Tongaat-Hulett Sugar Refinery Ltd Stakeholder Forum

Meeting held at 17:30 on Wednesday 09 June 2010 at Tongaat-Hulett Sugar Refinery

Present:
(as per attendance register)

Mr Robert Brusse (RBr)	Seaview Conservation Group
Mr Tim Campbell (TC)	Tongaat-Hulett Sugar Ltd
Mr Grant Cockburn (GC)	Tongaat-Hulett Sugar Ltd
Mr Rammy Govender (RG)	Tongaat-Hulett Sugar Ltd
Ms Phumulani Ngema(PN)	eThekwini Health
Ms Iris Ngubane (IN)	Tongaat-Hulett Sugar Ltd
Ms Natisha Padayachee (NP)	Tongaat-Hulett Sugar Ltd
Ms Billie Prinsloo (BP)	Ward Councillor Montclair
Mr Navin Ramjuan (NR)	Tongaat-Hulett Sugar Ltd
Ms Nokukhanya Zwane (NZ)	eThekwini Municipality

Secretariat:

Mr Rod Bulman (RB)	Phelamanga Projects
Ms Carine Jones (CJ)	Phelamanga Projects

Apologies:

Mr Siva Chetty (SC)	eThekwini Municipality
Mr Bruce Dale (BD)	eThekwini Municipality
Mr Lee D'Eathe (LD)	eThekwini Municipality
Mr Chris Fennemore (CF)	eThekwini Municipality
Mr Sharveen Maharaj (SM)	eThekwini Municipality

ACTION

1. WELCOME, INTRODUCTION & APOLOGIES
RB welcomed everyone to the meeting and a round of introductions was made.

2. APOLOGIES
Noted above.

3. ACCEPTANCE OF AGENDA
The agenda was accepted.

4. MINUTES OF THE PREVIOUS MEETING HELD ON 10 FEBRUARY 2010 AND CONFIRMATION THEREOF
The minutes of the meeting held on 10 February 2010 were accepted as a true reflection of the meeting and duly signed. The minute taker was complemented on a job well done. It was noted that the minutes of past meetings were available on the Phelamanga website as per previous agreement and the policy to keep these minutes published on the website was further supported.

5. MATTERS ARISING FROM THE MINUTES
5.1. Registration of dam
This process has been concluded. The Consultant confirmed the Tongaat-Hulett dam did not require registration as it was well within the limits.

5.2. Signage at Benson Road informal dump site
LD had raised this issue through an e-mail. The issue originally came from a resident and the matter was handed over to BP as the Councillor in the area. It was agreed that this issue did not belong in this Forum and that it was between the resident and BP.

CJ to inform LD

ACTION

6. REPORTS

6.1. THS Update From Jan to May 2010

Agenda

- Business KPI
- Steam & Power
- Energy Efficiency
- Emission Reduction
- Water & Effluent
- Waste
- Performance Trends
- Legislative Changes

6.1.1. Business KPA

KPI	Target	Actual
Manufacturing	Production : 6100 00 ton refined Yield : 98.4 Overall throughput efficiency – 92.0 % (stretch – 94)	83010 tons 98.48% 94.1
Environment	5 external complaints 390 000 kl/annum – effluent Metro water – 120 000 kl River water -<900 000kl	2 complaint 52805 tons 22567 222089
Quality	Export quality sugar >45% (40ton/hr) HACCP –Packaging – Pre-audit Dec 2010	45 tph
Safety	2 LTIs ; 100% Medical; 85% VCT. LTFIR: 0.13	0 LTIs ; 192 VCT
Profit/loss	Cost of refining : R500/ton	
Human Resource	EE :Increase C-band female profile by 4 – and people with disability complement by 2. Reduce non-shift overtime by 5% .	
Packaging	Conditioned sugar target: 855 tpd Reduce packaging material wastage to 3%.	On track
Liquids & Fructose	Fructose Production : 2500 tons Sucrose/fructose ratio: 1.02 Liquids Production: meet market requirements.	384 tons
Boilers	Coal/raws : 14.8 Energy consumption : 3800-4000MJ/ton melt Plant availability –95%	15.29 4394
Technical services	Roll out planned maintenance –Dec 10 Coal delivery – rail – 95%	

6.1.1.1. Discussion on profit/loss

1. There had been a change in the financial structure so figures would differ. In terms of Profit/Loss the accountant was still busy with figures.
2. Cost of R500/ton - TH was focussing on becoming more efficient as costs were high. The biggest cost was labour and second biggest cost was coal.
3. As an energy source, coal was still the most lucrative form of fuel. TH were looking at driving down steam usage.

ACTION

4. TH was also looking at total energy consumed translated into megajoules per ton in terms of sugar produced**.**

6.1.2. Steam & Power

- Continuous improvement program.
  - One boiler overhaul per year.
  - Boiler 5 – first half completed, second half to be completed Q3.
  - Boiler 4 – planned to start in Q4.
- Currently developing a proposal on boiler and PowerStation replacement using the best available technology and environmentally acceptable practices.
- The position paper on the proposed options been drafted and will be submitted for consideration by the Board in July 2010.
- Focus will remain on optimizing the installed automation and monitoring systems and reinforcing the systemic approaches to operations

6.1.3. Coal Update

- Coal Procurement
  - Local market now obtaining better focus.
  - Looking for better coal that has higher ash fusion temperatures, lower sulphur and better grading.
  - Rail/Road split was progressing well, however there has been upset with the recent Transnet strike.
- Coal- "Attention to detail"
  - Single biggest operations cost : R75 million
  - Drive down coal consumption – get it down to 14.6 % coal/melt ratio

6.1.3.1. Discussion of coal update

It was noted that some trucks carry coal to TH with no covers. It was confirmed that it was normal practice for the trucks to arrive uncovered. As this practice causes a problem in terms of dust distribution, especially during winds NP**,** GC and NR will look into the matter.

NP, GC, NR to investigate

6.1.4. Energy Efficiency – "Back to Basic"

- Project EnerSmart
  - Energy audit completed Dec 2009.
    - Outcomes :
      - Short term :
        - Reduce coal consumption.
        - Get "back to basics."
        - Maximise current energy utilisation.
      - Long term
        - Capex to change Evaporator configuration.

6.1.5. Emission Reduction

- Clear stack
  - Plant was evaluated by the Technical engineering group.
  - This audit highlighted a number items that required attention.
  - These were attended to over the past 2 months.
  - Plant was commissioned and has been running for approximately 1 week continuously.
  - PM removal (95%)
  - SO_2 results (87 %)
  - Still in the process of fine tuning.
  - Impact on STP
  - 0.2 ton/day PM
  - 0.8 ton/day SO_2
- STP
  - Still on track with STP requirements

ACTION

- Incident at Wentworth – 14 May 2010
- Once again not able justify incident, there were no plant problems

6.1.5.1. Discussion of Emission Reduction

1. The question was raised as to whether there was any benefit in having on-line monitoring. It was noted that online measuring was a process which was being advocated by legislation and would be a management tool.
2. Monitoring of the stack using a camera was still happening. An employee in the Control Room watches this.

6.1.6. Water & Effluent

- **Water**
  - Very slow progress.
  - Measurement systems in place.
  - Daily report in place.
  - Trying to manage against targets.
  - Very complex water network.
- **Effluent volume**
  - Progress is noted.
  - Projects completed in boiler house.
  - Dedicated person in manufacturing.
  - 25% reduction – Since Jan 2010.
- **Storm-water contamination risk**
  - Comprehensive plan in place to deal with all outstanding risks.
  - Project plan finalised.
  - Capex in progress.
  - Completion expected in Sept 2010.

6.1.6.1. Discussion of water

In response to BP's previous suggestion that consideration be given to rainwater harvesting with a filtration system at the tap, TH stated that they would consider this suggestion but needed to weigh up costs to put the infrastructure in place in terms of gutters, as asbestos gutters was currently used in places at the moment. TH was looking into it.

6.1.7. Effluent Dam

- Completed JIT system in Jan 2010.
- Geo-tube concept – trial Feb 2010.
  - Concept worked.
  - Did not prove effective for current level of desludging.
- Reverted to traditional clean-up method (mechanical removal)
  - Trial completed last week.
  - Exploring option of re-using sludge in brick manufacturing or as Agricultural spread.
- Long term solution is being developed by TEG. Options to be presented shortly.

6.1.7.1. Discussion on the effluent dam

1. Sludge samples had been sent for testing and it was found that it contains ash which can be used for brick making.
2. The second outlet was agriculture.
3. After emptying the dam TH were looking at long term solutions. The long term solution was online de-sludging which would be put into recycle reuse.
4. The outcomes of testing were awaited, but there are definitely options.

ACTION

6.1.8. Waste

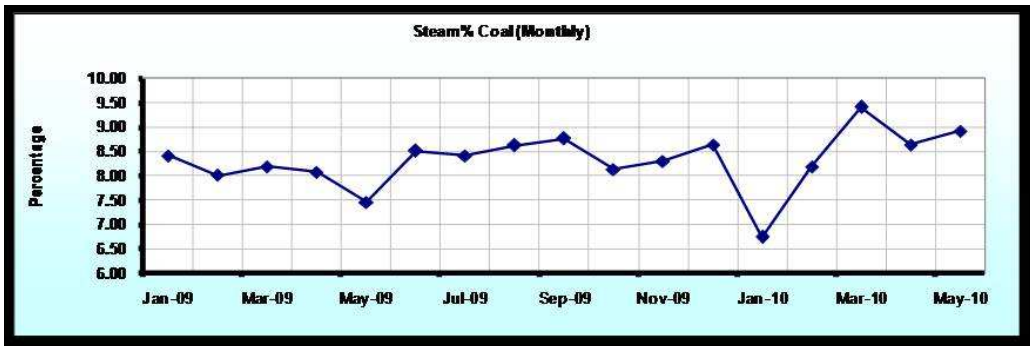
- Filter cake

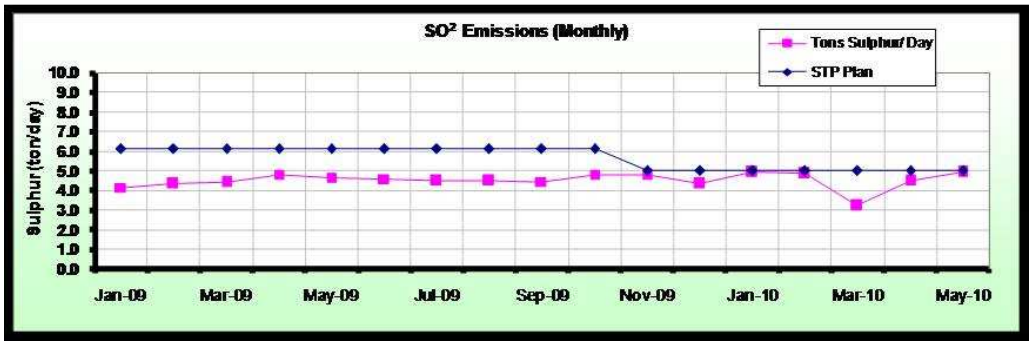
  Agriculture
  - Final clearance from DWAF was received in Dec 09.
  - Full-scale agricultural spread started 1 May 2010.
  - 1 year contract.
  - Currently being listed with Department of Agriculture as a fertilizer.
  - Will still continue to proceed with other options in parallel.

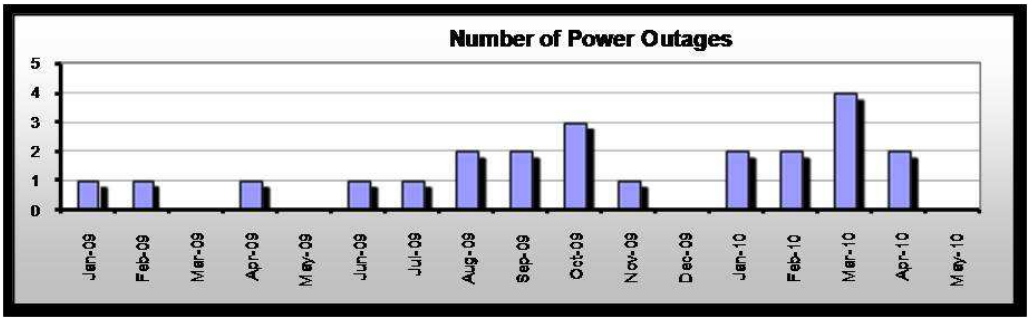
6.1.8.1. Discussion on waste

1. TH was paying Veolia to take the product to the farms. Veolia carries the costs for transportation and helps the farmers to lay the product.
2. This process has saved TH R1m in disposal costs.
3. TH does not receive any environmental credits for this practice.
4. The product is not used by TH farmers who believe that the formula does not meet their requirement, but by a group of private farmers put together by Veolia. The product is used as a surface application. TH needs to convince their agricultural colleagues that this works and will still to go through all checks and balances to confirm.

6.2. Performance Trends







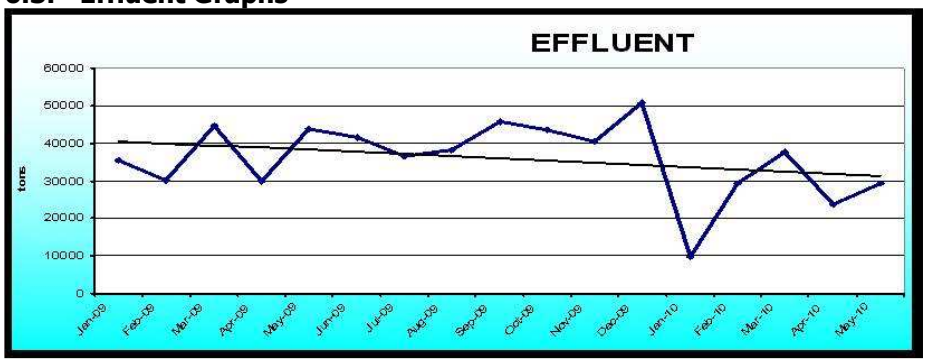
ACTION

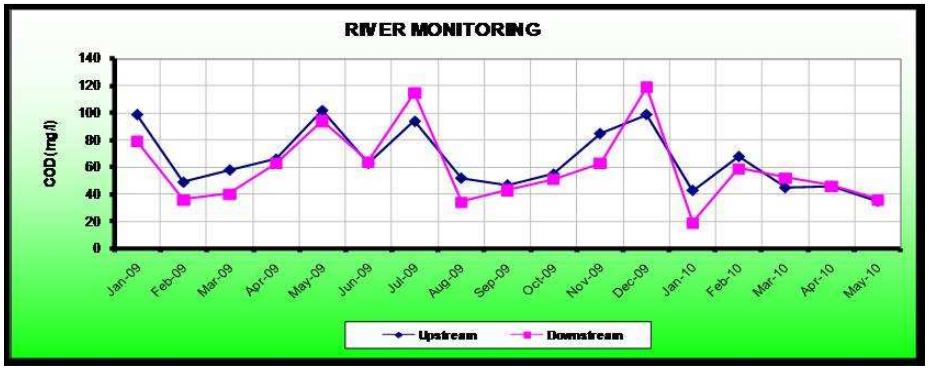
Reasons for Power Outages - 2010												
	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10
Start-up problems	0	0	0		0							
Turbine tripped	2	0	0	0	0							
Municipality power failure	0	2	4	1	0							
General boiler problems	0	0	0	1	0							

6.2.1. Discussion of Performance Trends

It was noted that "Power outage" does not mean a total power shutdown, but is a disturbance in the power supply no matter how brief.

6.3. Effluent Graphs





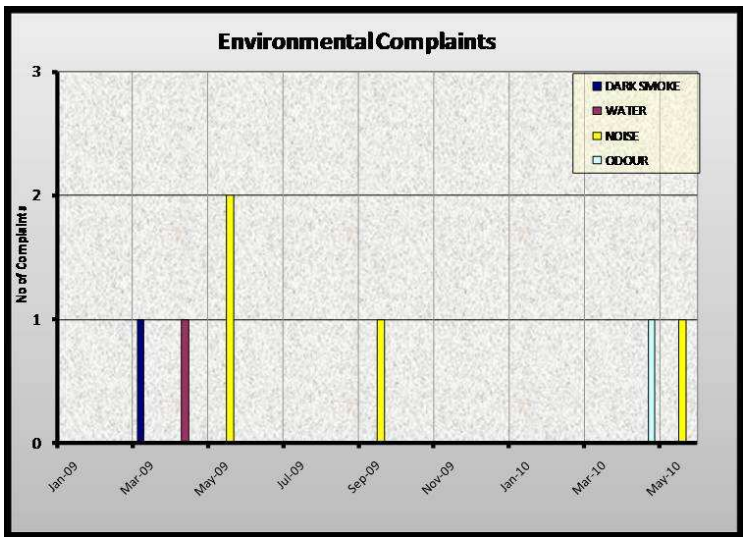
6.3.1. Discussion on river monitoring and effluent monitoring

1. Monitoring was done at downstream site with easy access.
2. RBr asked what the direct impact was on the area adjacent to the TH plant area. It was noted that monitoring was only done at these points because of logistics in terms of accessibility. If samples are taken too close to the discharge point we will not get a true reflection because of mixing. Sampling needs to be done further downstream for a true reflection.
3. There are no industries between the discharge point and downstream.
4. It was suggested that photos would be informative

ACTION

5. The sampling done by Metro water and the transparency thereof was mentioned.

6.4. Environmental complaints



6.4.1. Discussion on environmental complaints

1. A complaint of a strong molasses smell was received. TH couldn't confirm this, however recorded the complaint.
2. The second complaint was about noise. This complaint had been passed on by Peter Roberts of City Health, but TH couldn't establish the source of the noise.
3. It was noted that it is important to get addresses to identify the areas. NP does have details of complainants on record.

6.4.2. TH Initiative

6.4.3. 2009/10 - Emission inventory has been complied.

- Some difficulties with data from outside operations.
- Tongaat Hulett - establishing carbon foot print.
- Sustainability Awareness drive is being planned to roll-out from executive level to shop floor – planned for Aug 2010.

6.4.4. Legislative Changes

- 2009/10 – Significant legislative changes.
- Major impact on the Refinery and the Industry as well.
    - Air Quality Act
    - Waste Act
    - Electricity Levy
- Air Quality
    - APPA was repealed, AQA is in place – 1/04/2010
    - Stringent air quality standards in place.
    - Will be administrated by local Government.
    - Integration of STP & AQA Requirements.
    - On-line measuring equipment is mandatory.
    - The following table provides illustrative example of the impact of the changes.
        - The calculations were done using:
            - 2009 Eco-serve report.
            - Straight line conversion of units from mg/m3 to ton/days.
            - Assumed plant remains the same.

6.4.4.1. Discussion on Air Quality Act

The Air Quality license runs for 5 years and is a process that follows from the Air Quality Act.

ACTION

This will become mandatory and will be monitored and measured it will become a key requirement in the new legislation.
Legislation applies to listed activities and if these listed activities fall within certain categories, operations in that category will need to apply for a license. Some information in this regard is available on DEAT website however the information does need to be updated. The following table reflects TH's position.

	Current (2009/10)	STP (2011)	AQA(2015)	AQA (2020)
	Tons/day	Tons/day	Tons/day	Tons/day
PM	0.77	0.28	0.32	0.15
SO2	5	3.52	5	1.80

- **Implications of changes are serious for sugar industry.**
  - Major capital investment will be required.
  - Increase in operational cost.
- Collective industry group has been formed and will be meeting with DEA to share implications of the new standards on the Industry.
- **Environmental levy**
  - Purpose is to ensure long protection of the environment.
  - Environmental levy has been introduced for generation of electricity using "non-renewable" sources – Coal.
  - Encourage generation of electricity from renewable resource and drive down green house gas emissions
  - Implications – increase in operational cost for Hulref (R850k/annum - 2009).

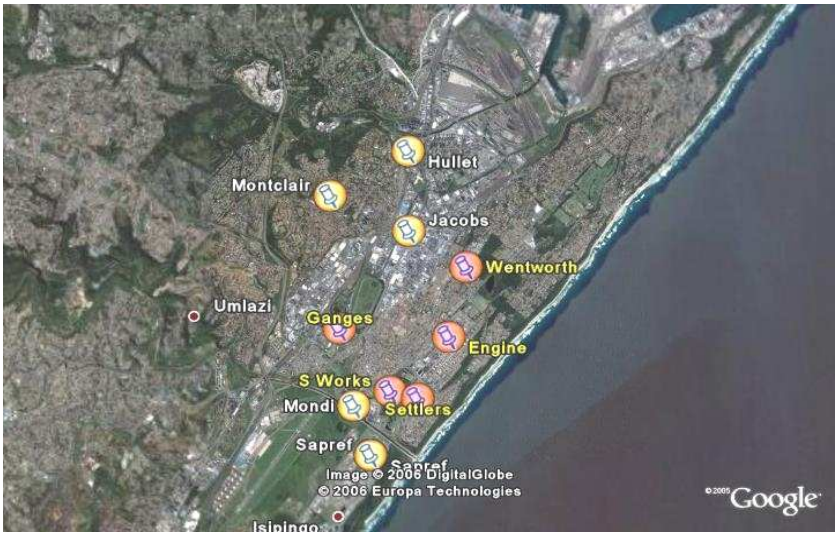
6.4.4.2. Discussion on Targets

1. Industries generally felt that it would be impossible to achieve the targets set for 2020 and that these will put them out of business.
2. TH was very capable of achieving the 2011 targets, however it was felt that the gap between 2020 and 2011 would need a paradigm shift in thought processes as well as technology in order to achieve these results. RBr said that he felt confident and hopeful that these targets would be achieved as TH had already set a precedent in meeting the standards to date.
3. A meeting with DEA has been scheduled for 21 June. TH had also been invited to join the CAIA lobby to express the same concerns.

7. SO_2 MONITORING REPORT

ACTION

7.1. Montclair Bubbler Station Data For Sulphur Dioxide



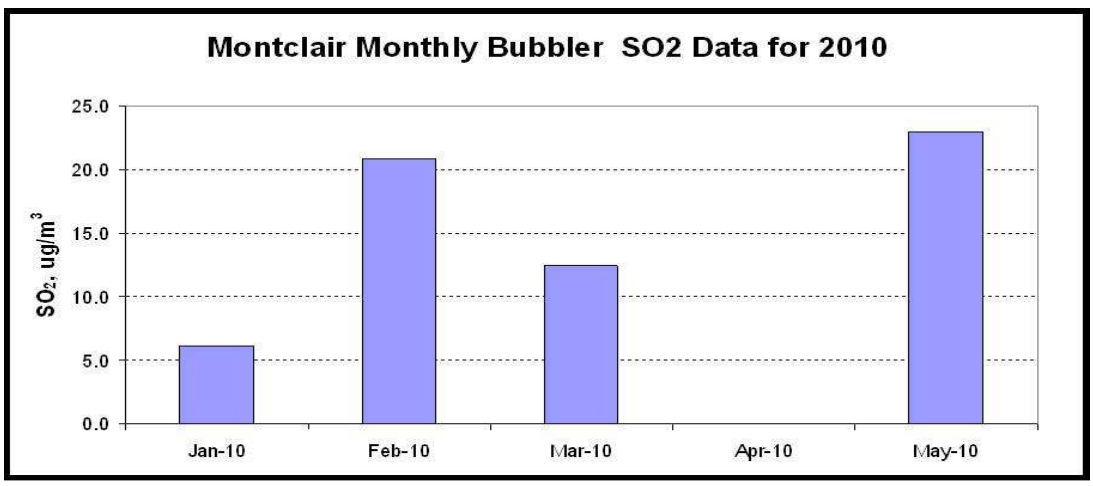
7.2. Background

1. The method used for quantifying SO_2 was adopted by the Council of Scientific and Industrial Research.
2. Sampling was done on Tuesday and Friday 3 & 4 day sampling period.
3. Chemical analyses of samples were performed internally by the eThekwini Water and Sanitation Laboratory, and the results were submitted on a monthly basis, data was quality controlled and reported.
4. Unfortunately the Laboratory had a fire incident on 23 March so most instruments got destroyed. Still waiting for insurance to pay out for the instruments. Cause of fire still not known but could be due to an electrical fault. In the offices most of the records were also destroyed. BP stressed that she should get a quarterly report on any fire incidents in the area.

7.3. Objective

1. To determine the level of impact of Tongaat-Hulett's sulphur dioxide (SO_2) emissions from their boilers in the Montclair area (Mowat High School). Unfortunately not real time data.
2. To use the data collected from the Montclair bubbler station to assess the efficiency of the abatement strategy implemented by Huletts.
3. To make recommendation when required on further improvements to prevent human exposure to elevated SO_2 concentrations.

7.4. SO_2 Data Monthly Averages



ACTION

1. Montclair station recorded varying SO_2 concentration for months Jan, Feb, March and May 2010. The concentrations are significantly low when compared to the SO_2 national annual ambient standard of 50 ug/m^3.
2. This method does not record real time SO_2 averages, hence, the exceedances associated with Huletts facility that may have occurred cannot be reported.
3. The new Continuous Monitoring Mobile Station will be used to view real time data recorded at Montclair station. Currently being prioritised for other areas.

7.4.1. Discussion on the SO2 Data 2009 Monthly Averages

1. No data for April due to fire incident.
2. January figures interesting as plant was shut down for 2 weeks.
3. Monitoring mobile was currently being used at the Moses Mabhida Fan Park during the World Cup period.

7.5. Conclusions & Discussion

1. Montclair station has recorded low concentrations of SO_2 for January, February, March and May 2010 when compared annual standard value of 50ug/m^3 in 2009.
2. This method does not record real time SO_2 averages, hence, the exceedances that may have occurred cannot be reported.

8. ANY OTHER BUSINESS

1. Feedback had been received from Bruce Dales that their department would start discussions on aligning the STP with the new AQA requirement with DEA the next day and that he would report back on how they would manage the process at the next meeting. Priority areas: only the guidelines would change and not much else. Reduction in emissions. Will be a continuous improvement in the industry.
2. Beryl Gets would no longer be attending the TH Forum meetings as she had happily relocated to another residential area. Phelamanga to write Beryl a letter thanking her for her valued input.
3. BP had attended a Clem Sunter talk on biodiversity and future scenarios. She reported that the message was to think differently along the lines of needs and not wants and that the costs of manufacturing would rise very high.

Phelamanga to write letter to Beryl Gets

9. DATES OF NEXT MEETINGS 2010

The meetings for the remainder of this year are scheduled as follows:

13 October 2010

10. CLOSURE

There being no further business the meeting closed at 19h10.

Read and confirmed this day of 2010.

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Facilitator