



**MINUTES OF THE QENOS ENVIRONMENT MONITORING TEAM MEETING
HELD**

WEDNESDAY 18th Mar 2015

Present:

Resident EMT members	Qenos
Judy Hindle	Rob Berton: SHE Manager (Chair)
Troy Ryan	Les Harman: Senior Environmental Adviser (Secretary)
Dominique Dybala	Alan Findlay: Environmental Health Coordinator
	Duncan Laslett: Olefins Operations Manager
	Gary Lyon Plastics: Operations Manager
	Andre Olszewski Resins Operations manager
Apologies	Bruce Gunn Olefins: SHE Coordinator
Kimberley Foss	
Melinda Corry	
Valerie Gemmel	CWW
Chris Ryder	Linus Tong

1. Introductions

Rob opened the meeting @19:10 with a round the room self- introduction by all attendees.

Rob also communicated that expenditure in 2015 was being closely scrutinised and delayed where practical due to impacts from (1) The significant drop in oil price and (2) limited feedstock availability due to upstream industrial relations activities. This impact has been taken into account when scheduling EAP activities with higher cost items scheduled for 2016 onwards

2. Review of 2015 EAP action status

The status of the 2015 EAP list that was distributed with the meeting agenda was discussed by the action owners with the following points noted.

- Items 6.22 to 6.24. The first modified gearbox has been fitted to the RX2 compressor, but not yet run under load due to the lack of available feedstock at this time. Once feed is available the gearbox will be run until we are satisfied with its performance at which time the replaced gearbox will be shipped overseas to have the modified gears fitted which will then be installed

on the RX1 compressor later in the year. Community noise monitoring is in progress to measure the noise reduction.

- Items 7.5 to 7.12 for odour relate principally to actions to reduce the risk of odour from the Olefins Effluent treatment plant and were communicated at the December EMT. The Effluent Treatment Plant is currently having maintenance and cleaning cycle of the Forebay and API separators with this section currently bypassed. The odour audit will be scheduled once the system is all back on line. Items 7.9 and 7.11 to improve the seal of the covers will be completed as part of the return to service.
- Items 10.27 & 10.30 are covered by the groundwater update.
- Items 10.32 to 10.38 relate to the clean out and refurbishment of the Resins site waste water ponds. We are on schedule to meet our commitment to EPA to have reduced the risk from these ponds by the end of 2015. Two of the ponds the emergency and settling lagoons will be taken out of service before year end to meet the risk reduction commitment; however the refurbishment will be completed in 2016. These pond refurbishments and the bio pile disposal in item 10.32 have been rescheduled to 2016 to manage the cost profile of the pond program spend. The EAP will be updated to reflect these status changes.

The rest of the items were briefly discussed with the status in the distributed EAP identifying their current status. .

3. Incident Review

Olefins site has had one low risk incident relating to sulphides level in trade waste marginally exceeding the trade waste licence limits. A similar event was recorded in December 2014. Low residence time at the end of run with sludge build up in the forebay and API separator increases the variability of sulphide levels in the trade waste where they can go marginally above the licence limit for short periods. Once the Fore bay and API separator are returned to service the issue with sulphide management will be gone. Qenos have communicated with CWW to have a standing customer notified noncompliance on sulphides until the clean is completed.

4. PSV graph. (Pressure Safety Valve)

Duncan Laslett presented the PSV graph that was distributed with the meeting agenda. There were four PSV lifts in January all related to the plant response to the January steam supply interruption. Two valves lifted during the initial response to the plant shutdown and two were related to the subsequent start up.

The Steam supply interruption occurred when the Cogen plant heat recovery boiler shutdown and there was not enough steam to maintain operation. Duncan explained that a control system conflict on the Cogen plant caused the shutdown. Qenos was not aware of the potential for this control conflict and is working with our Cogen plant owner to engineer out this specific issue and review the facility to ensure that there are no other control system conflicts.

(Copy attached to minutes)

5. Community Complaints

Alan Findlay presented the complaint graph. There were three flare noise/smoke complaints in January related to the loss of steam supply.

6. November Groundwater Monitoring

Les made a presentation summarising the finding of the November 2014 groundwater monitoring. (Copy of presentation attached to the minutes)

The monitoring program completed was as specified in the updated Groundwater Quality Management Plan (GQMP) and did not exceed any of the triggers levels contained in the GQMP. The benzene plots show that the benzene plume is attenuating on the Olefins site.

The monitoring concluded that there is some biodegradation of petroleum hydrocarbons and that there is potentially some recharge of the groundwater in the vicinity of the Olefins effluent treatment plant.

There are also some amendments recommended to the 2015 sampling program. Judy asked what they were and a copy of them is being attached to the minutes. If EMT members have a need we can discuss any queries relating to them at the June EMT.

Activities for 2015 include

- Commence LNAPL removal program with bore skimming.
- Annual monitoring in November and dip round mid-year.

A key activity is getting EPA acceptance of the Qenos GQMP. We discussed it with EPA in December and they should be in contact in the near future to discuss. EPA indicated that they may require an independent auditors opinion of the GQMP in this process.

7. Noise EIP.

The draft Noise EIP was distributed with the agenda for review and comment. No queries were raised by the community members relating to the noise EIP. Valeria Gemmel email as requested is attached to minutes,

Troy asked whether we had recent noise monitoring data from Charles Road as he seemed to think it had been quieter. Les noted that the noise meter is still deployed in Charles road but we haven't downloaded the data yet. Qenos will present the noise monitoring data from Charles road and Galvin Street at the June EMT.

8. Community Alarm

Rob Berton discussed the future of the Community Alarm which has been in place for a little over 20 years. In the last several years there have been significant advancements in community notification for emergencies with police and fire brigade using phone messaging, phone apps and website for communication. In the event that an emergency at the Complex requires the community emergency response Rob feels that these emergency communications will be more effective than the community alarm as a lot of people do not know what it is.

Rob asked the Qenos EMT reps if they were willing to discuss and review the options for emergency notification, and that he would initiate discussions with the full ACNCG members if so. The reps agreed that a review should proceed and Rob would arrange.

9. Injury Performance update

Rob gave the injury update. A maintenance worker unfortunately received a cut to his wrist that required five stitches when installing plastic sheeting in the Resins site cooling tower. The sheet that was overhead slipped and contacted the wrist between the gloves and overall sleeve which gets exposed when reaching up. The cut while requiring stitches was not severe and he was able to return to work.

The Olefins site has recently passed the safety milestone of 700 days without a recordable injury.

10. Environmental News

The Odour audit has been delayed until after the Olefins site effluent treatment plant is clean. We would expect to finish this by early April and then be able to schedule the odour audit at a mutually agreeable time before the end of April. We will get in touch with the EMT members to arrange.

A quick look at the updated Qenos website structure was given by Les. The look is fresher and reduces the amount of navigation required for the community to access information.

11. Other Business

EMT meetings in 2015:

Les presented several options with the following resolved at the meeting.

4 meetings per year March, June, September and December.

Hold on Wednesdays evenings from 6-8 pm.

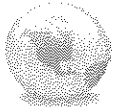
General Business.

Judy asked about what was happening with EPA. She had heard that the EPA was going to allow some companies to perform their own audits. Qenos was not sure what this referred to. We had recently attended some environmental briefings at which EPA chair and CEO had addressed and they were still following their current five year plan. We are aware that the Labour party as part of an election promise was to have a review of the EPA's operation which is expected to be in 2015. This may result in reviews of regulations etc.

Qenos is aware of a trial of a program known as Earned Autonomy that EPA is about to kick off soon. The program is been evaluated as a replacement to the current Accredited Licence Scheme. Participants in the trial will be the water industry and existing Accredited Licensee's. Upon reflection of the meeting discussion Qenos feel Judy's comment it may be related to the earned autonomy trial

12. Meeting Close.

Meeting closed by Rob



Noise Abatement

gemval to lee.harman

10/09/2015, 02:50 PM

[Hide Details](#)

From: gemval <gemval@optusnet.com.au>

To: lee.harman@qenos.com,

Please respond to gemval <gemval@optusnet.com.au>

Reply: This message has been replied to.

Les

My apologies to the meeting. Evening meetings not my forte these days.

Plse table these comments re the Qenos noise programme. And attach to the circulated minutes.

I am full of admiration for what seems to be a thoroughly professional, consultative and outcomes driven project.

Would that many other companies focus on community welfare in this way!

Congratulations, too, to your residents/community members who have been co-driving this with you.

Noise is not going to be non-existent: you are a heavy-industry plant with an eye to safety above all else for personnel and surrounding people. But qenos certainly shows integrity in its efforts to be a good neighbour.

It is a pleasure to work with you in addressing problems. We are all a bit more advanced from when I joined the "neighbours niggle group" twenty or so years ago.

Keep up the good work. Live long and prosper and keep jobs in our area.

Best regards

Valerie Gemnell

Sent from Samsung Mobileles



Groundwater update



Some terms

GW	Ground Water
GQMP	Groundwater Quality Management Plan
LNAPL	Light Non Aqueous Phase Liquid. (Floating oil/ hydrocarbon layer)
TDS	Total Dissolved Solids (measure of salinity)
ppm	Parts Per Million (1ppm = 1 milligram per Kilogram)
ug/L	Microgram/Litre (part per billion)

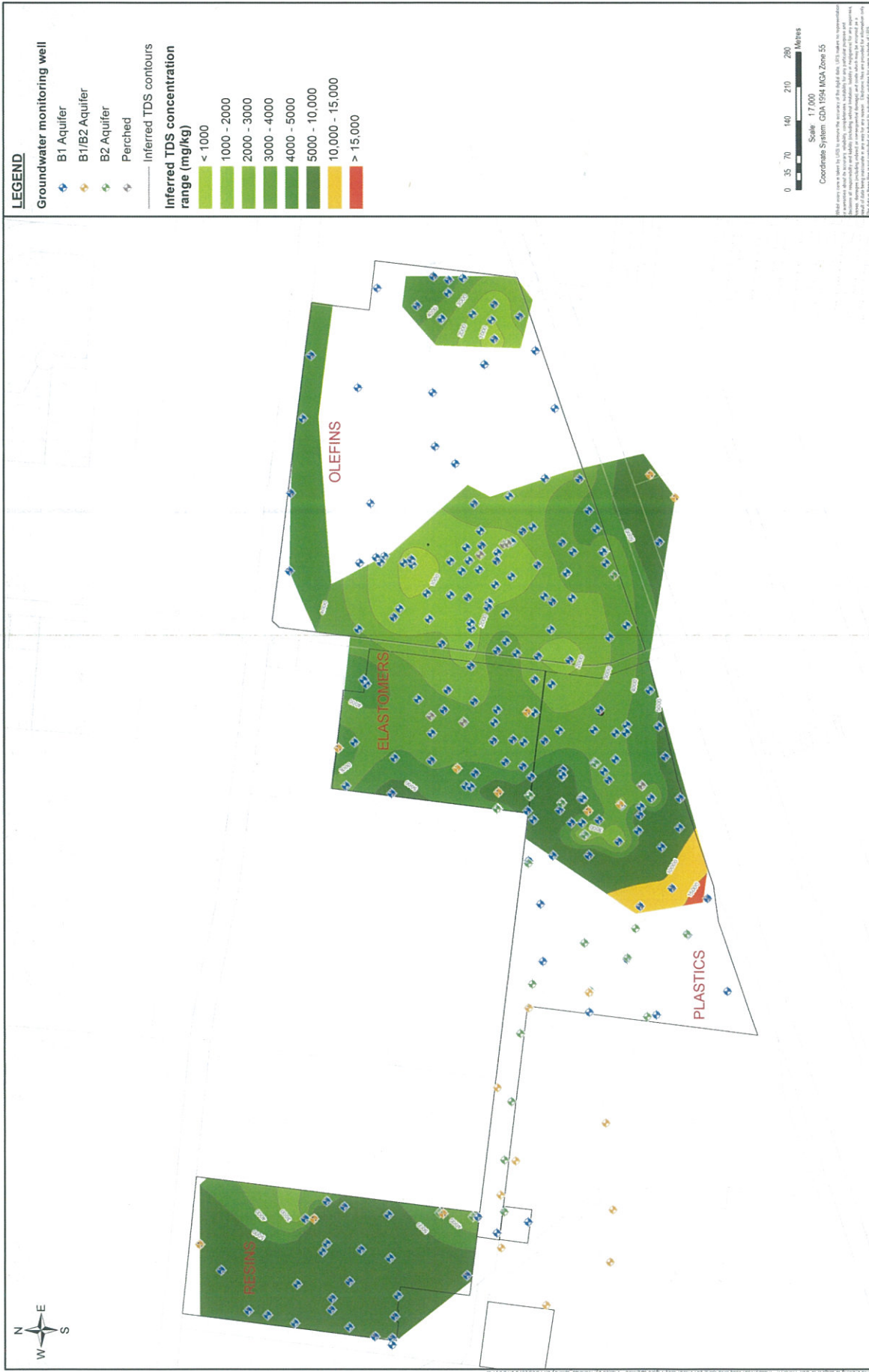
Activities

- Annual monitoring completed in November.
 - GW plan trigger levels not exceeded.
 - Biodegradation of petroleum hydrocarbons is occurring.
 - Potentially some recharge of GW at Olefins water treatment plant
- Recommendations.
 - All consistent with GW management plan.
 - Some amendments to next years GW sampling program
 - Passive skimming of LNAPL (free oil) @ Olefins & Plastics. (2015)
 - Potential Multi phase extraction of LNAPL @ Olefins. (2016).



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 QENOS ANNUAL GME, 2014
 QENOS MANUFACTURING COMPLEX
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INFERRED TDS CONCENTRATION CONTOURS GENOS - NOVEMBER 2014

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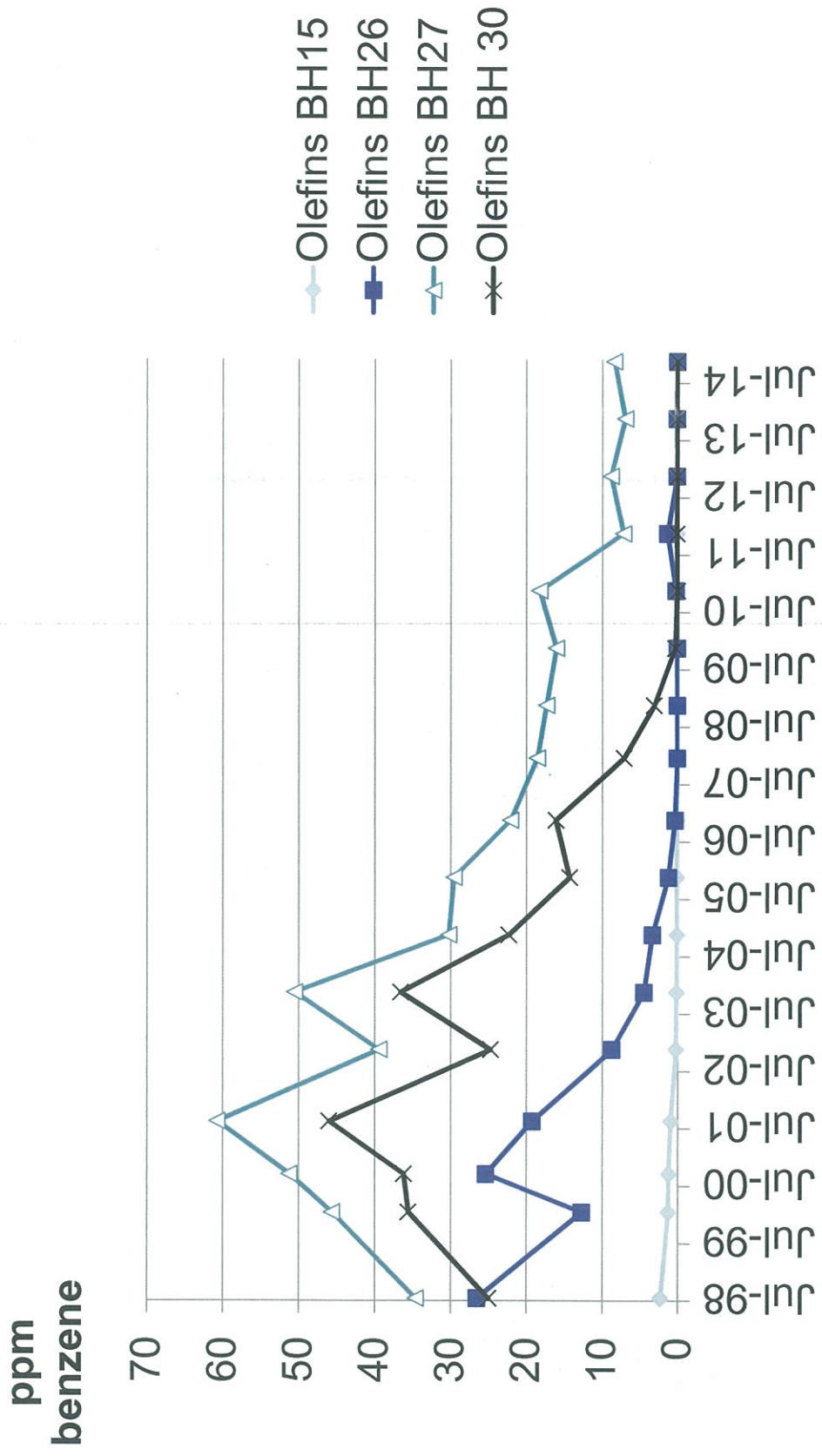


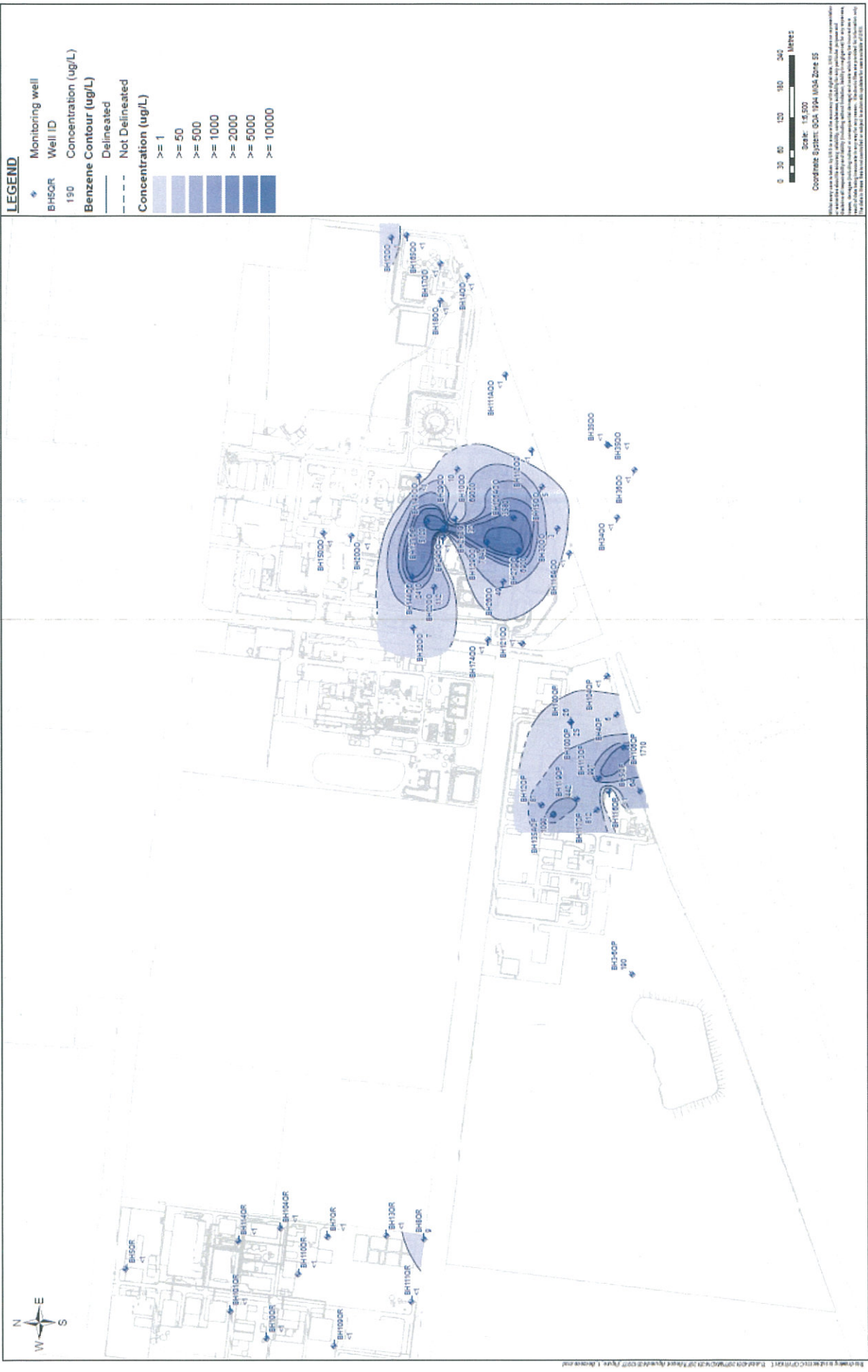
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Date: 10/03/2015
Approved: EH
Drawn: NT

Figure: 6b
Rev: 8 A3

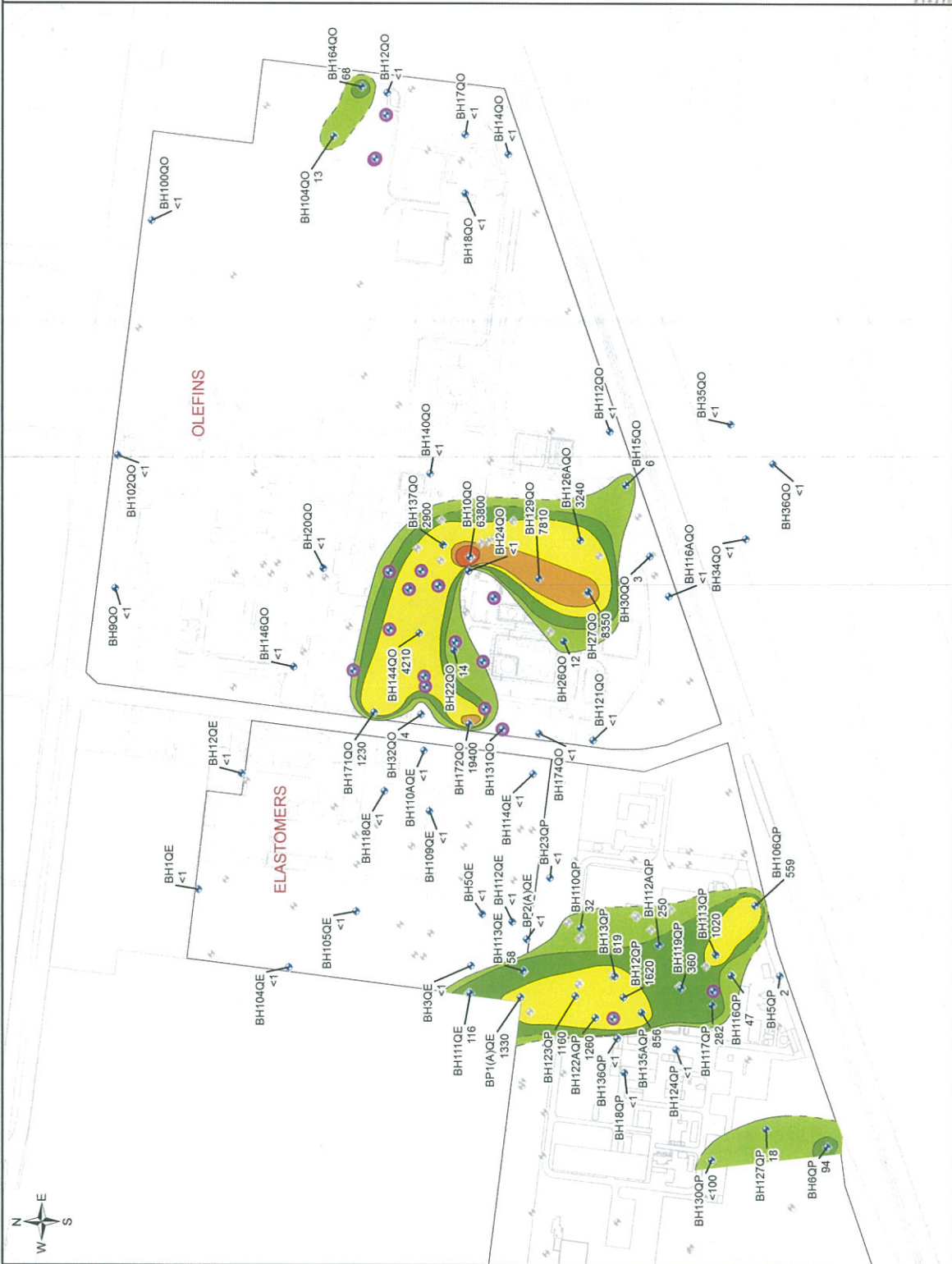
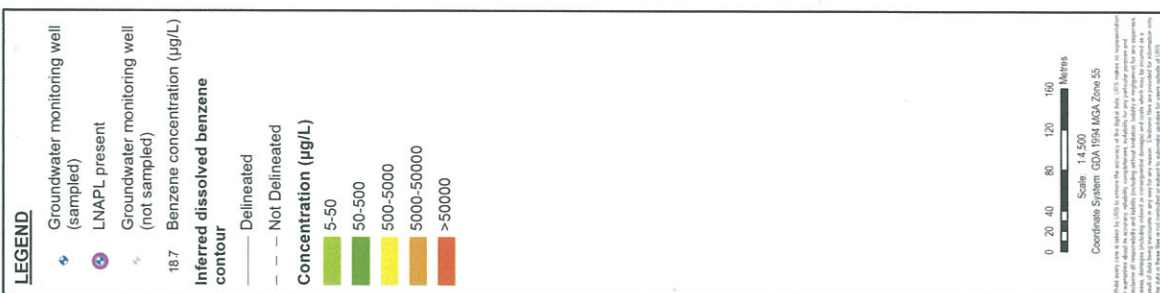
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Benzene trend





BENZENE CONCENTRATION CONTOURS



File No: 4314082-Figure 6a.mxd Date: 16/03/2015

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Figure: 6a
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Next steps

- Continue monitoring. Annual plus 1 dipping round.
- LNAPL (Free Oil) removal program
 - Commencing June 2015.
- Groundwater Quality Management Plan (GQMP)
 - Discussed with EPA in December.
 - Will come back to discuss in 1H 2015.
 - Possibly require independent auditors statement of opinion.
 - May issue notice to implement GQMP

Trigger Levels

- No trigger levels, as outlined in the GQMP, have been exceeded during the November 2014 GME, and as such, contingency actions are not currently required, (URS, 2014e).

7.1.3 Hydrasleeve Trial

Based on the hydrasleeve trial undertaken by URS during the November 2014 GME, it was shown that while variation in groundwater concentrations between samples taken using the hydrasleeve method to low-flow method existed, concentration differences appear to be due to natural variations seen in aquifers.

Furthermore, this variation did not affect the interpretation of the groundwater on the site, for example where GWQOs were exceeded, this occurred in both the hydrasleeve and low flow samples. However, the trial was completed on five impacted wells.

7.1.4 Natural Attenuation

Tier 1 lines of evidence have shown that the petroleum hydrocarbon contaminant plumes are generally stable. Tier 2 lines of evidence show that biodegradation of petroleum hydrocarbons is occurring.

7.2 Recommendations

It is recommended by URS that the Groundwater Monitoring Program, as outlined in the GQMP (URS, 2014), be updated to reflect the recommendations listed below. Otherwise, groundwater monitoring should continue in accordance with the GQMP. This includes continued collection of MNA data to build a series of data for comparison over time.

- LNAPL thickness and distribution remains stable on Plastics and Olefins. It is recommended that ongoing LNAPL monitoring be undertaken as per the GQMP. As per the conclusions of the LNAPL management plan (URS, 2014), passive skimming could be implemented at Olefins and Plastics to remove LNAPL. Mobile multiphase extraction (MPE) could also be undertaken at Olefins Area 1 to assess whether this would be an effective method for remediation of LNAPL in this area of the site.
- For Elastomers it is recommended that:
 - On the basis of the TRH results with silica gel cleanup, further TRH analysis from groundwater wells across the site is not required.
 - Benzene and TDS should be analysed from wells in the southwestern corner of Elastomers to assess whether concentrations decrease over time.
- For Olefins it is recommended that groundwater sampling be undertaken as per the GQMP with the following additions / changes:
 - Further investigation (review of historical records and discussion with site personnel) should be undertaken to assess whether 1,1-dichloroethene and carbon tetrachloride in BH34QO, BH35QO and BH36QO could have resulted from the Olefins and/or Plastics.

- For Plastics it is recommended that groundwater sampling be undertaken as per the GQMP with the following additions / changes:
 - Groundwater from BH121AQP reported phenolic concentrations less than laboratory limits of reporting with the exception of pentachlorophenol (reported below GWQOs). Further analysis of phenols at this location is not considered to be required.
 - For BH116QP benzene has been less than the LOR since 2007, but increased to 47 µg/L in 2014. Further assessment will be required in later monitoring events to review if this increasing trend continues.
 - On Plastics there are a number of volatile compounds reported in groundwater, for which there are no available screening criteria for assessment of the volatilisation pathway. A qualitative review of these data indicates that further assessment of these compounds may be required.

It is considered unlikely that unacceptable risks would be posed to onsite workers from the VHCs, due to inhalation exposures associated with volatile impacts in groundwater. This assumption is based on the construction types of buildings onsite, the location of impacts relative to buildings, the depth to groundwater, and the potential for vapours to degrade through the vadose zone.

URS recommends that further assessment of the vapour intrusion pathway be undertaken to ensure that the potential risks, although unlikely to be significant, are adequately assessed and closed out. It is possible that this risk assessment has already been completed by DOW and Qenos should enquire if this is available through the data sharing agreement.

- For Resins, it is recommended that groundwater sampling be undertaken as per the GQMP with the following additions / changes:
 - The impact in BH105QR is anticipated to be associated with the former UST at this location. Although detected at 2 µg/L in 2014, an assessment of trend cannot be completed as the only previous reading was reported less than the elevated LOR of 100 µg/L. Further assessment will be required in later monitoring events to review if a likely decreasing trend exists.
- The following wells require works (repair, re-surveying, etc.):

SITE	WELL	ACTION
Plastics	BH19QP	Remove pump that is stuck in the well.
	BH20QP	Repair / move damaged gatic cover.
Resins	BH101QR	Survey top-of-casing and ground surface.
Pipeline Easement	BH9QP	Remove pump that is stuck in the well.

- URS recommends hydrasleeve sampling as a viable alternative to low-flow sampling. It is URS' recommendation that Qenos consider implementing the hydrasleeve sampling technique for all future Groundwater Monitoring Programs. URS suggests to initially sample a limited number of low impacted / non impacted wells using both low-flow and hydrasleeve techniques.