

1 WELCOME AND INTRODUCTION

Marc de Fontaine from Rand Water welcomed everybody present. The purpose of the Forum is to review the progress made in the last four years and to look into the future. The New National Water Act should be used as a guideline for information sharing. The chairperson, R. Munnik introduced the attendees and gave a special word of welcome for new people attending the Forum meeting for the first time.

Apologies received from: Danie van der Merwe and Tony Pieterse (EGSC), J. van Niekerk, Nico Schneider (SETON), C. van der Merwe, Jurie Terblanche (ERWAT), Louis de Wet (Water Lab)

Approval of the Agenda and Previous Minutes

The agenda was finalised and minutes accepted.

2. MATTERS ARISING FROM THE PREVIOUS MINUTES

Nothing was discussed.

3. PRESENTATIONS AND PROGRESS REPORTS

3.1 Report back from Forum Management Committee, and Vaal Barrage Catchment Executive Committee

Riana Munnik

The National Water Act is striving towards the establishment of Catchment Management Agencies (CMA). CMA's should be established in all water management areas and the Blebokspruit Catchment is part of the Upper Vaal water management area. The structure of the Blebokspruit Forum was presented.

Annemarie Maurizi

The structure of the Vaal Barrage Catchment Executive Committee (VBCEC) was explained. Members and participants of VBCEC were also introduced and there was no representative from grassroots level. The activities and proposed Terms of Reference for VBCEC were listed. Projects of the committee are Water Quality Guidelines and Objectives, which are scheduled for a workshop on 26 January 2001, and the report back will be forwarded to other Catchment Executive Committees. The status of the Upper Vaal Catchment was also discussed.

Marc de Fontaine

He presented the first draft of the Charter for the Blebokspruit Forum, which shows the Forum's mission, vision and objectives. Participants should distribute and comment on the

contents of the charter document and forward their suggestions to the chairperson within two weeks.

Question: Why can't we have permanent staff sitting on the Forum? There is no budget to pay people for transport to attend the Forum meetings. The aim is to get as many people as possible at the meetings. Community members and politicians should also be involved, for their interaction and involvement is needed. In future, people will be educated to be aware of the Forum's existence.

Question: Is this Forum legally binding? The Legal status of the Forum is not recognised in the National Water Act, but the Forum can use the Charter document as an administrative tool to raise funds. Considering the importance of the Ramsar site, the Forum should focus on short, medium and long-term goals in future.

Question: To what extent is the community involved and do they understand? Did you involve them in planning and designing the charter? The Local Authorities on the Forum are responsible for distribution of information to the communities they represent. The Forum needs to look at the establishment of a Communication Committee to make sure that all interested and affected parties are involved.

3.2 **Grootvlei Mine: Desalination, Compliance to permit conditions, and other mining activities**

Johan Fourie (Petmin Representative)

He presented the Strategic Water Management plan which is an integrated approach to manage water on the East Rand. This will focus on the rehabilitation of mines and the reclamation of land for industrial purposes. The plan will have three focus areas, which will deal with Water Uses, Radiation Control and Solid Waste Disposal Management respectively.

Historic overview

There were 23 mines operating in East Rand and four are still operating. Mines closed without a closure certificate and there are no funds for rehabilitation, because the cost of pumping underground water is very high.

Amanzi project

The main objective is to pump water found in mining basins and treat it to potable standards. This should be dealt with in an integrated approach and in finding the solution this Forum can be used as an important tool. One of the objectives of the Water Management Plan is to reduce the salt loading. Dykes act as conduits and they also contribute to increasing the salt load in

the underground mine water. There is a reduction over time in the SO₄ levels, but it has not been determined accurately. The Ramsar Site Management Plan is also important for the Strategic Water Management Plan. It should also address flooding and encroachment of Agricultural land. From the discussions on the problems faced by Grootvlei, there were four options to choose from:

- Grootvlei to stop pumping from basins;
- Grootvlei to pump water from depth for treatment;
- To establish a system of channels used to convey water from industrial areas to the Nigel dam in order for the polluted water not to be in contact with the dolomitic areas. Daggafontein is also a site to be looked at; and
- To use a pumping subsidy that is reducing annually.

It was suggested that the catchment should be subdivided into 22 sub-catchments to manage it more effectively. To call all the role-players together by the end of December 2000 in order to have their inputs. French and Russian Governments will provide funding and technology for the process. According to Mr Fourie du Preez, Petmin has committed them to put funding into the operation. Government needs to charge other polluters. Forum members raised many issues and it was suggested that a special workshop be organised in the second week of January 2001. It will be important to invite politicians to the meeting.

3.3 Impala Platinum Refinery: Expansion of BMR Refinery, AES System and Effluent treatment.(Martyn Fox)

Mr Martyn Fox gave an introduction to and background of Impala Platinum Refineries regarding their metal extraction process. They started upgrading their PMR in 1997, which is the best Platinum separator in the world. Impala went through feasibility studies, EIA and scoping phase in order to get approval to increase the BMR plant. R750 million is required for the project.

At present the effluent is not channeled to ERWAT. There should be a holistic solution to all effluent that is generated, as it is due to increase by 50-100%, consisting mainly of a highly saline solution. There should be a separation at source of waste stream. Depending on the rainfall, about 100 000m³ of water needs to be treated per month. It will take 2 years to put a treatment facility in place at the PMR plant as a means of saving 80 m³ per day of effluent. The aim is to produce a NaCl product that will be converted to a weak solution.

The effluent treatment project involves both BMR and PMR processes and a model is already in place. A task team will be set up and they will look at the size of the plant and conduct a pilot study which will be fully funded to minimise or optimise water use.

3.4 ERWAT: Construction of the new Regional WasteWater Care Works at Welgedacht. (Leon Naude)

Development

The project background was presented and the site of the development shown on a map. The plant will be mainly for nutrient removal and phase 1 will treat 35 ML/day of effluent. The construction will be complete in November 2001. The project team was introduced and the estimated cost are R86 million excluding VAT.

The plant

On the Welgedacht site there are poor soil conditions, holes were filled with rock and they were consolidated before construction could start. A basin where water will be contained, before it will be discharged to the Blebokspruit, will be constructed to make sure that there is extra precaution against impacts on the Blebokspruit. The Mc Combs and Benoni Sewage Treatment Works will be closed after the Welgedacht Works is commissioned.

3.5 Zincor: New Copper/ Cobalt and Cadmium By-products Storage Facility. (Harry Parson)

There is an abundance of Copper/ Cobalt and Cadmium stockpiles at Zincor. Copper/Cobalt may have caused possible groundwater pollution. The design and construction of the hazardous waste site for the Copper/ Cobalt and Cadmium stockpiles have now been completed. Classification of stockpiled materials has been officially accepted by DWAF.

A system to handle clean and dirty water is now in place. Surface water drains are upgraded.

Liner design, Emergency dams and drains are being discussed with authorities.

3.6 ERWAT: Monitoring Committee (Dries Louw)

Objectives: To develop, maintain and manage a comprehensive monitoring program, and to identify the influences on the environment.

Management Structure: over 3000 industries, Councils, Forum, Government and the private sector.

Monitoring program: Co-ordination of monitoring protocols.

Working areas of task groups: Point and diffuse sources. Monitoring committee consists of:

- Workgroup 1: Freddie Viljoen (B1 - 8)
- Workgroup 2: Harry Parsons (B9 - 13)

- Workgroup 3: Laura Roode (B14 - 19)

Local authorities and the private sector will continue with the monitoring operations until duplication is determined and a procedure has been established to eliminate duplication. This will be evaluated and the problems will be resolved.

The committee will set up the monitoring programmes for water quality and quantity. The sampling protocol has been developed. The task team within the committee will look at point and diffuse sources of pollution and the monitoring groups within a catchment should report to the committee. They should get involved in instream water quality standards and new water quality standards which are coming. The existing pollution control structures are Local Authorities, Private Sector and DWAF. The Local Authorities will manage the industrial effluent.

The working groups will develop training and communication programmes. Gauge plates are already in place for water level recording. The Bio-monitoring programmes will get going in the near future.

3.7 Rand Water: Water Quality Status in Blebokspruit (Fiona Hendry)

July-September 2000 results were presented in order to see the changes in water quality.

Upper reaches - no major problems. NO₃ and PO₄ problematic at B2.

Major pollutants are conductivity, sodium, COD and Sulphate. The main impacts are salinity from the mining activities.

Faecal coliform is a problem at the outflow from Cowles Dam.

Rand Water's Annual Report will be given out in January 2001.

3.8 ERWAT: Compliance to permit conditions, and status of the DD5 Water Care Works (WCW)

Status of the DD5 WCW: (Johan Hendriksz)

Benoni WWTW, Daveyton WWTW and J.P.Marais WWTW - to put a new chlorination unit. At Jan Smuts WWTW, the Jan Smuts dam level has decreased and therefore the chlorination unit is working. At Mc Combs WWTW chlorination is working, but they experience a sulphide problem. The biggest problem is in H.Bickley WWTW- aerators are too small and they are presently being upgraded by replacing the gearboxes of the aerators. ERWAT is to spend R2,5 million to upgrade the chlorination unit and the sludge ponds at the works.

Welgedacht WWTW will relieve a lot of the pressure on the flow to other treatment works such as Mc Combs, Benoni and Daveyton.

Compliance to permit conditions (Hannes Joubert)

A request for exemption from compliance to some of the parameters has been forwarded to DWAF. He discussed the impacts of effective operation as well as the increase in water quantities and pollutant loads, finance and resource availability and stricter effluent standards. Comparing the old and new effluent standards for October 2002 by using Waterval WWTW's COD. ERWAT can comply 95% of the time for COD in terms of the existing standards versus 2% with new standards.

Infiltration management is important due to the design capacities of the works. Certain limits were set in permit conditions and the existing infrastructure cannot cope with the excessive in flow during rainy seasons. During winter months there are a steady flow pattern. ERWAT may in future require a River Diversion license.

Sludge Handling

There is a limited area to dispose of the sludge, and ERWAT will need larger areas and other high technology to comply with minimum requirements for sludge disposal. Problem elements to dispose of are lead, copper and zinc. ERWAT looks at new technology but they are given a limited time to comply to permit conditions, namely by October 2002.

To address this issue, a consultant was appointed to forward letters to DWAF regarding the changes and modification of the plants. DWAF has set effluent standards based on Blebokspruit objectives as no proper study was done by ERWAT. By-laws need to be addressed to assist ERWAT with financial problems.

4 GENERAL

In January 2001 there will be a VBCEC workshop regarding Water Quality Objectives.

Presentation by Grootvlei Mines and discussions with Petmin will follow in the 2nd week of January 2001. Grootvlei to visit ERWAT on 24 November 2000(Friday).

All interested and affected parties to comment on the charter document and forward their comments to the chairperson of the Forum.

6 CLOSURE

Next meeting is scheduled for 23 May 2001 at Rand Water Head Office, Glenvista, at 9:30.