Surface Water – Surface Facilities Area

Metropolitan Coal monitors the water management system at the mine's major surface facilities area. The site water management system comprises a series of collection dams, sumps and treatment systems. The system is operated to avoid mixing of clean water runoff and mine water, minimise off-site release of site runoff and to provide water supply requirements on-site. Figure 1 shows a schematic of the major surface facilities area water management system.

Water Use

Flow meters at key points in the water management system monitor flow rates using an electronic system and manual (weekly) readings. Manual weekly readings have been recorded during the review period while the electronic system is scheduled for additional monitors and improvements.

Metropolitan Coal used approximately 185 ML of potable town water (as recorded by the Sydney Water meter) during the review period, with a monthly average of approximately 15 ML. The amount of town water used over the review period is shown in Chart 1. Metropolitan Coal also sourced approximately 95 ML of water from Camp Gully during the review period.

Licensed Discharge

Water discharged from the Water Treatment Plant to Camp Gully is monitored in accordance with EPL No. 767, which requires Metropolitan Coal to continuously monitor the volume (kilolitre/day) of water discharged from the clean water tank in the Water Treatment Plant to Camp Gully.

The total amount of water discharged from the Water Treatment Plant to Camp Gully during the review period was 156 ML.

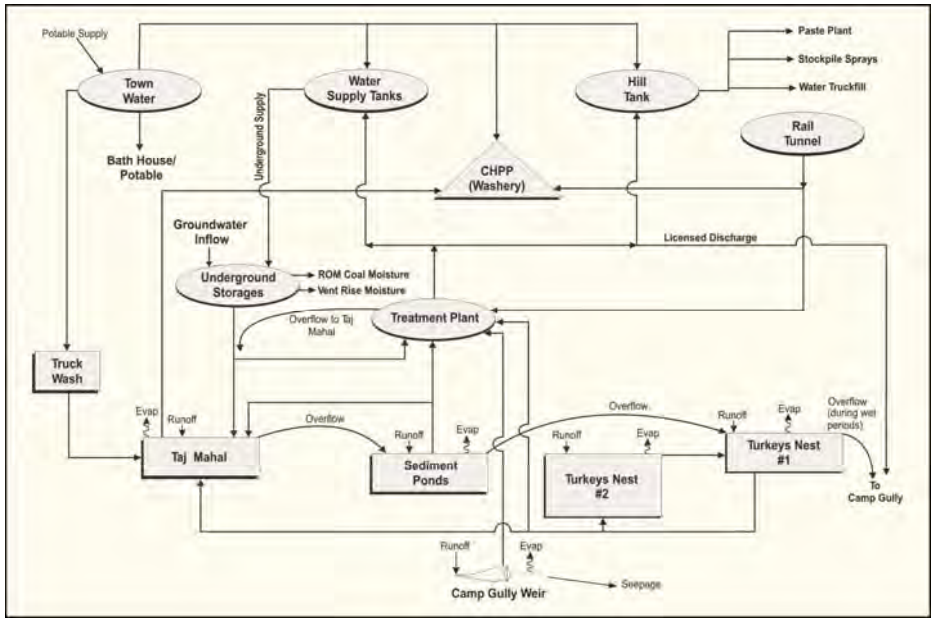


Figure 1 Major Surface Facilities Area Water Management Schematic

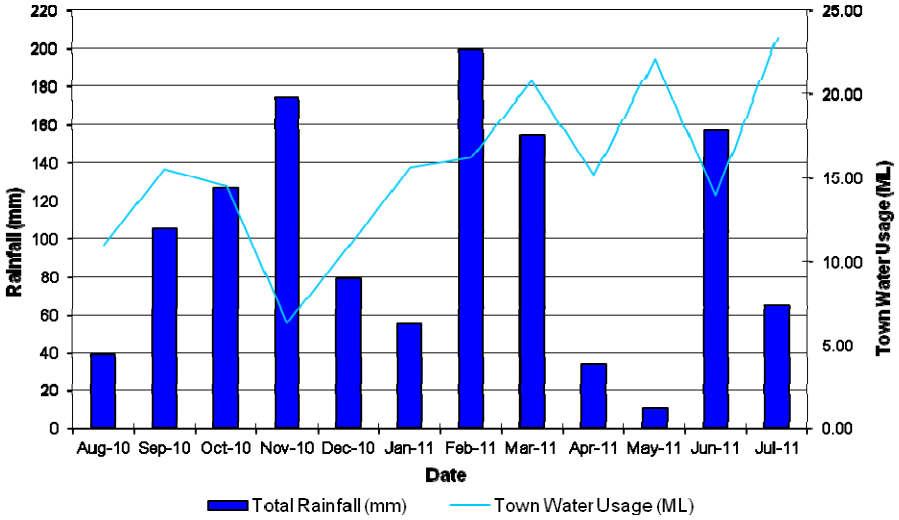


Chart 1 Rainfall and Town Water Use during the Review Period

Water Quality

Surface water quality monitoring is conducted at EPL No. 767 monitoring point 9 (clean water tank of the water treatment plant), if discharge is occurring to Camp Gully. Water quality parameters for EPL No. 767 monitoring point 9 include: pH, oil and grease and total suspended solids.

The monitoring results indicate:

- pH ranged from 7.6 to 8.6, with an average of pH 8.4 (Chart 2).
- Oil and grease concentrations ranged from less than the detection limit (<5 mg/L from August 2010 and <2 mg/L from September 2010 to July 2011) to 4 mg/L (Chart 3).
- Total suspended solids ranged from <2 to 19 mg/L, with a monthly average of 8.8 mg/L (Chart 4).

The site water management system continuously monitors total suspended solids and prevents discharges of water that exceeds the criteria. Water that exceeds the criteria is treated further to ensure that only water which meets the acceptable criteria is discharged.

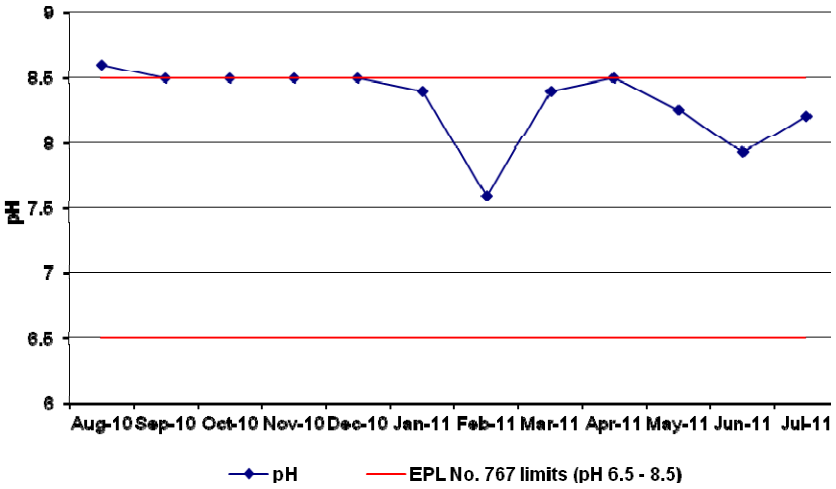
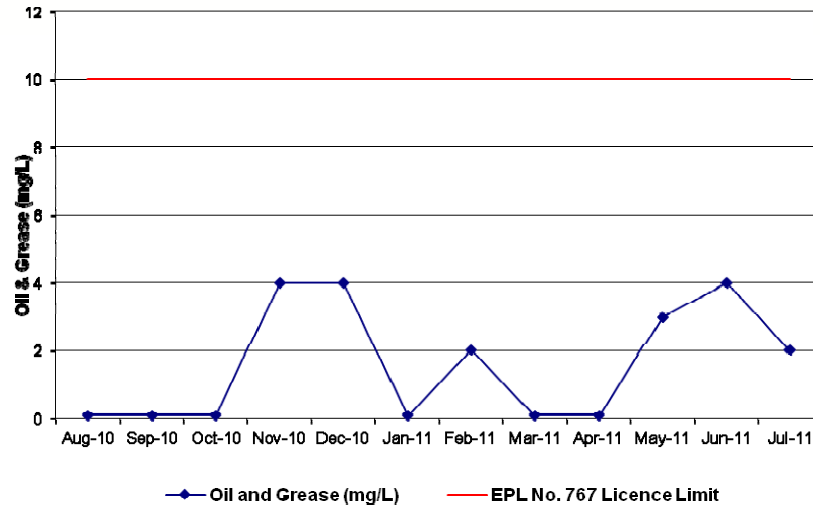


Chart 2 pH recorded at EPL No. 767 Monitoring Point 9



* Note: zero values correspond to results that are below the laboratory detection limits.

Chart 3 Oil and Grease recorded at EPL No. 767 Monitoring Point 9

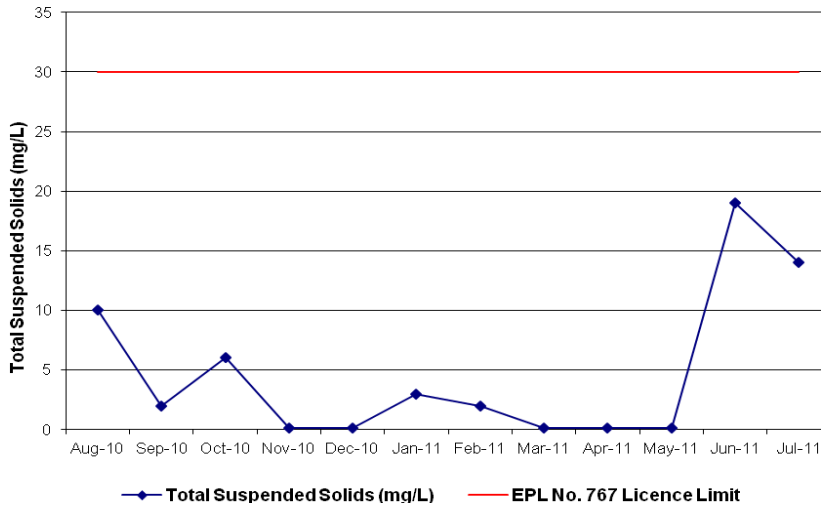


Chart 4 Total Suspended Solids recorded at EPL No. 767 Monitoring Point 9

Water Quality (continued)

In addition, monthly surface water quality monitoring at four sites on Camp Gully commenced during the review period. More frequent (i.e. event-based) sampling is conducted at the Camp Gully sites during larger rainfall events (i.e. greater than 25 mm/day). Water quality parameters sampled include: pH (pH units), electrical conductivity (microSiemens/cm), oil and grease (mg/L), total suspended solids (mg/L), dissolved oxygen (% Saturation and mg/L) and oxygen reduction potential (milliVolts). An analysis of the monitoring results from these sites will be included in the next Annual Review and future Environmental Monitoring Summaries.

Mine Water Make

Mine water make is monitored by Metropolitan Coal. The monitoring is described in the Groundwater section of this Environmental Monitoring Summary.

Overall System Integrity

Water management items are visually inspected and reported in accordance with the mine's maintenance system to assess the overall integrity of the water management system. This includes inspections of the:

- Integrity of all water management system pipelines and pumps for leaks and general serviceability (daily inspection).
- Integrity of all concrete bunded areas (hydrocarbon storages) for integrity and signs of leakage (daily inspection).
- Integrity of main water storages (Turkey's Nests, Sediment Ponds and Taj Mahal) and status of sediment accumulation (daily inspection).
- Signs of discharge of site runoff to Camp Gully or Helensburgh Gully, other than via licensed discharge points (daily inspection).
- Integrity of upslope diversions at site perimeter (weekly inspection).
- Integrity and effectiveness of erosion control measures (weekly inspection).

The Water Treatment Plant is also checked daily by the site's maintenance personnel under the direction of Metropolitan Coal's Environment and Community Manager.

The Environment and Community Manager (or their delegate) also inspects the site weekly.

The daily and weekly inspections have identified a number of improvements and maintenance requirements that have been subsequently implemented by Metropolitan Coal.

During the review period an environmental incident occurred on 24 November 2010. The NSW Office of Environment and Heritage and the Department of Planning & Infrastructure were notified of the incident as soon as practicable. The incident involved water seeping from a borehole which was being drilled to facilitate underground emplacement of coal wash into Helensburgh Creek Culvert and subsequently Camp Creek. The seepage was contained beside the colliery and impacted water was pumped back into the site water management system. The seepage would have included crushed rock, clays, recycled water from the site water treatment plant and a small quantity of drilling fluids.

A spill response procedure was immediately initiated including cessation of drilling operations and the establishment of a containment line and pumping extraction system. This swift implementation of the spill response procedure mitigated the potential environmental harm associated with the incident. Further actions have since been taken to clean up the incident and prevent re-occurrence.