

Altona Properties Soil & Groundwater Meeting

Minutes and Record of Questions and Answers

Date: 1st March 2004
Location: Altona Conference Room
Time: 17:00

1 Present

Nessie Hardie (Resident)
Richard Marks (EPA)
Charles Carabott (EPA)
Murray Grayburn (Orica)
Peter Horne (Orica)

Vincent Bonnici (City West Water)
Noel Ryan (APPL)
Melanie Rowe (PB)
Kate Dowsley (PB)

2 Apologies for absence

Dave Adams.

3 Confirmation of Agenda

Agenda confirmed as stated.

4 Greetings and Introductions

Opening of meeting and welcome by Noel Ryan.

Introduction and summary of involvement from everyone at the meeting.

5 Minutes of Last Meeting

Minutes of last meeting (August 2003) were circulated. Minutes of last meeting were accepted as true and correct.

Noel Ryan discussed visit by Jim Lewis of Polyone in October 2003. The visit was planned as a result of the management changes at Altona Properties. Jim emphasised Polyone's commitment to maintaining the attention to and continuity of groundwater monitoring and remediation. The visit was brief but served to assure stakeholders that Polyone will maintain an active interest in the site.

6 Groundwater Treatment Update

PB presented a summary of groundwater treatment and monitoring over the past 6 months since the last community meeting. An updated timeline (attached) was presented detailing system operation and shutdowns. In that period the Groundwater Treatment System (GWTS) was shutdown for burner maintenance, maintenance and repairs to the caustic

pump, transfer sump, quench and the annual general maintenance shutdown in November 2003. The general maintenance shutdown including servicing to the air sparge blowers and removal and overhaul of one blower. The period of the shutdown was extended due to difficulties in sourcing local parts and problems with supply of parts from the US.

PB is currently conducting a reliability study of the system to assess maintenance and replacement/modification measures that could be implemented to improve system up time and prevent extended GWTS shutdowns.

Polyone indicated their desire for improved reliability during the site visit in October 2003. Peter Horne also expressed the need to have the GWTS running more reliably. It was identified that some of the maintenance issues and delays are related to the difficulty in sourcing parts locally. Noel Ryan identified three main components which are responsible for the majority of extended shutdowns:

- air sparge blowers - the current blowers could potentially be replaced with air cooled Australian made blowers with the advantages of decommissioning the cooling tower (resulting in lower running costs) and availability of local servicing and parts;
- transfer sump - problems with the transfer sump are generally related to the poor water quality at the site resulting in pipe and filter blockages and effecting electrical equipment including level switches and probes. Options being considered to improved water quality include site wide pipe replacement, relining of pipework, drawing water from the centre of the service water tank to allow settling of sediment, additional filtration options ; and caustic system – caustic pump has already been replaced by locally available and serviceable pump and service contract put in place.

Charles Carabott (EPA) questioned the potential benefits of a remote connection to the GWTS so that issues could be resolved without a site visit. Noel/PB are currently assessing costs to install a remote system which can be operated without specialised training.

PB presented a number of graphs (attached) showing cumulative VCH (as EDC) extracted by the treatment system, cumulative resources used and waste produced, cumulative VCH (as EDC) in waste streams and cumulative environmental impacts measure.

PB reported that VCH destruction is highly efficient with a destruction efficiency of approximately 98%.

VCH emissions to wastewater and air are monitored on a regular basis and comply with the EPA waste discharge license and Trade Waste Agreement.

There are ongoing environmental impacts from the operation of the GWTS associated with greenhouse gas emission, resource consumption, and VCH emission. These need to be considered together with the environmental benefits in terms of treatment of groundwater contamination hotspots in determining an appropriate endpoint for remediation.

Improved reliability of operation needs to be achieved to enable assessment of the remediation results and associated environmental impacts.

7 Groundwater Monitoring

PB presented the September 2003 quarterly monitoring results. Fourteen groundwater monitoring wells on the Altona Properties site were sampled and analysed for VCHs.

Groundwater levels were generally higher than the previous monitoring event and flow was south-southeast, consistent with previous data.

There was a change in primary laboratory from ALS to Amdel for the September quarterly groundwater monitoring due to ALS increasing costs to offset technical issues associated with analysing high concentrations of VCHs.

Overall September 2003 data was generally within historic ranges although a systematic decrease in VCH concentrations was noted for the September 2003 round which is considered to be attributed to the change in laboratory. Despite this, some ongoing decreasing trends consistent with effective groundwater treatment and natural attenuation were also noted. Dissolved oxygen and redox were indicative of natural attenuation in some locations. Nessie Hardie (resident) queried whether a higher winter rainfall may have diluted VCH concentrations in the groundwater. Seasonal effects may be apparent in site water level data, but it is considered unlikely that this would significantly affect contaminant concentrations.

PB also presented the November 2003 Annual groundwater monitoring results. Sixty-three wells were analysed for VCHs, BTEX, TDS and selected wells for PAHs.

PB presented the groundwater level contour map (attached) showing that groundwater flow was south-southeast, consistent with previous data.

The decrease in VCH concentrations noted in the September 2003 monitoring event was also noted for the November 2003 annual though it was noted that the decrease may be due to the change in laboratories. Decreasing trends were noted primarily at the edges of the plume or in areas associated with air sparge wells, for example in the south-west corner of the Altona Properties site. Some increasing trends were noted and will continue to be monitored. BTEX concentrations continue to be high in the centre of the plume.

PB presented the EDC and VCM plume maps (attached). The central plume displayed lower concentration than reported from the March 2003 annual monitoring. Again it was noted that this may be partly due to the change in primary laboratories. It was also noted that VCH concentrations in the centre of the plume have always exhibited more variability due to the high concentrations present.

The separation of the plume observed from March 2003 data was not replicated by the November 2003 plume map, however this is due to two data points reporting minor concentrations of VCHs where below laboratory detection limits were reported previously. This variation is most likely to be the result of seasonal effects and is not interpreted to be indicative of any significant plume migration.

VCH trends around the edge of the plume and dissolved oxygen and redox measurements were indicative of natural attenuation in some locations.

Noel explained that natural attenuation is likely to be active to varying degrees across the plume because of differences in contaminant concentrations and physical variation in the aquifer. Organisms in the groundwater are responsible for natural attenuation of the plume and likely to have adapted to the site conditions over the last 40 years since groundwater contamination is likely to have occurred. The introduction of air to the aquifer via the air sparge wells is considered to encourage further active biodegradation of the contaminants.

PB presented a series of graphs (attached) which plot trends for EDC and VCM concentrations in certain wells (Category 2 wells - BH1AVQP, BH8G, BH9G, BH6G, Category 3 well - AS7, Category 4 well - BH2D-G, Category 5 well - BH24G and off-site wells BH3-4QP, BH3-5QP, BH3-7Qp and BH3-8QP). In general the graphs indicate overall decreasing trends for EDC. VCM concentrations are generally more variable with less evidence of distinct trends. Well BH6G is located in the centre of the plume and shows a high degree of fluctuation for both EDC and VCM due to the high concentrations in this area. The decreasing trend observed for both EDC and VCM in well AS7 is evidence of the effectiveness of groundwater treatment and the enhancement of natural attenuation due to the injection of oxygen to the groundwater. Where increasing trends have been noted (i.e. BH24G) ongoing monitoring is being undertaken.

It is proposed that annual groundwater monitoring will continue to be conducted in November rather than March as has been the case previously. The reason for this is to coincide with annual monitoring undertaken on the neighbouring Dow and Qenos sites.

A decrease in frequency of groundwater monitoring was proposed by PB and Noel Ryan. One of the reasons for this change was that the volume of data collected in monitoring events between 1997 and present has allowed us to establish declining trends noted at certain areas of the plume and the general stability of the plume. We also now have a firm idea of the normal concentration range for each well and so can identify any departures from usual values. Evidence of natural attenuation in certain areas is also well established. The plume is now well defined and new data merely supports our definition of the plume, rather than adding to our knowledge of it. PB considers it appropriate to decrease the frequency of monitoring to 6 monthly, rather than quarterly.

Decreasing the frequency of monitoring may offset the cost of returning to the initial primary laboratory and receiving better quality data. ALS appears to be able to achieve lower detection limits than Amdel on groundwater samples and is therefore the laboratory of choice. Currently their increased costs make them too expensive to use for quarterly groundwater monitoring. It is emphasised that a return to quarterly, or more frequent, monitoring would be instigated, if changes in the plume were observed or any modifications were made to the treatment system.

[Following consultation with the EPA Land and Groundwater Group, the site EPA representative (Richard Marks) advised that the proposed change to groundwater monitoring frequency was acceptable to the EPA.]

8 General Discussion and Questions

Nessie expressed concern regarding the analysis of fewer wells for PAHs than in previous annual monitoring events. Wells analysed for PAHs in November 2003 were those which had reported detectable concentrations of PAHs in previous monitoring. In November 2003, three of the wells analysed reported concentrations marginally above laboratory detection limits and three reported no PAH detections. Nessie requested a table of PAH concentrations to be included in the minutes (attached)

The sale of the the Qenos Plastics paddock to STC was raised with regard to well access. Noel advised that STC plans to develop the site and initial plans have allowed for the retention of four of the seven wells currently on the site. These four wells are situated on the perimeter of the site and as such are not in optimum locations to assess plume attenuation. Noel plans to communicate with STC representatives and encourage them to retain the monitoring wells that are located in the centre of the paddock as well. Charles suggested that the EPA may also be able to encourage STC to retain the wells in question.

During site demolition works in 2003 two wells (BH3G and BH5G) were badly damaged. One of the wells was pushed into the ground and is considered to be unrecoverable. The other well was bent and PB is currently investigating the recovery of this well. The impact of losing these wells is considered to be minor, given that the wells are in the centre of the on-site plume where concentrations are known to be high. The wells were also close to several other wells which continue to provide data for the plume in that area.

Charles expressed concern regarding the variation in results between the laboratories, particularly as the primary laboratory has recently been changed. Noel explained that the overall variation in results from different laboratories is within acceptable standards.

The AP Groundwater Management Plan website www.altonagroundwater.info will be updated with the meetings minutes when they are finalised.

Richard queried the availability and capabilities of the EQUIS database for site wide Altona data. Dow is currently coordinating the project and Altona Properties cooperates by providing Dow with access to site data.

Peter announced Orica's plan to apply to Council for a rezoning of the Altona Properties north title SUZ3 to SUZ4. The change would enable the site to be used for other commercial/industrial uses. Initial discussions with the Hobson Bay Council have met with preliminary approval. The proposal is currently awaiting formal approval.

9 Next meeting

The next regular meeting was scheduled to be in six months – August 2004.

Meeting closed at 7 pm.