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Water Sustainability: Best Practices

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Water Sustainability : Best Practice

- Carried out a water/steam/condensate leak “blitz” to tackle wastage on site.
- Lifted the priority of water leaks on maintenance schedules in order to resolve these with urgency.
- Developed a close relationship with the City Water and Sanitation department – communication has been essential to our success:
 - Make sure that the Primary water source for the Refinery i.e. treated effluent from the City of Cape Town sewage works remained available for use.
 - Sewage works has had challenges with off specification water – we have worked with our RO plant to successfully manage the contaminants using chemical dosing.
 - Off specification water has at times forced the refinery to use more municipal water than desired – this has been improved through the use of dosing chemicals and rain water harvesting.

Water Sustainability : Best Practice

- Management of water pressure in the mains water supply has been critical – when the refinery has low water usage, municipality is able to lower supply pressure and reduce usage and leakage rates at other consumers. When our water usage is high (primary source interrupted), we have to increase pressure to keep sufficient supply. This requires excellent communication.
- There have been many instances of line breakages in the treated effluent supply system, during these times, we have assisted and utilised the leaking water by pumping from the excavations into our water storage system.
- Implemented waterless urinals, hand sanitisers, paper plates in the canteen and other small water saving systems – to raise awareness and develop a water saving culture.
- Installed a system to use rain water collected in our impounding basins as a back-up supply when Municipal treated effluent water is unavailable – we have had to use this a number of times. This represents a large rain water harvesting system.

Water Sustainability : Best Practice

- Implemented projects to ensure all non-potable water is supplied from the RO plant and not from municipal drinking water.
- Maximising the collection of clean water (non-potable) by routing blowdowns, condensate drains etc. to storage for re-use.
- Currently implementing a long term project to recycle refinery effluent (currently routed to sea) to our RO plant for use in the refinery.
- Working aggressively to increase cycles of concentration in cooling towers and reduce water usage during regen and backwashing of demin trains.
- Steam trap repair program to improve condensate recovery.