



**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 FOUR REPORTING

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Background to the Proposal for Phase IV for EEB funding for mercury work.

Over the past 3 phases of EEB funded mercury activities, groundWork has gained a broader and better understanding of the extent of existing environmental mercury pollution and also current industrial activities that continue to cause mercury pollution in South Africa.

Additionally we have gained a better assessment of some of the impacts of mercury pollution in a South African Context and are now regularly actively engaged in the South African mercury Assessment (SAMA) Program with a wide representation of stakeholders (including the Government, regulator, Private and Industry, and NGO sector) which ultimately is in a very good position to address existing particular concerns.

A number of specific activities were defined and initiated to achieve our overall goal of better characterizing, understanding and minimizing the impact of mercury (in the South African Context) during Phase's I-III of EEB funding these have been outlined in our previous reports, however a number of these activities were ongoing and not completed.

Additionally for the Phase IV cycle of EEB funding we have identified some other activities (shown in the Table below) outlining further activities and actions to meet the challenges of addressing gaps in the South African context. For all intents and purposes the EEB cycle of funding has institutionalized a mercury program at groundWork.

The following table shows an outline for the EEB/GroundWork Phase IV Mercury Research Project.

General 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 III reporting period, and, an environmentally sound disposal process had still not been undertaken by the South African regulator (DEAT)

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 Environment and 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 IV Mercury Research Project.

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

	Activity	Actions	Deliverables
1	Assist DoH to write National mercury policy for South Africa	<p>A1: Following the Southern African Conference on Mercury in Health Care was organized by groundWork and Health Care Without Harm in association with UNEP, held in Johannesburg October 24-25, 2007 the South African National Department of Health have embarked on a project to write a policy to phase mercury containing devices out of the Public Health Sector. groundWork will assist the DoH write this National policy.</p> <p>A2: Alongside this National Project gW will pursuer a similar campaign directed at the Private Health Care Sector</p>	<p>D1: DoH Policy on phase out of mercury in the health care sector</p> <p>D2: Commitment from private sector to switch to non mercury equipment</p>
2	Participate in the South African Mercury Assessment Program (SAMA) Steering Committee	<p>A1: Validate mercury content in South African coal reserves for UNEP emissions report</p> <p>A2: 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</p> <p>A3: Assess and track legislative processes on mercury in South and Southern Africa</p> <p>A4: Use the SAMA program to determine mercury imports into and exports from South Africa and how these are distributed and used</p> <p>A5: Lobby the DEAT to take a more proactive role in mercury assessment in South Africa</p> <p>A6: Engage with the DEAT to identify and determine priority activities for mercury assessment for South Africa</p>	<p>D1: Short literature review</p> <p>D2: Participate and facilitate the participation of Eskom, Sasol and cement industry in UNEP coal partnership</p> <p>D3: Continue to review and critique standards for air, water, land. Lobby for standards</p> <p>D4 Report on SA mercury imports/exports</p> <p>D5 & D6 organize a meeting with DEAT, write a short report on outcomes</p>
3	Track and make comments on Environmental Impact Assessments (EIA's) for proposed coal fired power stations and cement works.	<p>A1: Lobby the regulator for inclusion of mercury in the EIA process</p>	<p>D1 Review coal fired power stations EIA's and submit comments to DEAT authorities.</p>

	Lobby for better abatement technologies, emissions monitoring, evaluation and regulation.	<p>A2: Ensure that South Africa includes an ambient standard for mercury</p> <p>A3: Review BAT for mercury emissions abatement and monitoring</p> <p>A4: Lobby for BAT mercury emissions monitoring and abatement in coal fired power stations and cement works</p>	<p>D2 Ensure mercury to be listed as a priority pollutant with an Air Quality standard</p> <p>D3 Report on BAT in coal power stations and letter to regulator/ DEAT</p>
4	Monitor Thor Chemicals spent catalyst disposal and site remediation process	<p>A1: Evaluate/assess and lobby for safe disposal and site remediation options</p> <p>A2 Apply Conceptual Site Model (CSM) of the facility and health risk assessment (potential) of the residents nearby.</p> <p>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.)</p>	D1 report of disposal and remediation options
5	Track and contribute to Global / European mercury campaigns	<p>A1: Attend international mercury meetings and co-ordinate activities with Zero Mercury WG</p> <ul style="list-style-type: none"> - UNEP AHOEWG meeting in Nairobi - 9th International Conference on Mercury as a Global Pollutant, Guiyang, China, June 6-12, 2009 - Others 	D1 Short report of international mercury activities
6	Identify large international donors of health care assistance in S. Africa and AFRICA overall and quantify proportion of mercury containing equipment in these donations	A1: Compile a DB of international donors to S. Africa and Africa overall and determine who donates hg containing health care products	<p>D1 Short report of international health care donors and % of hg containing products</p> <p>D2 Ensure international donors of health care assistance in S. Africa and AFRICA provide mercury free equip</p>
7	Identify the businesses, organizations, and governmental agencies representing the largest purchasers of these products in public and private sectors	A1: Investigate whether hospitals group together to buy hg containing equipment, what role does the government play, etc.	D1: Short report detailing purchasing patterns of hg containing health care products

			D2: Mercury free health care is purchased
8	Identify the large manufacturers of mercury measuring devices in Africa	A1: Investigate whether hg containing health care products are manufactured in Africa	D1: Short report on African hg containing medical equipment manufacturers D2: facilitate switch to manufacturing mercury free devices
9	Identify what quality control certifications apply to measuring devices in S. Africa and AFRICA overall for both mercury and non-mercury devices	A1: Compile DB of quality control certifications apply to measuring devices in S. Africa and AFRICA overall for both mercury and non-mercury devices	D1: DB of quality control certification
10	Identify international quality control certifications that could be applied to non-mercury devices in S. Africa and AFRICA overall,	A1: Compile DB of internationally acceptable quality control certifications that could be applied to non-mercury devices in S. Africa and AFRICA overall A2: Evaluate whether these internationally acceptable quality control certifications apply in Africa and if NOT understand why such standards have not already been applied A3: Identify the influential medical associations in S. Africa and AFRICA overall which can influence the adoption and use of quality control certifications for non-mercury devices	D1: Imports to Africa conform to international certification D2: Short report on compliance to internationally acceptable quality control certifications in Africa and reasons why not if NO D3: Ensure medical associations in S. Africa and AFRICA adopt and use accepted quality control certifications for non-mercury devices
11	Recommend other key stakeholders to include in a possible workshop on transitioning to non-mercury medical devices	A1: Identify and synergize with other stakeholders towards a mercury free health care	D1: Arrange meetings/workshops towards mercury free health care

Activity 1: Assist DoH to write National mercury policy for South Africa

A1: Following the Southern African Conference on Mercury in Health Care was organized by groundWork and Health Care Without Harm in association with UNEP, held in Johannesburg October 24-25, 2007 the South African National Department of Health agreed to embark on a project to write a policy to phase mercury containing devices out of the Public Health Sector. groundWork will assisted the DoH write this National policy.

Although a National DoH Policy to phase out of mercury in the health care sector has not yet been achieved, significant inroads towards this goal have been made. Initially the focus was on the DoH, however a broader range of government stakeholders were also necessary to participate in this process, including the environment and water Ministries who are now also on board.

groundWork have successfully lobbied and met with key members of these Ministries who have taken the policy motivation (presented in phase III of EEB funded mercury work) to their Ministers and we now await further engagement.

A2: Alongside this National Project gW will pursue a similar campaign directed at the Private Health Care Sector

The South African health care landscape is characterised by a very large private health care sector servicing the privately funded sector. Although governed by provisions within the South African Health Act they are free to follow and additional “private” policy directives. Although we have not yet achieved across the board institutional buy in from the “big three” there has been some commitment from various private sector hospitals to switch to non mercury equipment.

Furthermore, through our work with health care institutions on health care waste in South Africa, it has become increasingly evident to groundWork that there is a need for clinics (who offer primary health care) to understand the environmental determinants of community illness, especially in resource poor rural areas where people are exposed to a variety of chemicals because of agricultural and poor waste management practices¹.

groundWork has begun to work with clinics to be able to give clinic staff a broader understanding of the possible environmental factors that could be causing patients illnesses.

¹ It is often in rural areas where people work on unlicensed dumps that are used to final resting place of a variety of waste not only domestic waste. It is no uncommon to find health care waste discarded on dumps that are publicly accessible in rural areas.

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

A2.4: Use the SAMA program to determine mercury imports into and exports from South Africa and how these are distributed and used

A2.5: Lobby the DEAT to take a more proactive role in mercury assessment in South Africa

A2.6: Engage with the DEAT to identify and determine priority activities for mercury assessment for South Africa

The South African Mercury Assessment Programme (SAMA) is now fully functional and the Executive Steering Committee have again met in 2008 on a quarterly basis. The program is still being coordinated by the Council for Scientific and Industrial Research (CSIR), however the DEAT are poised to take ownership in 2009. Through this process we are now more proactively engaging with the DEAT to identify and determine priority activities for mercury assessment for South Africa.

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

“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

In 2008 the SAMA embarked on 2 major activities in addition to routine project activities. The first was to launch a project to investigate some of the high hazardous (H:H) landfills in South Africa to assess the extent to which mercury is a concern at these landfills and the second was to get South Africa participation in the UNEP coal partnership described below.

The title for this research project is: Assessment of the contribution of waste to mercury (Hg) loads in South Africa.

Background

Mercury-containing products such as batteries, lamps, electric switches in general waste, incinerator waste and other hazardous waste streams are generally discarded to landfills. Although South Africa is not a manufacturer of such products, most of the Hg-containing products enter the country as finished consumer products eventually get disposed of in local landfill sites. In addition to Hg-containing products, South Africa also imports raw Hg for unidentified uses and unknown disposal pattern. Data from the Department of Trade and Industry (SA) shows that about 10 222 kg of Hg was imported into South Africa between April 2006 and April 2007 (DTI, 2007).

In order to understand the nature of mercury waste problem in South Africa, this study seeks to characterize the presence, fate and transport of Hg in different waste disposal sites in South Africa by addressing the following:

- Is there Hg in waste (in South Africa);
- Which waste streams/landfill-classes (hazardous/ general) contain more Hg in mobile forms (gaseous and aqueous phase); and
- Is there mercury in groundwater and runoff associated with specific landfill classes.

Activities to be undertaken at the landfill site

- Sampling of gaseous mercury during the working phase
- Sampling of mercury in treated and untreated leachate
- Sampling of mercury in storm water drains
- Sampling of mercury in ground water monitoring wells

Benefits of the research

Characterising levels of mercury in SA will provide a sound basis for making national strategic decision relating to mercury in general. The survey will also provide a benchmark against which the success of national management initiatives can be tested (e.g. those aimed at minimising Hg emissions). This research will:

- Establish the extend to which mercury is a problem in SA waste
- Establish the need for recommendations on the proper management of special waste streams such as fluorescent lamps and electronic waste
- Establish the need for policies that regulates the import and exports of mercury containing goods such as switches, hospital instruments etc.

A2.1: Validate mercury content in South African coal reserves for UNEP emissions report

A2.2: 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

With regard to the activities listed above the South African government delegation who participated in the OEWG on mercury have agreed to participate in the UNEP coal partnership coordinated by Gunnar Futsaeter, (Programme Officer) for UNEP Chemicals. Sponsorship for this project is being sought through the EU coal project and (the revised project documents relating to the EU Coal project was sent to the EC 21 November) and UNEP are currently awaiting a response any day now, since a (possible) contract need to be signed with the EC before the end of the year. The EC would want a potential project to start up as soon as possible in January.

A broader overview of this project is described in Annex 1 titled “Framework for a transferrable regional work-plan for the evaluation of coal emissions”

A3: Assess and track legislative processes on mercury in South and Southern Africa

D3: Continue to review and critique standards for air, water, land. Lobby for standards

The National Environmental Management: Air Quality Act 2004 ultimately aims to align air pollution control with the rights conferred in the Constitution of South Africa. It replaces the outdated Air Pollution Prevention Act (Act 45 of 1965) with a more effective regulatory regime, by including such measures as the establishment of national norms and standards, and a framework for air quality management planning.

The purpose of The National Framework (NF) for air quality management in the Republic of South Africa (September 2007) is to achieve the objectives of the Air Quality Act (AQA), and as such the NF provides a medium to long term plan of the practical implementation of the AQA.

Furthermore the NF “must provide mechanisms, systems and procedures to promote holistic and integrated air quality management through pollution prevention and minimization at source, and through impact management with respect to the receiving environment from local scale to international issues. Hence, the NF provides norms and standards for all technical aspects of air quality management.

Paragraph 5.4.3.1: The standard setting process of the NF states that: The AQA provides for the setting of standards for:

- Ambient air quality;
- Emissions;
- Controlled emitters, and
- Controlled fuels.

The Ambient air quality Standard Project is intended to provide the Department of Environmental Affairs and Tourism (DEAT) with a forum to develop and agree Ambient Air Quality Standards. To date the DEAT has submitted the Draft Ambient Air Quality Standards to the STANSA Technical Committee for Air Quality for finalisation, before they can be gazetted for public comments. Although mercury has not been included as a criteria pollutant in the first round of defining standards for ambient air quality it has nonetheless been included as a pollutant of concern to be reviewed in the second National Air Quality Framework as shown in the table below²

Table 19: Pollutants of Concern

Current Criteria Pollutants	Possible Future Pollutants	
	National Pollutants	Local Pollutants
Sulphur dioxide (SO ₂); Nitrogen dioxide (NO ₂); Ozone (O ₃); Carbon monoxide (CO); Lead (Pb); Particulate matter (PM ₁₀); Benzene (C ₆ H ₆).	Mercury (Hg); Particulate matter (PM _{2.5}); Dioxins; Furans; POPs; Other VOCs; Pollutants controlled by international conventions ratified by RSA	Chrome (Cr ₆ ⁺); Fluoride (particulate and gas); Manganese (Mn).

² THE NATIONAL FRAMEWORK FOR AIR QUALITY MANAGEMENT, 2007

The AQA Implementation: Listed Activities and Minimum Emission Standards Project:

DEAT has also completed the Draft Minimum Emission Standards for Listed Activities. These can be accessed from the project website: www.saaqis.org.za/projects/. These standards have also been submitted to STANSA for consideration by the Technical Committee for Air Quality. The first meeting of the Technical Committee to discuss these was held on the 25th February 2008. Stakeholder organisations who have commented and participated in this process have also been invited to participate in a STANSA Technical Committee. Within this process groundWork have successfully lobbied for and included mercury emission limits for all industrial processes (cement manufacture, smelting etc.) that possibly result in mercury <http://www.saaqis.org.za/Links.aspx> and [emissionshttp://www.airshed.co.za/projectDEAT.htm](http://www.airshed.co.za/projectDEAT.htm)

Brief update on waste legislative process

In March 2008, Parliaments Environmental Affairs and Tourism Portfolio Committee has adopted a middle path towards incineration by deciding against both an outright ban (which is what groundWork lobbied for) and a laissez faire approach in favour of strict regulation. The future Waste Act is further intended to contain provisions on applications for licences to dispose of waste by way of incineration. Licence holders will have to supply the DEAT with information about the types of waste to be incinerated, the existence of other waste incinerators in the vicinity that could do the job and alternative environmentally sound methods to treat the waste, in addition to the handling of hazardous and toxic waste. Attention is also being devoted to the disposal of other industrial and household waste – with tough penalties (up to 1 million €) for those that are found guilty of contravening measures aimed at controlling and limiting the disposal of waste especially without the necessary licences to do so.

Activity 3: Track and make comments on Environmental Impact Assessments (EIA's) for proposed coal fired power stations and cement works. Lobby for better abatement technologies, emissions monitoring, evaluation and regulation.

Prior to groundWork's interventions on raising awareness and lobbying for mercury emissions monitoring and standards no industry in South Africa was regulated on their mercury emissions. In fact there was no awareness at all about the adverse, local, national nor international adverse impact that anthropogenic mercury emissions have on public health.

However this has since changed and this is reflected in records of decisions (ROD's) for industrial processes granted permission to operate as well as the proposed minimum emission standards for mercury in the priority industries listed below.

Table 2: Mercury emission limits for hazardous waste incineration in South Africa

2.2.8 Disposal of general and hazardous waste.

1. CATEGORY OF LISTED ACTIVITY			
Number:	8	Category Title	The disposal of hazardous and general waste
2. LISTED ACTIVITY			
Being an activity which result in atmospheric emissions and which the Minister reasonably believes have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage as contemplated in Section 21(1)(a) of the Act.			
Number:	8.1	Name:	Waste incineration
Description:	Facilities where hazardous waste including health care waste, used oil or sludge from the treatment of used oil is incinerated		
Size:	Facilities with an incinerator capacity of 10 kg of waste processed per hour or larger capacity.		
3. MINIMUM EMISSION STANDARDS FOR POINT SOURCE EMISSIONS			
Being the minimum emission standards for emissions from a single identifiable source and fixed location of atmospheric emission in respect of substances or mixture of substances resulting from a listed activity including the permissible amount, volume, emission rate or concentration of that substance or mixture of substances that may be emitted and the manner in which measurements of such emissions must be carried out as contemplated in Section 21(3)(a) of the Act.			
Substance or mixture of substances		mg/Nm ³ under standard conditions of 11% O ₂ , 273 Kelvin and 101.3 kPa (New and existing plant).	Manner in which measurements of emissions must be carried out
Common Name	Chemical Symbol		
Particulate matter (PM)	Not applicable	25	All parameters to be defined and measured as in the Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on Incineration of Waste
Carbon monoxide	CO	100	
Hydrogen chloride	HCl	30	
Sulphur dioxide	SO ₂	50	
Lead, Chromium, Beryllium, Arsenic, Antimony, Barium, Silver, Cobalt, Copper, Manganese, Tin, Vanadium, Nickel, Mercury	Pb, Cr (total), Be, As, Sb, Ba, Ag, Co, Cu, Mn, Sn, V, Ni, Hg	0.5	
Cadmium, Thallium	Cd, Tl	0.1	
Dioxin/furan	Not applicable	0.1 ngTE/Nm ³	

1. CATEGORY OF LISTED ACTIVITY			
Number:	5	Category Title	Mineral processing industries

2. LISTED ACTIVITY			
Being an activity which result in atmospheric emissions and which the Minister reasonably believes have or may have a significant detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage as contemplated in Section 21(1)(a) of the Act.			
Number:	5.3	Name:	Cement production
Description:	The production and cooling of Portland cement clinker and the grinding and blending of clinker to produce finished cement		
Size:	All installations		

3. MINIMUM EMISSION STANDARDS FOR POINT SOURCE EMISSIONS				
Being the minimum emission standards for emissions from a single identifiable source and fixed location of atmospheric emission in respect of substances or mixture of substances resulting from a listed activity including the permissible amount, volume, emission rate or concentration of that substance or mixture of substances that may be emitted and the manner in which measurements of such emissions must be carried out as contemplated in Section 21(3)(a) of the Act.				
Substance or mixture of substances		mg/Nm ³ under standard conditions of 10% O ₂ , dry gas at 273 Kelvin and 101.3 kPa.		Manner in which measurements of emissions must be carried out
Common Name	Chemical Symbol	New plant	Existing plant	
Particulate matter (PM) from clinker production	Not applicable	50	50	Appropriate method selected from Table 1
Nitrogen oxides from clinker production	NO _x	1200	2000	
Sulphur dioxide from clinker production	SO ₂	250	250	
Particulate matter (PM) from clinker cooling using electrostatic precipitators	Not applicable	100	150	
Particulate matter (PM) from clinker cooling using fabric filters	Not applicable	50	50	
Particulate matter (PM) from clinker grinding and cement blending and loading	Not applicable	30	50	
Total organic compounds where alternative fuels and/or resources are used	Not applicable	10		
Hydrogen chloride where alternative fuels and/or resources are used	HCl	10		
Hydrogen fluoride where alternative fuels and/or resources are used	HF	1		
Cadmium plus thallium plus mercury where alternative fuels and/or resources are used	Cd+Tl+Hg	0.05		
Sum of chromium, beryllium, arsenic, antimony, barium, lead, silver, Cobalt, copper, manganese, tin, vanadium and nickel where alternative fuels and/or resources are used	Cr, Be, As, Sb, Ba, Pb, Ag, Co, Cu, Mn, Sn, V, Ni	0.5		
PCDD/PCDF (units of ng/Nm ³ I-TEQ) where alternative fuels and/or resources are used		0.1		

Activity 4: Monitor Thor Chemicals spent catalyst disposal and site remediation process

groundWork continued to monitor the EIA Process for the Proposed Decommissioning and Closure of a number of Obsolete Facilities at Guernica Chemicals (Pty) Ltd, Cato Ridge during 2008.

Annex 2 details correspondence RE: Comments and questions on the Background Information Document (BID): EIA Process for the Proposed Decommissioning and Closure of a number of Obsolete Facilities at Guernica Chemicals (Pty) Ltd, Cato Ridge.

Additionally groundwork attended Guernica chemicals basic assessment process NGO's focus group meeting to discuss and agree various remediation options for the mercury still stockpiled on this site

The key points the NGO's raised with regard to the content of the Draft Report and the scope of the EIA assessment are summarised below:

1. The suitability of the treatment technology needs to be well demonstrated. It was suggested that suitable case studies be reviewed and considered. The decommissioning of mercuric chlor-alkali plants, the technology used, process followed and overall suitability, would be the most relevant to the Guernica project.
2. The option of returning waste to the originator/generator was discussed. It was pointed out that in addition to the waste returned to Guernica as a result contracts they had with companies they serviced, Guernica also received waste from other outside sources. This needs to be considered in the evaluation of this option. A key consideration with regard to the "return to originator" option was the issue of the originators responsibility (i.e. cradle to grave principle). It was agreed that Guernica should explore the possibility of receiving financial compensation from originators in parallel with their remediation of the site (i.e. this should not hold up remediation). In addition, DEAT should, via NEMA, recover costs from local and international companies associated with remediation. This point has been noted but is outside of the scope of this EIA process.
3. Alternatives considered need to be proven technologies, the technical efficiency and environmental suitability of which has been demonstrated.
4. There is only one local thermal retorting facility in South African – Thermopower (TPT) in Gauteng. Groundwork stated that Thermopower's operations and associated emissions have been the subject of recent concern from surrounding neighbours and their apparent permit non-compliance is of serious concern.
5. It was agreed that South African environmental regulations are in place, however there are concerns associated with monitoring, compliance and accountability. In general there is little faith in the authority's ability to ensure that non-compliances are addressed. There was consensus that compliance and accountability is more likely with international alternatives.
6. The fate of the recovered mercury was raised as a concern. Should mercury waste be treated in South Africa, it is likely that the recovered mercury will be sold into the

open market. In contrast Europe has an export ban on elemental mercury, and the recovered mercury is likely to be removed from the market and stored safely in a national stockpile (as in the US). It was agreed that the fate of the recovered mercury should be considered and discussed in the report.

Following this NGO focus group meeting and various specialist studies requested and undertaken by WSP consultants on the Environmental Authorisation Process for the Proposed Decommissioning and Closure of a Number of Obsolete Facilities at Guernica Chemicals (Pty) Ltd, Cato Ridge a draft Environmental Assessment Report was made available for public review and a public meeting was scheduled for October 2008.

The draft Environmental Assessment Report found that Thermal Retorting still remains the most preferable option for environmental sound disposal of the mercury waste split between an international vendor and a local vendor. groundWork have however put together a strong case against the local disposal option (because of serious ongoing concerns at the facility who are considered for this disposal) and that the waste should be treated at an overseas facility with a proven track record, who show proven good environmental governance and provide a long term storage for the recovered mercury. Additionally I am pleased to report that ALL of the waste will be treated by only one service provider and that the job will not be divided up.

The Swiss service provider who have been shortlisted for this work are **Batrec Industrie AG**. A short description of their track record and proposed table of actions appears below:

- Global recycling company with headquarters in Wimmis, Switzerland
- Processing hazardous waste since 1992 (currently ~5000t/a)
- Recovering mercury through distillation since 1993
- Certified in 2001 by the Swiss Technical Services
- Able to process all the waste types and soils located at Guernica/Thor
- Treatment of wastes (i.e. 2700t) would take ~2 years
- Resulting residues would be landfilled.
- Emission standards used by Batrec are based on the EU Air Quality Guidelines.
- Compliance regularly reviewed by Swiss Authorities

Activity 5: Track and contribute to Global / European mercury campaigns

International mercury work

Over the last year of so groundWork has played a crucial role in assisting and facilitating the African Regional participation in the global mercury debate towards a globally binding treaty governing the supply, demand and ultimate end use of mercury.

groundWork is an active member of the Zero Mercury Working group, www.zeromercury.org, an international coalition of more than 40 public interest non-governmental organizations from around the world formed in 2005 by the EEB and the Mercury Policy Project/Ban Mercury Working Group. The aim of the group is to reach “Zero’ emissions, demand and supply of mercury, from all sources we can control, towards eliminating mercury in the environment at EU level and globally.

As part of the Zero Mercury Working group groundWork participated in the first & second meeting of the *ad-hoc* Open Ended Working Group (OEWG) to review and assess measures to address the global issue of mercury held in Bangkok, Thailand and Nairobi, Kenya where I assisted African delegates during the negotiations to consider the analysis of possible options to address the global challenges to reduce risks from releases of mercury. These include “*inter alia*: reduce atmospheric mercury emissions from human sources; find environmentally sound solutions for the waste containing mercury; reduce global mercury demand and supply; identify environmentally sound storage solutions for mercury; and to increase knowledge on areas such as inventories, human and environmental exposure, environmental monitoring and socioeconomic impacts”³. The African Region have agreed that voluntary measures to address mercury releases have proven insufficient and have called for a legally binding instrument to effectively address mercury.

International chemicals work

groundWork also participated at the 2nd African regional meeting on the Strategic Approach to International Chemicals Management (SAICM) and associated UNEP African regional consultation on Mercury. SAICM was [developed by a multi-stakeholder and multi-sectoral Preparatory Committee](#) and supports the achievement of the goal agreed at the 2002 Johannesburg World Summit on Sustainable Development of ensuring that, by the year 2020, chemicals are produced and used in ways that minimize significant adverse impacts on the environment and human health.

SAICM is extremely important for Africa because of the growing harm that chemicals cause to public health and the environment and the links between chemical safety as well as poverty reduction and sustainable development. To reach the SAICM 2020 goal, the pace of SAICM implementation must quicken in the countries with policy support from sub-regional bodies.

Two and a half years have now elapsed since the SAICM was adopted but the process of implementation has been very slow in most countries. To reach the SAICM 2020 goal, countries need to quicken the pace. The main problem is that many countries do not yet have clear national implementation plans. However in South Africa this is additionally compounded because worryingly South Africa is represented by a delegate from the

³ <http://www.iisd.ca/chemical/merc1/>

Department of Trade and Industry who worryingly did not have a single positive contribution to make in the context of health and the environment. The use of chemicals in Africa is rapidly increasing, but many African governments lack the technical, financial and institutional capacity to ensure that chemicals are properly managed and controlled so that they do not cause harm to human health and ecosystems. This is why African NGOs play such a key role in the development and implementation of SAICM.

Additionally I assisted the Co-Chair for the African Region and UNEP Chemicals (Mercury Program) organise the program for a related UNEP Workshop on Mercury. During this I also helped the African delegates draft "A global framework for international action on mercury" as well as assist the African group prepare an "African regional position for a legally binding instrument for the global control of mercury"

I also attended the 9th Conference of the Parties to the Basel convention" held in Bali, Indonesia, June 23-27, 2008. During this COP I undertook the following activities:

- Attended all of the African Regional meetings and lobbied delegates and provided comments on agenda items
- Prepared a concept note and an update for the African Regional delegates on the status of the Basel Ban Amendment and the Basel Convention low POPs content
- Participated in the discussions and made recommendations on the environmentally sound disposal of mercury waste

I also participated and presented groundWork/HCWH and EEB's experiences at the AGENDA in collaboration with SSNC and International Chemical Secretariat (ChemSec) of Sweden: "NGO Skill share workshop: Strategies towards Heavy Metals (Mercury, Cadmium and Lead) Phase-Out" with the aim of strengthening and networking of NGOs to work for the regulation and phasing out use of heavy metals on national and international level. This skill share was attended by 25 NGO's from various African setting and sought to raise awareness and influence the general public, businesses and policies through campaigns and projects to improve the situation while United Nations Environment Program (UNEP) has focused more attention on heavy metals, especially mercury, urging international action to reduce risks to human health and the environment. To make this happen and to speed up action, not only towards a global control of mercury, but real improvements locally and nationally, the work of NGOs are crucial. The final Civil Society Statement on Mercury and Other Heavy Metals of Concern following this workshop is attached as Annex 3.

Furthermore groundWork assisted UNEP Chemicals (Mercury Program) host a 2 day African regional consultation on Mercury. African delegates concluded that mercury is a global pollutant with serious health and environmental effects. They said that the global trade of mercury can only be regulated within a legally binding framework and that the trade related environmental measures established by such a multilateral environmental agreement would allow parties to develop national trade rules. They said that there is also a need for regional collective actions to conduct research on the impact of mercury and its compounds. Mrs Abiola Olanipekun - African Regional SAICM Focal Point said in her closing remarks that SAICM implementation requires strengthening of infrastructure for management of chemicals and addressing the growing global concern over mercury. In an effort to address chemical issues, mercury in particular, the SAICM participants agreed that there should be reduction of mercury supply as well as reduction of international trade of mercury. They also agreed that there should be public information and awareness to the public to ensure that the whole community becomes wary of dangers of chemicals.

Activity 6: Identify large international donors of health care assistance in S. Africa and AFRICA overall and quantify proportion of mercury containing equipment in these donations

Activity 7: Identify the businesses, organizations, and governmental agencies representing the largest purchasers of these products in public and private sectors

Activity 8: Identify the large manufacturers of mercury measuring devices in Africa

Activity 9: Identify what quality control certifications apply to measuring devices in S. Africa and AFRICA overall for both mercury and non-mercury devices

Activity 10: Identify international quality control certifications that could be applied to non-mercury devices in S. Africa and AFRICA overall,

An Analysis of the use of mercury free thermometers and sphygmomanometers in South Africa was undertaken in response to the Activities listed above. The findings of this research are presented in Annex 4 attached to this final report.

Activity 11: Recommend other key stakeholders to include in a possible workshop on transitioning to non-mercury medical devices

Annex 5 provides a summary of meetings/workshops towards mercury free health care arranged, facilitated or participated by groundWork staff towards identifying and synergizing with other stakeholders towards a mercury free health care