



Figure 6: Identification of missing valve and chamber after cleaning



Figure 7: Removal of valve body

As can be seen in **Figure 6** and **Figure 7** the valve chamber had been buried with rubble and rubbish for approximately 30 years and when the valve was eventually unearthed, it had seized completely. In many cases, the valves are more than 60 years old and must be removed completely and refurbished in order to restore the reticulation system to its normal operating condition. This type of problem has been a common occurrence and it is anticipated that more than 100 large valves similar to that shown in **Figure 7** will have to be refurbished. Further details of the project and the problems experienced can be found in various papers which have been presented internationally by the project team including, Mckenzie et. al. (2007), and Siquilaba et al (2006).

Catalyst for funding

Prior to the implementation of the project, the municipality was unable to access any funding for WDM activities of any nature and even the various “development” banks were unwilling to provide funding for the project. Once the project had been completed, however, and the results were published, the situation changed dramatically and suddenly there were several organisations (including the bulk water provider) wishing to invest funding into Sebokeng and Evaton. One of the main supporters of the project is now the Department of Water Affairs and Forestry (DWAF) which is the national custodian of all raw water in the country and also fulfils the role of regulator countrywide. After assessing the savings from the Sebokeng/Evaton pressure management initiatives, DWAF realised the value of such projects and created a new budget to help overcome the funding difficulties that originally threatened to halt the project. Approximately R50 million (± \$8 million) has been allocated for 2007 and if successful, the budget will be increased in future to encourage WDM activities throughout South Africa. Of the R50 million (± \$8 million) allocated to WDM activities by the Government, more than R10 million (± \$1.7 million) has been allocated to support WDM activities in Sebokeng and the surrounding areas.

In addition to the injection of DWAF funding, the municipality itself is now in the position that it has surplus funds for the first time as a result of the R30 million (± \$5 Million) savings made during the first year of operation. Approximately R10 million (± \$1.7 million) from the savings has been returned to the water utility to match the DWAF funding which brings the total funding available to upgrade the system for 2007 to more than R20 million (± \$3.4 million). Prior to the project, the municipality had virtually no budget for maintenance of the system since all funds were being used to support the water account from the bulk supplier.

Improved municipality status

Prior to the project, the only publicity received by the municipality was usually with regard to spills of untreated sewage in the Vaal River. Such spills were due in part to the poor infrastructure of the multiple sewage pumping stations and in part to the huge sewage inflows which in turn were caused to a large extent by high internal household leakage.

Since the project has been completed, it has created significant positive publicity for the Municipality and has picked up no fewer than four national awards for technical engineering excellence. The publicity surrounding the project has created awareness at the highest levels in government and the project has been acknowledged in parliament by the water portfolio committee as a model which should be repeated throughout South Africa wherever conditions permit.

The positive exposure from the project has also created a general atmosphere of success within the municipality and the municipal managers who supported the project have also been able to promote their own personnel through various radio and television interviews on the project. In effect, the project has created a turning point within the municipality and the general perception of the municipality has changed from negative to positive.

Catalyst for other WDM interventions

Perhaps one of the most important benefits to arise from the project is the fact that it has demonstrated what can be achieved with relatively little funding and combined support from both the private and public sectors. Following the successful completion of the project, the Municipal managers have since been able to motivate for and gain approval for several additional technical and social WDM interventions.

Of particular note are the following:

- Sectorisation to enable proper management of the reticulation system -
- Consumer metering and billing as a first step to proper billing;
- Community awareness with particular reference to garden watering;
- Pressure management at district level (<3000 properties) to gain further savings in low lying areas;
- Continuous monitoring of control points to assist with system management; and

- Development of an asset register as first step to full asset management system.

Sustainability of savings

One of the key problems to many WDM interventions is the problem of maintaining the initial savings after the project has been completed and the project team has been paid for its efforts. In the case of the Sebokeng/Evaton PPP, the Project Team is responsible for all maintenance and operation for a period of at least 5 years. Since the Project Team receives payment in accordance with the savings generated (up to an agreed limit after which 100% returns to the municipality) it is essential that the project continues to operate properly until such time that the municipality takes over or extends the period of the contract.

The percentage of the overall savings retained by the Project Team is approximately 15% based on the first two years of operation and is sufficient motivation for the team to ensure that the project is fully functional at all times. In this manner, the savings initially achieved are still being achieved several years after the project was completed.

It should be noted that the similar project in Khayelitsha is also continuing to provide the savings although it is being operated and maintained by the City of Cape Town (see paper by McKenzie, Mostert and de Jager, 2004). This highlights that under certain circumstances, it is not essential for the project team to operate and manage the project as is currently the case with the Sebokeng project. Unfortunately very few municipalities have the capacity to operate and manage such a project and the City of Cape Town is more the exception rather than the rule.

The lack of capacity is becoming a serious problem throughout most parts of South Africa and it is anticipated that more Public Private Partnerships involving a relatively long period for operation and maintenance will be implemented. Obviously any Municipalities that have managed to retain a certain level of skilled personnel can implement such projects without any support from the Private Sector, however, the majority no longer have any engineering expertise at all as recently highlighted by Lawless (2008).

This is one of relatively few WDM projects where the savings are audited carefully on a continuous basis and this is considered one of the key elements of a successful WDM project.

Conclusions

While the Sebokeng and Evaton Public Private Partnership is clearly one of the most successful small scale PPP's to be completed in South Africa, the real benefits of the project are only now materialising several years after the project was commissioned.

As a result of the significant savings in water purchases from the bulk water provider, the municipality has been able to allocate funds for maintenance of the water distribution system for the first time in several years. In addition to the R10 million allocated by the Emfuleni Local Municipality, the Department of Water Affairs and Forestry also allocated a further R10 million to show support for the efforts. It is likely that these budgets will be doubled for the 2008 to 2009 financial year which clearly highlights the value of the project to the municipality and government.

Due to the availability of the additional funding, many new initiatives have been implemented which could not have been considered before the Public Private Partnership had been commissioned. Some of the other initiatives are discussed in the paper by Siquabala (2006) which highlights many of the softer issues such as community awareness and schools education which have been addressed over the past 2 years. It is clear that such issues are extremely important and that without proper consultation with the community even the best planned technical interventions will fail.

It is clear that although the financial savings generated exceed all initial expectations, the hidden and often less tangible benefits greatly outweigh the obvious and tangible benefits.

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