in the EIA process A2: Ensure that South Africa includes an ambient standard for mercury A3: Review BAT for mercury emissions abatement and monitoring A4: Lobby for BAT mercury emissions monitoring and abatement in coal fired power stations a d cement works	D1 Review coal fired power stations EIA's and submit comments to DEAT authorities. D2 Lobby Environ. Ministry (DEAT) for mercury to be listed as a priority pollutant with an Air Quality standard D3 Report on BAT in coal power stations and letter to regulator/ DEAT
7	Design, print and distribute mercury spill and cleanup brochure for hospitals	A1: Adapt existing material for the South African setting (context and translation) A2: Distribute these to all infection control nurses and hospital waste departments in South Africa.	D1 brochure
8	Provincial Hospital waste disposal survey	A1: Survey selected state and private hospitals in the province and determine whether hospitals still dispose spilt mercury in their sharps containers and whether most of this is destined for incinerators	D1 short report from hospital survey
9	Track and contribute to global / European mercury campaigns	A1: Attend international mercury meetings and co-ordinate activities with Zero Mercury WG - UNEP AHOEWG meeting in November (Bangkok) - Others	D1 Short report of international mercury activities

Additional activities following on from phase II

1. Reprint and distribute Hospital waste brochure

2. Follow up of the survey to Local authorities on disposal and collection facilities…etc.

3. Follow up and attend chemical safety processes and focal points in South Africa and abroad (SAICM/WHO/UNEP e.g. Dubai preparatory activities for special sessions, Basel and UNEP AHOEWG on mercury etc.

4. Generally keep track of and follow up work on capacity building on NGO's in SA (or Africa) working on mercury issues

5. Contribution to the global / European mercury campaigns by:
    - Attending international meeting and highlighting and lobbying for global mercury ban.

    - Lobbying politicians when necessary to put pressure for limited and safer mercury trade, use, storage, and standards

Activity 1: Lobby the DEAT to be more proactive on a position on mercury in South Africa

Generally the DEAT have not been very proactive in identifying South African mercury activities even though their, Chief Director Alf Wills, (Directorate: International Cooperation) was present at the 24th Session of the Governing Council in Nairobi, February 2007 to negotiate South Africa's position on mercury priorities and a Legally Binding Instrument. Instead they appear to be focussing on developing National Policy that would in fact be contrary to the agreed outputs following the GC24 meeting.

Since 2005 the consolidated cement industry have undertaken and submitted EIA applications to the relevant Provincial Environmental Departments to seek authorisation for the use of general and/or hazardous waste as alternative fuel source in cement kilns to bring down their operating costs. Although this concept of waste treatment/destruction in cement kilns has been contemplated in South Africa by the cement industry and government alike over the past 5 years or so, no formal position regarding government's support thereof, or not, as an alternative waste management option has been formalised. In response the DEAT have since February 2007 embarked on a project to develop a national policy framework on (i) the high temperature thermal treatment of waste in general, and (ii) the use of selected waste streams as alternative fuels and raw materials in cement kilns.

The projects aim is to enable informed decision-making around the proposed use of alternative fuels in cement kilns, and the high temperature thermal treatment/destruction of general and hazardous waste. Accordingly, the project includes the following main objectives:

- Development of a national policy statement on general and hazardous waste treatment / destruction through high temperature thermal technologies, in consultation with all stakeholders;
- Development of a detailed, technical sector guideline specific to the use of selected general and hazardous waste streams as alternative fuels or raw materials (AFRs) in cement kilns, in line with the above policy;
- Providing technical support and comments to provincial environmental departments through the joint review and consideration of current EIA applications for the use of AFRs in cement kilns; and
- Development of detailed technical and procedural EIA review guidelines for applications for the use of AFRs in cement kilns and similar technologies, as relevant/applicable based on the outcome of the policy development process.

groundWork have systematically opposed this process and highlighted among other concerns the current and possible future emission of mercury arising from these installations. **Appendix A** includes details of comments and further questions for the Environmental Impact Assessment Process for the proposed Secondary Materials Co-Processing Programme – Pretoria Portland Cement, at the Hercules plant in Pretoria and illustrates groundwork's activities addressing anthropogenic mercury emissions arising from cement kilns. In addition to this EIA 11 additional cement facilities have submitted EIA for a Secondary Materials Co-Processing Programme

The South African National Chemical Profile which was prepared by the DEAT has not been amended since the first draft edition was published in 2005. This document generally fails to meaningfully address heavy metals and all references to mercury are only in passing and do not relate to any meaningful specific issues on chemical safety. The DEAT plan to update this but have not committed to a specific time, however, once they do begin this process groundWork have committed themselves to provide technical expertise in this regard.

Activity 2: Participate in the South African Mercury Assessment Program (SAMA) Steering Committee

The South African Mercury Assessment Programme (SAMA) is now up and running and the Executive Steering Committee have met in 2007 on a quarterly basis. The program is still being coordinated by the Council for Scientific and Industrial Research (CSIR), however the DEAT are one of the participating organisations on the Executive Steering Committee and one of the main program objectives is to hand over the project to the DEAT. Through this process we are engaging with the DEAT to identify and determine priority activities for mercury assessment for South Africa.

SAMA have identified the following objectives as priorities in the South African context including:

"Research coordination and facilitation relating to:

- Sources of mercury pollution;
- The biogeochemistry, speciation, fate, and transport (cycling) of mercury in the environment;
- The impacts of mercury on aquatic and terrestrial ecosystems;
- Human health risks linked to mercury; and
- Mercury emission mitigation options.

Progress on current SAMA Activities

1. SAMA will contribute a chapter to the UNEP Fate and Transport activities and report to the UNEP Governing Council focussing on "new data obtained" on Hg-related research being undertaken in South Africa. This chapter should include: coal combustion data from power plants, cement industry, and medical waste incineration.

2. The USEPA have requested SAMA's input regarding "critical" research to be undertaken in South Africa. This will include training and technology exchange in the following areas:
   - Analytical Methods in Hg Detection, including
   - Training Methods and Sampling of Atmospheric Hg.

3. Hg Inventory: CSIR are currently developing a Hg inventory. A peer-reviewed publication will ensue from this research.
   - Atmospheric Hg emissions: University of Connecticut shipped an automatic air sampler to South Africa. The air sampler is based at the CSIR in Pretoria. However, the equipment needs repair. This has set the group back in terms of air sampling. CSIR hopes to sample air during November 2007.

   - National Survey of Hg in Water Resources of SA: CSIR undertook a survey of water resources in eight (8) Water Management Areas in South Africa during June-July 2007. Prof. Robert Mason and his students visited South Africa during this time. Samples of water, sediment and biota were collected as part of the survey. This project forms part of a WRC funded project, and has an MSc student registered.

4. Industry activities on emissions from combustion sources research
    - A publication is being prepared in partnership with ESKOM. The paper focuses on coal combustion and Hg emissions from stacks.
    - SASOL is busy setting up their Hg laboratory.
    - Industry (SASOL, ESKOM and Cement) to explore the possibility of entering into a cleaner coal combustion partnership with the USEPA and IEA – facilitated by groundWork.

5. WITS University Activities on Developing Analytical Capacity
    - Chemical – Gold electrode is ready to measure THg (ppt/ppb levels)
    - Capillary zone electrophoresis is ready, but needs to be optimized. Measures at the *ppt* level.
    - Gold Applications: uses metal-oxide → traps Hg
    - Proposals: Submitted a SANERI proposal to measure trace metals in coals in South Africa. Mercury is one of the metals.
    - Presented feedback on the Coal Forum.
    - Overall, research in the Hg field is going well at Wits.

6. SA Customs and Excise program to assess mercury imports and exports
    - SAMA to engage with the SA Customs and Excise to investigate mercury flows

See the SAMA Programme website for more details: www.waternet.co.za/samercury

7. First Southern African Regional Cooperative Mercury Conference

    groundWork in conjunction with Health Care Without Harm[1] and UNEP successfully hosted the third UNEP Chemicals sponsored Regional Mercury conference which was held in Johannesburg from the 24th to the 26th of October 2007. This conference builds on the previous regional cooperative workshops held in Manila and Buenos Aires organized by HCWH in association with UNEP Chemicals in 2006[2].

    The key feature of this workshop was to raise awareness of the inherent environmental, community and occupational dangers of mercury and provide delegates with appropriate information and to develop a strategy to reduce the and ultimately phase out mercury use in the health care sector.

    85 delegates from various institutions including physicians, nurses (occupational and infection control), health care specialists from the private and public sector of different positions, microbiologists, nursing unions from the SADC, East African and West African region registering for the three day big event which was held in Kempton Park in Johannesburg.

    The conference was opened by Dr. Aquina Thulare, the Secretary General and Chief Executive Officer of the South African Medical Association, a national Association and trade union of medical doctors in South Africa.

[1] **Health Care Without Harm** is an international coalition of over 460 organizations in more than 50 countries, working to transform the health care sector so it is no longer a source of harm to people and the environment. http://www.noharm.org

[2] http://www.mercuryfreehealthcare.org/

She began her presentation by stating that mercury is an occupational and environmental menace that is widespread in our environment. Importantly she said that "as an affiliate of the World Medical Association, and the World Medical Association Africa Region, we are part of a global network of millions of doctors who aspire to notions of ethics in medicine, practiced to ensure that we do not harm our patients and communities. In keeping with the Hippocratic Oath that states: "first, do no harm," doctors, dentists, nurses and other health workers must be frontline advocates of mercury-use reduction and elimination to make health-care practices safer to human health and the environment".

Speakers from various countries including Argentina, Botswana, Nigeria, Tanzania, the Philippines, the United States, Sweden, India and South African gave a global overview of mercury in health care and the move towards safer alternatives in health care settings over the next two days. The third day focussed on alternatives and the dangers of incinerating health care waste.

Conference highlight
It was promising and encouraging to hear Jabu Nene, former Head of infection control at Ngwelezane Hospital in rural KwaZulu Natal and long term advocate for improved waste management in KZN, announce "We are already mercury free at Ngwelezane and I hope this gathering gives others confidence and evidence to move towards mercury free health care". Ngwelezane is one of the two model hospitals that were identified for greening by groundWork in 2002 to ensure that their health care waste is properly managed and disposed. They were also assisted to put waste minimization and segregation in place. Sr. Nene even added that "it was a breakthrough for them to actually switch to the digital thermometers as the mercury ones were breaking everyday".

See the conference website http://www.mercuryfreehealthcare.org/ for the:

- Conference agenda
- Delegate declaration
- Conference presentations
- Working group outcomes
- Conference proceedings and press

8. The phase out of mercury containing measuring devices in state hospitals with the Department of Health

Prior to the Southern African Regional Mercury Conference groundWork lobbied and submitted a motivation to the National Department of Health Directorate of Health Technology highlighting our concerns around the use of mercury containing equipment in the health care sector justifying the need to move towards mercury free alternatives. **Appendix 2 and the associated Annex 1 to 5** details this activity. Following the mercury conference groundWork will assist the National Department of Health Directorate of Health Technology develop policy advising the remaining South African provincial state health facilities to move towards mercury free alternative hospital equipment.

Activity 3: Quantify and assess mercury imports and exports into and from South Africa

Data from the Global Mercury Project assessments of mercury trade show that between 2000 and 2004 South Africa imported 59438 Kg and exported 80849 kilograms of mercury. Most of the imported mercury comes from the Netherlands (36186 Kg), however South Africa only reported receiving 5608 Kg from the Netherlands.

South Africa reported total exports of 80849 Kg of mercury between 2000 and 2004. These exports are reported destined for Southern African destinations such as Namibia, Botswana, Zimbabwe, Swaziland, Congo, Mozambique, Zambia, Lesotho and India among others. 45859 Kg was reportedly exported to Saudi Arabia in 2001 and 165 031 Kg and 71 753 Kg was reported to be received by Botswana in 2000 and 2001 respectively.

Trade flows of mercury between SADC countries do not tally and correspond in terms of reporting exports and imports, which possibly indicates that South Africa acts as the port of entry for many SADC mercury imports. This also potentially indicates that mercury is traded legally and illegally in South Africa with possible cross border trafficking taking place into Southern African destinations.

There are serious gaps in our understanding of the trade flows of mercury into and out of South Africa, potentially as an import destination for much of the unregulated mercury destined for ASM in Southern Africa. In this regard much work can potentially be done in the form of a situational analysis to better quantify these trade flows, assess the sensitivity and effectiveness of the South African customs and excise systems (and Green Customs Initiative).

groundWork have had limited success in engaging with the South African Customs and Excise to assess mercury imports and exports into South Africa and the SADC region. We hope to make better progress in this regard using the SAMA programme to engage with the South African Customs and Excise to investigate mercury flows.

Activity 4: Follow up Thor Chemicals process

After 2 years of silence the Department of Environmental Affairs and Tourism (DEAT) notified all registered interested and affected parties (IAP) of a public meeting on the 8th September to report on the Environmental Impact Assessment (EIA) for the Waste Treatment, Waste Disposal and Decontamination at the Guernica Industrial Site (hereinafter referred to as Thor Chemicals), located at Cato Ridge, KwaZulu-Natal.

Surprisingly the reason for this public meeting was to notify IAP's that the DEAT initiated EIA being undertaken by SRK Consulting[3] was being closed and that a new EIA application will be initiated by Guernica Chemicals (Pty) Ltd in order to continue this process and address the need for remediation and disposal of mercury waste stockpiles.

SRK consulting were commissioned to prepare a detailed waste inventory to quantify, (within reasonable limits of accuracy) the amounts of waste materials on the site, and to classify these wastes in terms of their type and degree of mercury contamination. The following sub-objectives were identified and carried out:

- Develop and implement a waste classification system that will facilitate the efficient decontamination and treatment of the waste.
- Label the wastes appropriately to allow for efficient sorting and treatment.
- Chemically characterise the waste in sufficient detail to permit the selection of the most appropriate treatment option.
- Develop an accurate database of the wastes stored on the site, including those contained in warehouses and on the leach pad, but also eventually including buildings and soil.

The current situation following the SRK Investigation

Presently the waste at Thor Chemicals (stored on site) has just been inventoried and the waste types and quantities established and captured on a database linked to a barcode system. The total volume of waste stored on site is approximately 3 590m^3 and adds up to approximately 2 704 tons. The majority of the waste is catalyst and most of this is stored in a leach pad. SRK Consulting state that 79% of the waste cannot be linked to where it originated.

A total of 9 054 drums stored within the three warehouses have a total mass of 972 tons and a volume of 1 279 m^3. The different waste types have varying chemical compositions with the highest determined Hg content of 36 % in a sludge. The highest level of mercury in catalyst was 27 % from a Thor Chemicals catalyst sample. The extent of on-site soil contamination was determined previously and some 2150 m^3 above the EPA limit of 610 ppm.

The water in the Storm water dam and Earth dam did not contain any detectable Hg suggesting that negligible additional mercury is entering the storm water dam from on-site surface water run-off. Mercury levels in the sediment and water from the stream to the north of the site have improved since 2002. The Hg level in the plants along the stream is significantly higher than in the water and sediment, suggesting that the plants are taking up and accumulating mercury.

[3] The SRK Consulting reports containing the inventories and disposal option selection have been made available online (http://www.srk.co.za/publicdocuments.asp?projID=83).

SRK Treatment and Disposal Option Review
SRK then undertook a review and identified technical disposal options from the international literature based on the characterization of the waste described above. Much of the information within their report draws heavily from the US EPA and US Department of Energy reports of mercury treatment technologies[4].

Not surprisingly the main conclusion SRK Consulting draw in this regard is that the most preferred option for the waste stockpiled at the Thor site is mercury roasting and retorting – another name for incineration – which is the very same technology that got us to where we are in the first place.

Additionally in a dramatic twist of events the DEAT has decided to absolve themselves from the present situation and have decided that Thor Chemicals (Guernica) will now begin a new EIA process to assess Waste Treatment, Waste Disposal and Decontamination at the Guernica Industrial Site.

groundWork will continue to monitor the Thor Chemicals (Guernica) EIA process and evaluate/assess disposal options which are recommended in this regard.

A detailed report with a Thor Chemicals chronology of events is available in Appendix 3

[4] Treatment Technologies for Mercury in Soil, Waste, and Water
http://www.epa.gov/tio/download/remed/542r07003.pdf

Activity 5: Follow up groundWork greening hospitals project and assess mercury and health care waste management in these 2 hospitals

During April, 2007, the groundWork members of the medical waste management team visited Ngwelezane Hospital, which is one of the rural hospitals that was originally involved in groundWork's hospital greening and mercury phase out project. Our aim was to follow up on how they were managing their waste subsequent to the training and support that they received from us.

We met the infection control team, who remain very confident about their program of infection control. They are still using the groundWork manuals as their source of reference. Furthermore they had motivated for digital and electronic equipment to replace all their mercury containing items and that all their old stock which contained mercury was sent back to Wentworth Hospital, which is the Medico central division. Their hospital is now a mercury-free zone. We had a tour around the hospital and it was exciting to see that this hospital is working so hard to keep their standards high when it comes to infection control and waste management.

Each ward is segregating its waste and still using the colour coded bags to ensure that only the infectious waste goes to the private waste contractor Compass Waste. Ordinary waste gets collected daily by the municipality. They also have a routine ward in-service training program and daily inspections, however, when new staff come in, they do experience some challenges with waste sometimes getting mixed and being improperly managed.

The surrounding rural clinics however still do not have a consistent transportation of their waste because drivers get hi-jacked very often and, as a result, their waste sometimes remains on their sites for more than 48 hours, which then leads to waste being burnt in open pits. This is one of their biggest environmental and public health challenges, but they are currently trying to outsource collection of waste through inviting tenders so as to have waste collected routinely. In the near future, we plan to twin Ngwelezane hospital and its satellite support clinics with another hospital that is close to them. This will assist the infection control nurses and nursing managers to implement the same program.

Sadly, the same cannot be said for Edendale Hospital, the large 2000 bed urban hospital that was also originally involved in the hospital greening and mercury phase out project. Instead we identified some areas of regression regarding waste management practices. Medical waste was observed lying around in open spaces and some of their waste was getting incinerated on site. We now plan to reinitiate the Edendale program.

Activity 5 (A2): Lobby DoH for National Policy on mercury in health care phase out is detailed under Activity 2 with further described in Appendix 2 and the associated Annex 1 to 5.

Activity 6: Track and make comments on Environmental Impact Assessments (EIA's) for proposed coal fired power stations and push for better abatement technologies, monitoring, evaluation and regulation.

1. Mercury ambient air quality standard for South Africa

"Government Gazette No. 528 GG No. 28899 9th June 2006 identification of substances in ambient air and establishment of national standards for the permissible amount or concentration of each substance in ambient air" provided an opportunity to lobby for an ambient air quality standard on mercury. groundWork made the following submission in this regard:

"The establishment of a mercury ambient standard to protect public health is crucial in the context of South Africa's developing economy and expanding need for energy from coal fired power stations. The bioaccumulation of mercury in the food chain is extremely harmful to not only people living in the area of mercury emission sources but to the entire population. Mercury is very persistent in the environment, bio-accumulates and continues to be emitted without regulation from industrial sources. For these reasons the reduction of mercury and the need for ambient air standards is fundamental. New Zealand have promulgated an annual average standard of 0.33ug/m".

2. Eskom (South African Electricity Utility) 2006 Annual Report

In March 2007 Eskom asked an independent consultancy to arrange stakeholder meetings to understand stakeholder concerns around their activities. Mercury emissions are not acknowledged nor mentioned in the annual report and this gap was highlighted by groundWork:

- Eskom currently burns 119 113 (kt) of coal per annum (1kt = 1000t).
- SA is the world's 6th largest producer of coal, mining ~ 220Mt / year. Relatively poor coal used for combustion & gasification processes. When combusted, coal releases Hg which poses risk to human health
- Typically South African Highveld Coals contain 0.15 ± 0.05 mg Hg/kg (with little variation). Using this estimate Eskom released approximately 800kg of mercury into the atmosphere each year, with the potential to double in the next 7 years.
- Furthermore Eskom is planning a €15 Billion expansion to supply electricity to the Southern African region over the next 5 years. Eskom plans to generate an additional 22 000MW by 2017.

Following groundWork's interventions Eskom are now "considering the above and being cognisant of the potential severity of the risks it is important to properly assess the implications of Hg pollution for South Africa's ecosystem and human health". In response Eskom have committed themselves to quantifying mercury emissions for their 2007 Annual Report.

3. Mercury control through cleaner coal combustion in South Africa

groundWork through the SAMA programme are in the process of introducing Eskom and Sasol's participation in this UNEP, USEPA, IEA partnership and we have already initiated preliminary discussions with both parties. The objective of this exercise will be to facilitate their involvement in this mercury partnership and monitor its progress. We additionally plan to facilitate the participation of the cement industry in this partnership.

Activity 7: Design, print and distribute mercury spill and cleanup brochure for hospitals

A mercury spills and cleanup pamphlet/poster for the South African setting was designed adapting existing peer reviewed material from HCWH, HEAL, and EEB.

This pamphlet/poster was printed onto a A3 sheet so that it folds into an information sheet and with a poster on the inside. This pamphlet/poster was then distributed to the groundWork mailing list and to all participants at the groundWork/HCWH mercury conference.

The intention is to now distribute this pamphlet/poster to every infection control nurse and hospital waste department in South Africa. **Please see Appendix 4 and 5 for an electronic copy of this pamphlet/poster. (I will also post some with the financial report).**

Activity 8: Provincial Hospital waste disposal survey

The intention of this activity was to undertake a random walk through and short questionnaire survey of selected state and private hospitals in the Province (KwaZulu Natal) in order to gain an understanding and determine how broken mercury equipment and spilt mercury is disposed.

Previous groundWork experience found that hospitals disposed broken mercury equipment and spilt mercury within their sharps containers and most of this was destined for incinerators.

Although this activity was not undertaken in a systematic manner, informal hospital visits over the course of 2007 found that many state and private sector hospitals were still using mercury containing devises on their wards and when questioned nurses disclosed that many equipment breakages (mainly thermometer) and spills still occur. In many instances, mercury spills are cleaned up with mercury spill kits and the mercury is either flushed down the nearest sink or placed in the sharps bin if there exist shards of glass from the broken thermometers.

This indicates that even though there is a policy in place in KwaZulu Natal to phase out mercury thermometer and sphygmomanometers, many hospitals and health care providers are not aware of this policy nor the dangers associated with mercury in the health care setting.

Using this information groundWork will work more closely with the KwaZulu Natal Provincial Department of Health to popularise and implement this zero mercury policy.

Activity 9: Track and contribute to Global / European mercury campaigns

I participated in a Zero Mercury Working Group strategic meeting at the NRDC offices in New York on the 14th April 07.

I participated in the NGO meeting on global mercury strategies organised by EEB/ZMWG.

I attended the first meeting of the *ad-hoc* Open Ended Working Group (OEWG) to review and assess measures to address the global issue of mercury, held from November 12 to 16, 2007 at the UN ESCAP facilities in Bangkok, Thailand as part of the Zero Mercury Working Group delegation.

During this meeting I attended and tracked the activities of the African Region participants and tried to align their position and activities with the position of the Zero Mercury Working Group. The various submissions made by the African Region will shortly be available as conference documents on the UNEP Chemicals mercury program website.

Additional activities following on from phase II

1. Reprint and distribute Hospital waste brochure

2. Follow up of the survey to Local authorities on disposal and collection facilities…etc.

3. Follow up and attend chemical safety processes and focal points in South Africa and abroad (SAICM/WHO/UNEP e.g. Dubai preparatory activities for special sessions, Basel and UNEP AHOEWG on mercury etc.

4. Generally keep track of and follow up work on capacity building on NGO's in SA (or Africa) working on mercury issues

5. Contribution to the global / European mercury campaigns by: Attending international meeting and highlighting and lobbying for global mercury ban.

6. Lobbying politicians when necessary to put pressure for limited and safer mercury trade, use, storage, and standards

Summary of additional activities
An additional 1500 copies of the groundWork Managing Hospital Waste – A guide for Southern African Health Care Institutions was printed and distributed to health care providers requesting this manual as well as delegates attending the mercury in health care conference.

Local Authorities who were surveyed in 2006 were posted a copy of the mercury spills pamphlet. In the medium term we intend running a training workshop on mercury spills and storage with local authorities in 2008.