FOUR MILE URANIUM MINE

(MINERAL LEASE 6402)

ANNUAL COMPLIANCE REPORT 2016

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Department of the Environment

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1 INTRODUCTION

1.1 Context for this report

This Annual Compliance Report (ACR) has been prepared by Heathgate Resources Pty Ltd (Heathgate) to satisfy the reporting requirements specified in the Four Mile Mineral Lease Program for Environment Protection and Rehabilitation (PEPR) and Radioactive Waste Management Plan (RWMP) and lease conditions for Mineral Lease (ML) 6402, hereafter referred to as ML 6402. The report has been prepared by in accordance with the "Minerals Regulatory Guidelines MG3 Guidelines for Miners: Preparation of a Mining and Rehabilitation Compliance Report (MARCR) Version 1.4 March, 2009" (PIRSA 2009).

1.2 Project Background

The leaseholder of the Four Mile Mineral Lease (ML) 6402 is Quasar Resources Pty Ltd (Quasar)[1]. The Four Mile ML was granted on 26 April 2012 subsequent to the approval of the Beverley Four Mile Project Public Environment Report (PER) and Mining Lease Proposal 2009 by the relevant State and Commonwealth authorities on 14 July 2009. In-situ recovery (ISR) mining commenced at Four Mile East (FME) on the 14th April 2014 under condition of the *South Australian Radiation Protection and Control Act 1982* (*RPC Act*), the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (*EPBC Act*), and the Four Mile Uranium Mine Program for Environment Protection & Rehabilitation (PEPR) and Radioactive Waste Management Plan (RWMP) approved in August 2013.

This ACR demonstrates compliance with approved environmental, closure outcomes and compliance criteria prescribed by the Mineral Lease conditions and the PEPR/RWMP.

1.3 Mining Leases and Land Tenure

The natural, social and economic environment of the area are described in the PEPR and therefore a description of the surface environment to be disturbed by the mining activities is not included in this ACR.

ML 6402 is 122 km^2 in area and is on the western boundary of a broad plain approximately 45 kilometres (km) wide, laying between the eastern margin of the northern Flinders Ranges (Ranges) and Lake Frome i.e. the Callabonna sub-basin (Figure 1-1). The Ranges rise abruptly on the western margin of the plain to about 600 metres (m) above sea level, falling to an elevation of between 180 m to 100 m over Four Mile (150 m to 120 m over the Four Mile East (FME) deposit where initial construction occurred), then to the lowest elevation of +0.5 to -3.0 m above sea level at Lake Frome some 35 km to the south east.

The closest communities include the tourist resort at Arkaroola and the Adnyamathanha Aboriginal community at Nepabunna, approximately 30 km and 80 km to the south-west respectively (Figure 1-1). The Native Title Holders for the area are the Adnyamathanha people.

ML 6402 is for the most part covered by the Wooltana Pastoral Lease (Deposited Plan 42204 Allotment 34, Pastoral Lease 2293, Crown Leasehold Volume 1289 Folio 38) and a small portion near the Ranges covered by the Arkaroola Pastoral Lease (Hundred 833900 Pastoral Block 1108, Pastoral Lease 2240, Crown Leasehold Volume 1278 Folio 43). The Arkaroola Protection Area lies immediately to the west of the western boundary of ML 6402 within the Ranges (Figure 1-2).

[1] *Prior to 18 September 2015, the leaseholders were Quasar (75%) and Alliance Craton Explorer (ACE, 25%) were in Joint Venture in the Four Mile ML and adjoining Exploration Lease (EL 5017). On September 18, 2015, Quasar purchased ACE's interest in the Four Mile Joint Venture for $73.975 million with all stamp duty, bond replacement and equity transfer being completed on 15 October 2015. Subsequently a Cross Boundary Co-ordination Agreement between Quasar and Heathgate was negotiated and accepted by the Director of Mine on 22 December 2015 to enable ISR to occur across/at ML boundary between Four Mile and Beverley North.*

ML 6402 comprises in-situ recovery (ISR) wellfields and wellhouses within the Four Mile East (FME), North East (FMNE), North (FMN) and West (FMW) deposits, with trunklines constructed through to the Pannikan satellite plant located on Heathgate's Beverley North ML (Figure 1-2).

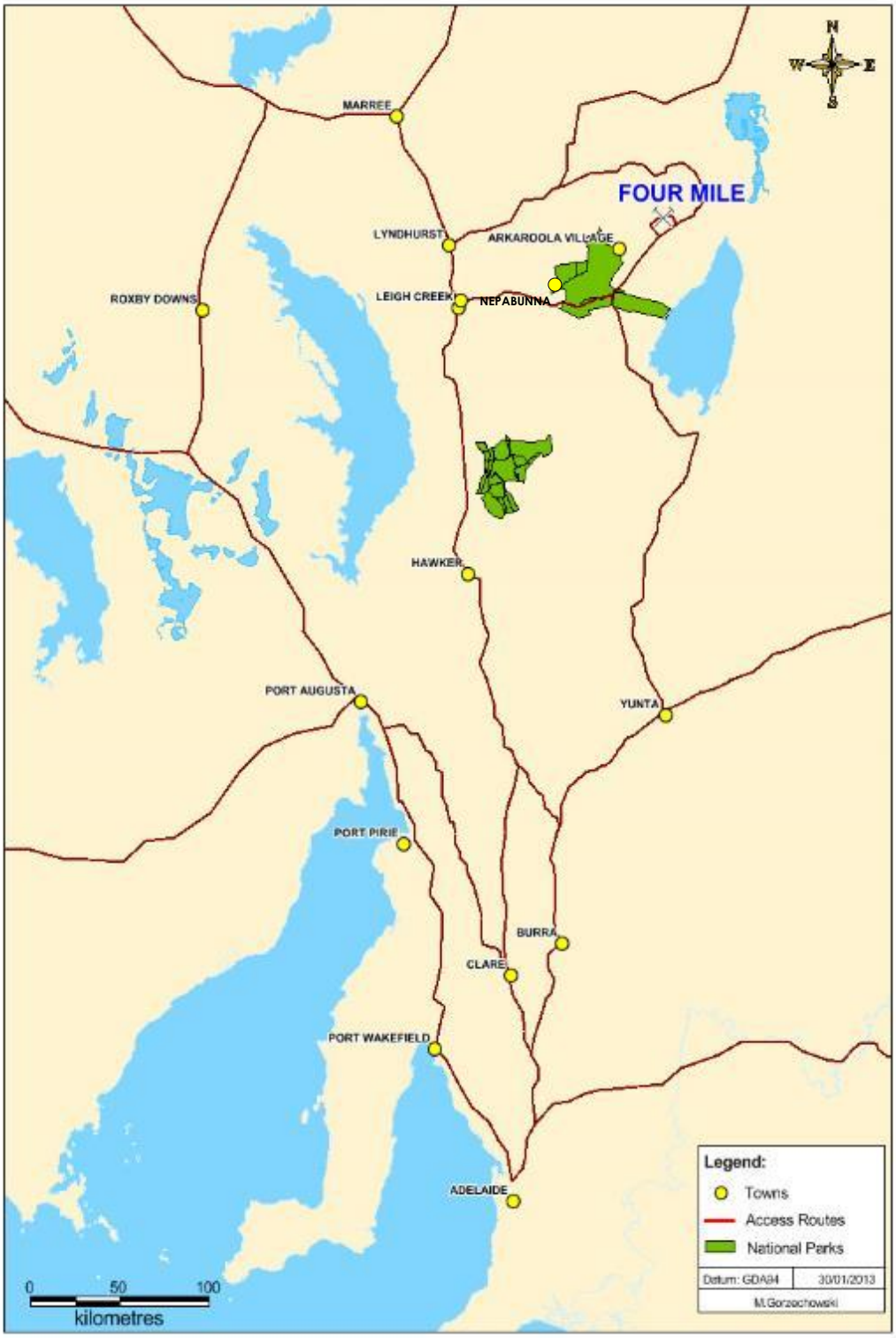


Figure 1-1: Location of the Four Mile Uranium Mine

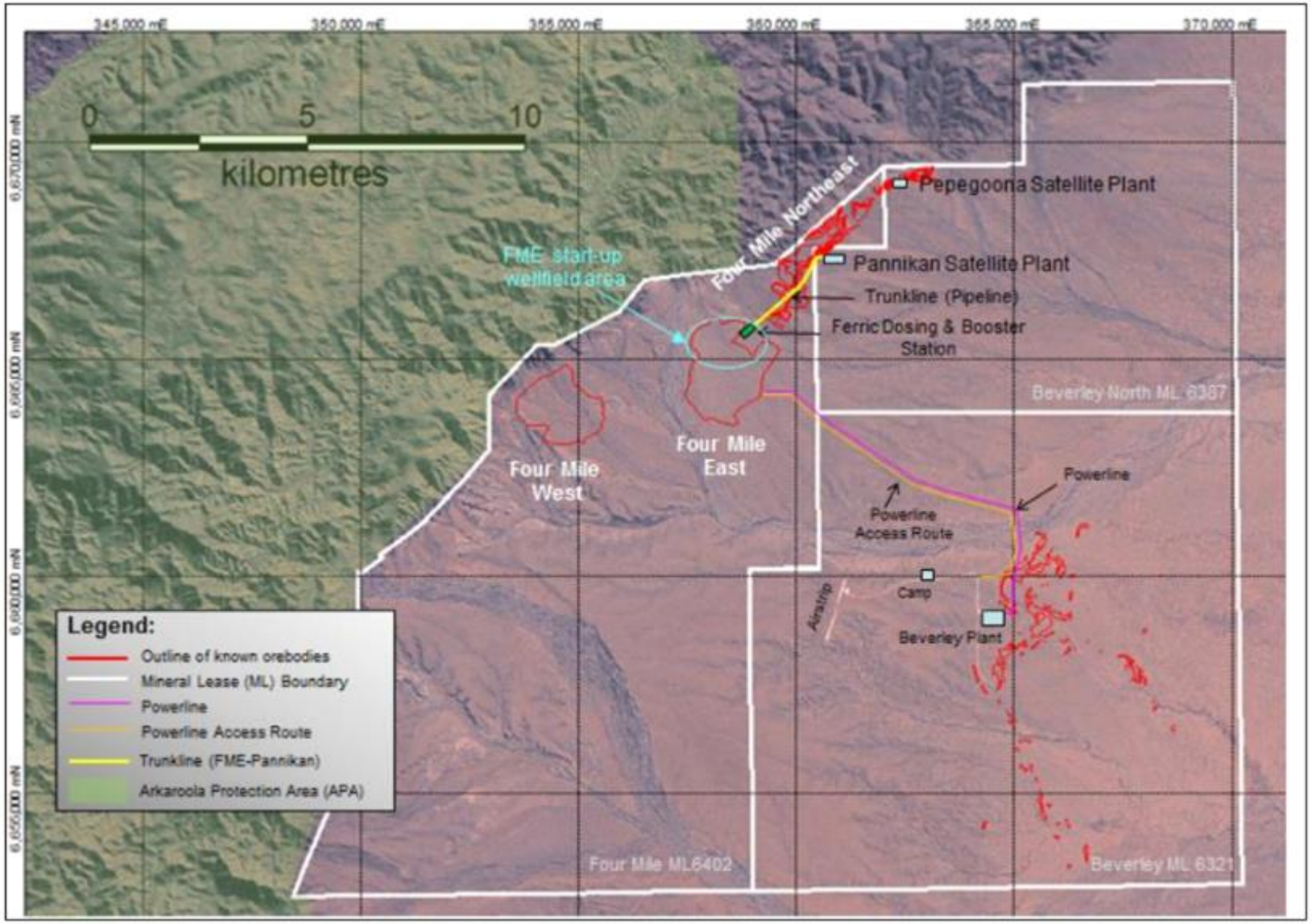


Figure 1-2: Beverley ML 6321, Beverley North ML 6387 and Four Mile ML 6402 showing key infrastructure and the Arkaroola Protection Area

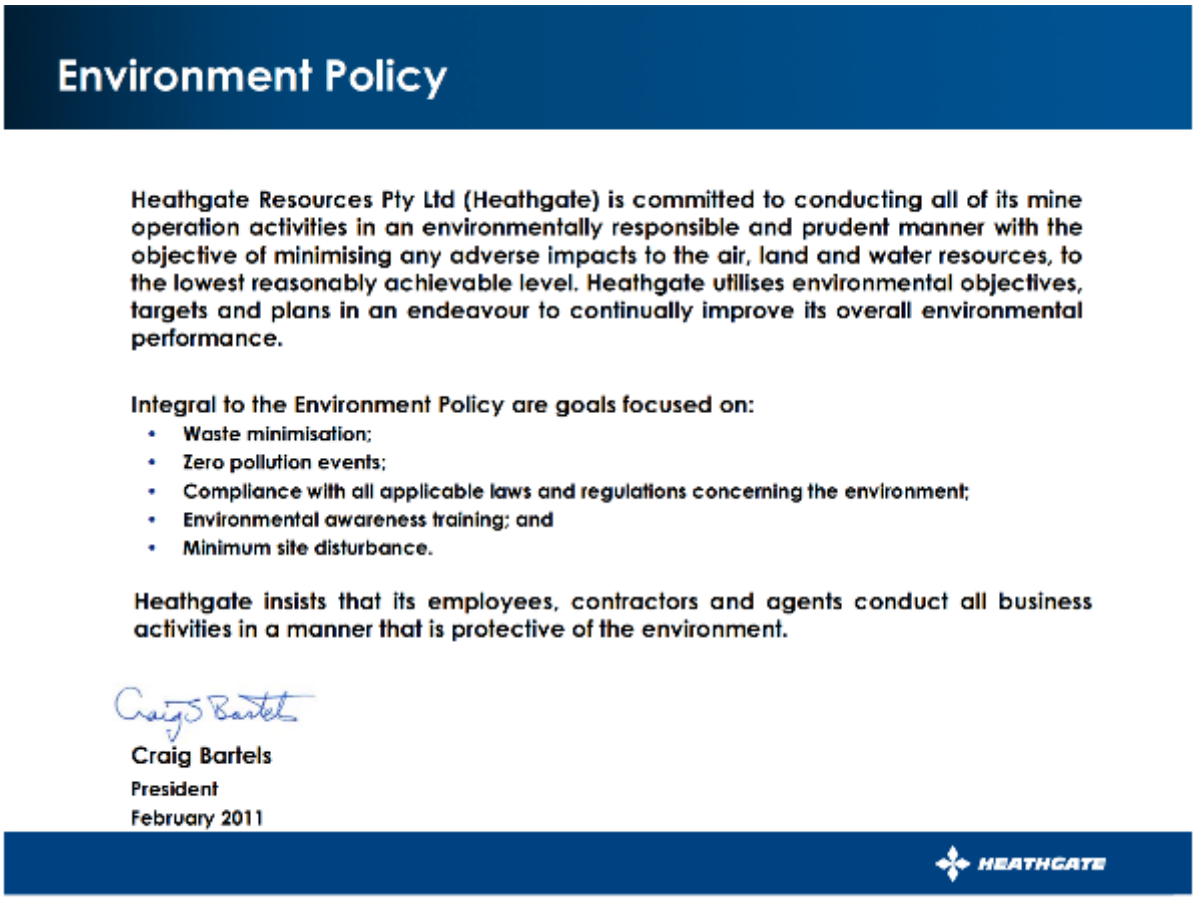
1.4 Heathgate Management Personnel

During 2016, the following Heathgate personnel were responsible for environmental management at the Four Mile site:

- President – Craig Bartels
- Operations Manager – Simon Tildesley
    - Production Managers - Chris Every and Chris Heinrich
- Manager – Regulatory and Compliance – Andrea Marsland-Smith
    - Chief Environment and Radiation Advisor – Kelly Pelgrim
- Geology Manager – Brett Rava
    - Chief Geologist – Ben Packer
    - Chief Hydrogeologist – Aaron Smith

1.5 Heathgate's Environment Policy

Heathgate's Environment Policy valid during the reporting period is given below Figure 1-3.



Environment Policy

Heathgate Resources Pty Ltd (Heathgate) is committed to conducting all of its mine operation activities in an environmentally responsible and prudent manner with the objective of minimising any adverse impacts to the air, land and water resources, to the lowest reasonably achievable level. Heathgate utilises environmental objectives, targets and plans in an endeavour to continually improve its overall environmental performance.

Integral to the Environment Policy are goals focused on:

- Waste minimisation;
- Zero pollution events;
- Compliance with all applicable laws and regulations concerning the environment;
- Environmental awareness training; and
- Minimum site disturbance.

Heathgate insists that its employees, contractors and agents conduct all business activities in a manner that is protective of the environment.

Craig Bartels
President
February 2011

HEATHGATE

Figure 1-3: Heathgate's Environment Policy

2 DESCRIPTION OF ACTIVITIES

2.1 Drilling and Related Activities

Four Mile Regional

Two (2) diamond mud core holes were drilled along the range front adjacent to FMNE to gain a greater understanding of the structural and sedimentological properties along with mineralising within the area.

Four Mile East (FME)

Fourteen (14) delineation holes were drilled at FME to further delineate resources to the south of the existing wellfields. The program refined uranium mineralisation within the area, and assisted in defining the location of production wells for the FME06 wellfield.

Eight (8) production wells were drilled at FME comprising the start of FME06 wellfield.

Two (2) production style water supply wells were drilled to south of the current wellfield operations. These wells were designed to assist in the dilution of the LIX solution and associated ground water from the FMWFLT.

Other activities completed during the reporting period included airlifting, rescreening and integrity testing of production wells as part of normal wellfield operational management and recovery optimisation.

Four Mile North/East (FMNE)

One hundred and nine (109) delineation holes were drilled at FMNE to further delineate the resource within the FMNE prospect. The program refined uranium mineralisation within the area, and assisted in defining the location of production wells for the FMNE02 and the upcoming FMNE03 wellfields.

Forty three (43) production wells were drilled at FMNE comprising of the FMNE02 wellfield. Five (5) additional wells were drilled however abandoned prior to completion.

One (1) lateral observation well was drilled at FMNE to monitor the influences of mining activities with FMNE01 & FMNE02.

Other activities completed during the reporting period included airlifting, rescreening and integrity testing of production wells as part of normal wellfield operational management and recovery optimisation.

Four Mile West (FMW)

Eight (8) delineation holes were drilled at FMW to further delineate the FMW resource and refine the geological interpretation in the area surrounding the proposed monitoring wells. The program refined uranium mineralisation within the area, assisted in defining the location of production wells for the initial FMW wellfield and refined the location of the associated monitoring wells.

Four (4) diamond mud core hole were drilled at FMW one (1) of which were to gain a greater understanding of the sedimentological properties of FMWFLT, one (1) of which was used as an APFN+ test well and two (2) of which were to gain a greater understanding of mineralisation above the water table closer to the range front.

Twenty two (22) production wells were drilled at FMW comprising of the FMW FLT due to be online in 2017. Twelve (12) additional wells were drilled however abandoned prior to completion primarily due to failure of integrity testing.

One (1) overlying and Fourteen (14) lateral (including: seven (7) situated within the Four Mile Diamictite and seven (7) within the Eyre Formation), were drilled at FMW to monitor wellfields at FMW. One (1) additional lateral monitoring well situated within the Eyre Formation was abandoned prior to completion.

Nine (9) 4DT wells were drilled at FMW to investigate the hydraulic flow characteristics of the LIX solution upon the commencement of mining within the MFWFLT wellfield.

Four Mile North (FMN)

Twenty eight (28) delineation holes were drilled at FMN to further delineate the resource between the Pannikan and Pepegoona deposits which lie on the adjacent Beverley North Mineral Lease. The program refined uranium mineralisation within the area, and assisted in defining the location of production wells for the FMN01 to the west of the Pepegoona Deposit, and further refined mineralisation to the east of the Pannikan deposit.

Fourteen (14) production wells were drilled at FMN comprising of the FMN01 Wellfield due to be online in 2017. Two (2) additional wells were drilled however abandoned prior to completion.

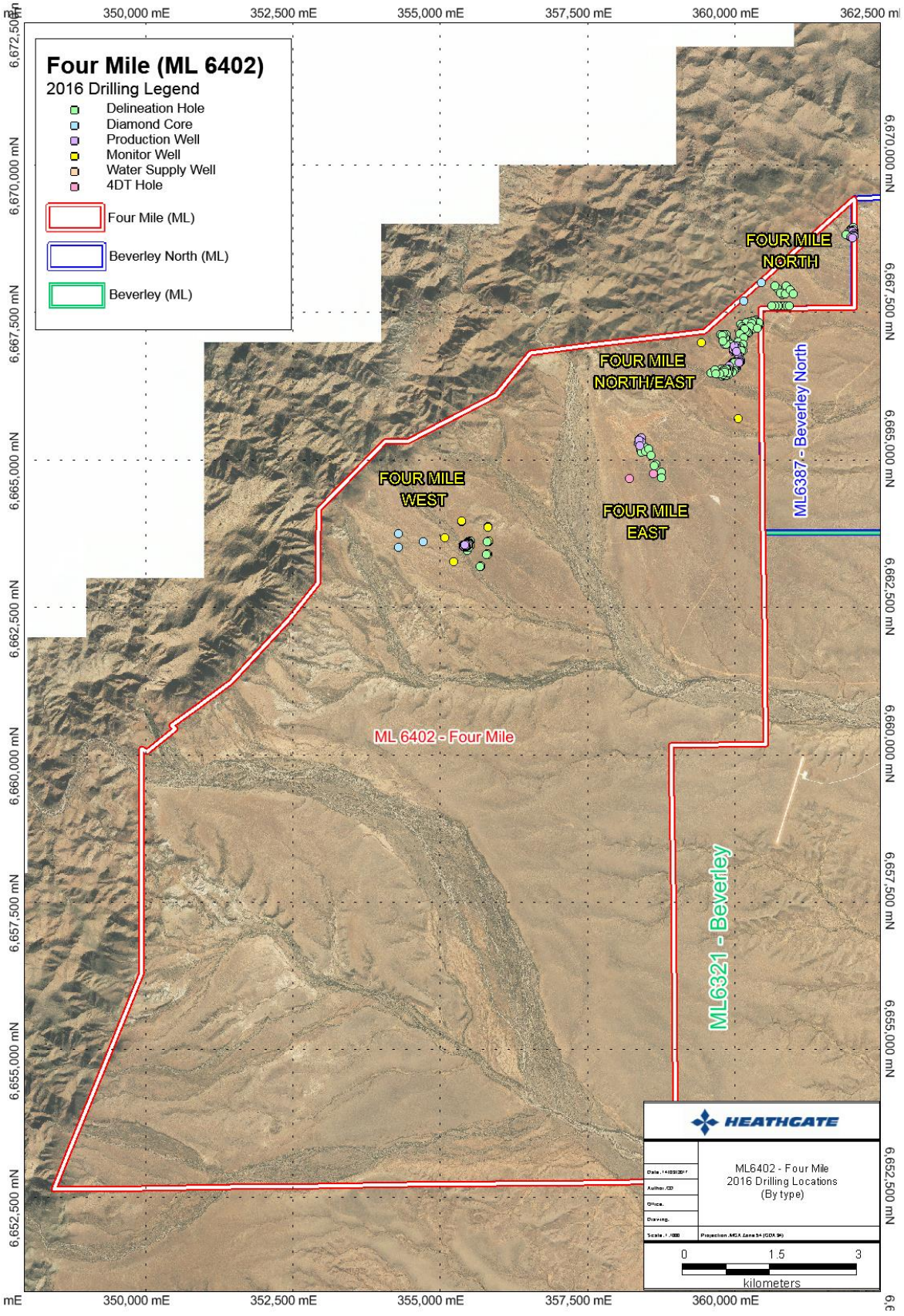


Figure 2-1: Location and type of drilling activities – Four Mile ML

2.2 Construction and Mining Activities

Wellfield development in the Four Mile area continued during 2016 including:

- Construction of the Wellfield FME06.
- Installation of two water supply wells to assist in the dilution of the lixiviant solution to the FMW FLT wellfield.
- Expansion of FMNE01 and FMNE02 Wellfields.
- Infrastructure to enable targeted acid dosing to wellfields at Four Mile to reduce reagent usage and improve efficiencies.
- Trunkline construction from Four Mile East to Four Mile West in preparation for the Field Leach Trial at Four Mile West in 2017.
- Installation of the Four Mile West Field Leach Trial wellfield, wellhouse and associated infrastructure.

3 ENVIRONMENTAL AND SOCIAL COMPLIANCE ACTIVITIES

This section presents and discusses the compliance monitoring and management activities for the eight risk areas identified in the PEPR/RWMP, they are:

- soil
- vegetation
- surface water
- hydrogeology
- fauna
- air quality,
- heritage, and
- third parties

A brief discussion of the meteorological statistics for the site is also presented below.

3.1 Meteorological

Meteorological data is collected continuously at the Beverley site weather tower. Rainfall data is collected using a tipping bucket, tipping at 0.2 mm increments, and recorded every 10 minutes. An automated evaporation pan including precision water level meter and refill tank provide measurements of evaporation, and is logged every 24 hours. Note that due to a technical issue, no data was recorded between 1-22 April (21 days).

Monthly rainfall and evaporation is shown in Figure 3-1.Comparative annual rainfall and evaporation since 2002 is shown in Figure 3-2 and Figure 3-3.

Total rainfall for 2016 was 245 mm, well above the long term average for the area of 195mm. Temperature, wind speed (readings taken at 3m, Figure 3-4) and wind direction (Figure 3-5) data are collected at 3m, 9m and 28m and recorded every 10 minutes using a continuous data logging system. The weather station also contains a humidity sensor, with humidity logged every 10 minutes.

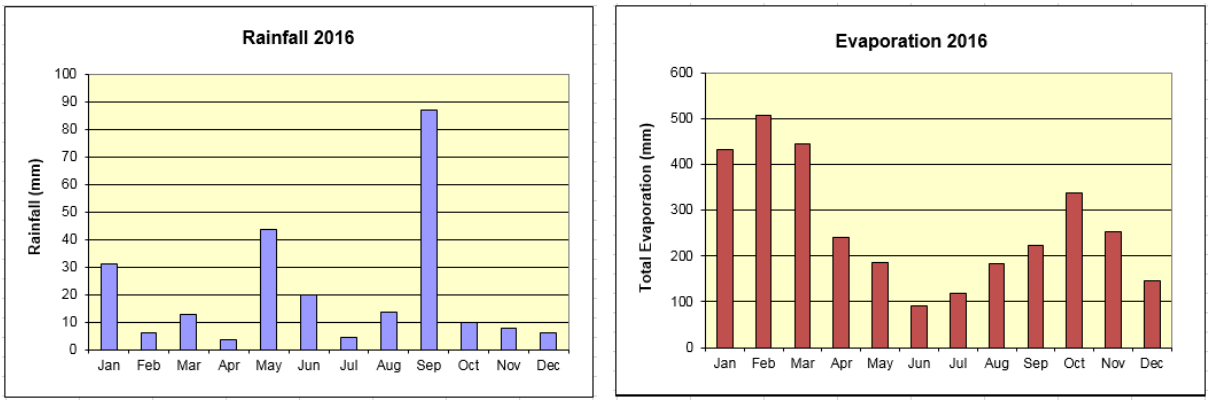


Figure 3-1: Monthly Rainfall and Evaporation 2016[2]

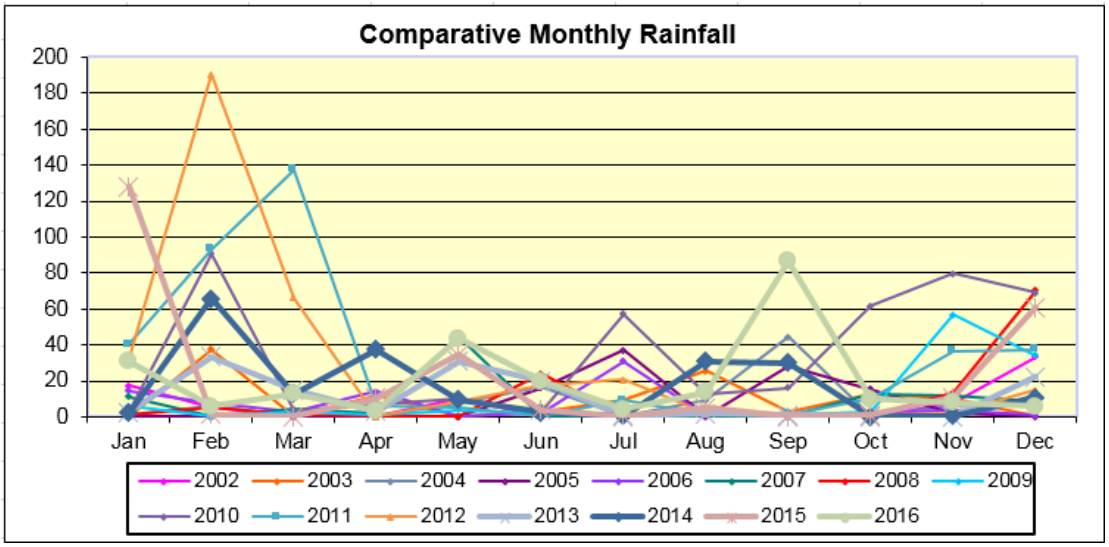


Figure 3-2: Comparative annual rainfall 2002 to 2016

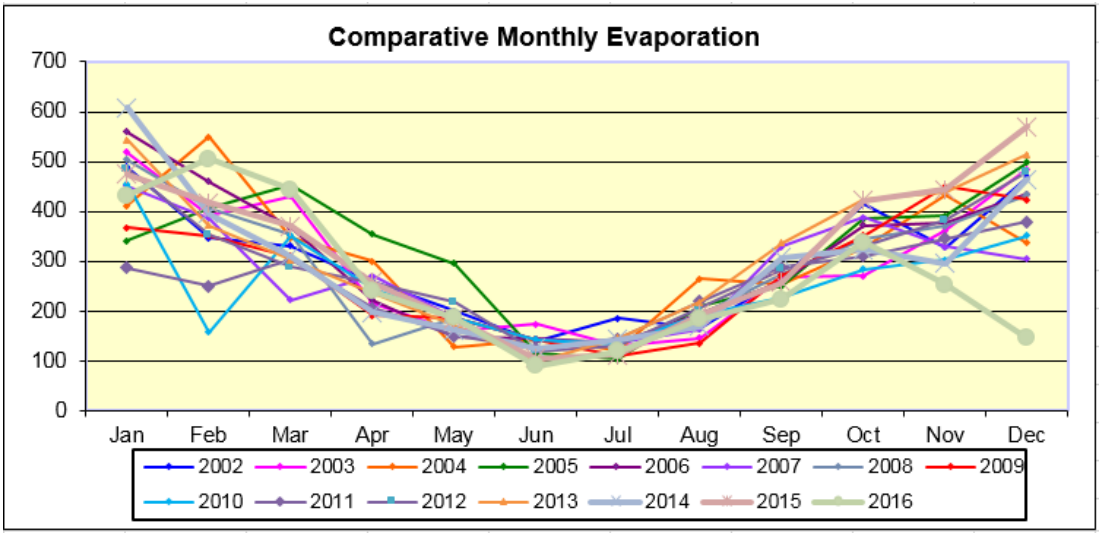


Figure 3-3: Comparative annual evaporation 2002 to 2016

[2] Data logger error during December 2016 resulted in extrapolation of results to estimate monthly evaporation total.

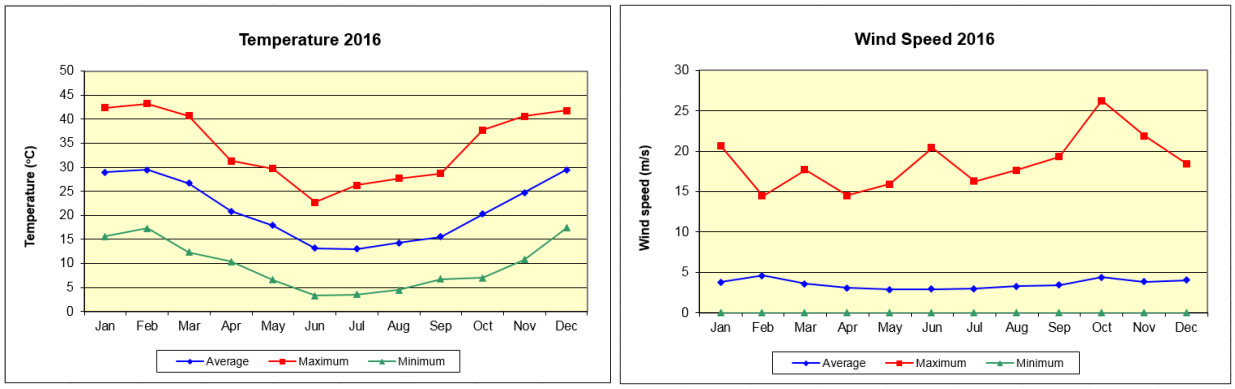


Figure 3-4: Monthly average, maximum and minimum temperature and wind speed for 2016

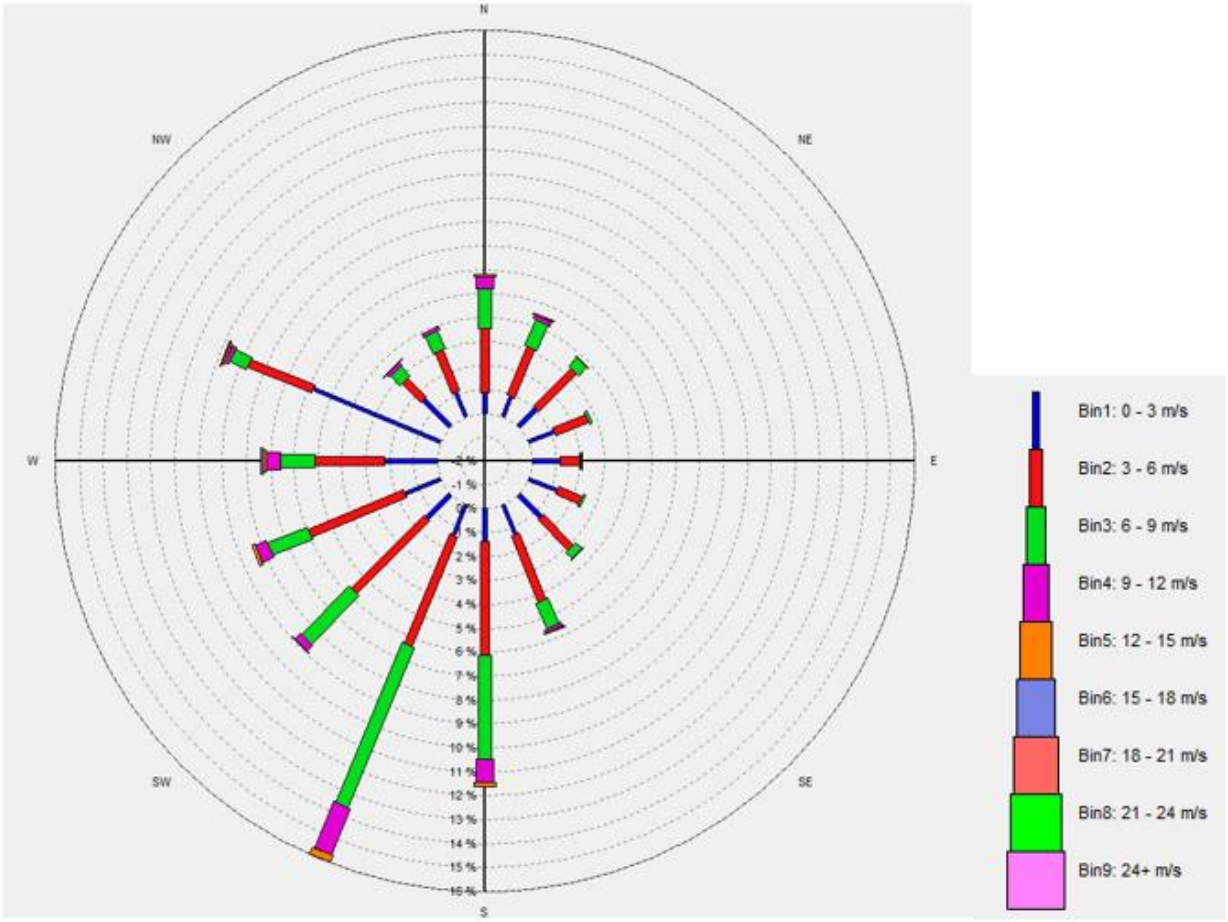


Figure 3-5 Wind rose showing wind directions during 2016

3.2 Soil

Sediment concentrations obtained within ephemeral water courses both upstream and downstream of FME show consistency with baseline data. The locations of sediment monitoring sites are shown in Figure 3-6 and the levels for pH, radium, uranium and sulphate for the soil sites are shown in Figure 3-7.

The table below shows the compliance status at end of 2016 against soil outcomes.

Table 3-1: Compliance Table – Soil

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
1.1	Chemical and radiological contamination of soil and watercourse sediments that would prevent its return to pre-mining use arising from the escape of mining solution due to accidental breakages	Soil affected by mining activities is suitable for return to pastoral use.	Management and clean-up of spills will be undertaken in accordance with EPA and DMITRE requirements.	Any leaks detected by automatic systems or visual observation are logged as events and rectified	Compliant. Annual sediment sampling was undertaken upstream and downstream of operations. Baseline chemistries observed. Natural variation or possible erroneous result has been identified as the cause for changes in SO_4 for sediment samples at location FMW01 and FMW10, as no mining activities have taken place near these areas.
1.2	Spillage of hazardous substances during transport, storage and handling resulting in contamination of soil that would prevent its return to pastoral use.	Soil affected by mining activities is suitable for return to pastoral use.	Spills of hazardous materials are assessed as soon as practicable[1] and if so determined cleaned up: a) Diesel spills to site-specific criteria to be established using National Environmental Protection Measure (NEPM) Risk Assessment methodology as recommended by the SA EPA. b) Acid or alkali spill sites returned to within local back-ground range of pH. *[1] Assessment will be risk-based and specify the timeframe for remediation (if remediation is required).*	Number and nature of spills and clean-ups	Compliant. No spills of hazardous substance occurred during the Reporting Period.

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
1.3	Soil disturbance due to unauthorised off-road vehicle movement which may compromise rehabilitation for pre-mining use resulting from: • compaction of soil • exacerbated erosion	Soil affected by mining activities is suitable for return to pastoral use.	Off-road vehicle movements not approved via an Environmental Clearance Permit are investigated, reported and one of the following actions are taken: • fenced off to prevent reuse and rehabilitated, or • converted to an authorised road subject to Significant Environmental Benefit (**SEB**).	Number of non-compliant off-road incidents.	Compliant. Nil reports for non-compliant ECPs involving off road incidents were received or logged in the incident management database during 2016.

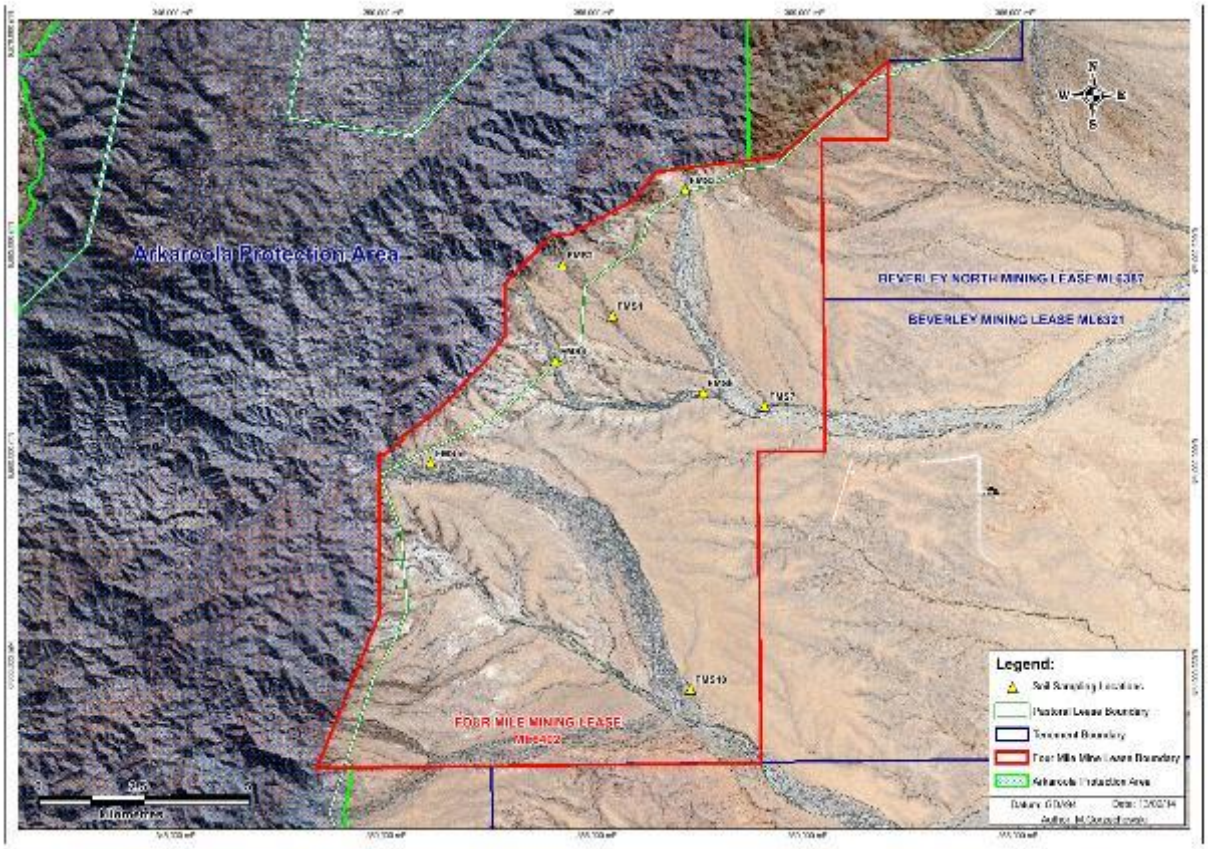


Figure 3-6: Sediment samples sites on the Four Mile ML

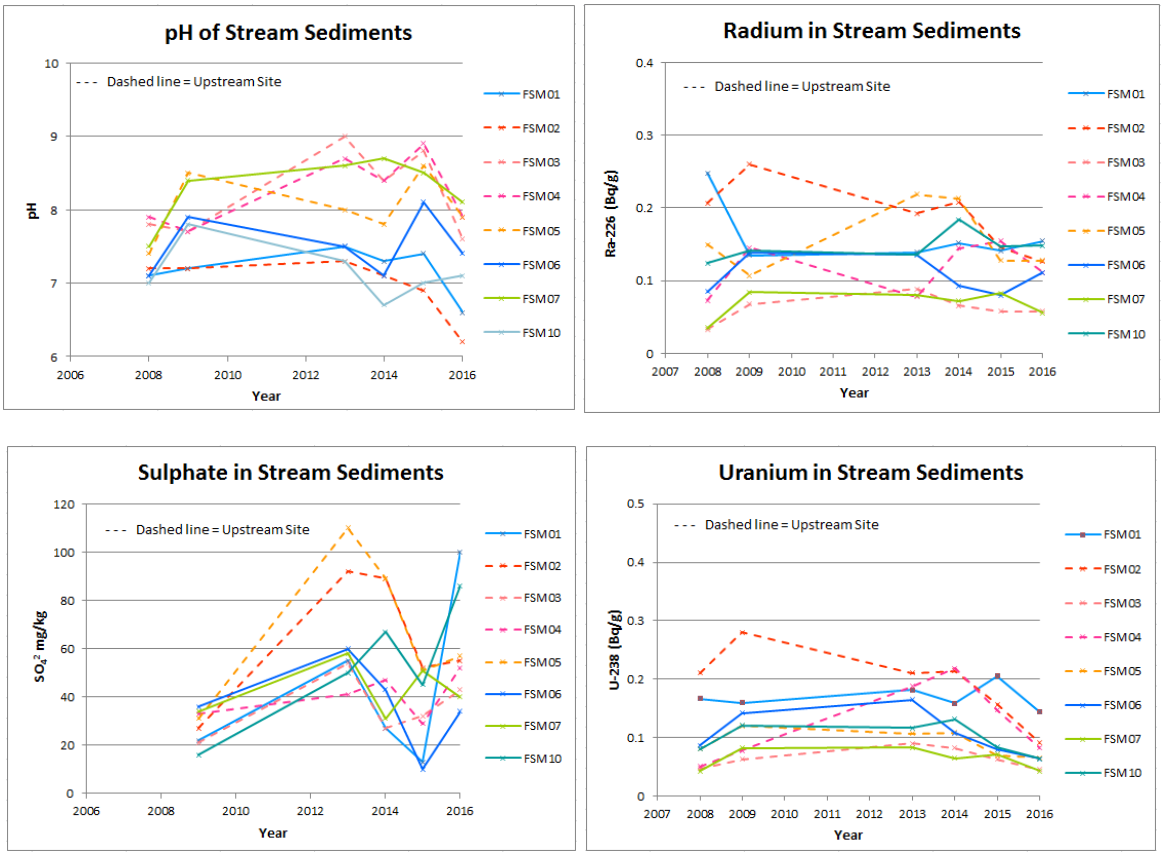


Figure 3-7: Chemical parameters for sediment samples on Four Mile ML

3.3 Vegetation

A baseline vegetation assessment was undertaken in the Four Mile ML area in May 2007 by Frank Badman of Badman Environmental, with successive annual surveys in September 2007 and 2008. Vegetation surveys were suspended between 2010 and 2013 (inclusive) due to the mining program being halted for several years.

Mining operations recommenced in April 2014, and the annual vegetation survey program was subsequently reintroduced in November 2014. Methods used for this monitoring program follow those used by Badman Environmental (Badman 2007) and as per methodology used by the Department of Environment, Water and Natural Resources.

The 2016 Four Mile ML annual vegetation assessment field survey was undertaken from by Heathgate Environment Advisors and EBS Ecology from 7th to 16th September 2016 utilising six previously surveyed sites. No statistically significant changes observed between 2014 and 2016 inclusive. In the 2016 spring monitoring period, the overall vegetation cover values at Four Mile sites showed a slight increase with 8.7% mean cover in 2016, an increase compared with 7.8% in 2015. Mean species richness remained consistent with previous years data; 10.3 species per plot in 2016, compared with 11.8 species per plot in 2014.

The Four Mile ML area typically has lower cover of *Astrebla pectinata* (Mitchell Grass) than the lowland plains and tends not to establish large tussocks. Cover of this species increased from 2015 results. The overall low cover provided by this species is typical of the Four Mile area in general which has higher dominance of short lived perennial species such as *Sclerolaena longifolia* (Long Spined poverty Bush) and *S. divaricata* (Tangled Bindyi). The soil structure in the Four Mile ML area is highly reactive, sodic and dispersive which may not be suitable for establishment of long lived perennial species.

No exotic species were recorded within the Four Mile quadrats in the 2016 survey. No other new outbreaks of exotic species were recorded within the general Four Mile ML area. Previous areas where weed outbreaks had been previously observed, such as around wellhouses, were free from exotic species outbreaks in 2016.

The location of vegetation monitoring sites is shown in Figure 3-8 below.

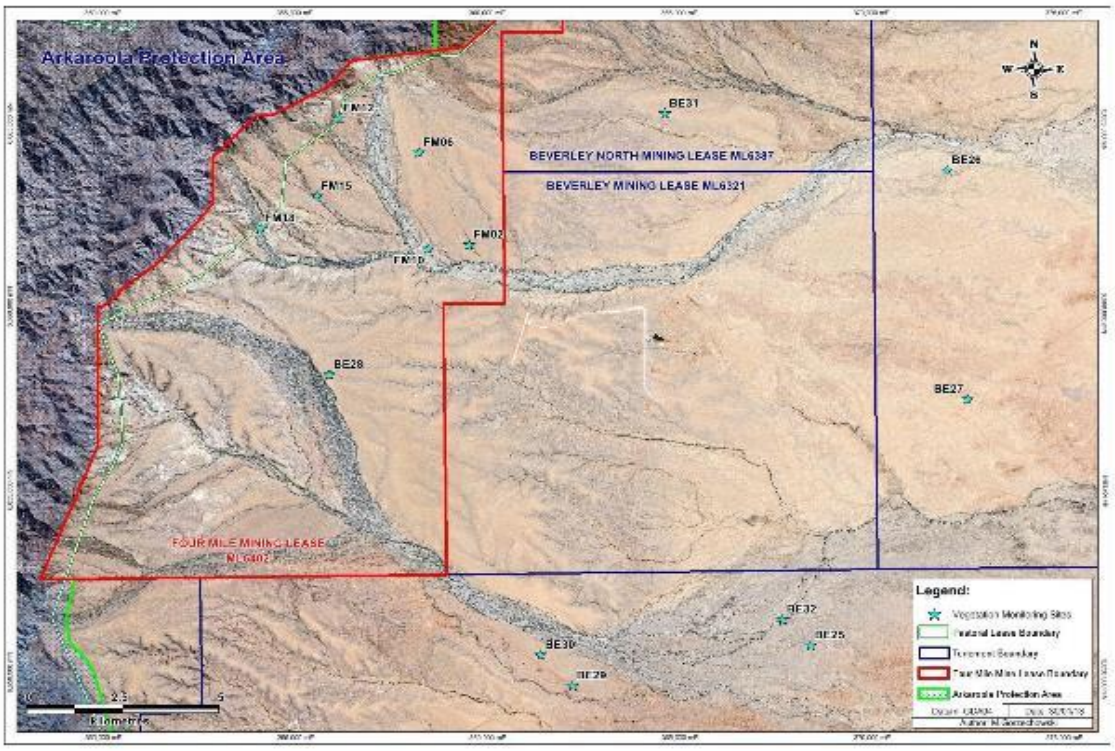


Figure 3-8: Four Mile vegetation monitoring sites showing the 5km distant control sites (BE)

To ensure minimal disturbance to vegetation and sensitive environmental areas, Heathgate has an Environmental Clearance Permit (ECP) system where a permit must be obtained prior to work commencing in any undisturbed area or area under rehabilitation on the ML. The ECP system ensures access networks are planned by personnel such that sensitive habitat and soaks are protected in accordance with specific environmental and rehabilitation requirements.

The ECP system also ensures that all new areas of disturbance is measured by GPS which is then imported into a Geographic Information System (GIS) to enable accurate calculations of the total area disturbed for each year. All rehabilitated areas are also measured in this manner and this information forms the basis for Significant Environmental Benefit (SEB) accounting (see Section 3.3.1).

Table 3-2 below shows the compliance status at end of 2016 against vegetation outcomes.

Table 3-2: Compliance Table – Vegetation

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
2.1	Reduction in regional native vegetation species density and diversity due to mining operations.	No permanent loss of abundance or diversity to native vegetation on or off the Four Mile ML area through clearance, dust contaminant deposition, fire or other damage unless prior approval under the *Native Vegetation Act 1991* (SA) (***Native Vegetation** Act*) is obtained.	Demonstrate that all clearing is undertaken within the maximum area approved in the Native Vegetation Management Plan.	Trends noted in vegetation surveys	Compliant. Actual disturbance measured via GPS for the purpose of SEB accounting for period Jan-Dec 2016. No mining-related fires occurred. A baseline vegetation survey occurred in 2007 with additional monitoring undertaken in and 2008.Following the commencement of mining activities, monitoring restarted in 2014. The annual SEB reconciliation is outlined in Section 3.3.1 of this Annual Compliance Report
2.2	Loss of local native vegetation (habitat) due to clearance for mining operations.	No permanent loss of abundance or diversity to native vegetation on or off the Four Mile ML area through clearance, dust contaminant deposition, fire or other damage unless prior approval under the *Native Vegetation Act* is obtained.	Demonstrate that all clearing is undertaken within the maximum area approved in the Native Vegetation Management Plan.		
2.3	Loss of local native vegetation (habitat) due to mining-related fires.	No permanent loss of abundance or diversity to native vegetation on or off the Four Mile ML area through clearance, dust contaminant deposition, fire or other damage unless prior approval under the *Native Vegetation Act* is obtained.	Any fires caused by mining operations are controlled within the Four Mile ML.		
2.4	Introduction of new or increase in abundance of existing weeds and pests (feral animals).	No introduction of new species of weeds [2], plant pathogens or pests (including feral animals), nor increase in abundance of existing weed or pest species in the lease area compared to adjoining pastoral properties. [2] *Weeds are defined in this condition as any invasive plant that threatens native vegetation in the local area or any species recognised as invasive in South Australia.*	Flora and fauna surveys demonstrate no new weeds or feral animals (due to mining activities) nor statistically significant increase in number or abundance of existing weed or pest species in the lease area compared to adjoining pastoral areas.		

3.3.1 Significant Environmental Benefit

All clearance of vegetation post August 2003 is subject to Significant Environmental Benefit (SEB) compensation payment in accordance with the *Native Vegetation Act 1991*.

In 2007 a vegetation assessment was undertaken by Badman Environmental for the purposes of determining the ratio to be used for SEB compensation payment calculations on the Four Mile ML area. The assessment found the vegetation to fall within a 4:1 ratio, i.e. for every hectare of vegetation cleared, the SEB compensation area would be four hectares, with a 50% discount claimed for areas to be rehabilitated (e.g. wellfield areas), reducing the ratio to 2:1.

SEB reconciliation compensation payment values are determined by undertaking an assessment of areas cleared between 1 January and 31 December for a given year. Mapping area disturbances is undertaken using GPS point measurements and utilising mapping software to determine the SEB compensation required (Figure 3-9). Heathgate's internal Environmental Clearance Permit (ECP) system assists in controlling and determining areas affected by clearance or disturbance in a particular year.

During 2016, construction and development activities included:

- FMW – FMW Field Leach Trial Wellfield (Figure 3-9, Insert A)
- FME – Communal Mudpit 5 (Insert B)
- FMNE – Wellfield FMNE02 (Insert C)
- FMN – Wellfield FMN01 (Insert D)
- Additional tracks and graded roads

The calculation uses the 2013 unimproved land value for the 253,042 ha Wooltana Pastoral Lease of $817,137 therefore a $3.23/ha unit cost has been used to calculate the annual reconciliation of SEB compensating to end of 2016. A management cost of $800/ha has also been applied. The annual reconciliation performed in 2016 for the vegetation clearance during 2016 shows an amount of $7,516.92 for SEB compensation to be paid for the Four Mile ML.

The SEB offset contributions are paid to the not-for-profit nature charity Nature Foundation SA, who own and manage the Witchelina Reserve. Witchelina Reserve is registered under the Australian Government National Reserve System and approved for SEB compensation as per the Native Vegetation Council of South Australia under the *Native Vegetation Act 1991*. (Table 3-3).

Table 3-3: FM 2016 SEB Compensation Calculation

ML	Area Cleared (ha)	Management cost at $800/ha (based on area cleared)	SEB Area – area cleared x Rehabilitation ratio* (ha)	SEB value $3.23 x ha** (based on SEB area)	2016 Reconciliation Compensation
Four Mile ML	9.32	$7,456.70	18.64	$60.21	$7,516.92
TOTAL for 2016	**9.32**	$7,456.70	18.64	$60.21	**$7,516.92**

** Using a 50% discount for areas that will be rehabilitated e.g. wellfields*
*** Based on the 2013 unimproved land value of $817,137 for the Wooltana Pastoral Lease comprising 253,042 ha representing $3.23/ha unit cost*

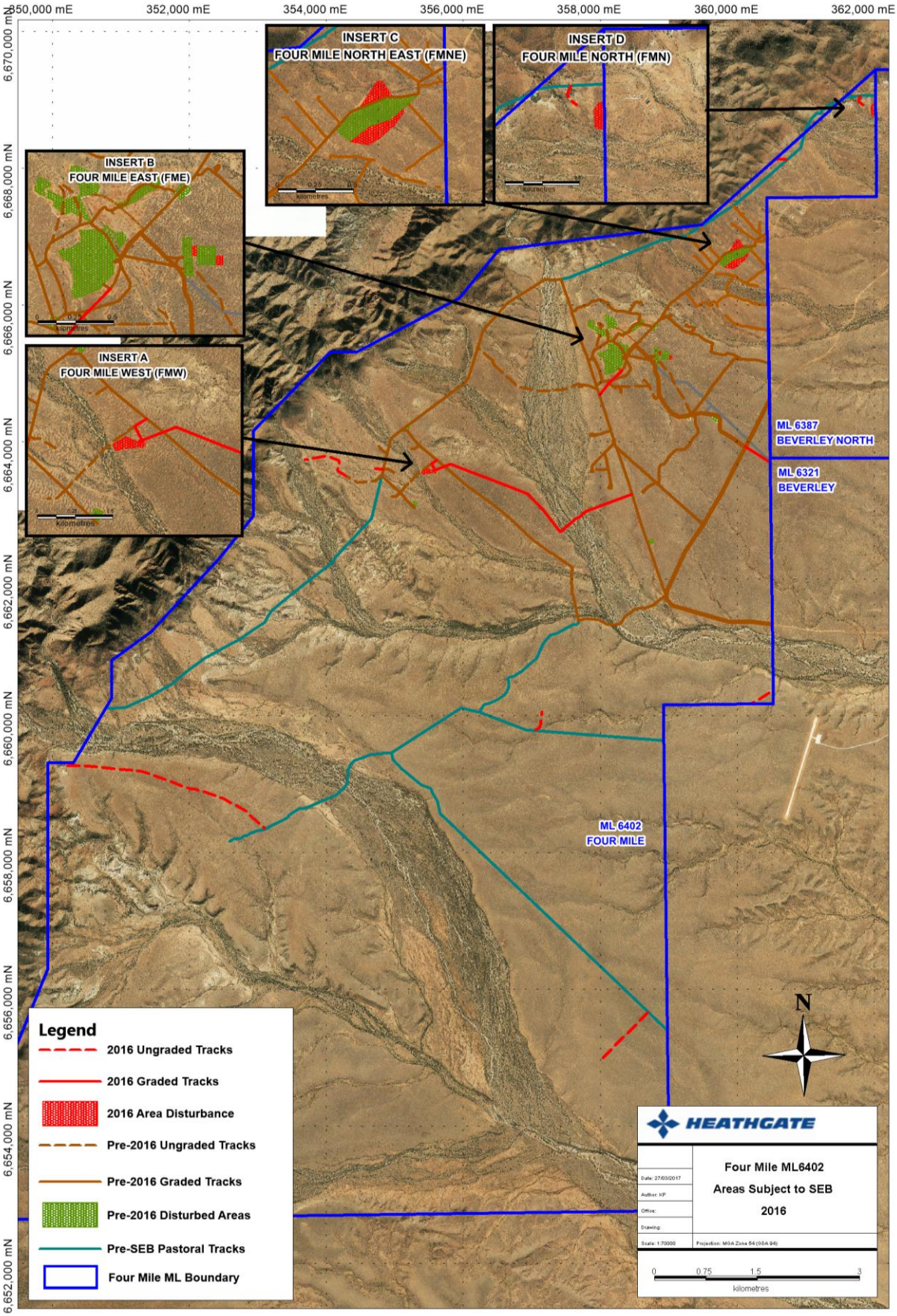


Figure 3-9: Four Mile ML 2016 SEB Areas

3.3.2 Ecosystem Function Analysis

Supplementary Ecosystem Function Analysis (EFA) monitoring is being used as a tool to assess the progress of areas of rehabilitation. EFA monitoring assesses soil surface stability, infiltration, nutrient cycling and patch proportion and includes a vegetation component which compliments the annual compliance vegetation monitoring.

Two rehabilitation transects and one analogue transect were established in 2013, with monitoring completed for the first time at these locations. In 2014 two more sites were added, for a total of 2 analogue and 3 rehabilitation sites (Figure 3-10). The new analogue site (EFA 27) does not have a correlating rehabilitation site as yet but has been put in place for future monitoring as the mine expands into similar landforms.

In 2016 a total of three (3) transects consisting of two (2) analogue sites and one (1) rehabilitation site were monitored at three (3) sites. Sites were selected on the basis they had not reached the prescribed completion criteria. The location of the EFA transects which were monitored during 2016 are shown in (Figure 3-10).

Total rainfall received at Beverley in the 12 months preceding the 2016 EFA survey was 245mm, 50mm above long term average recorded at Wooltana.

While the rehabilitation sites are still in their early stages, soil stability, infiltration and nutrient cycling values have been consistently higher than those seen on the analogue site, with both sites reaching the target 80% of mean values required to achieve rehabilitated status.

Transect path proportion was very low in the rehabilitation sites due to the absence of *Sclerolaena* shrubs which made up a large portion of the cover in these areas in 2012 and have declined since. Establishment of *Astrebla pectinata* (Mitchell Grass) tussocks on these sites may take a significant amount of time due to seasonal conditions needing to aid germination throughout summer and then provide enough follow up rainfall to allow establishment of the tussocks to the adult life stage.

The highly reactive clay soils in the Four Mile ML area aid rehabilitation in that they expand and contract naturally, thereby provide a self-mulching and levelling structure over time and have been shown to constantly rehabilitate naturally over time.

Figure 3-10: EFA transects

Note: EFA 42 (rehabilitation) and EFA 43 (analogue) are adjacent each other, site cannot be differentiated at this scale.

3.4 Surface Water

Surface water recharges the surficial Willawortina Formation which is unsaturated in the Four Mile ML. The Willawortina Formation is saturated (in part) in other areas of the Frome Basin outside of the ML and pastoralists occasionally use this water supply for stock.

The table below shows the compliance status at end of 2016 against surface water outcomes.

Table 3-4: Compliance Table – Surface Water

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
3.1	Watercourse contamination (including radiological) arising from release of mining solution.	No compromise to pastoral use of downstream surface water bodies.	Water quality in downstream water storages (within 5 km of an individual mining/spill site, or the closest accessible significant temporary creek waterhole if there is no water storage within 5 km), will be measured as soon as it is safe to do so following surface water flow, if there has been any immediately reportable10 release of mining solution. This must show no compromise of pastoral use that is attributable to mine operations. Applicable ANZECC/ARMCANZ stock water guidelines are: • salinity (EC) – 4,000 mg/L (6,000 uS/cm) • sulphate (SO4)– 1,000 mg/L • uranium – 0.2 mg/L.	No significant change in pH, EC, sulphate and uranium.	Compliant. No watercourse contamination (including radiological) as there was no release of release of mining solution during 2016 into any watercourse.
3.2	Spillage of hazardous substances during transport, resulting from an accident and release of materials into a creek.		Water quality in downstream water storages (within 5 km of an individual mining/spill site, or the closest accessible significant temporary creek waterhole if there is no water storage within 5 km), will be measured as soon as it is safe to do so following surface water flow, if there has been any immediately reportable11 release of mining solution. This must show no compromise of pastoral use that is attributable to mine operations. Applicable ANZECC/ARMCANZ stock water guidelines are: • salinity (EC) – 4,000 mg/L (6,000 uS/cm) • sulphate (SO4)– 1,000 mg/L • uranium – 0.2 mg/L.		Compliant. No spillage of hazardous substances occurred contamination (including radiological) occurred arising from the transport of resin or chemicals resulting in accidents and release of materials into a creek.

3.5 Hydrogeology

The hydrogeology in the vicinity of the FM wellfields consists of five main aquifers:

- Willawortina is ~20-60 m below ground level (bg**l**) and is not saturated at FME. This formation therefore has no regulatory monitoring program requirements in the form of regular monitor wells sampling. Water Levels and water quality chemistries are therefore not reported in this document.
- Namba Formation (~60-160 m bgl).
- Four Mile Diamictite (~140-180 m bgl). A localised unit that lies directly above the underlying crystalline basement. This unit is overlain by thin Bulldog Shale and the Eyre Formation. The Four Mile (FM) Diamictite is the host rock for the majority of uranium mineralisation at FMW. This unit is not present at FME or FMNE.
- Eyre Formation (~160-220 m bgl).
- Mt Painter Group Fractured Rock Aquifer (FRA) also known as crystalline basement (~230 m bgl).

A monitoring well network for FME and FMNE has been established to monitor groundwater movement within the Eyre Formation (the mining zone), as well as the overlying Namba Formation and the underlying FRA basement:

- Lateral Monitor Wells – these wells monitor the Eyre Formation sands laterally adjacent to the target zone
- Overlying Monitor Wells – these wells monitor the first permeable sand unit, being the Namba Formation, above the ore zone sands
- Underlying Monitor Wells – these wells monitor the underlying aquifer beneath the mining zone.

Monitor wells are sampled and water analysed in accordance to their classification as shown in Table 3-6.

Table 3-5: Company Compliance Monitoring Plan - Groundwater

	Method	Parameters	Criteria	Frequency
Lateral Monitor Wells	Wire-line Sonde sampling or pumped sampling and laboratory testing	pH, SO_4, U, Level	ECLs	Monthly
Observation Wells	Wire-line Sonde sampling or pumped sampling and laboratory testing	pH, SO_4, U, Level	ECLs	Monthly
Overlying Monitor Wells	Wire-line Sonde sampling or pumped sampling and laboratory testing	pH, SO_4, U, Level	ECLs	Monthly
Underlying Monitor Wells	Wire-line Sonde sampling or pumped sampling and laboratory testing	pH, SO_4, U, Level	ECLs	Monthly

The Excursion Control Parameters (ECPs) are pH, sulphate and uranium. Water levels are also monitored to detect changes in aquifer pressure and pressure trends. Water chemistry data obtained from baseline sampling is used to determine the Excursion Control Limits (ECLs). Results from Heathgate's on-site laboratory and an external National Association of Testing Authorities (NATA) accredited laboratory are compared for quality assurance purposes. Hydrographs for water levels and chemistry results for the 2016 calendar year are given in Appendices A and F.

Four lateral wells 4LMW002 (Screen 1 & 2), 4LMW019 (Screen 1), 4LMW020 (Screen 1) and 4LMW030 (Screen 1 & 2) exhibited alkaline chemistries consistent with residual drilling muds present near the screened zones. Subsequent airlifting was successful in cleaning out the drilling mud and water chemistry however 4LMW002 Screen 1 and 2, 4LMW019 Screen 1, 4LMW020 Screen 1 and 4LMW030 Screen 1 & 2 continue to show elevated pH consistent with

remnant drilling muds. All other lateral monitor wells are consistent with baseline Eyre Formation water chemistry.

3.5.1 Eyre Formation

The mining zone at FME is the Eyre Formation. Lateral monitor wells form a network adjacent to and surrounding the target zone, locations are shown in Figure 3-11.

The table below shows the compliance status at end of 2016 against Eyre Formation hydrogeological outcomes. Water levels and water chemistry graphs are provided in Appendices A and B.

Table 3-6: Compliance Table – Hydrogeology – Eyre Formation

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
4.1	Groundwater contamination of target aquifer outside ML 6402 preventing stock watering (where water quality meets stock watering guidelines) Note: Due to its high fluoride content and naturally radioactive nature there are no current beneficial uses without additional water treatment other than for mining of the Eyre Formation aquifer at the Four Mile area.	No compromise to the environmental values of the target aquifers (Eyre Formation) outside ML 6402.	No migration of mining solution in the Eyre Formation aquifers outside ML 6402 (except for areas where a Cross-Boundary Co-ordination Agreement applies that has been accepted by the Director of Mines) as demonstrated by ECP monitoring. Compliance will be demonstrated by either no exceedance of two ECLs at lateral monitor wells or by demonstration of compliance with the contingency measures described in Section 5.7.8.2 of Four Mile ML 6402 PEPR 2013.	• Water quality trends in the mined aquifer (Eyre formation) monitoring and observation wells (ECL parameters). • Hydrogeological gradient maps showing water levels (or pressure gradients) in the wellfield and surrounding monitor network. Gradients should be negative toward the wellfield/ mining area facilitating migration of fluids towards the mining zone.	Compliant. Refer Appendix A and B for Eyre Formation water levels & chemistry.

3.5.2 Namba Formation

The Namba Formation overlies the Eyre Formation and is separated by an impervious clay layer. The overlying monitor wells are located within the Namba Formation. Table 3-7 below shows the compliance status at end of 2016 against Namba Formation hydrogeological outcomes. The locations of the overlying monitor wells are shown in Figure 3-12.

Water levels and water chemistry graphs are provided in Appendices C and D.

Table 3-7: Compliance Table – Hydrogeology – Namba Formation

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
4.2	Contamination (including radiological) of non-target overlying aquifers arising from mining activities.	No compromise to the environmental values of the overlying aquifers (Willawortina, if saturated or Namba Formation).	Monitoring of ECPs demonstrates no compromise, as a result of mining operations, of the environmental values of the overlying aquifers (if saturated).	• Water levels and level trends in the Namba Formation monitoring wells • Water quality and quality trends in the Namba Formation monitoring wells.	Compliant. Appendix C and D for Namba Formation water levels & chemistry

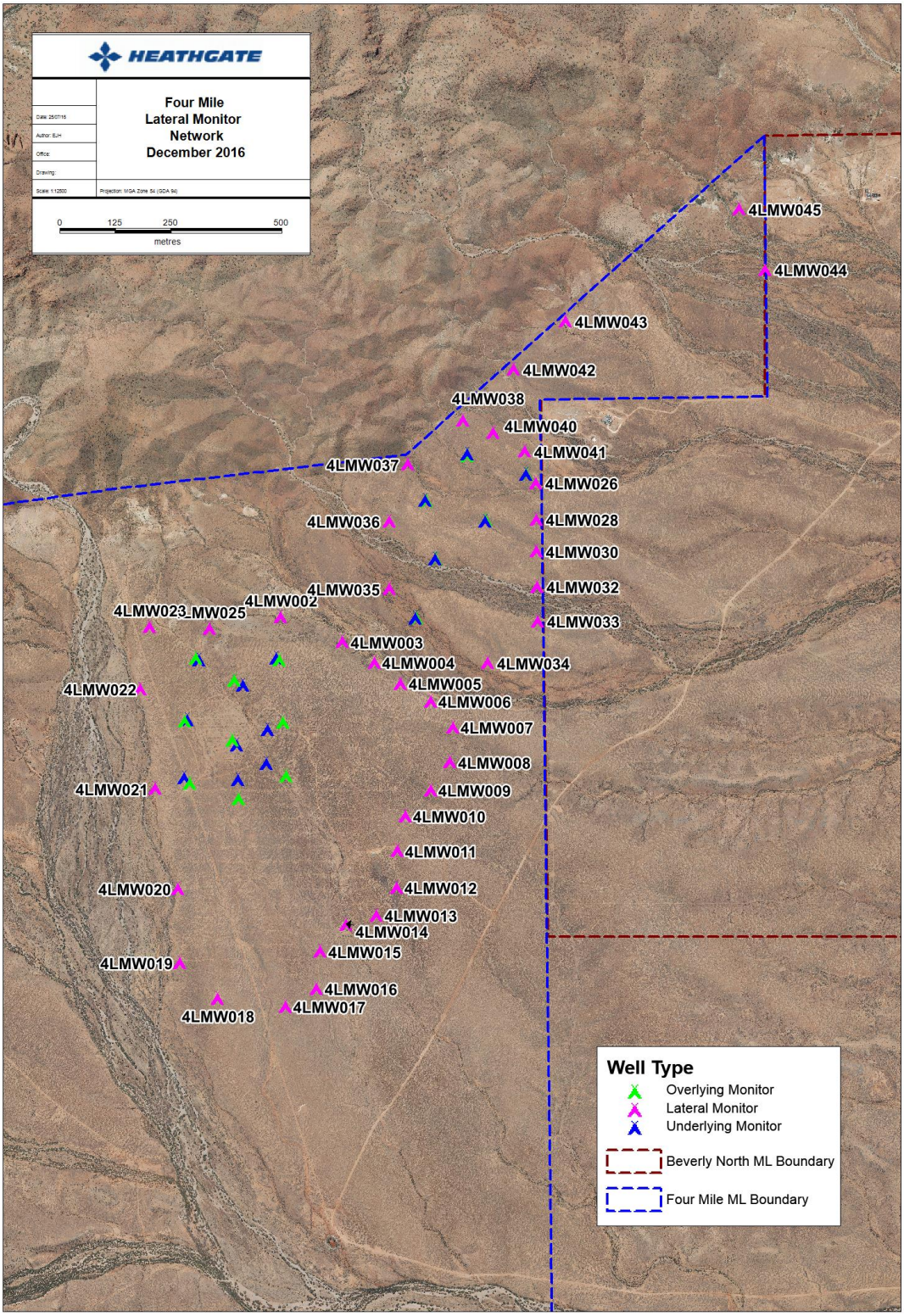


Figure 3-11: Location of the lateral monitor wells at Four Mile

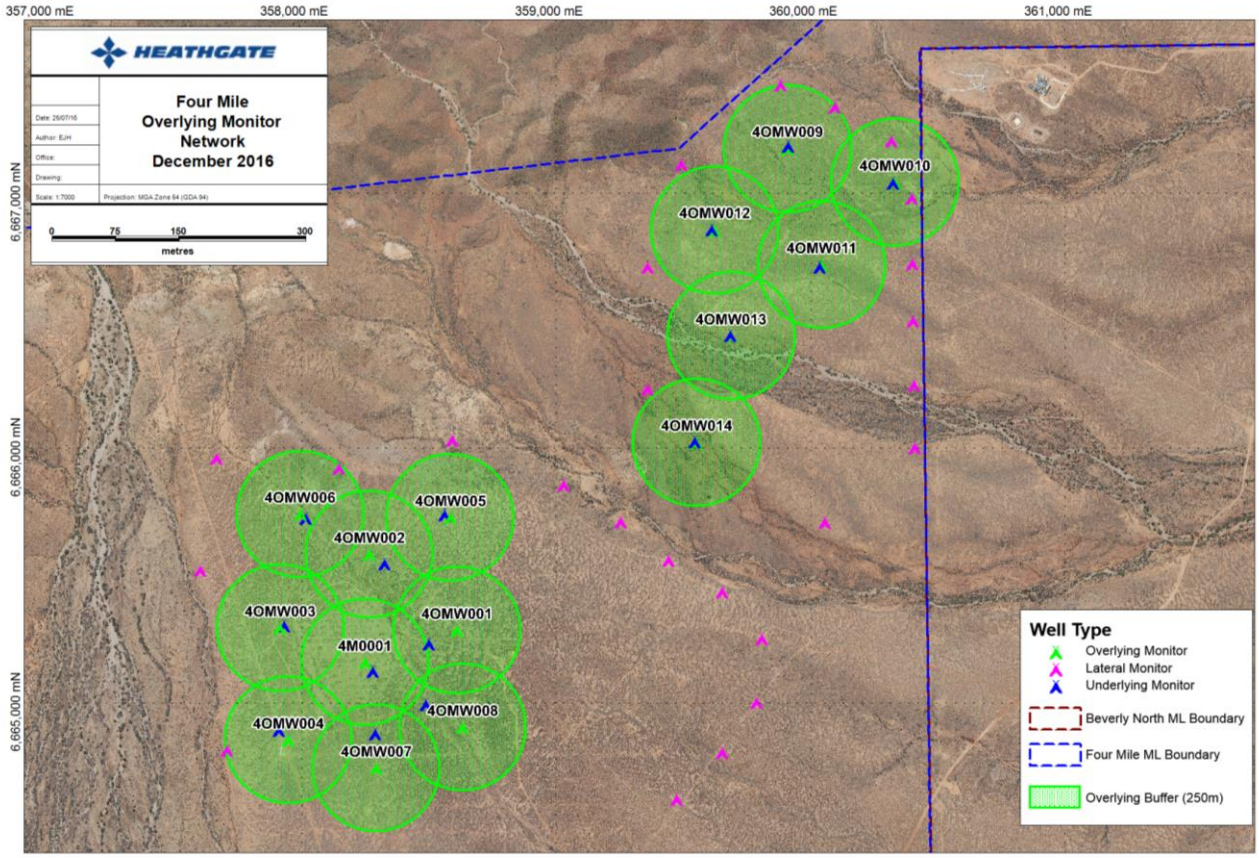


Figure 3-12: Location of the overlying monitor wells at Four Mile

3.5.3 Mount Painter Group Fractured Rock (Crystalline Basement)

Underlying monitor wells are located within the Mount Painter Group Fractured Rock which lies beneath the mining zone. Table 3-8 below shows the compliance status at end of 2016 against the underlying aquifer hydrogeological outcomes. The location of the underlying monitor wells are shown in Figure 3-13.

Water levels and water chemistry graphs are provided in Appendices E and F.

Note that a revised Four Mile PEPR was approved by the Department of State Development effective 23 December 2016. Future reporting will reflect this document.

Table 3-8: Compliance Table – Hydrogeology – Mt Painter Group Fractured Rock

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
4.3	Contamination (including radiological) or reduction in pressure of underlying aquifer arising from mining activities.	• No compromise to the environmental values of the underlying aquifer (Mt Painter Group Fractured Rock Aquifer). • No reduction in aquifer pressure of the Mt Painter Group Fractured Rock Aquifer.	• Monitoring of ECPs demonstrates no compromise of the environmental values of the underlying aquifer, as a result of mining activities. • Monitoring of water level trends to show no unexplained reduction in aquifer pressure.	• Water levels and level trends in the Mt Painter Group Fractured Rock aquifer monitoring wells • Water quality and quality trends in the Mt Painter Group Fractured Rock aquifer monitoring wells.	Compliant. Appendix E and F for Namba Formation water levels & chemistry

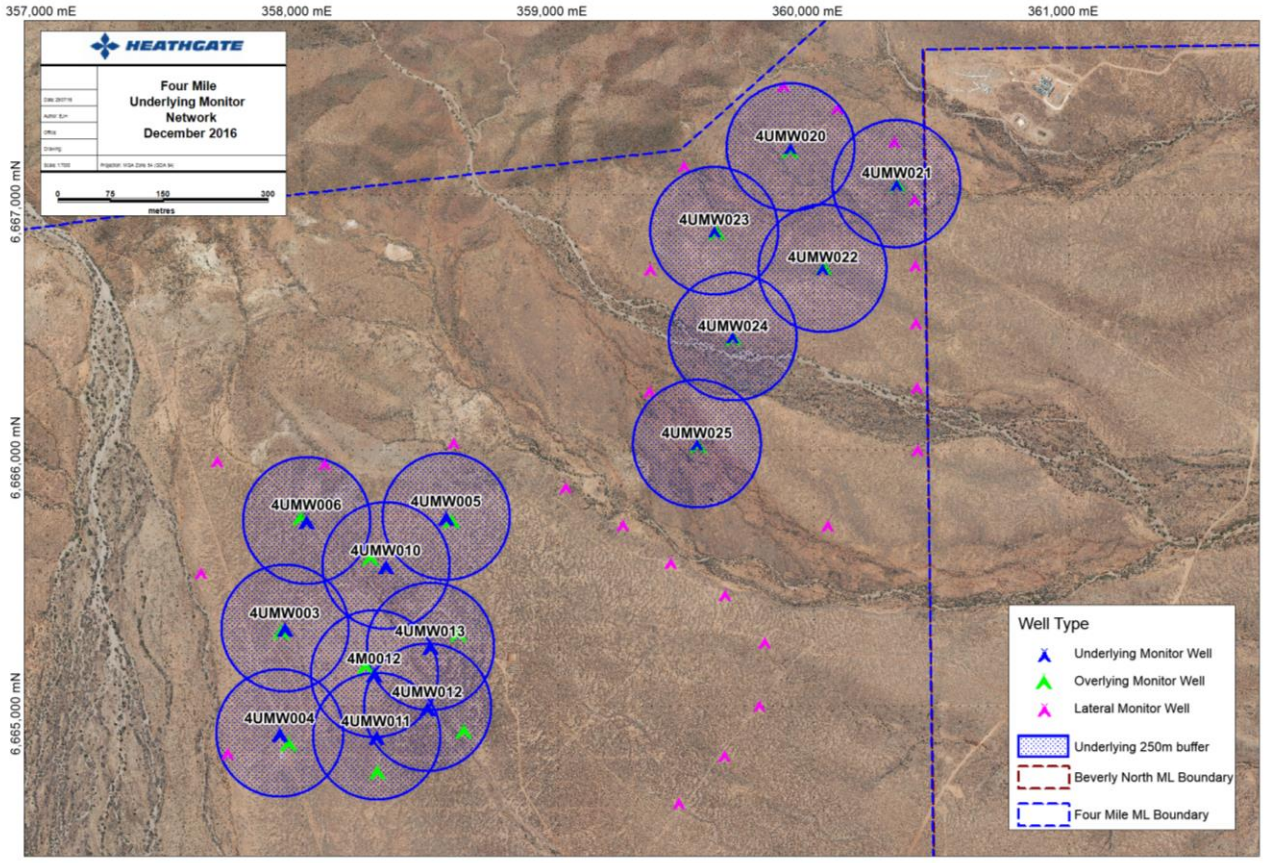


Figure 3-13: Location of the underlying monitor wells at Four Mile

3.6 Fauna

Outcomes related to fauna are measured via results obtained from annual fauna surveys and through opportunistic observations. Opportunistic sightings of feral animals are reported by Heathgate staff to the onsite Health, Safety, Security and Environment (HSSE) Department for appropriate action in line with DEWNR and the Government of South Australian Arid Lands Natural Resources Management Board (SAAL NRMB) guidelines. Table 3-9 below shows the compliance status at end of 2016 against the fauna outcomes.

A baseline fauna assessment was undertaken in the Four Mile ML area in October 2007 with additional surveys carried out in 2008 and 2009. Fauna surveys were suspended between 2010 and 2013 (inclusive) due to the mining program being halted for several years.

Mining operations recommenced in April 2014, and the annual fauna survey program was reinstated in the spring of 2014. Sites are monitored in accordance with the methodology outlined in the Biological Survey of South Australia for sites in the pastoral region of South Australia (Owens 2000), with the exception that Elliot trapping was discontinued in the 2016 survey due constant tampering by Australian Ravens (*Corvus coronoides*) in previous surveys.

The 2016 survey was undertaken from 5th-19th October on the Four Mile ML across the 14 previously surveyed sites (Figure 3-14) by EBS Ecology. The survey recorded a total of 1707 individuals from 78 species representing 37 families. The most diverse and abundant fauna group was birds, with mammals being the least diverse group and reptiles being the least abundant.

One species of national conservation significance was recorded, the Rainbow Bee-eater (*Merops ornatus*), which is listed as Migratory under the Commonwealth EPBC Act.

Overall species diversity was higher than the mean 5 year average, but almost identical to the 2015 survey. Weather conditions during the 2016 survey were reasonably mild with only three days reaching above 30^{o}C. There was no significant variation in vertebrate abundance or diversity between control sites and mine sites recorded during the 2016 survey.

Results to date show little change between years within the Four Mile ML across both impact and control sites. With continuous years of monitoring across varying climatic conditions, it is more likely that changes in fauna abundance and diversity at the Four Mile ML, will be linked to climatic changes and that mining operations are likely to not have a long-term impact on fauna in the area.

In addition, In addition, sightings of uncommon animals are required to be reported to the Health, Safety, Security and Environment Department. Annual environmental awareness sessions are held for all staff and personnel to pass on information and remind personnel of their environmental responsibilities when working at the mine. Information sheets, notices and identification photos are posted on the environmental noticeboard outside the Beverley plant reception area and also in the HSSE Department's office

Table 3-9: Compliance Table – Fauna

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
5.1	Reduction in native vertebrate species density and diversity caused by mining related activities.	No net adverse impacts from the site operations (including fire) on native fauna abundance or diversity in the Four Mile ML area and in adjacent areas	Results of monitoring program show no reduction of native vertebrate density and diversity compared with local area background.	Trends in the monitoring program	Compliant. No reduction in native vertebrate diversity or abundance of species occurred from mining related activities; such as wellfield construction, mining operations, or feral animals. No mining-related fires occurred.
5.2	Reduction in native vertebrate species density and diversity resulting from an increase in feral animals caused by creation of food sources, modified habitat and waste management operations.	No net adverse impacts from the site operations (including fire) on native fauna abundance or diversity in the Four Mile ML area and in adjacent areas. No introduction of new species of weeds[3], plant pathogens or pests (including feral animals), nor increase in abundance of existing weed or pest species in the Four Mile ML area compared to adjoining pastoral properties[4]. *3 Weeds are defined in this condition as any invasive plant that threatens native vegetation in the local area or any species recognised as invasive in South Australia.* *4 Whist this outcome includes vegetation it is included here as the ML 6402 condition lists feral animals with weeds.*	Results of monitoring program show no reduction of native vertebrate density and diversity compared with local area background. Results of monitoring program show no increase in feral vertebrates, compared with local area background [5]. *5 Weeds are defined in this condition as any invasive plant that threatens native vegetation in the local area or any species recognised as invasive in South Australia.*		
5.3	Reduction in native vertebrate species density and diversity caused by wellfield development, access road construction and operations.	No net adverse impacts from the site operations (including fire) on native fauna abundance or diversity in the Four Mile ML area and in adjacent areas.	Results of monitoring program show no reduction of native vertebrate density and diversity compared with local area background.		
5.4	Loss of local native fauna (habitat) due to mining related fires.	No net adverse impacts from the site operations (including fire) on native fauna abundance or diversity in the lease area and in adjacent areas.	Any fires caused by mining operations are controlled within the Four Mile ML area.		

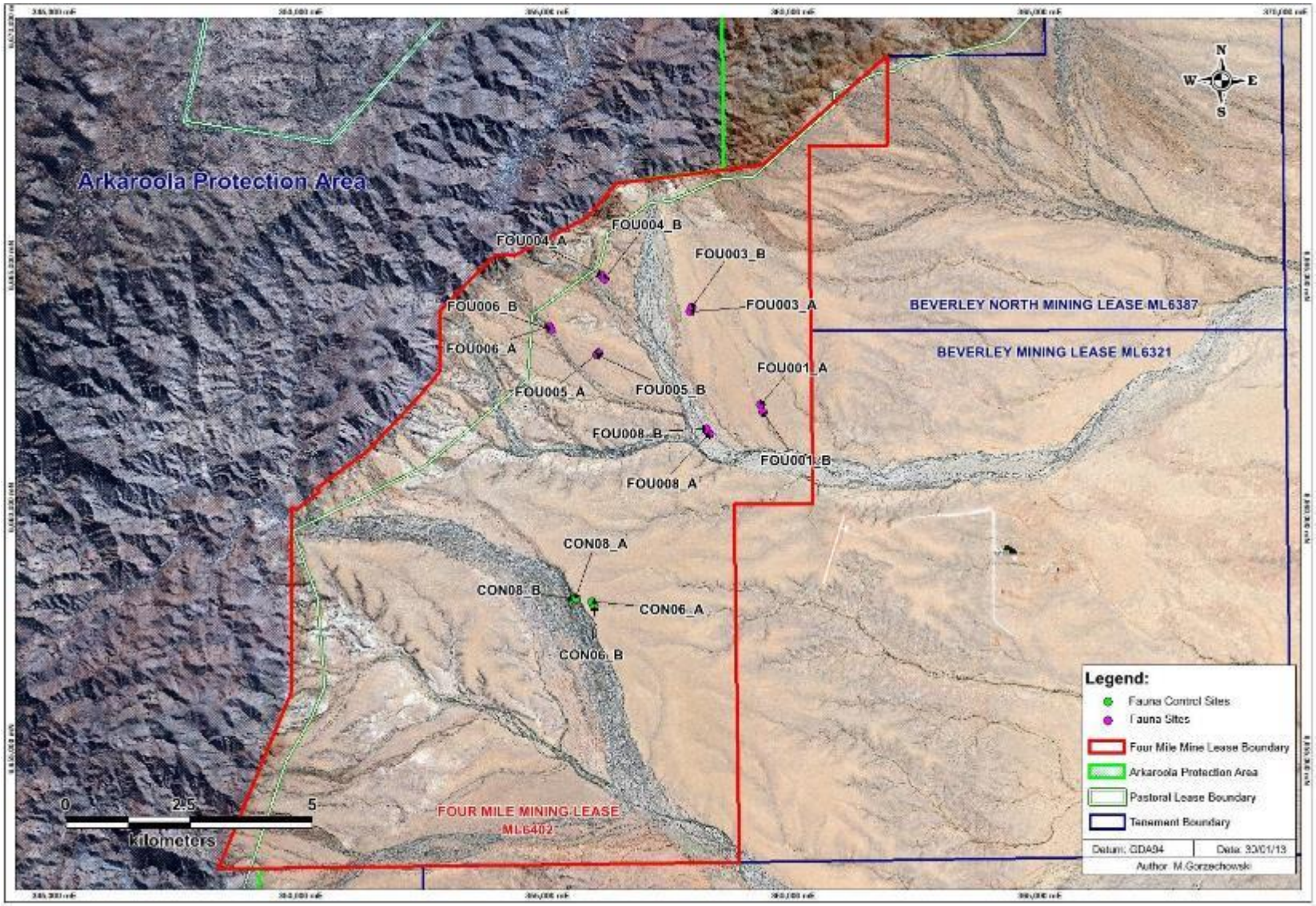


Figure 3-14: ML 6402 fauna monitoring locations

3.7 Air Quality

The radiation doses received by employees while working at FME are not calculated separately but included in the dose calculations compiled for Heathgate workers also working at Beverley and Beverley North operations to assess their total exposure.

The estimated radiation doses to employees in respect of all Heathgate operated uranium mining operations, and the public, remained low and within the applicable limits defined under the *RPC Act*. The average dose received by a Heathgate employee during 2016 was 0.37 mSv and the maximum was 2.63 mSv, well below the applicable annual dose limit of 20mSv. Employee average and maximum dose for 2001 to 2016 are shown in Figure 3-15. Table 3-10 below shows the compliance status at the end of 2016 against the air quality outcomes.

Table 3-10: Compliance Table – Air Quality

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
6.1	Radon and uranium-bearing dust release increasing radiation doses to the environment.	No adverse impacts to the environment due to radon release, nor radiological aspects of seepages and spills.	Estimated radiation doses within applicable limits as defined under the *RPC Act*.	Radon decay products and radionuclide dust in the wellfields remain below the investigation levels. Trends from monitoring of radon decay products and uranium dust in the processing plant, ponds and accommodation camp areas remain below the investigation levels	Compliant. Radiation monitoring was carried out as per the approved monitoring plan. Estimated doses to members of the public and workers remained low and well below the annual limits. Uranium dust and radon decay products -monitored doses are calculated and are within applicable limits as defined under the *RPC Act*.

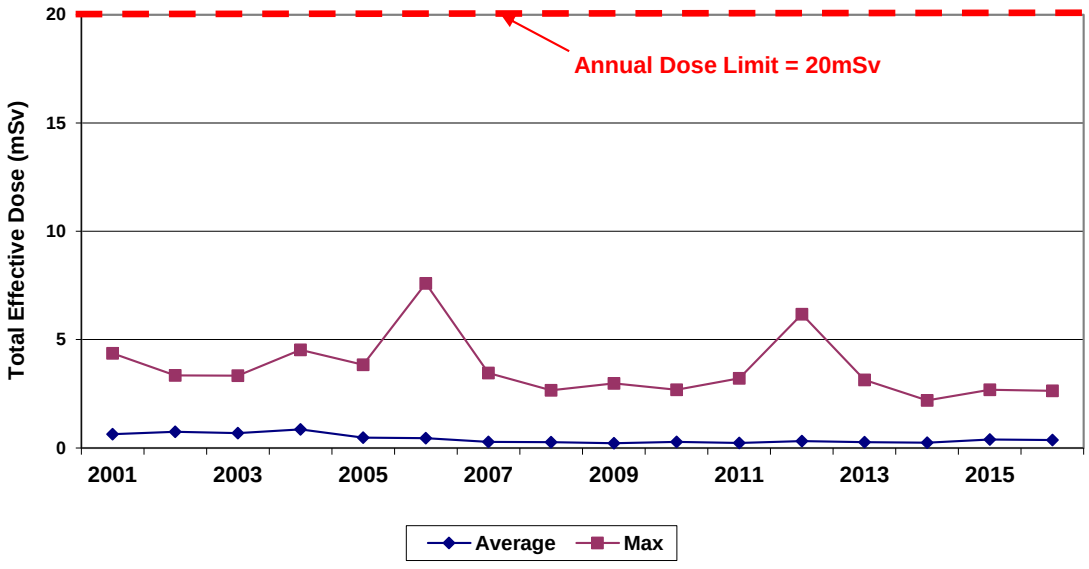


Figure 3-15: Heathgate employee dose from 2001 to 2016 (Note Four Mile production commenced on 14 April 2014).

The public dose calculated includes contributions from Beverley and FME operations. The estimated dose to a person living at the Beverley accommodation camp is 0.19 mSv (excluding the contribution from natural background radon).

Table 3-11 below shows the separation of dust and radon dose in mSv. The nearest residence occupied by a member of public is the North Mulga outstation, and considering the distance from FME areas, the annual dose received by a person living there will be less than 0.19 mSv, well below the applicable annual dose limit of 1 mSv.

Table 3-11: Public dose details

	Dose (mSv)
Dust dose (including natural background	0.025
Radon dose (excluding background)	0.166
Total dose	0.190
Public Dose limit (annual)	1.00

3.8 Heritage

All culturally sensitive sites are recorded by way of a heritage report. Work area clearance surveys are conducted with representatives of the Native Title Holders before any ground disturbing work commences. Areas identified as culturally sensitive are mapped and fenced off, if required, by Heathgate personnel. The Native Title Holders require the locations of these sites remain out of the public domain.

Heathgate also employs Aboriginal Liaison Officers that are present at all environmental clearances (as part of the Environmental Clearance Permit system) to ensure that heritage sensitive areas are not overlooked. Table 3-12 below shows the compliance status at end of 2015 against the heritage outcomes.

No disturbance occurred in 2016.

Table 3-12: Compliance Table – Heritage

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
7.1	Impacts on Aboriginal heritage as a result of mine activity.	No disturbance to Aboriginal artefacts or sites of significance caused by mine activity unless prior approval under the relevant legislation is obtained.	• Documented Aboriginal Heritage Clearance surveys of all operational areas. • Audits confirm flagged areas are not disturbed.	Near-miss incident reports relating to potential disturbance of flagged areas.	Compliant. All heritage sensitive areas are clearly recorded after every work area clearance heritage survey. There has been no disturbance to flagged sensitive areas, which are checked periodically in the year.

3.9 Third Party Issues

There were no third party complaints in 2015 for ML 6402. Table 3-13 below shows the compliance status at end of 2016 against the third party (public) outcomes.

Table 3-13: Compliance Table – Public

ID	Potential Impact Event	Outcome(s)	Outcome Measurement Criteria	Leading Indicator Criteria	Compliance Status
8.1	Damage to adjacent public or private property and infrastructure, including that caused by fire, as a result of mine activity.	No unauthorised damage to adjacent public or private property and infrastructure, including that caused by fire, as a result of mine activity.	Any fires caused by mining operations are controlled within the Four Mile ML boundary. Any accidental damage to infrastructure is made good as soon as practicable.	No specific criteria	Compliant. No reports of damage (including damage by fires caused by mining operations) to public or private property and infrastructure.

4 ONGOING COMMUNITY ENGAGEMENT PLAN

Heathgate maintains a community consultation database in order track consultation with third parties in relation to the Beverley and Four Mile ML. During 2016, twenty community consultations were recorded against the Four Mile ML. Heathgate also undertakes wider stakeholder engagement not directly related to the Four Mile project.

The number of community consultations for each quarter is shown in Table 4-1 while a graph representing the comparative annual community consultations is given as Figure 4-1.

Table 4-1: Quarterly Community Consultations for 2016

2014	No. of Community Consultations
1st Quarter	5
2nd Quarter	5
3rd Quarter	5
4th Quarter	5

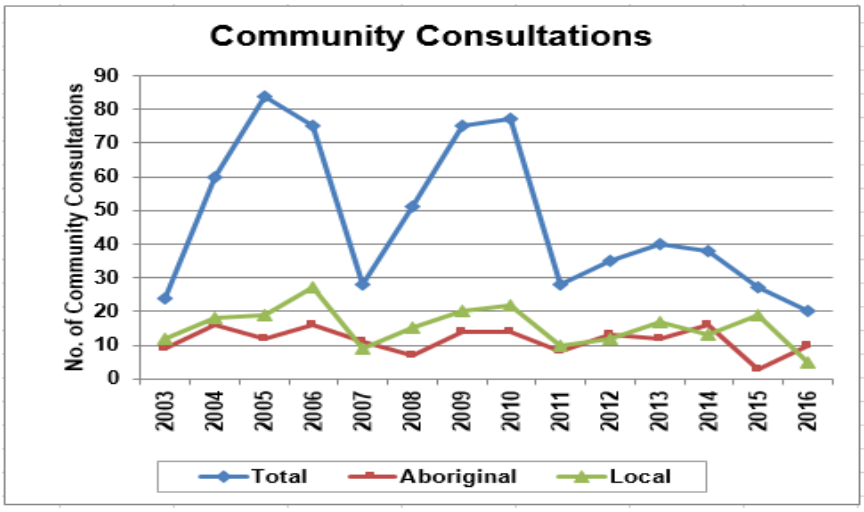


Figure 4-1: Community Consultations 2016

5 ENVIRONMENTAL RADIOLOGICAL MONITORING

Environmental radiation monitoring is undertaken at FME in order to assess the environmental radiological impact due to its operation and includes:

- Radon activity concentration in air;
- Potential alpha energy concentration of radon daughters in air;
- Long-lived alpha activity of airborne dust.

5.1 Radon Activity Concentration

The radon concentration in air is measured using a Passive Radon Monitor (PRM) with nuclear track detectors fixed at the FME monitoring station. The quarterly radon concentration results are given in Table 5-1 and Figure 5-1 shows a graph of monitoring trends since 2010.

Table 5-1: Passive Radon Monitoring Four Mile East 2016

Quarter	Radon Concentration (Bq/m^3)
First	30.50
Second	25.50
Third	20.80
Fourth	24.50

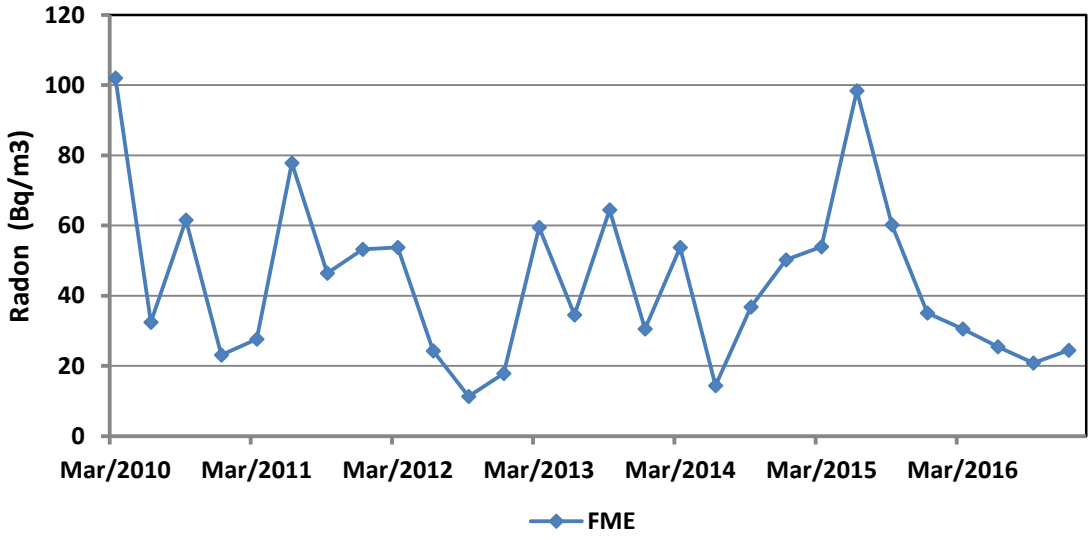


Figure 5-1: Passive Radon Activity Concentration Monitoring Trends

5.2 Radon Decay Product PAEC

The Potential Alpha Energy Concentration (PAEC) of radon decay products are measured continuously at the FME monitoring station using an Environmental Radon Daughter Monitor (ERDM) which logs every 10 minutes with data downloaded every month. Results of monitoring recorded in 2016 are presented in Table 5-2 and the monitoring trend from 2015 is shown in Figure 5-2. The average radon decay products concentrations at FME remained low during the year 2016.

Table 5-2: Quarterly Radon Decay Products PAEC

Month	PAEC (μJm^{-3})	
	Average	Maximum
January	0.04	0.25
February	0.04	0.25
March	0.07	0.40
April	0.07	0.28
May	Instrument failure and repair	
June		
July		
August		
September	0.04	0.28
October	0.03	0.23
November	0.05	0.27
December	0.06	0.57

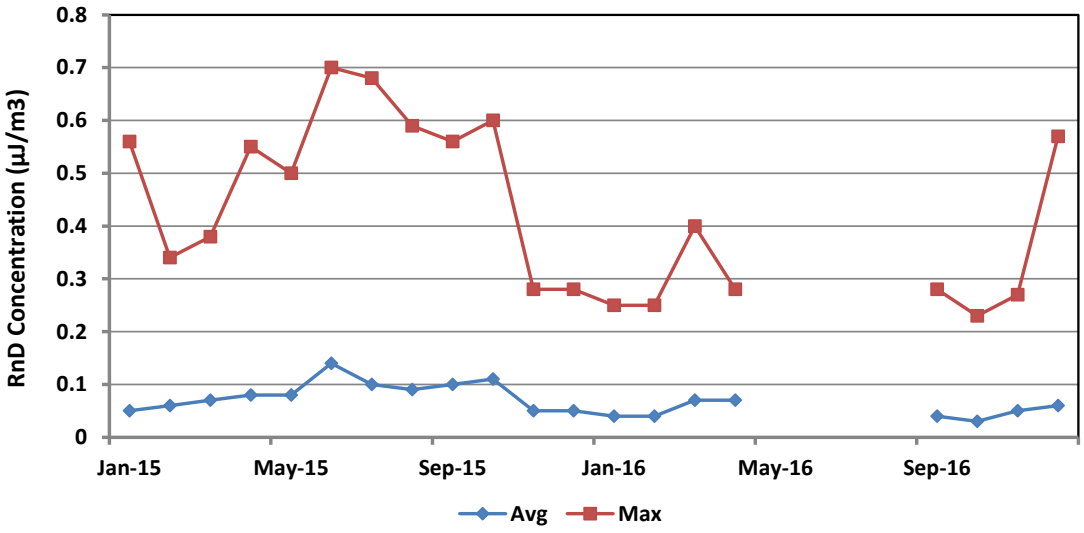


Figure 5-2: Four Mile Radon Decay Products PAEC Quarterly Monitoring Trends

5.3 Long Lived Alpha Activity in Dusts

Long-lived alpha activity (LLA) in dust monitoring was conducted continually at the FME monitoring station using a MicroVol 1100 Air Sampler. The gross alpha counting results are given in Table 5-3 and the trend from 2015 in Figure 5-3. LLA Dust concentrations at the FME monitoring location remained low.

Table 5-3: LLA Activity in Dust Monitoring Results Four Mile East 2016

Month	Concentration ($mBqm^{-3}$)
January	0.00
February	0.00
March	0.00
April	0.00
May	0.00
June	0.00
July	0.00
August	0.00
September	0.02
October	0.00
November	0.00
December	0.15

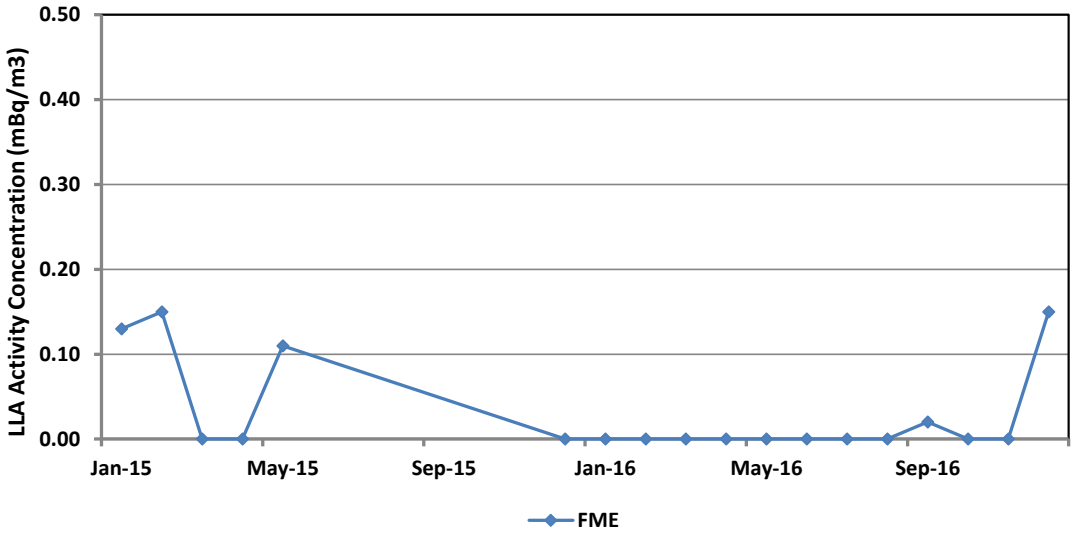


Figure 5-3: LLA Activity at Four Mile East

Several risk areas involve radiological aspects and Table 5-4 below lists where these are discussed within this document.

Table 5-4: Sections Relating to Radiological Aspects

Risk Areas	Sections	Compliance table ID
Soil	3.2	1.1
Surface Water	3.4	3.1
Hydrogeology	3.5	4.2, 4.3
Air Quality	3.7	6.1

6 STATUS OF OBLIGATION OF STATE AND FEDERAL CONDITIONS

The status of obligations with State and Commonwealth approval conditions and reporting requirements including those of the *EPBC Act* for ML 6402 are outlined in Appendix G.

7 RECTIFICATION OF NON-COMPLIANCES

There were no non-compliances recorded on ML 6402 during 2016.

8 MANAGEMENT SYSTEM REVIEW

No management system review audits were undertaken in 2016, however, continual improvement is reviewed and undertaken on an ongoing basis in response to operational learnings and identification of areas for improvements.

9 FITNESS FOR PURPOSE REVIEW

Heathgate has a maintenance management system which allows the scheduling of regular servicing and maintenance of plant and equipment as well as ad-hoc repairs and maintenance of all Four Mile assets. Heathgate's safety management system is utilised to ensure repairs and maintenance related to safety are captured.

The entire Four Mile project was subject to a thorough risk assessment prior to commencement of mining. A Hazard and Operability (HAZOP) study was undertaken on major equipment in the facility by GPA Engineering in September 2013. HAZOPS are undertaken prior to any new major construction activities outside the normal scope of operation.

10 NEW ENVIRONMENTAL HAZARDS

No new environmental hazards were identified in during the 2016 reporting period.

11 INCIDENTS

11.1 Incidents

No reportable or recordable incidents occurred during 2016.

11.2 Corrective Actions

No corrective actions were required during the 2016 reporting period.

12 OTHER

12.1 Public Liability Insurance

Public liability insurance is current and a copy of the Certificate of Currency is available to be shown to DSD upon request.

12.2 PEPR Amendments

The Four Mile PEPR was subject to several amendments and approvals during the 2016 reporting period with formal approval granted by DSD on 23 December 2016.

Six (6) notifications for a change in operation were submitted to DSD in relation to:

1) Notification of wellfield preconditioning (approved by DSD on 23 June 2015), and
2) Notification for the development of wellfields in the Four Mile North East area (approved by DSD 10 July 2015).
3) Notification for the construction of the FME to FMW FLT Trunkline (approved by DSD on 20 July 2016).
4) Notification for upgrade works to the Ferric and Booster Station at FME (approved by DSD on 20 July 2016).
5) Notification for four (4) additional communal mudpits (approved by DSD on 17 October 2016).
6) Notification for the development of wellfields in the Four Mile East and North East areas (approved by DSD on 1 December 2016).

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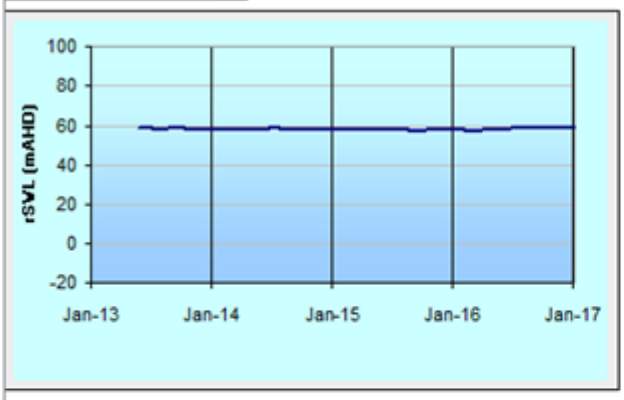
APPENDIX A

MONITOR WELL LEVEL GRAPHS – EYRE FORMATION

Four Mile Monitor Well Water Level Graphs – Eyre Formation

4LMW002_SC1



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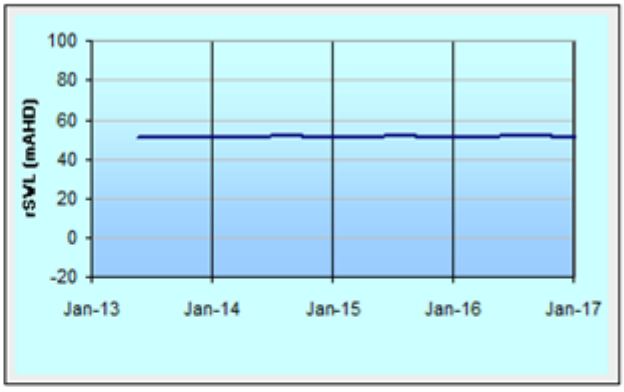

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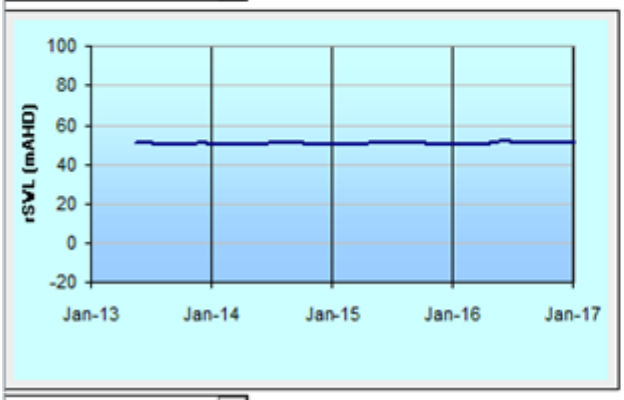

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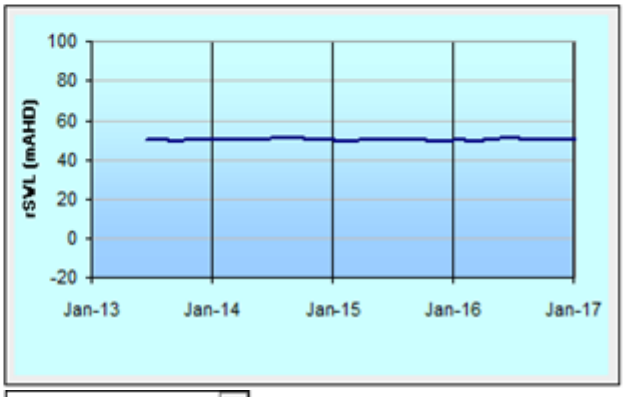

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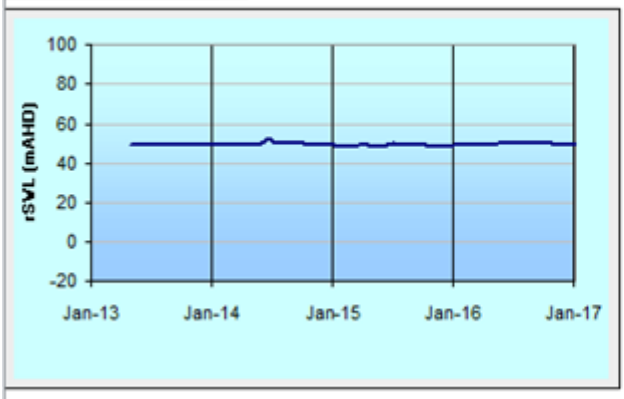

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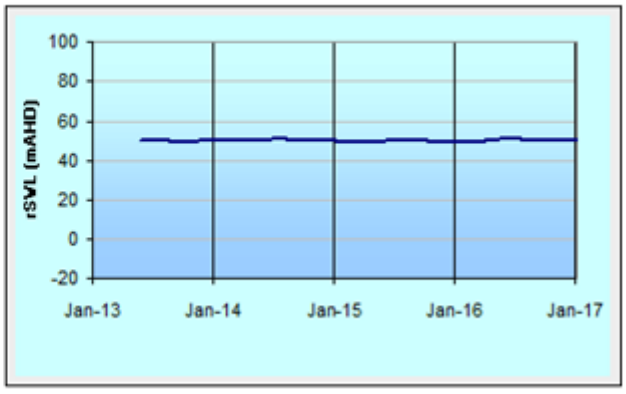

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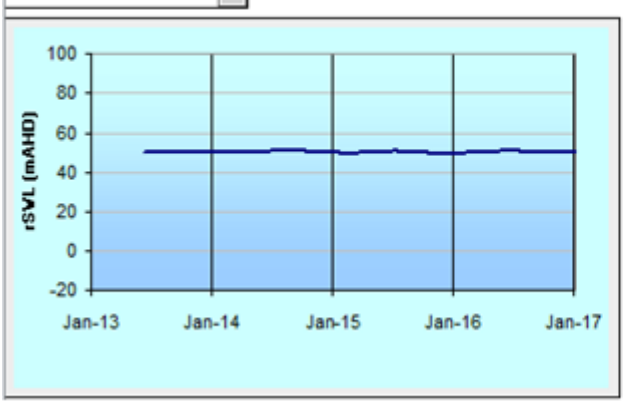

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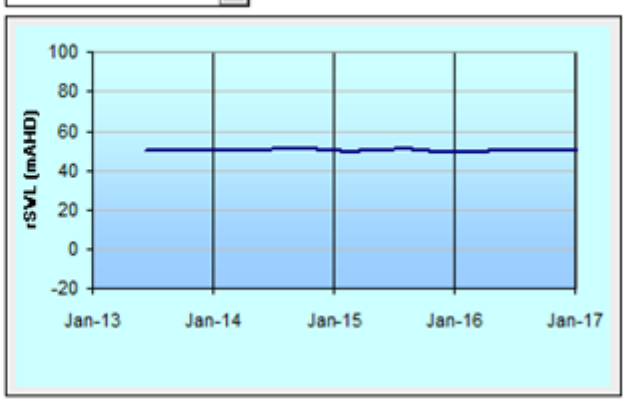
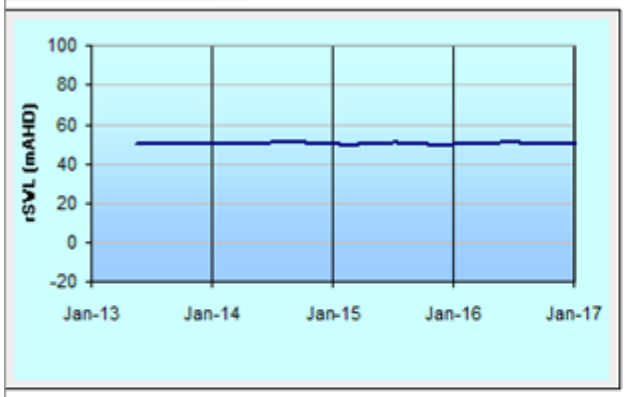


Four Mile Monitor Well Water Level Graphs – Eyre Formation

4LMW010_SC1



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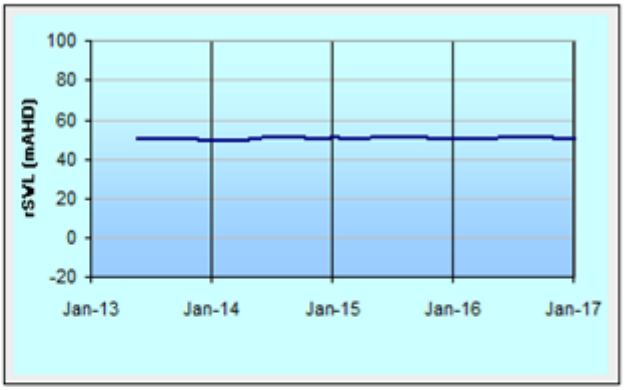

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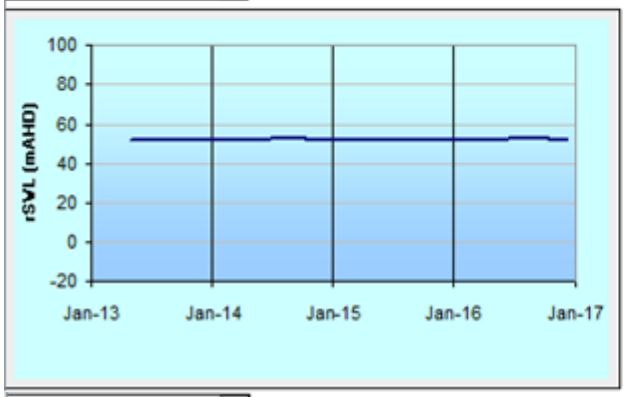

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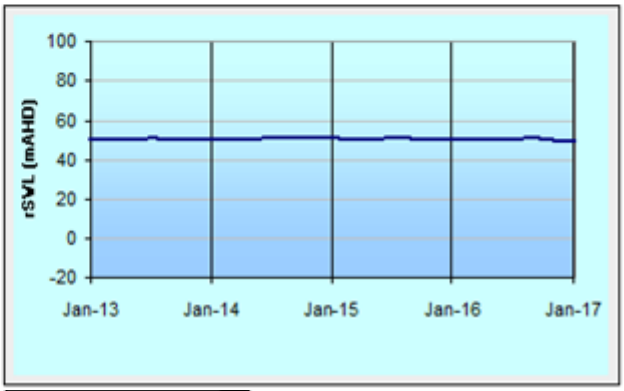

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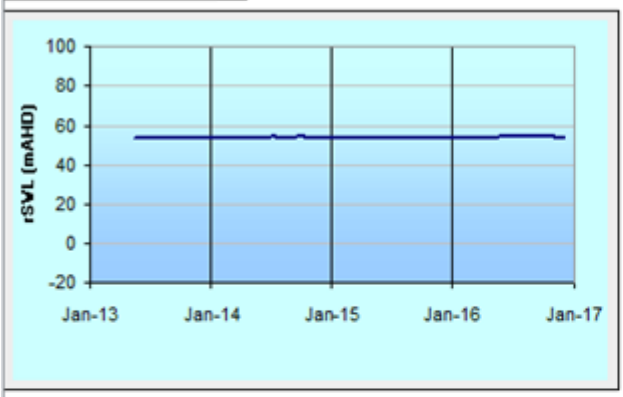

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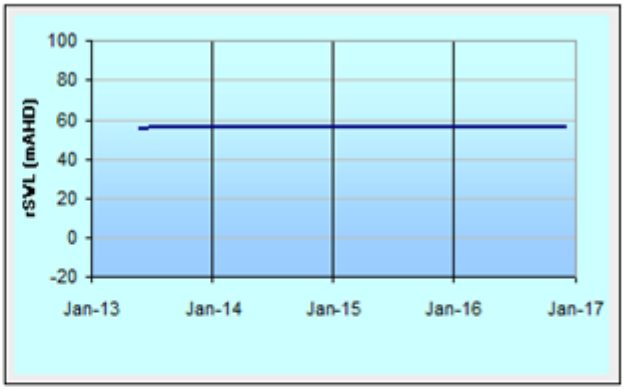

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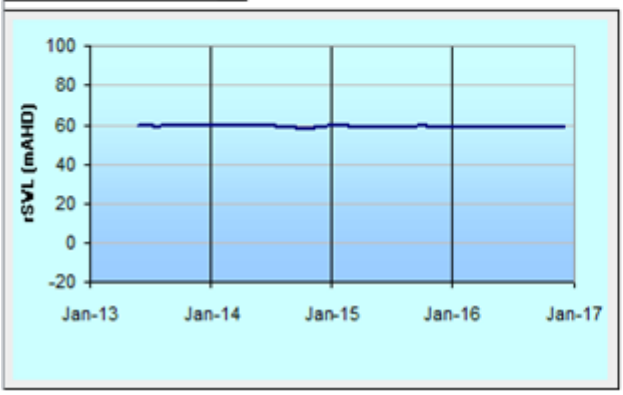

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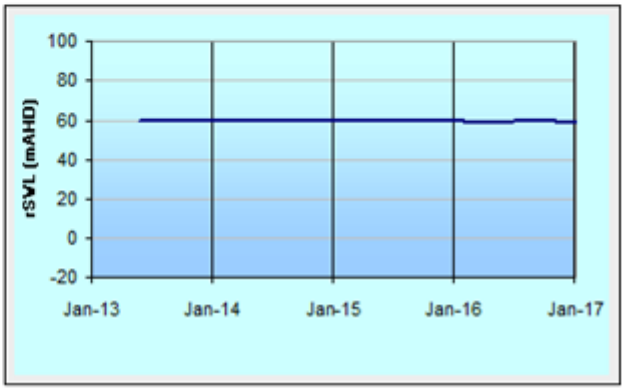

Four Mile Monitor Well Water Level Graphs – Eyre Formation

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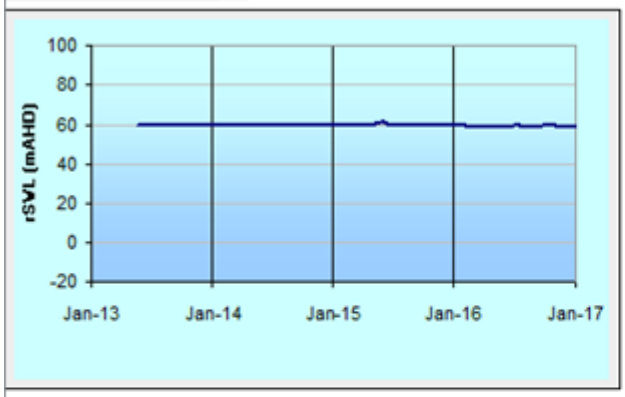

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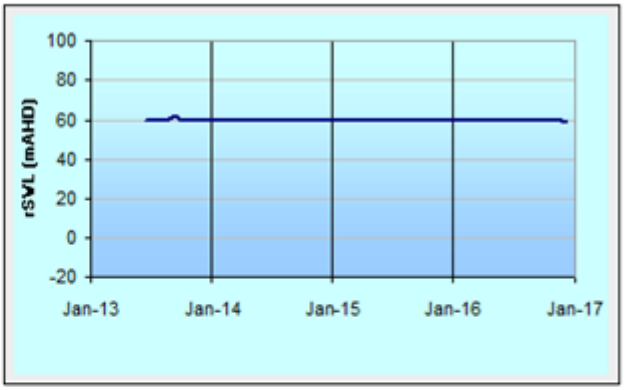

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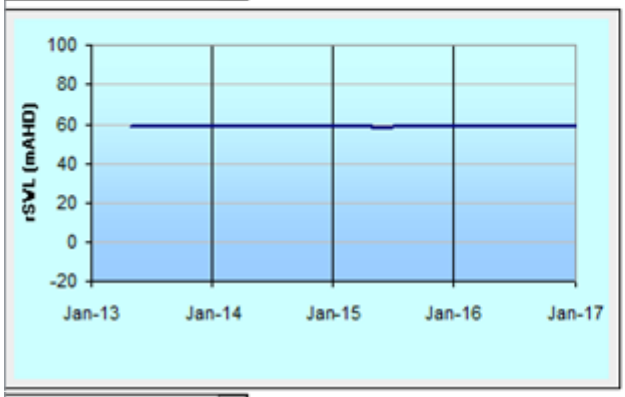

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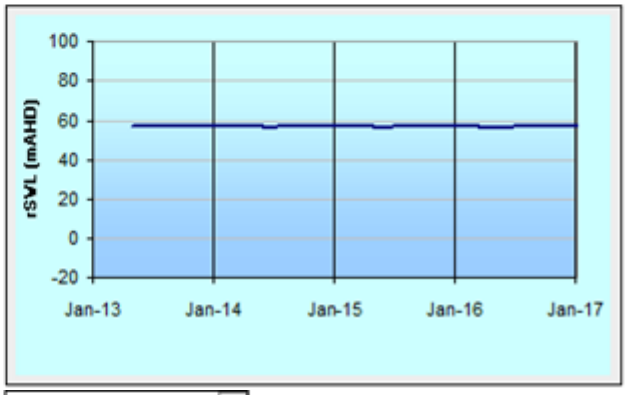

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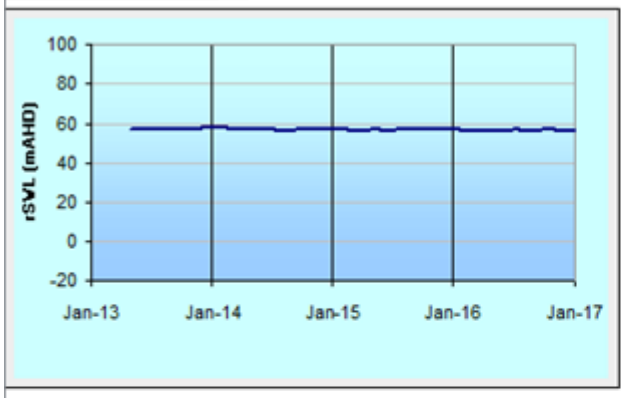

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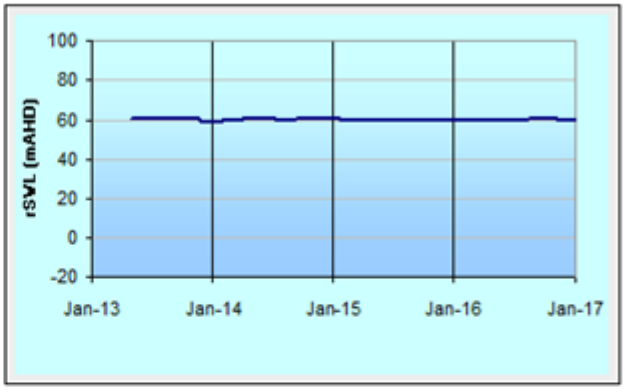

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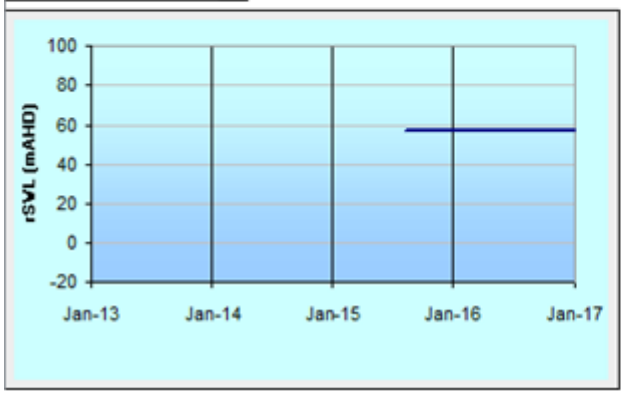

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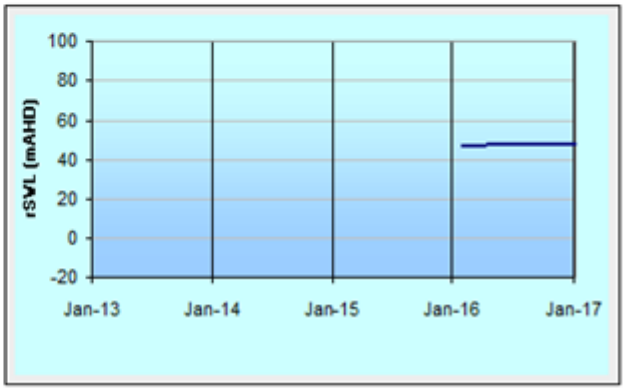

Four Mile Monitor Well Water Level Graphs – Eyre Formation

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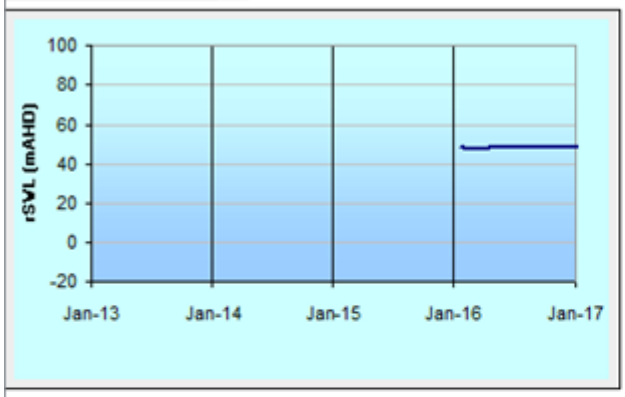

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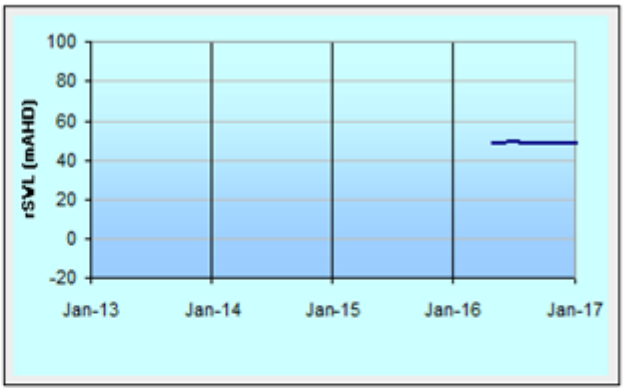

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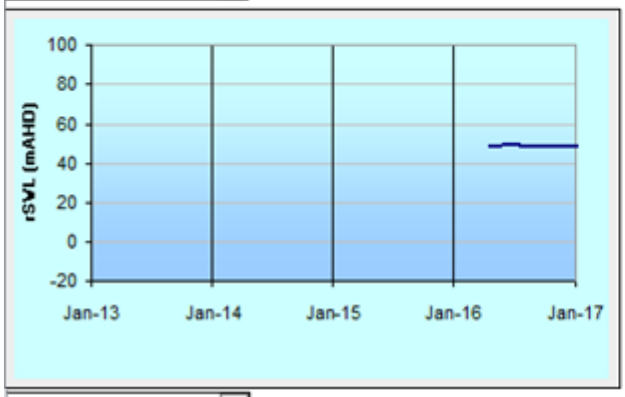

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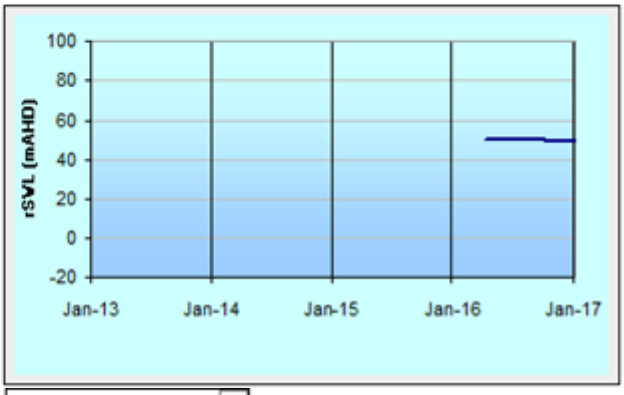

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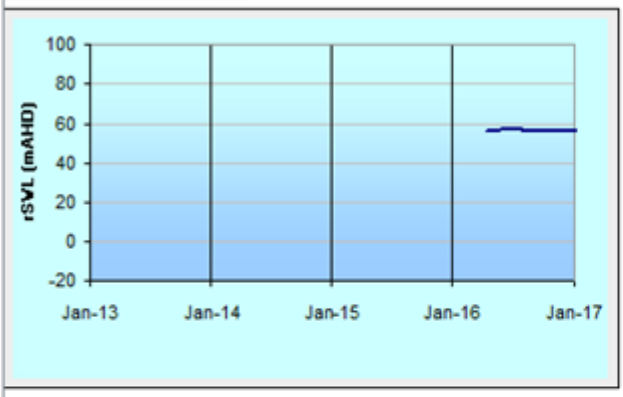

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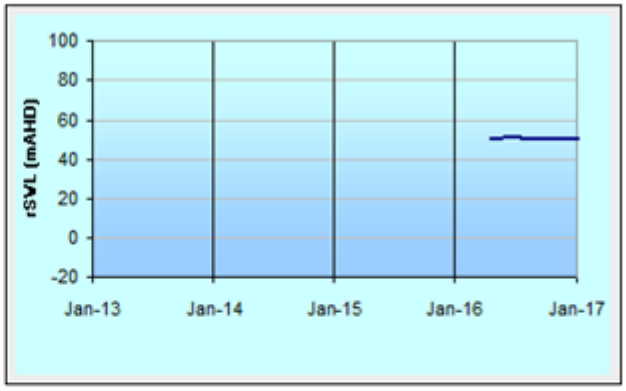

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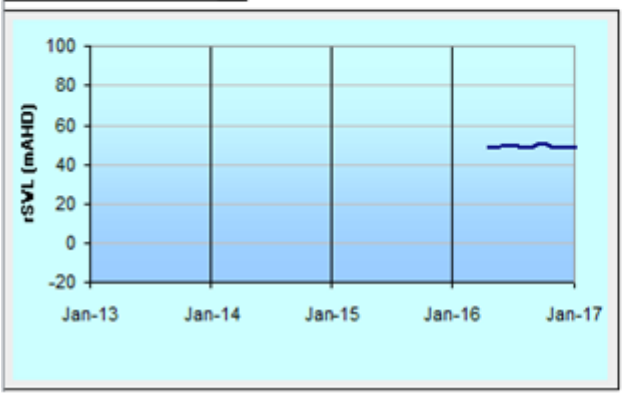

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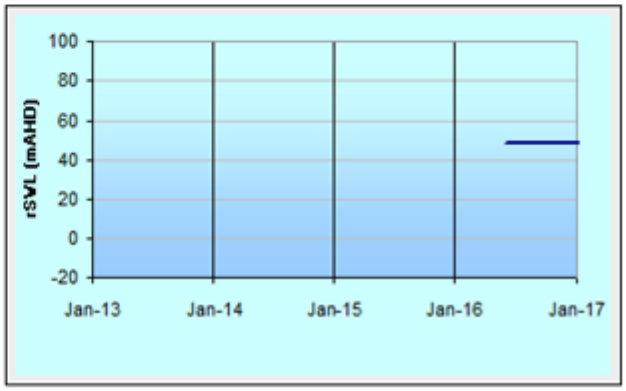

Four Mile Monitor Well Water Level Graphs – Eyre Formation

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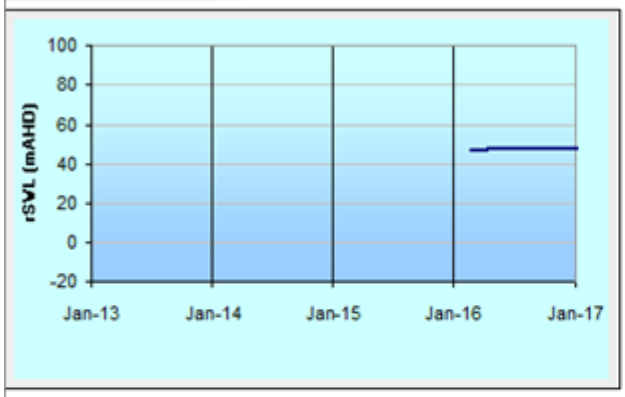

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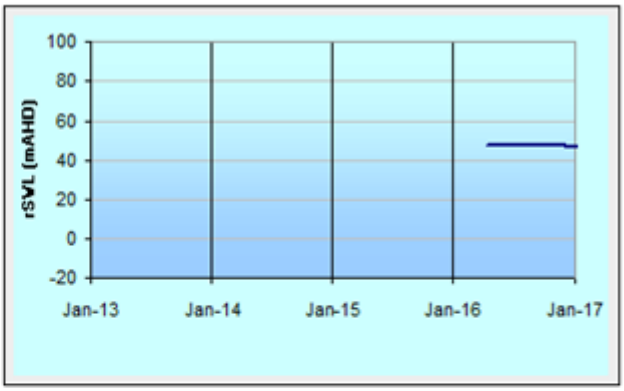

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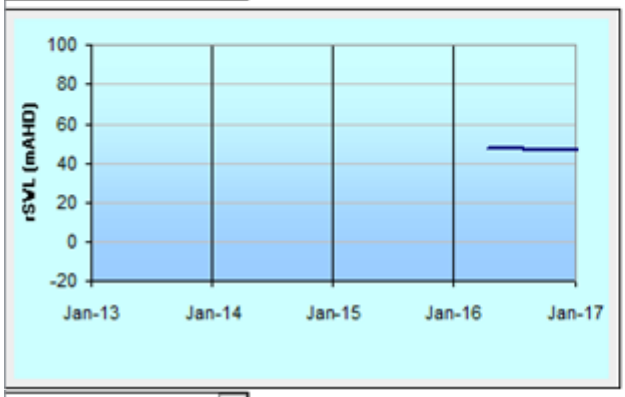

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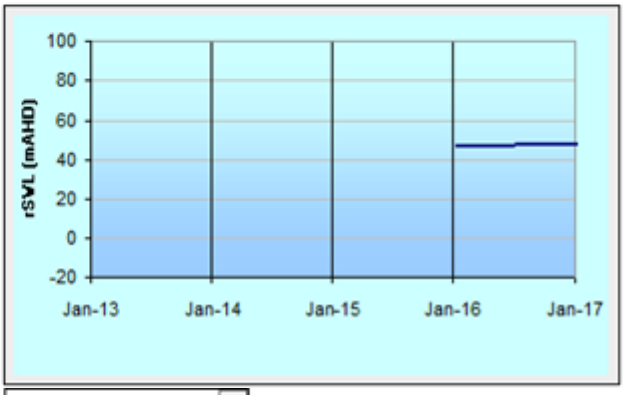

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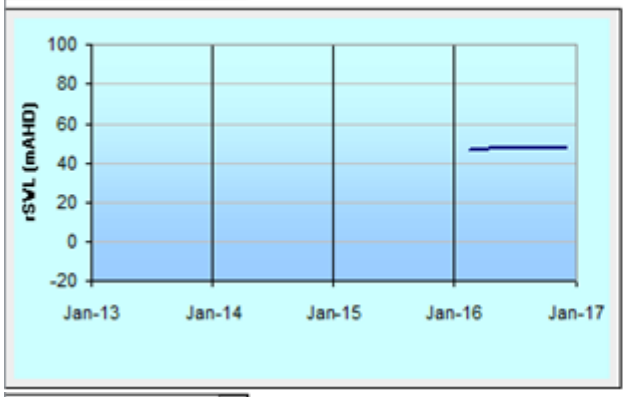

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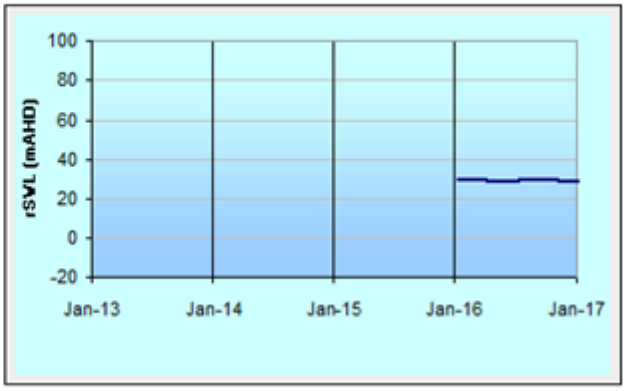

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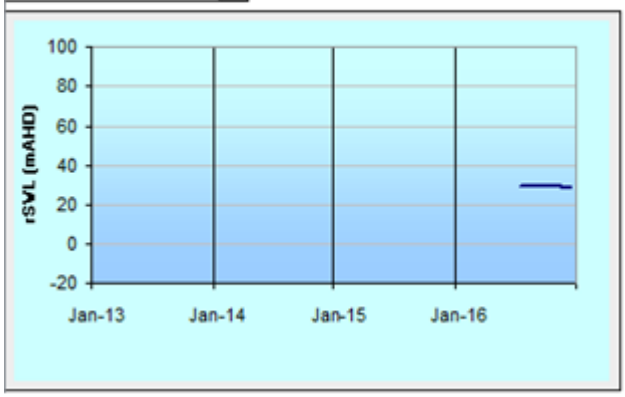

APPENDIX B

MONITOR WELL CHEMISTRY GRAPHS – EYRE FORMATION

Discussion on Anomalous Lateral Monitor Well Chemistries

The chemistries within several of the wells show the presence of remnant drilling mud as evidenced by the alkaline pH of the water in the screened zone. This is unlikely to inhibit the detection of mining lixiviant.

4LMW002 (Screens 1-2)

1. Anomalous chemistry (pH around 12) likely to be related to remnant drilling muds which have proven difficult to clear in lower yielding wells.
2. Well has been re-airlifted twice with pH dropping briefly before returning to the higher level.

4LMW019 (Screen 1)

1. Anomalous chemistry (pH around 11) likely to be related to remnant drilling muds.
2. Well was re-airlifted which appears to have been successful in screens 2 and 3 with pH returning to baseline levels consistent with the formation.

4LMW020 (Screen 1)

1. Anomalous chemistry (pH around 12) likely to be related to remnant drilling muds which have proven difficult to clear in lower yielding wells.
2. Well has been re-airlifted twice with limited improvement.

4LMW030 (Screen 1 & 2)

1. Anomalous chemistry (pH around 12) likely to be related to remnant drilling muds.
2. Well was re-airlifted which appears to have been successful with pH returning to baseline levels consistent with the formation.

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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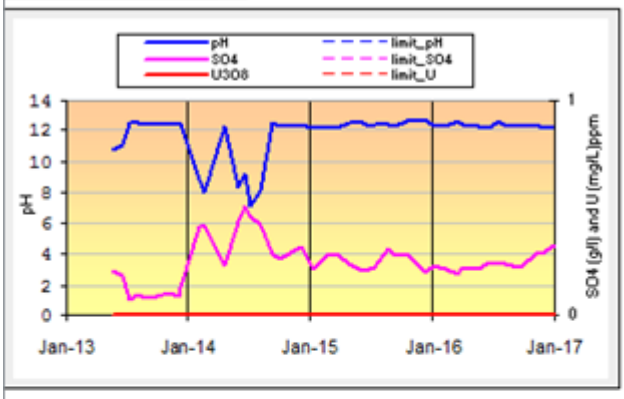

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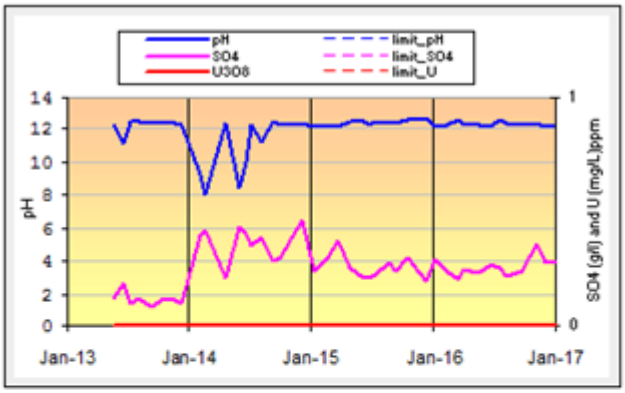

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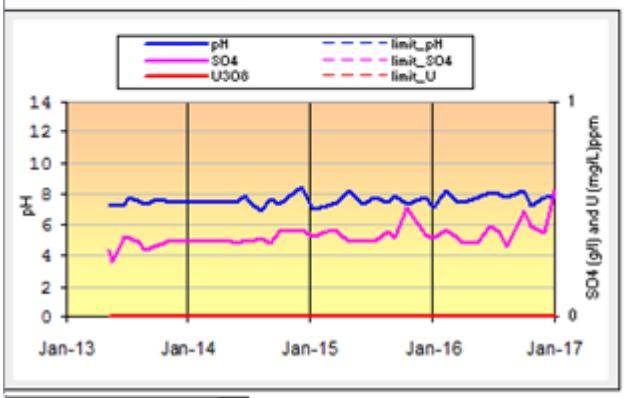

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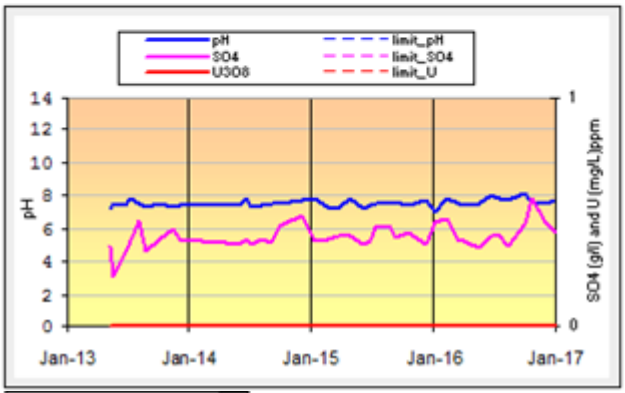

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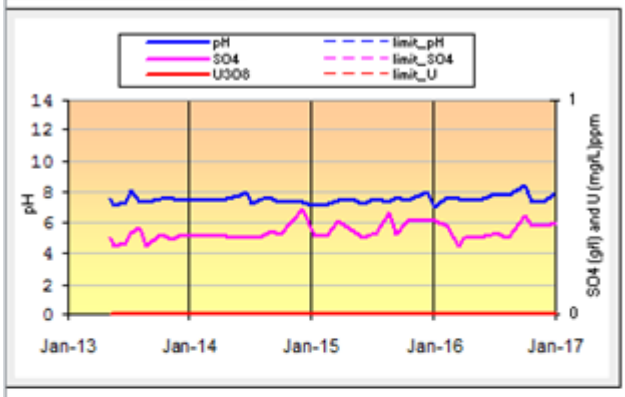

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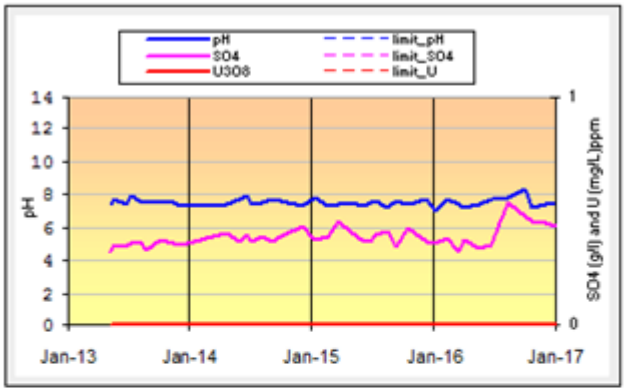

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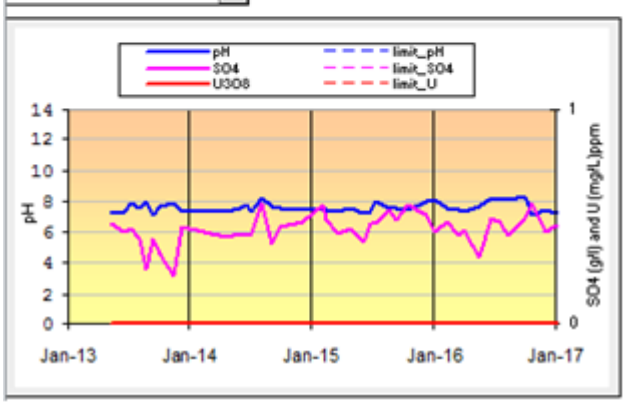

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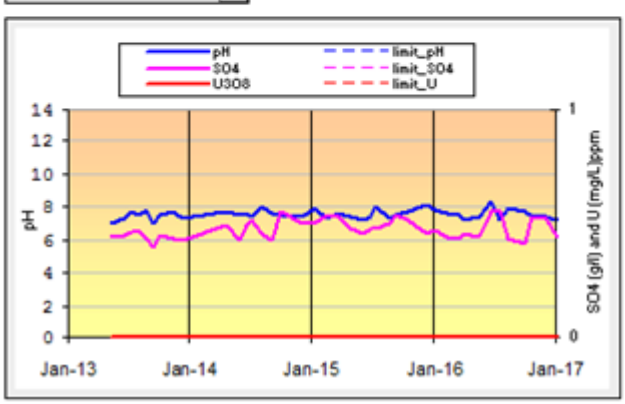
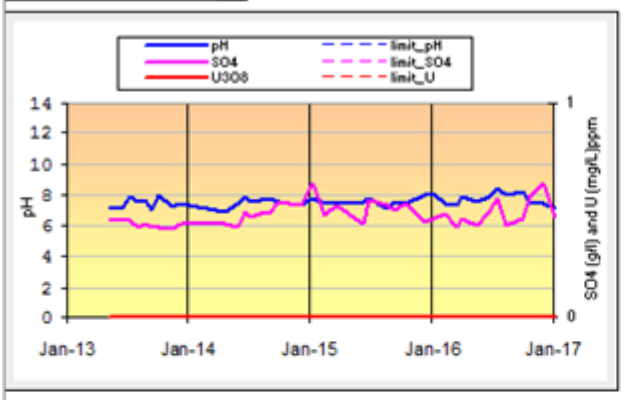


Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

4LMW004_SC3



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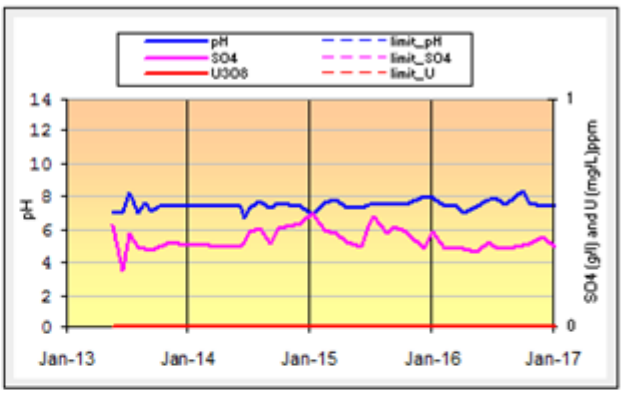

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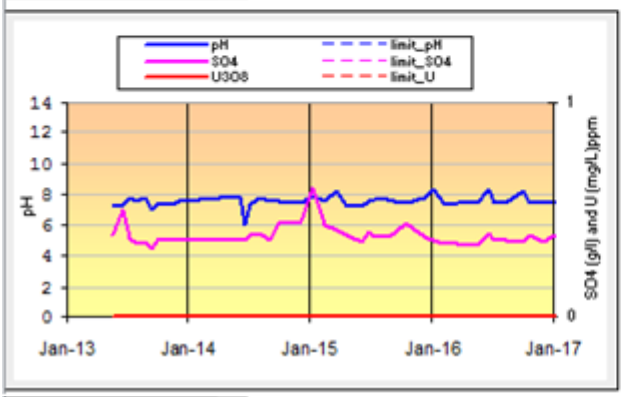

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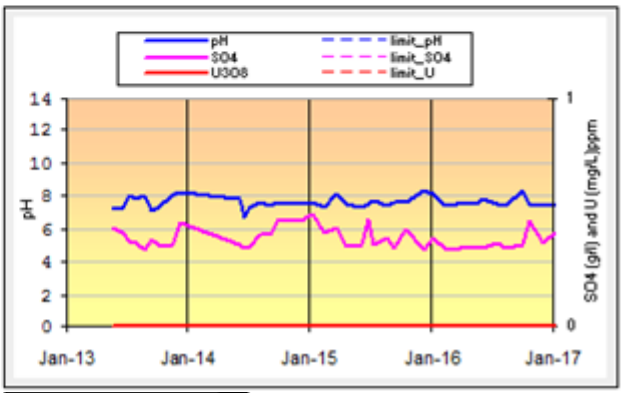

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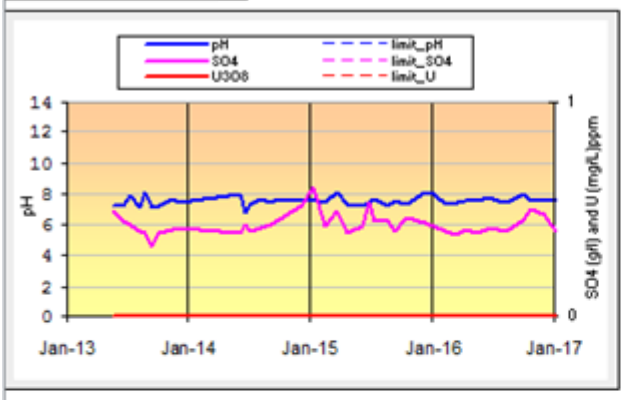

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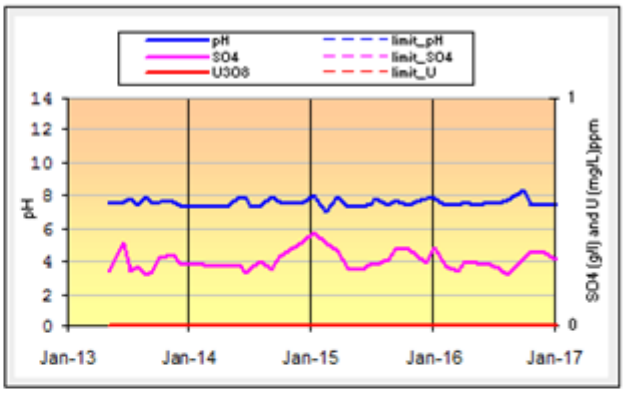

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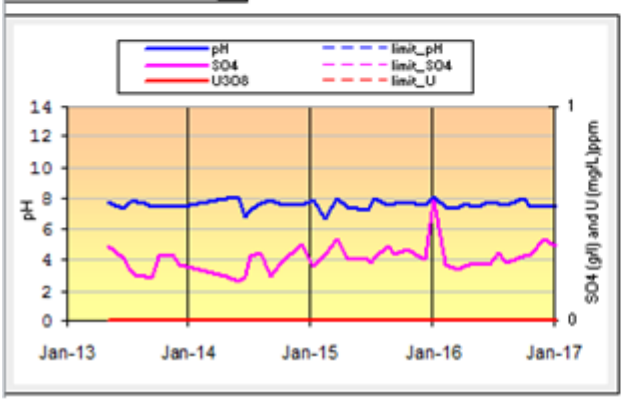

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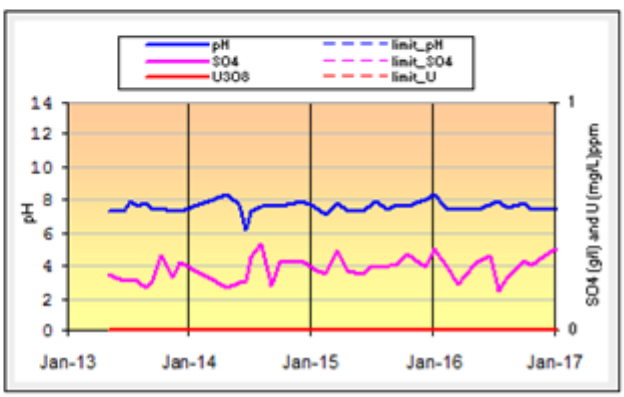
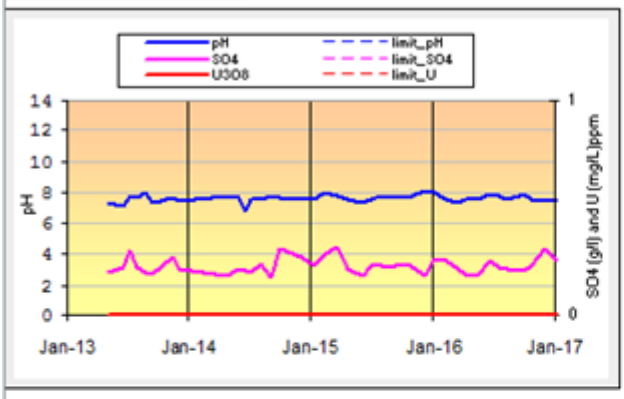


Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

4LMW006_SC4



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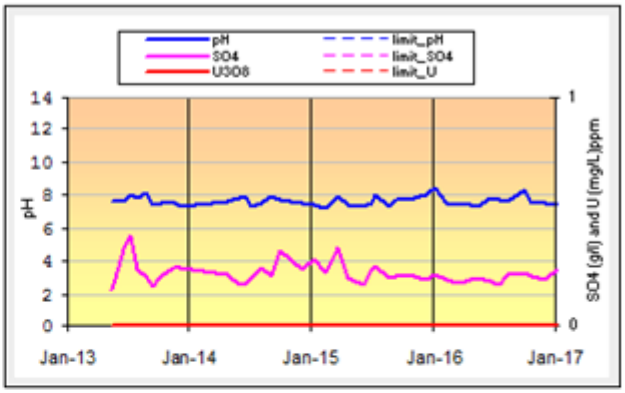

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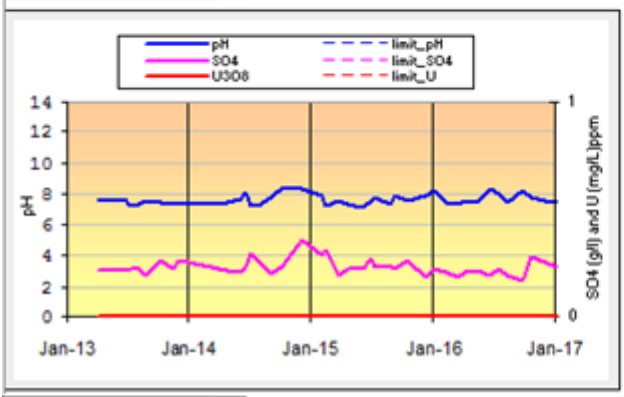

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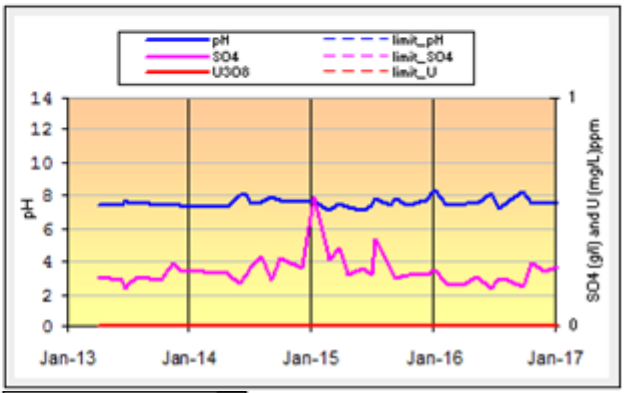

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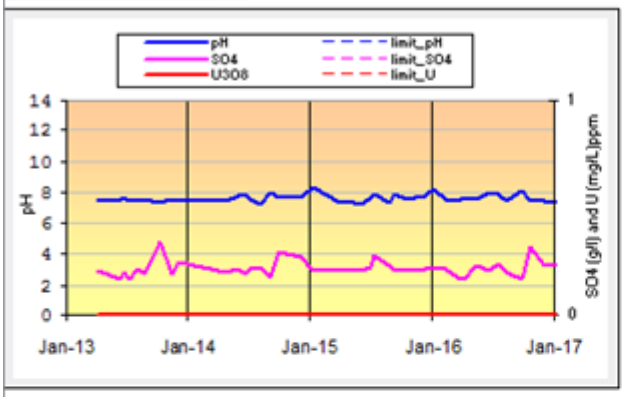

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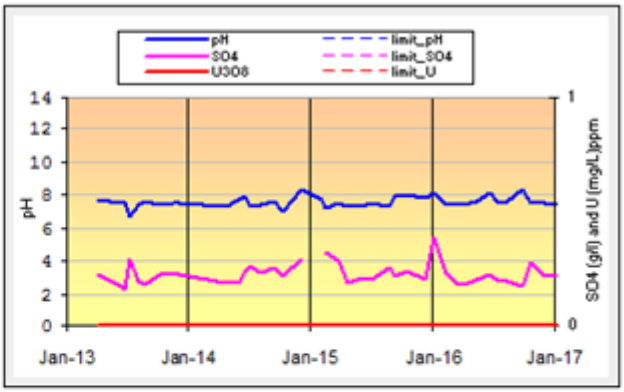

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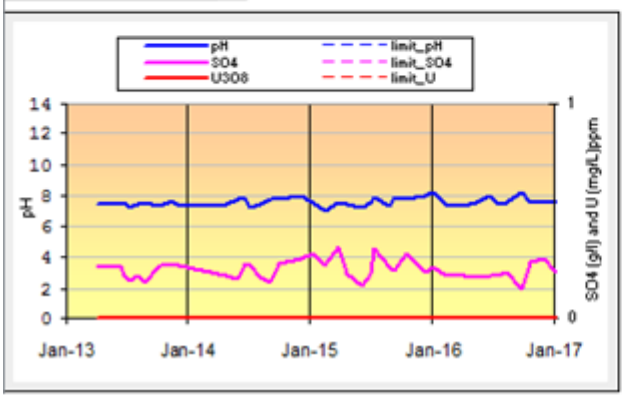

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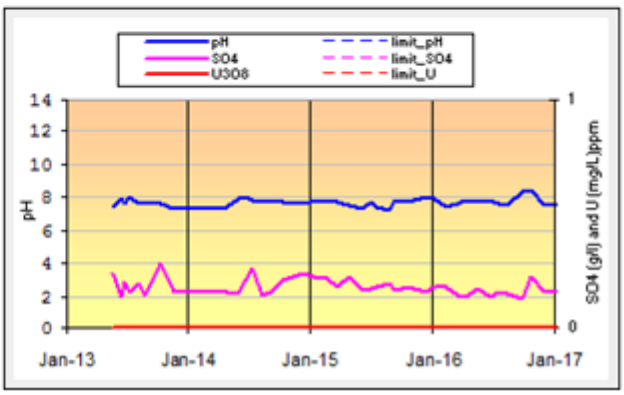

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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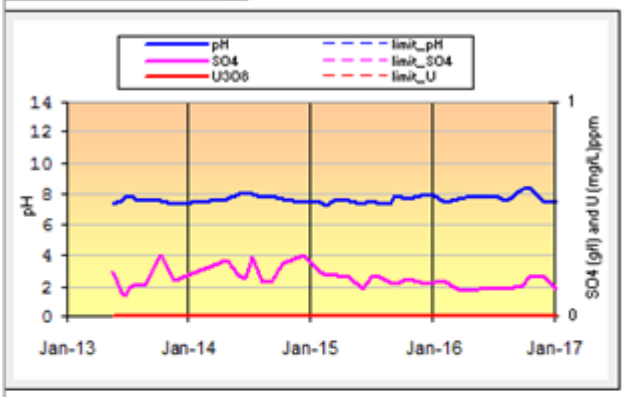

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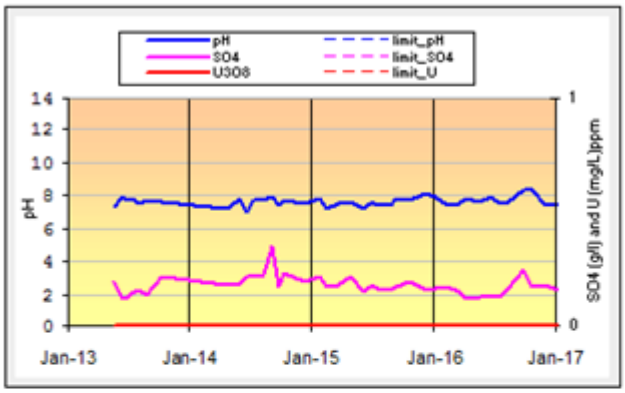

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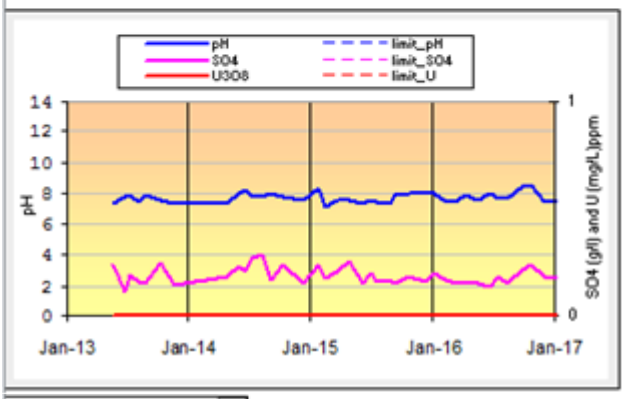

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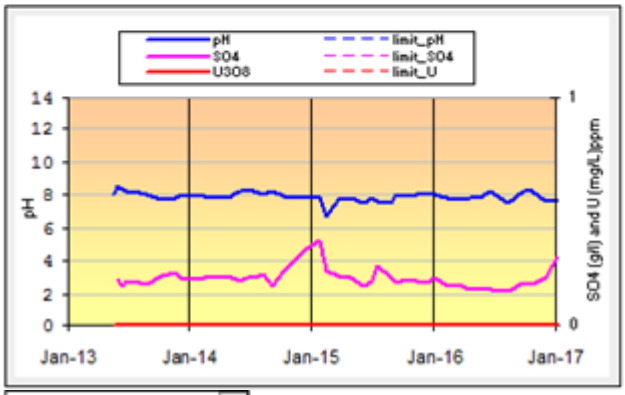

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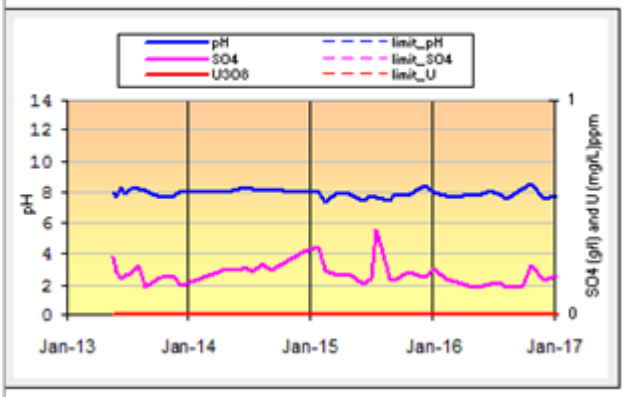

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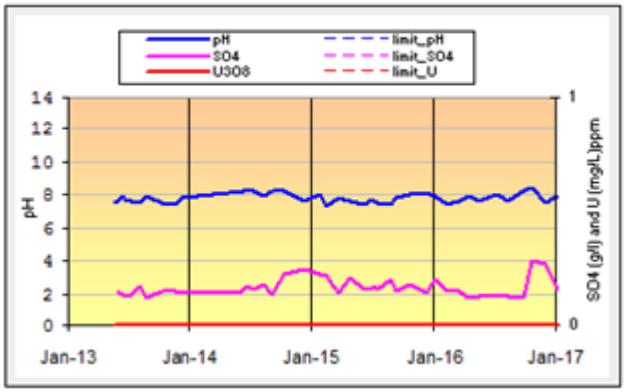

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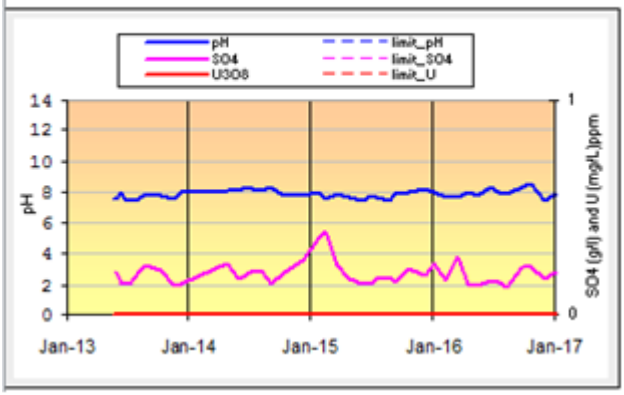

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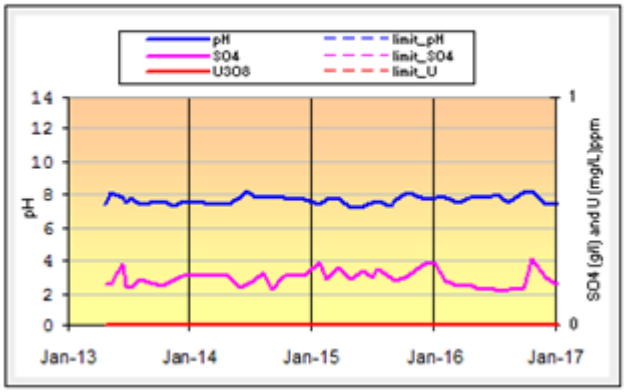

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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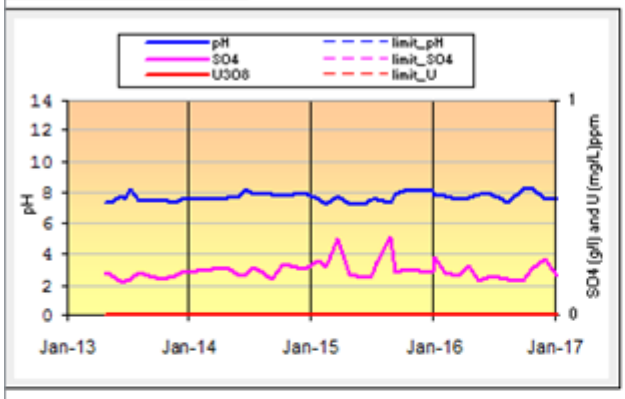

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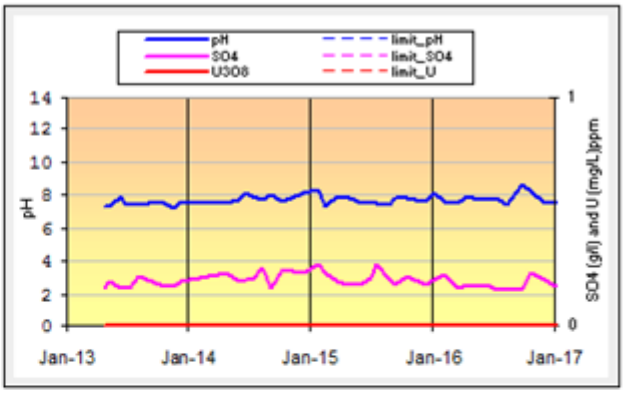

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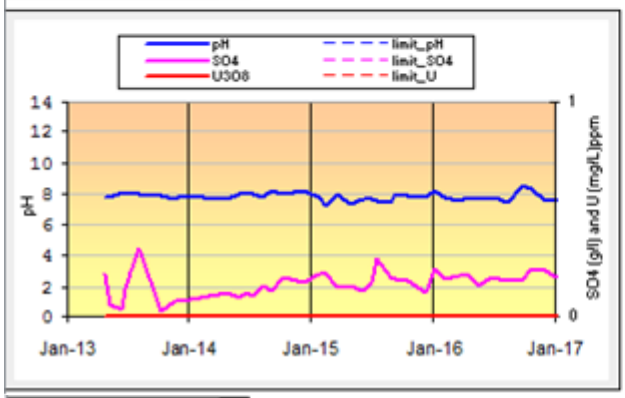

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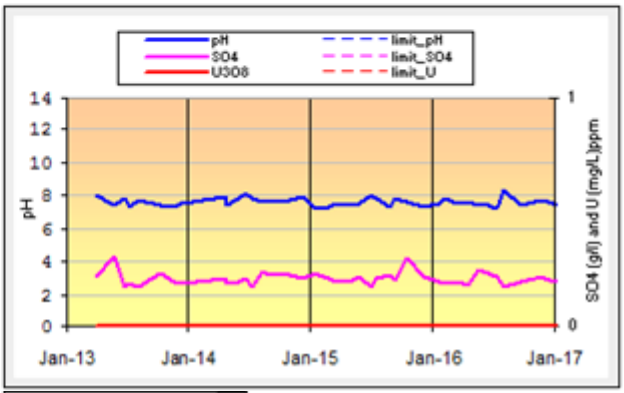

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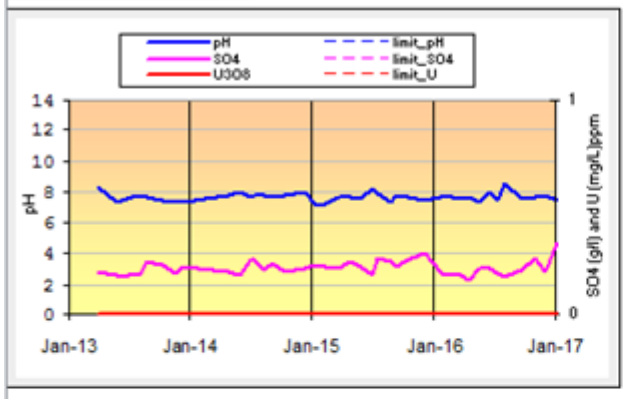

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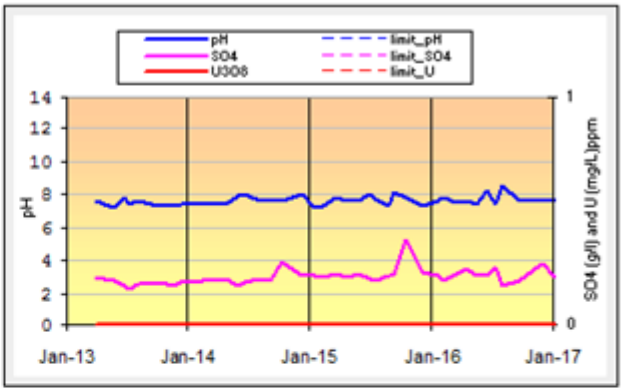

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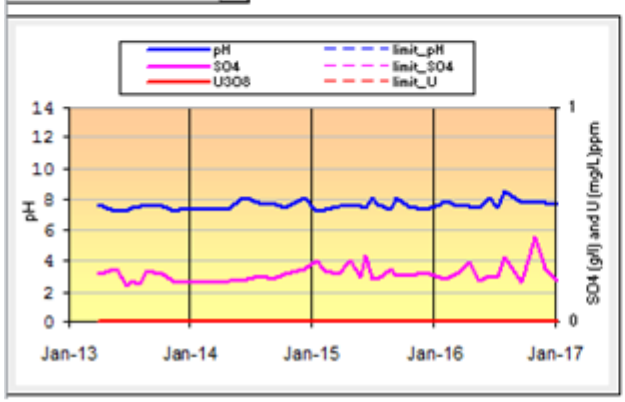

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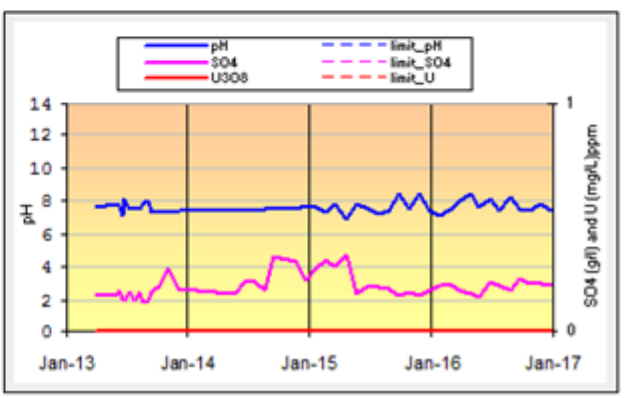

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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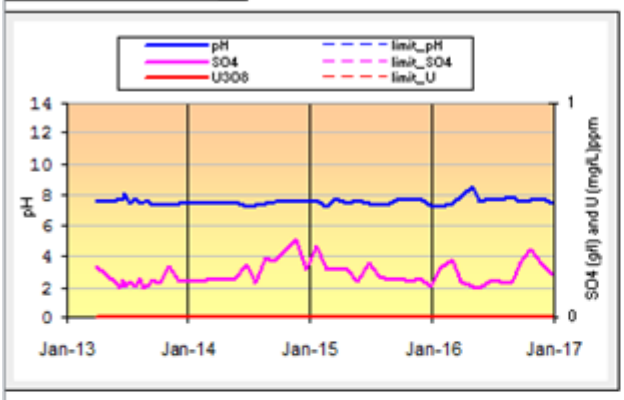

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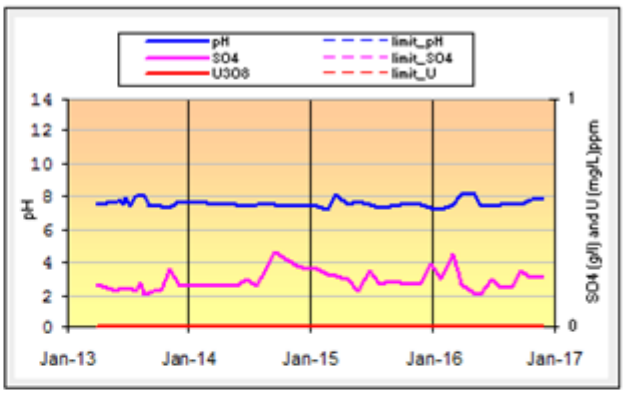

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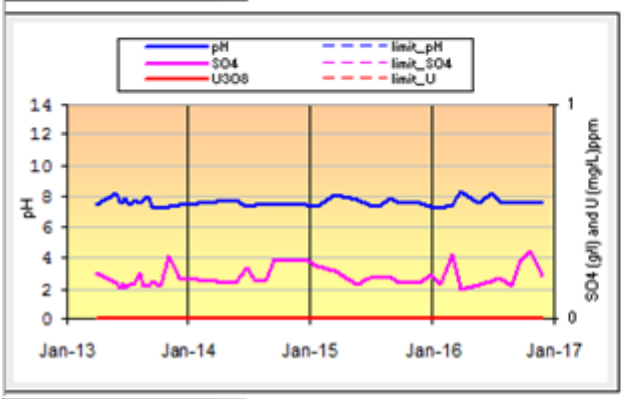

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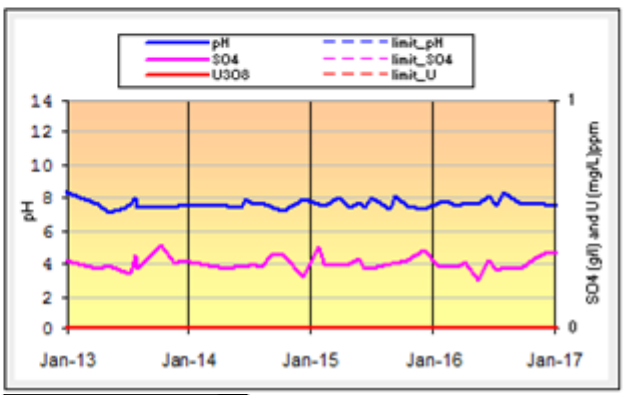

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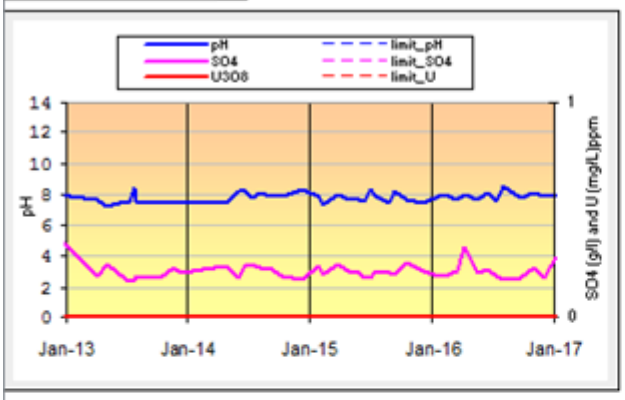

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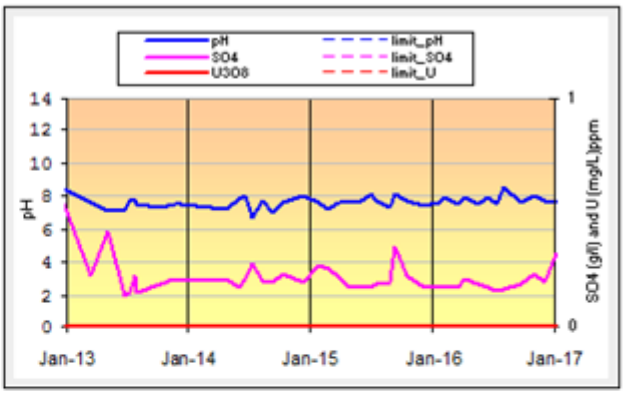

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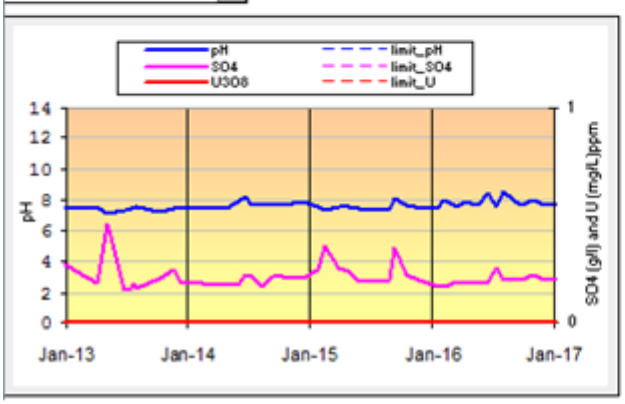

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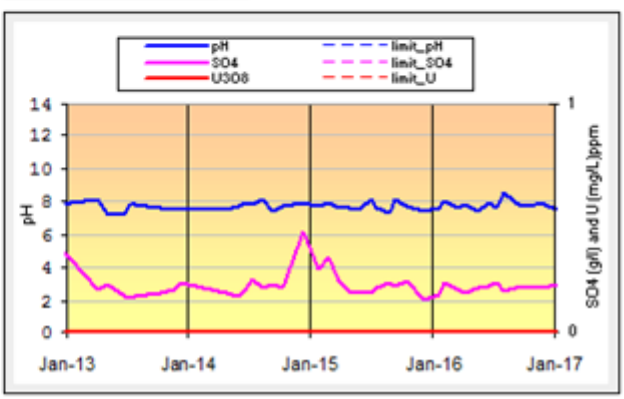

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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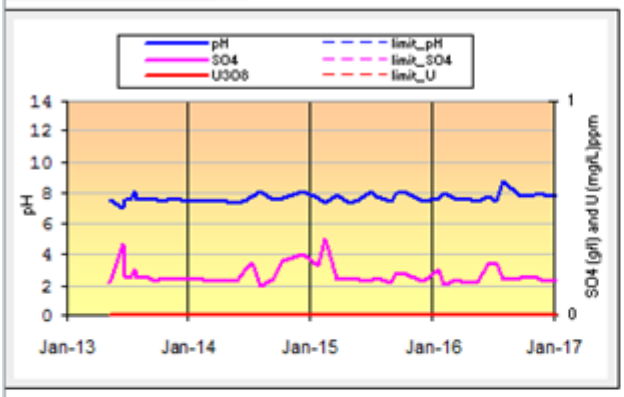

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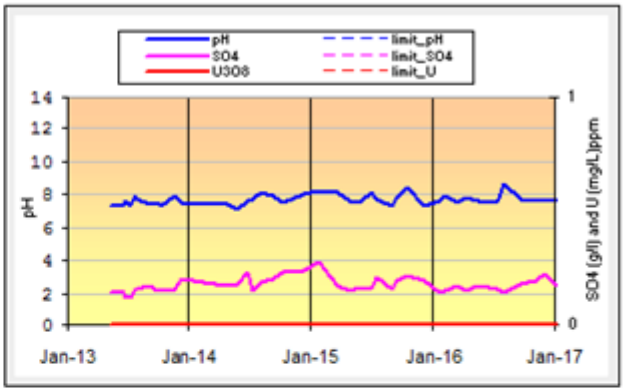

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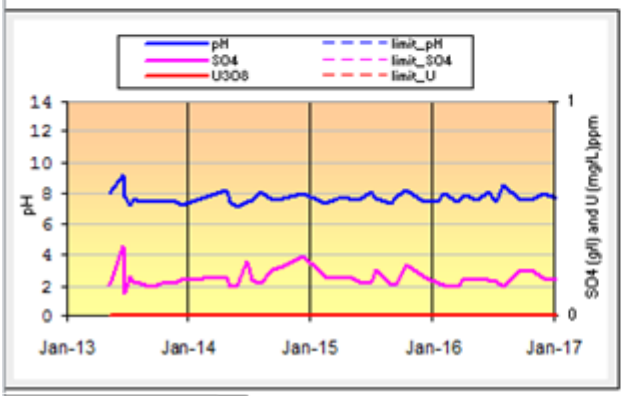

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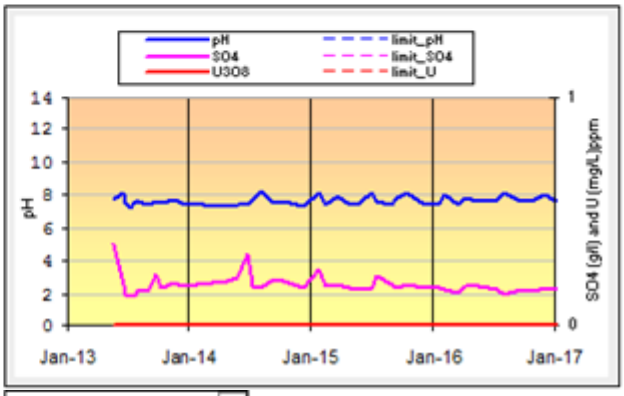

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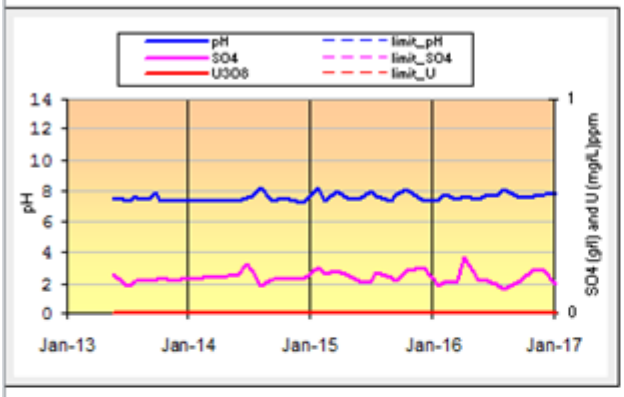

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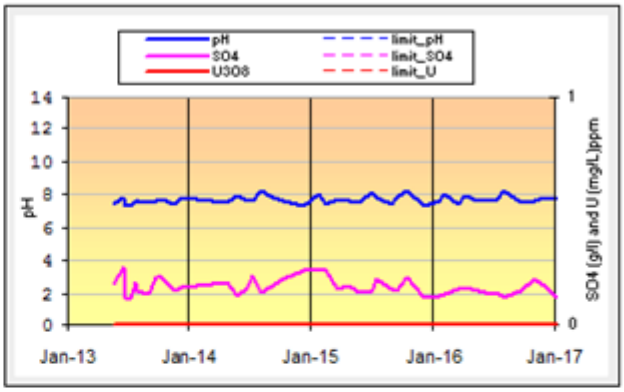

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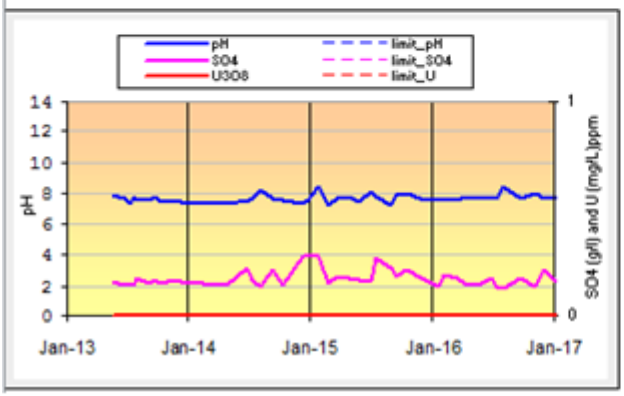

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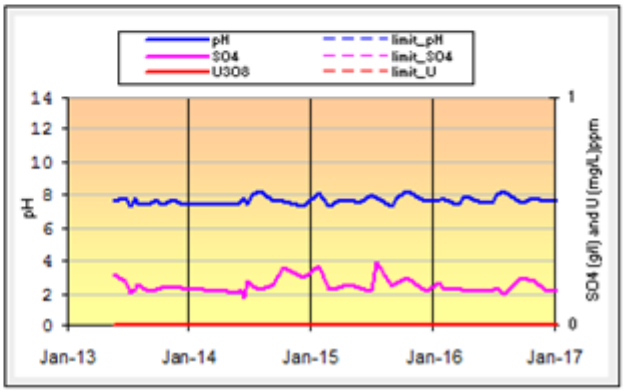

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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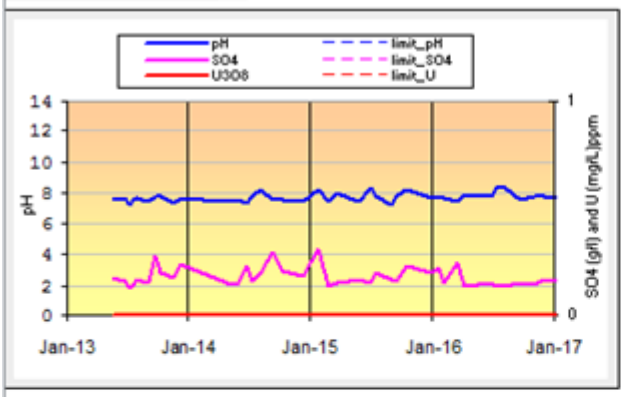

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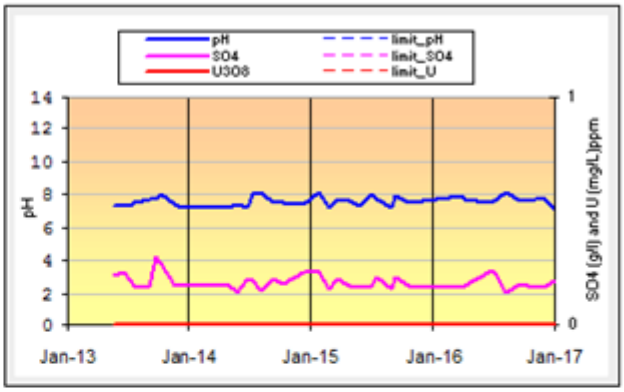

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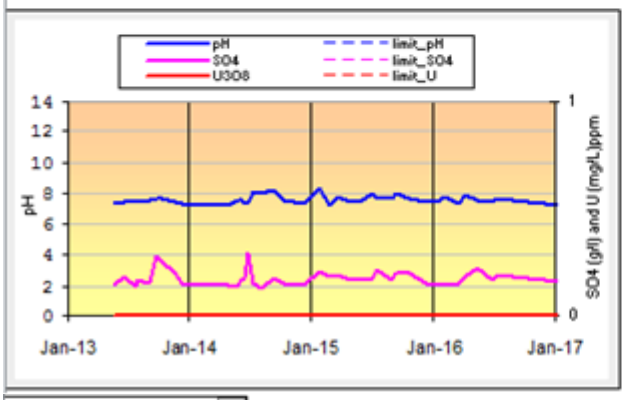

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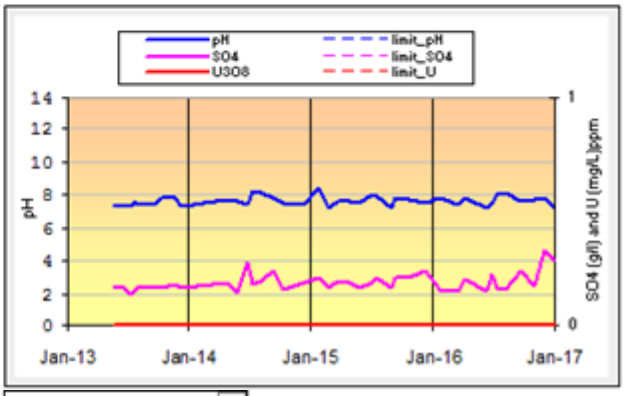

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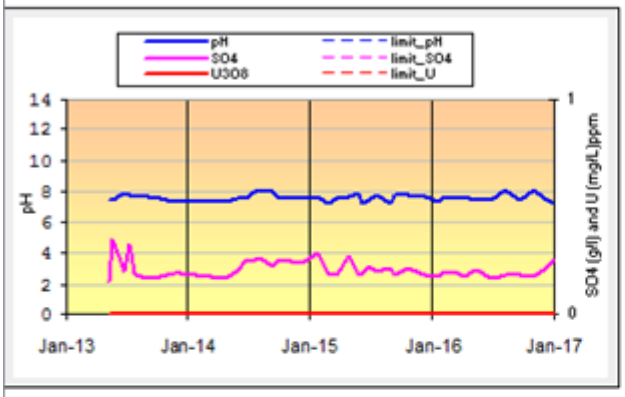

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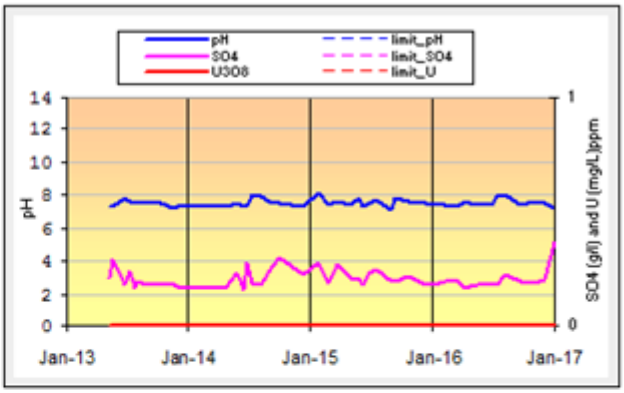

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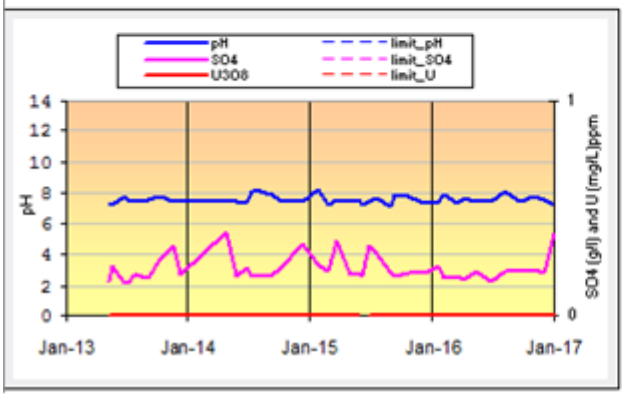

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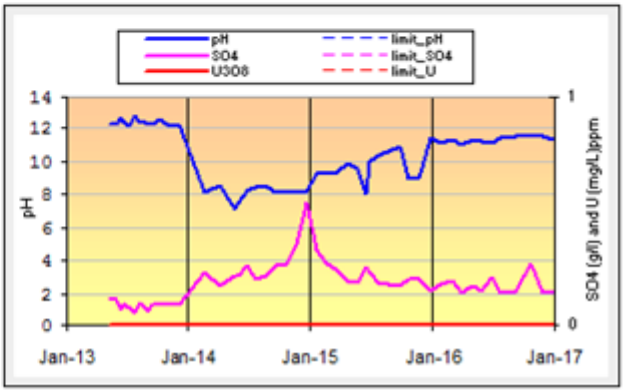
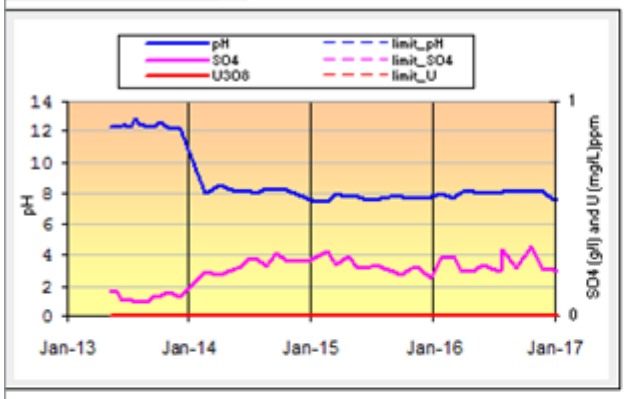


Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

4LMW019_SC2



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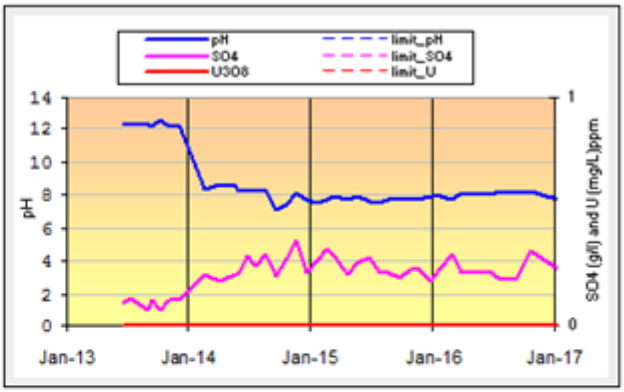

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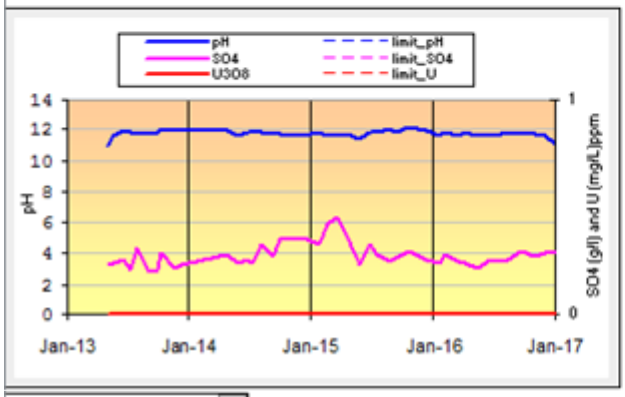

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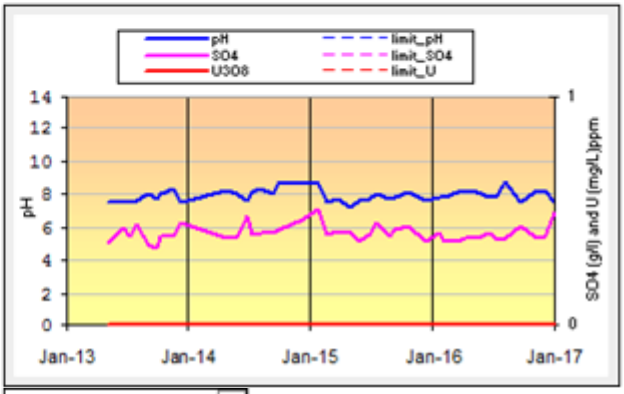

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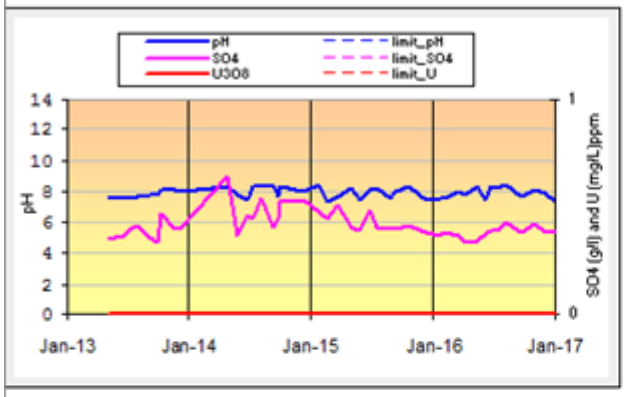

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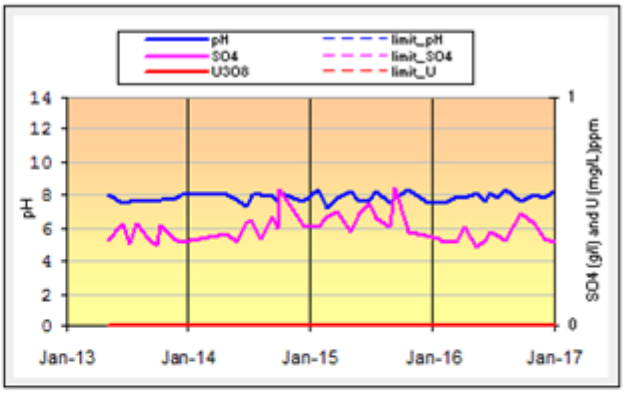

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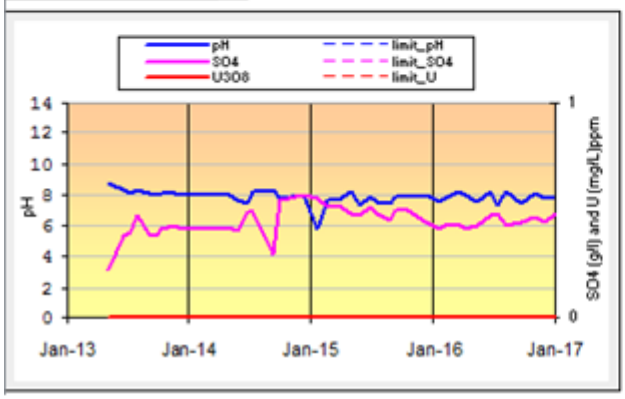

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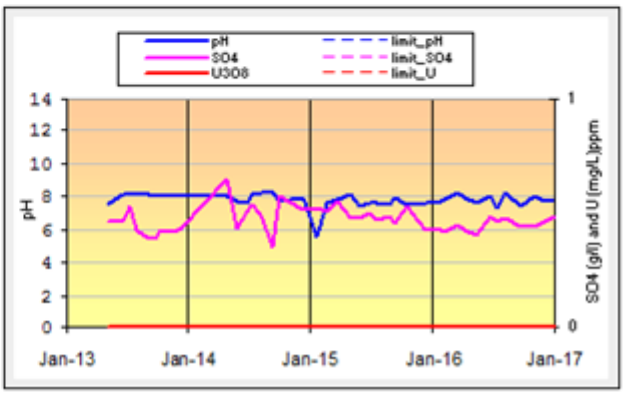

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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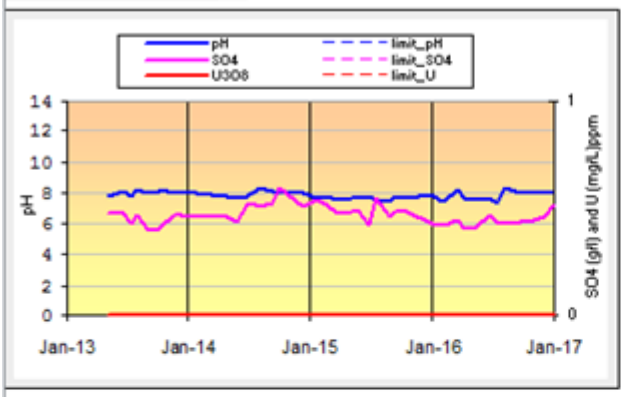

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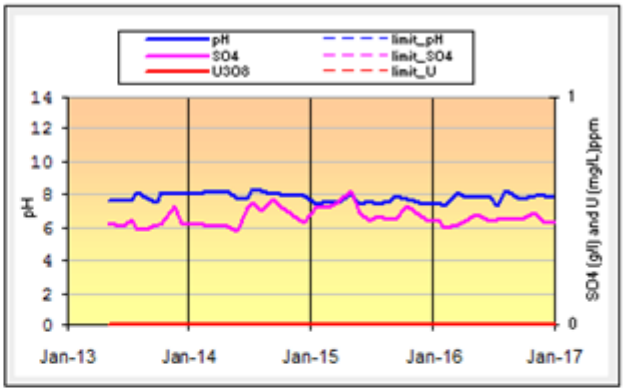

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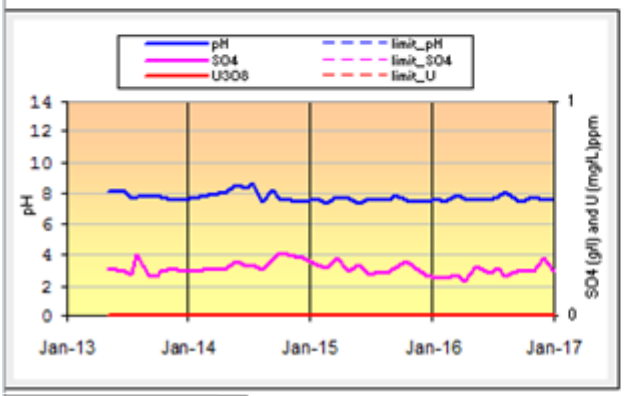

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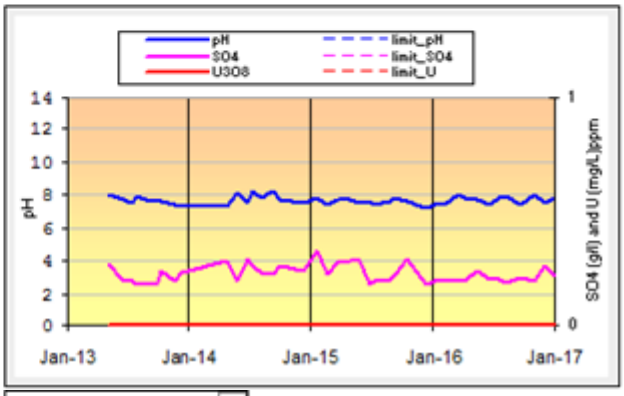

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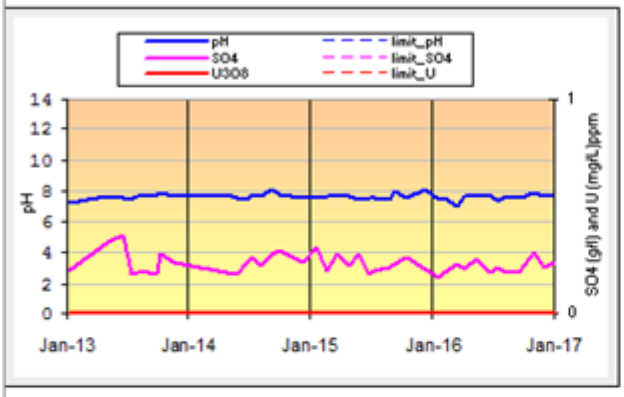

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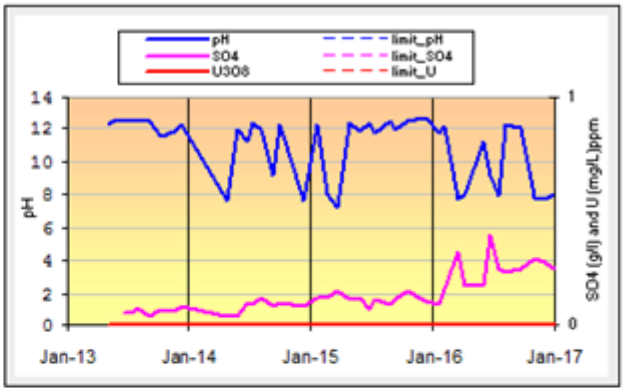

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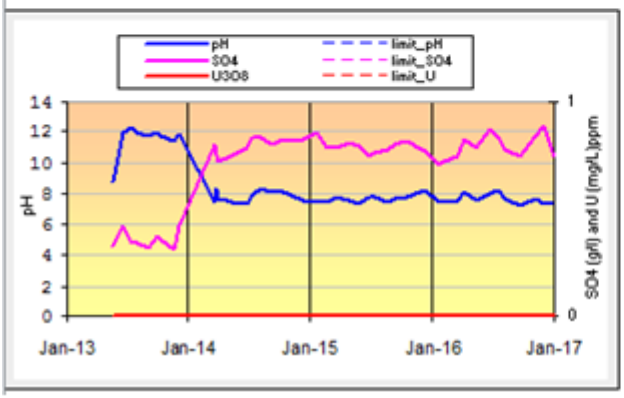

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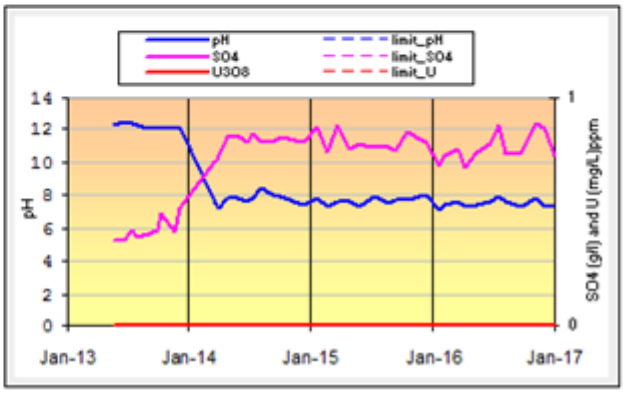

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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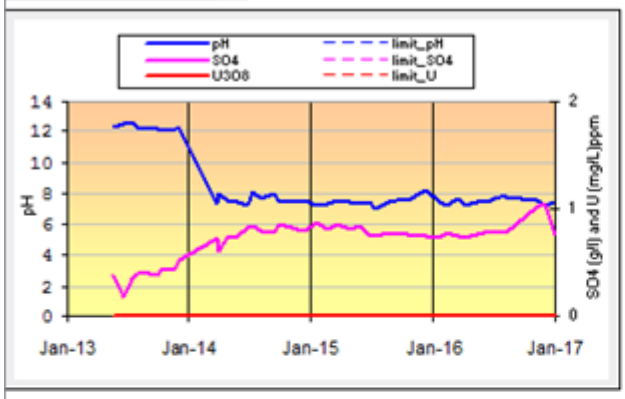

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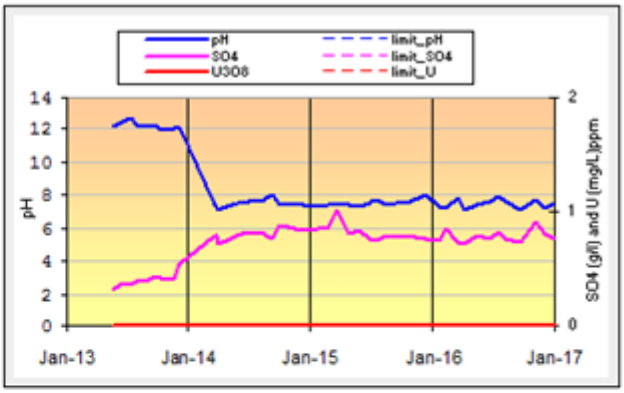

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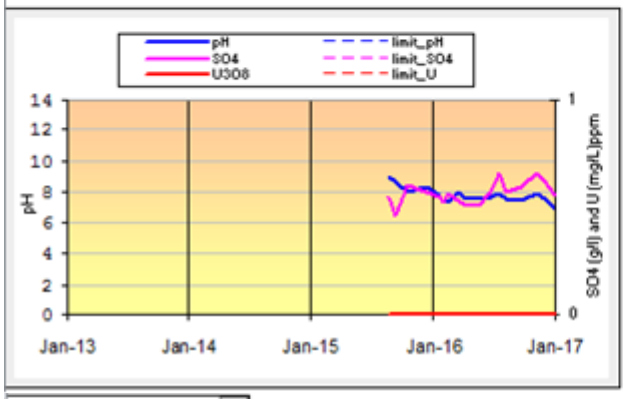

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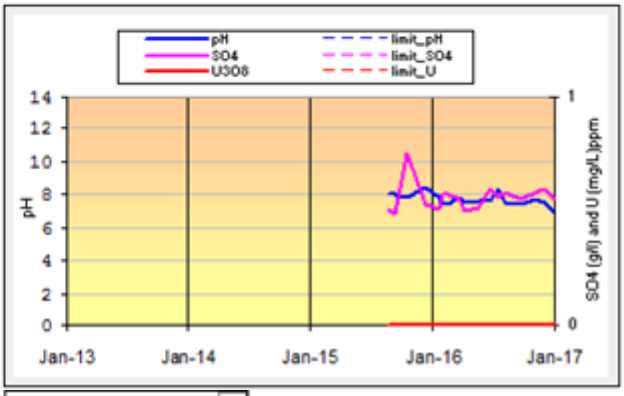

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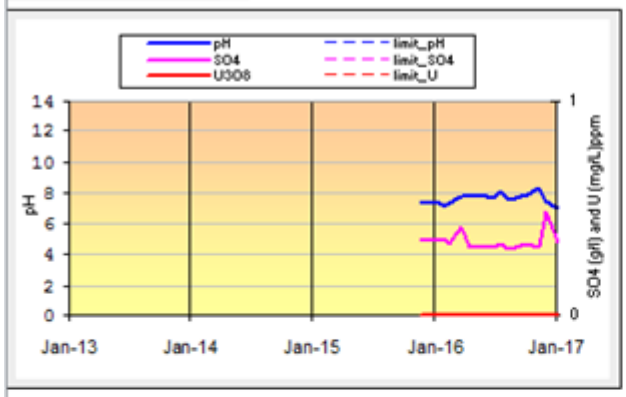

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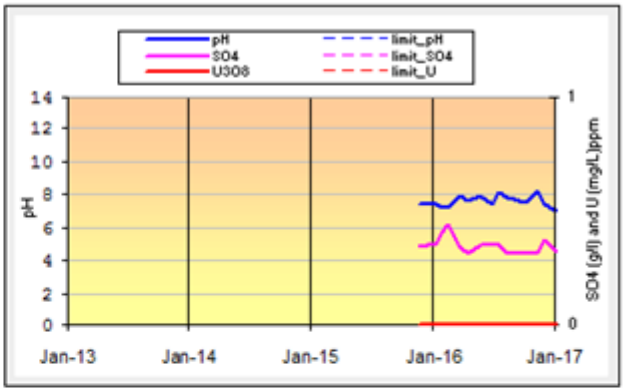

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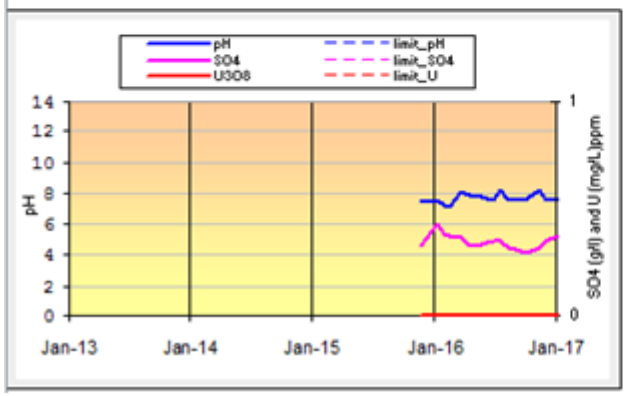

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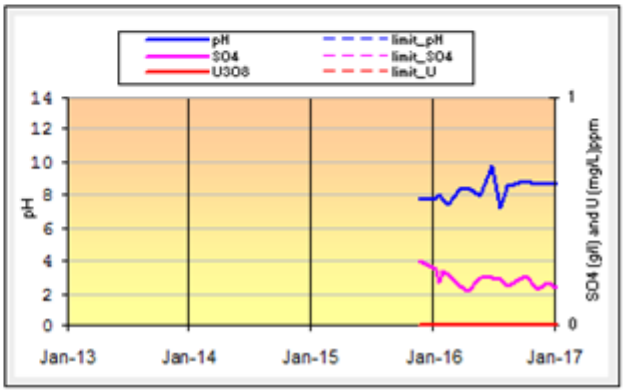

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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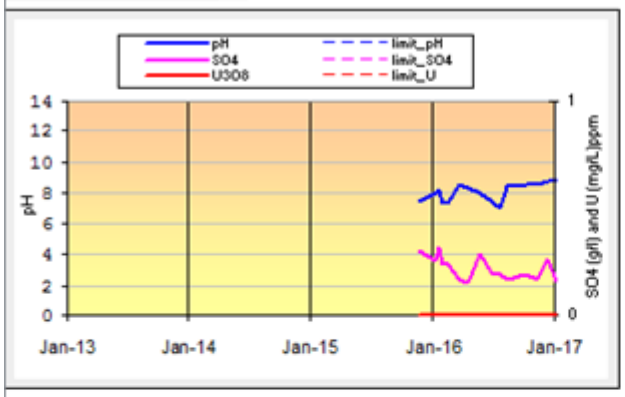

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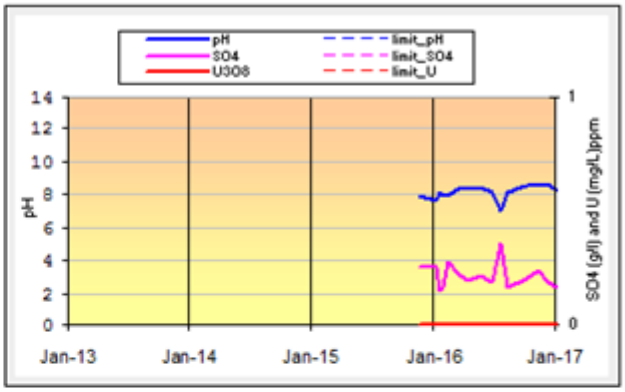

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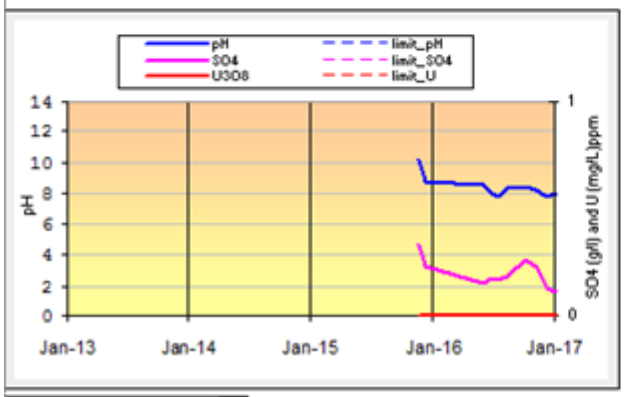

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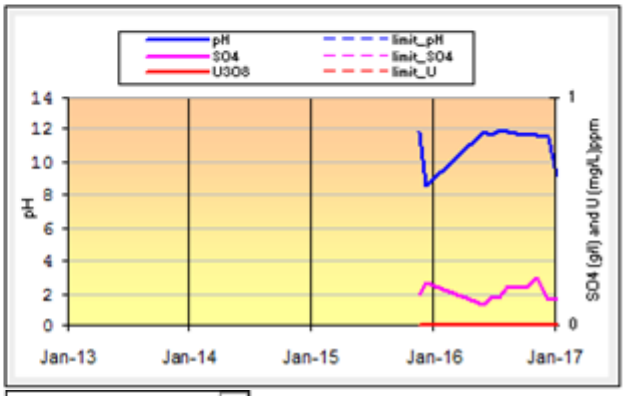

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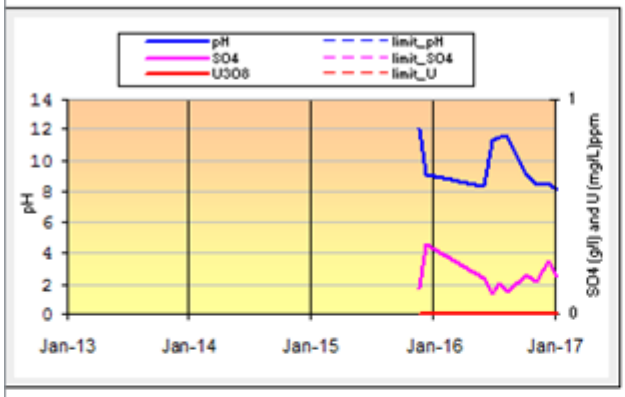

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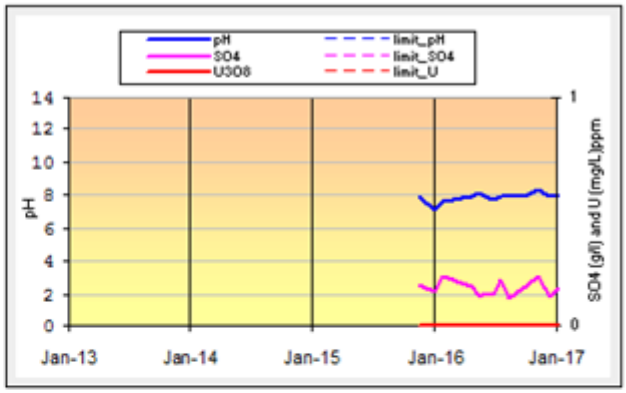

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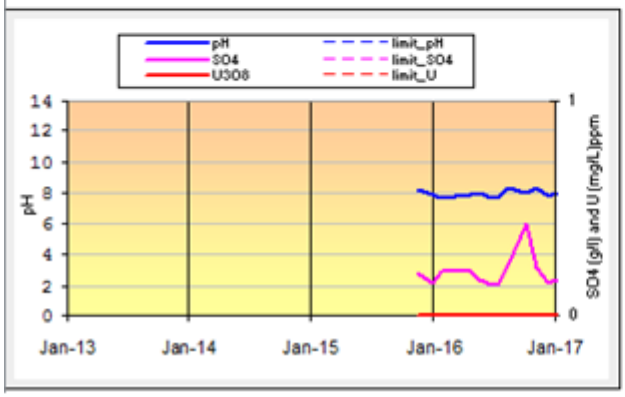

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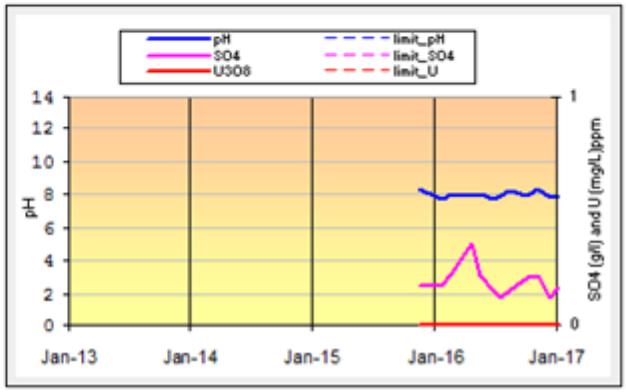

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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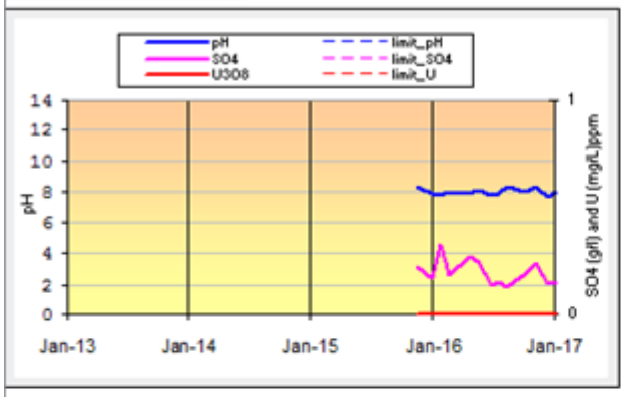

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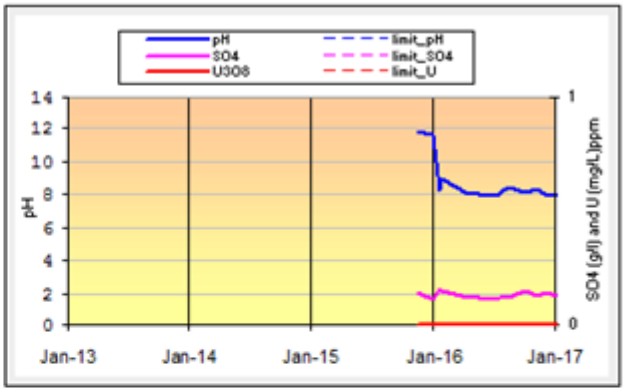

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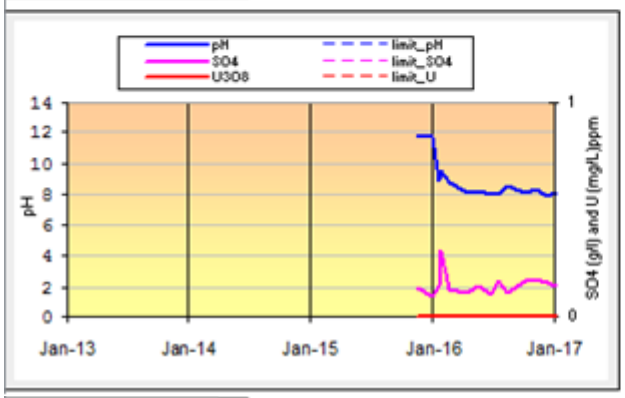

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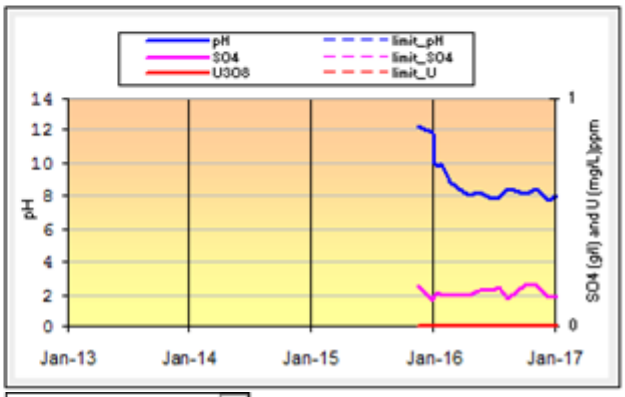

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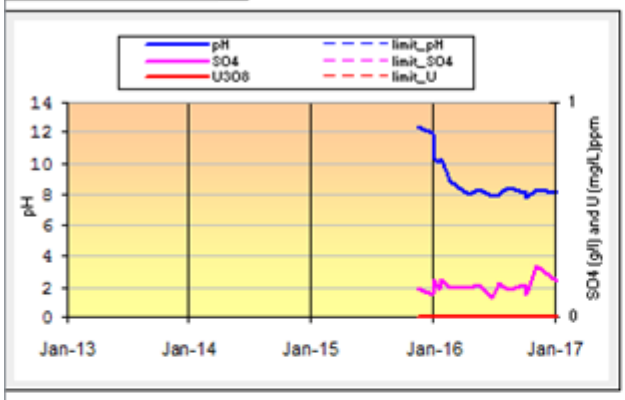

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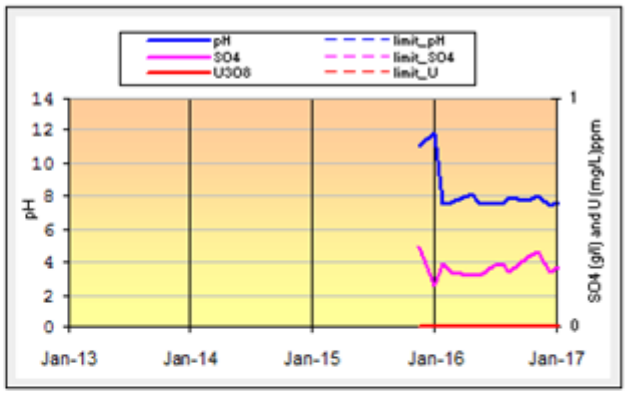

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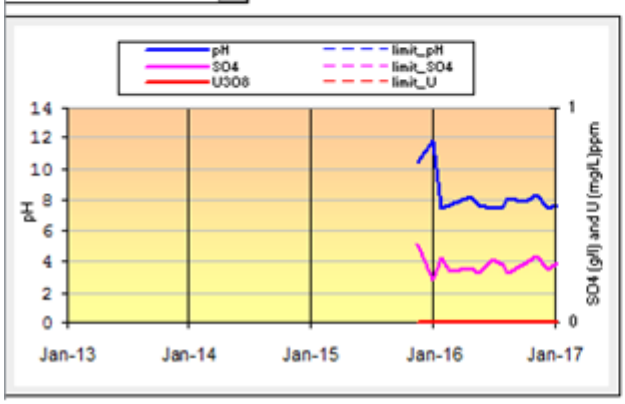

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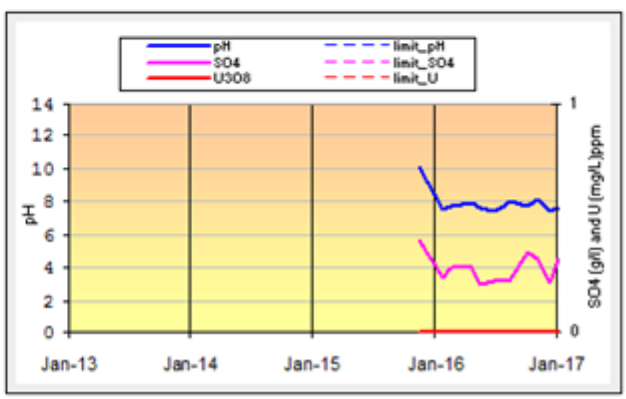

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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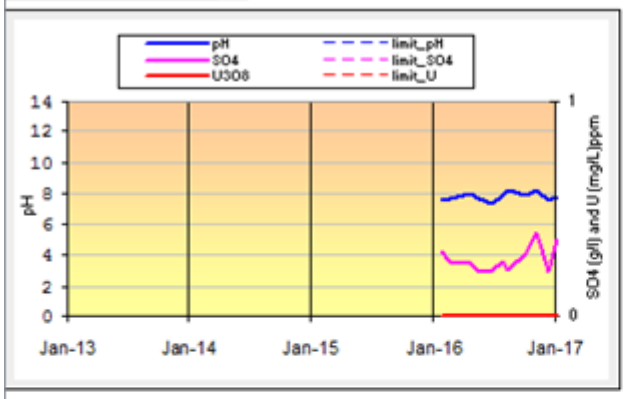

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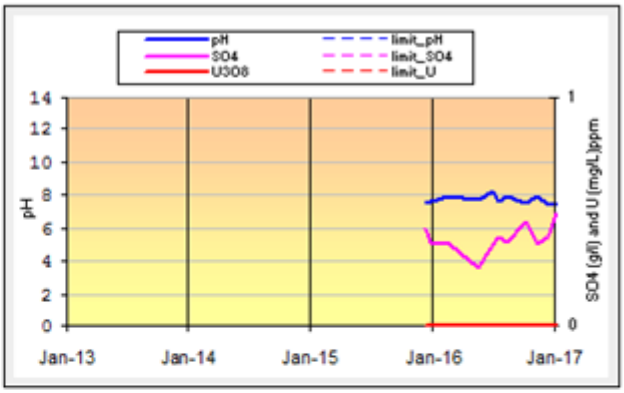

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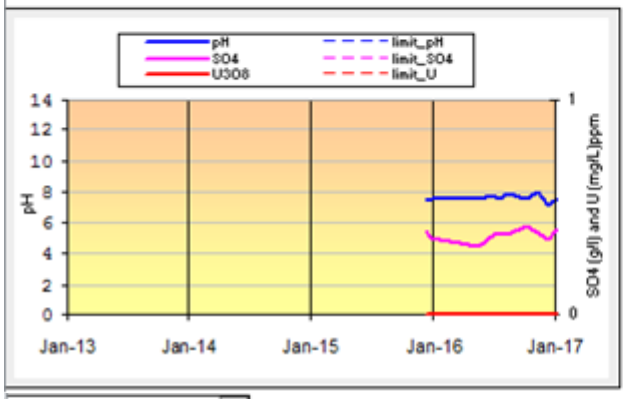

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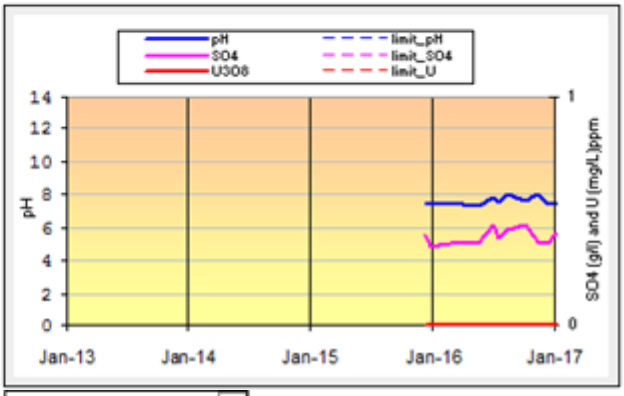

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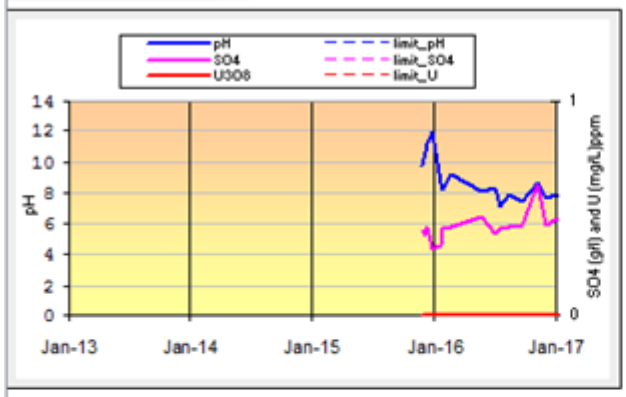

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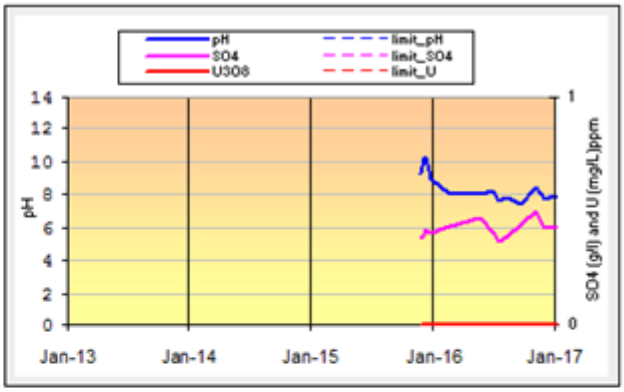

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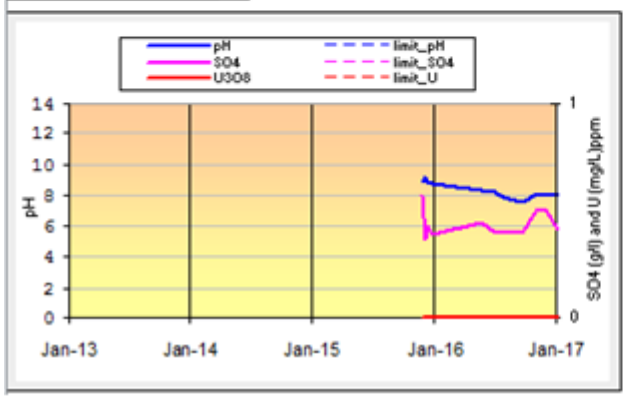

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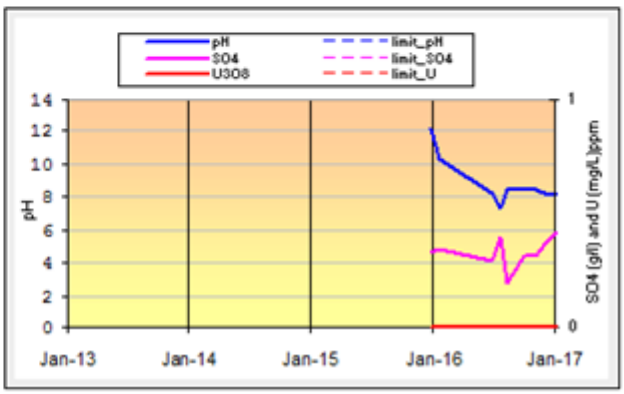

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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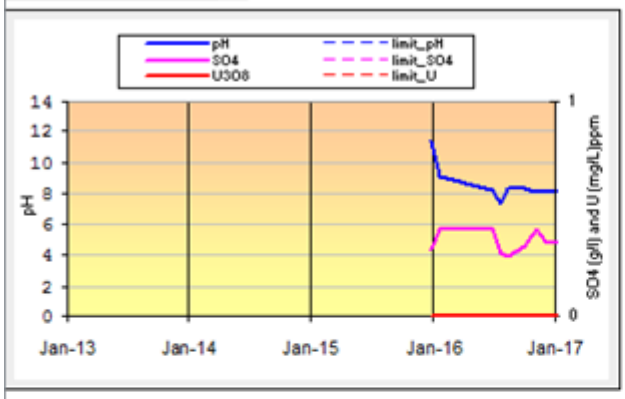

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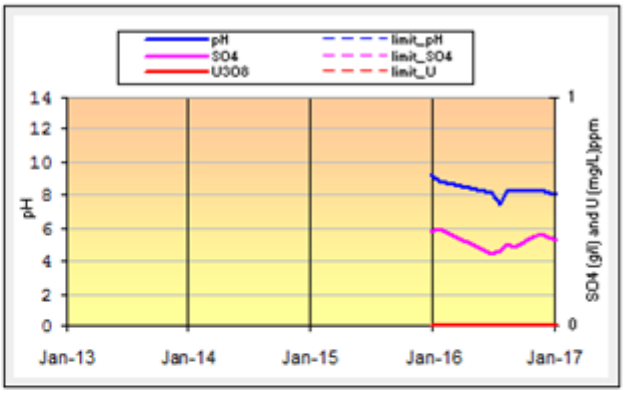

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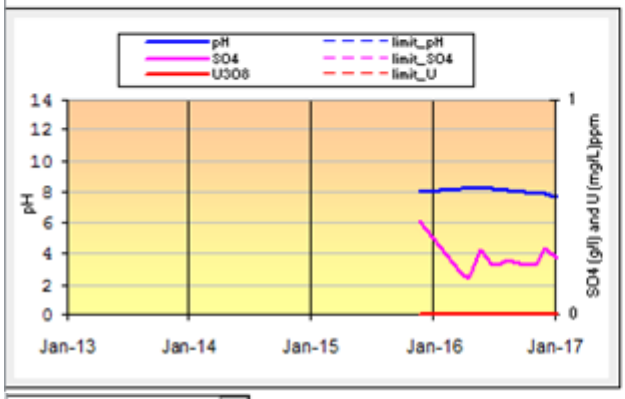

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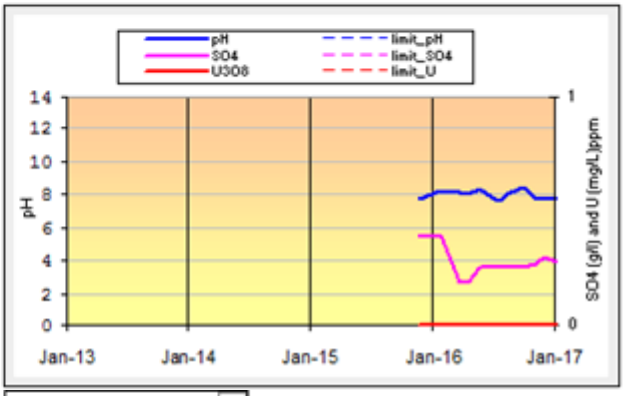

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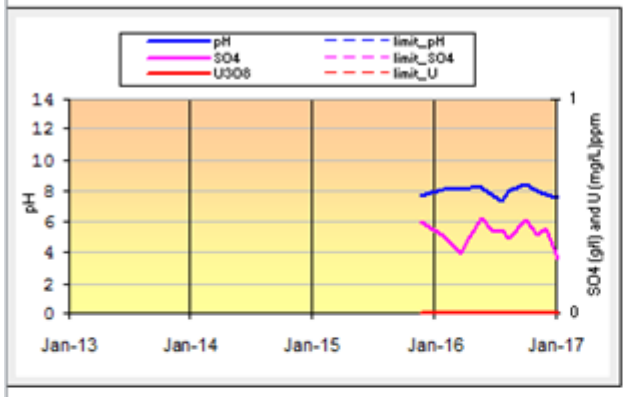

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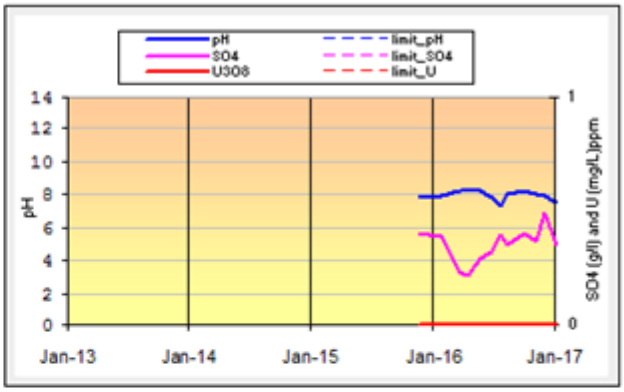

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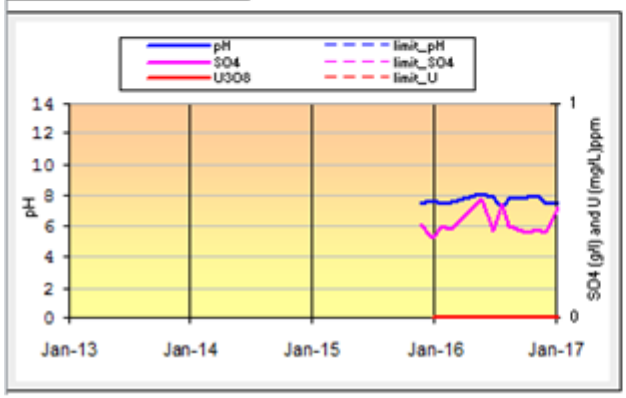

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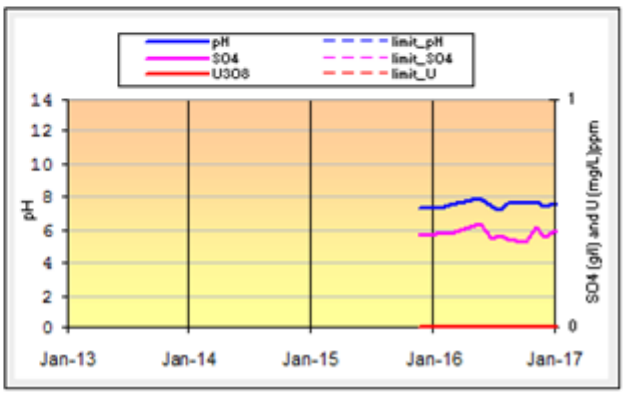

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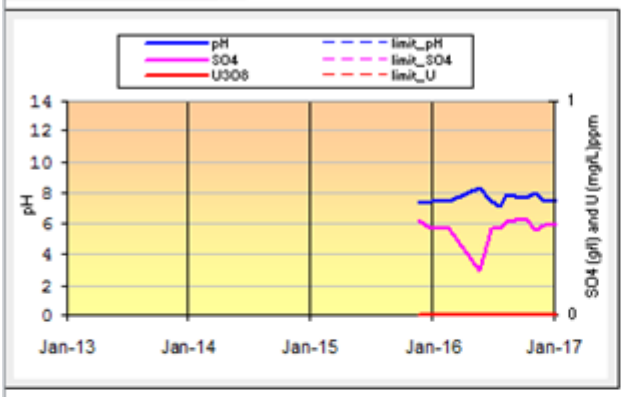

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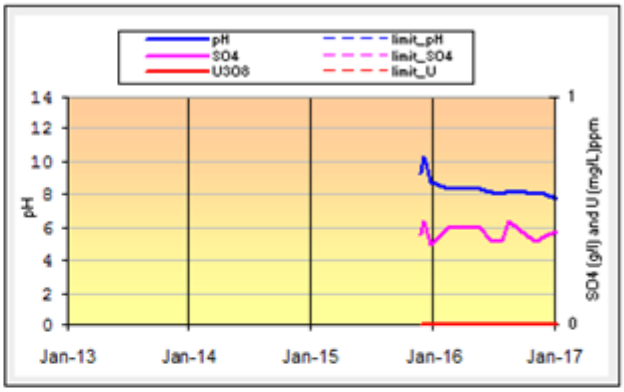

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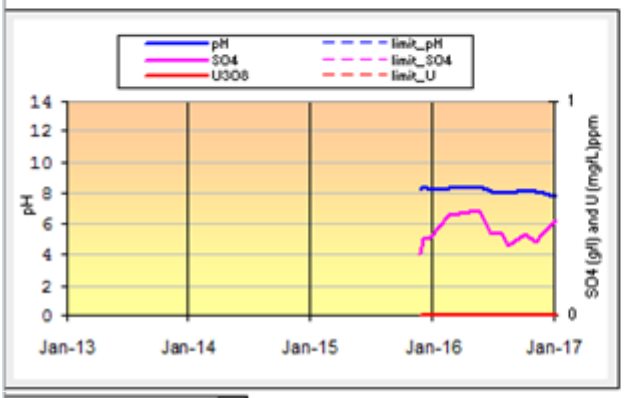

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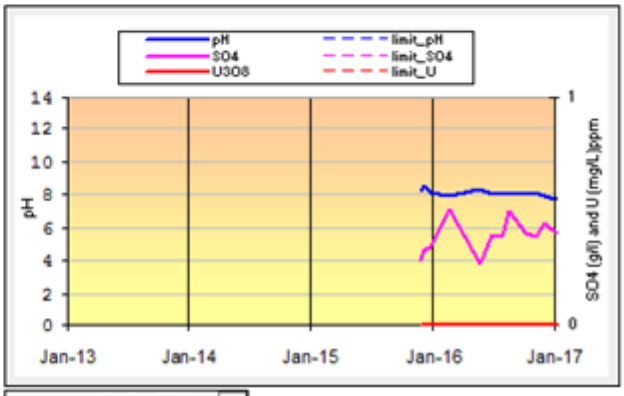

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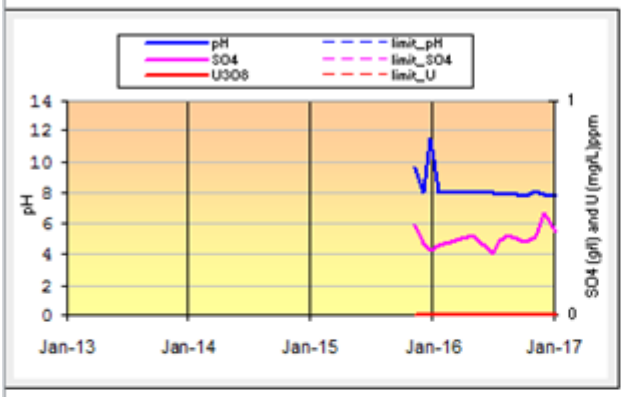

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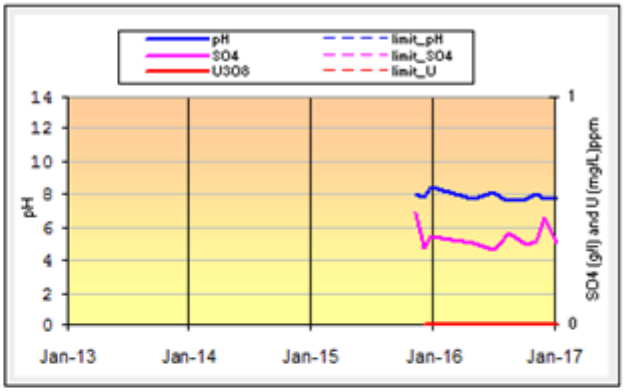

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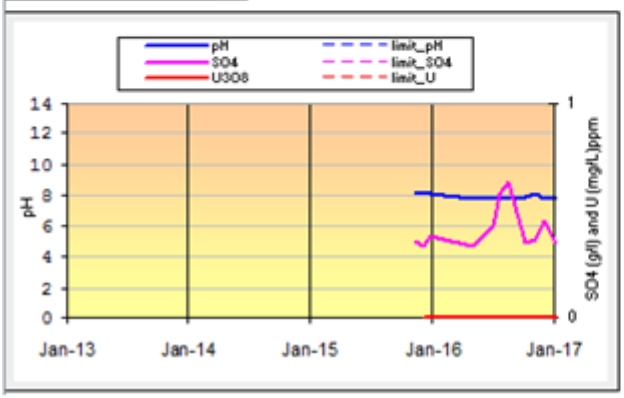

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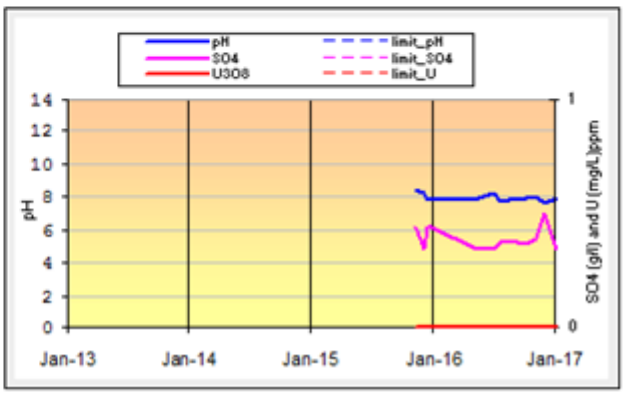

Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation

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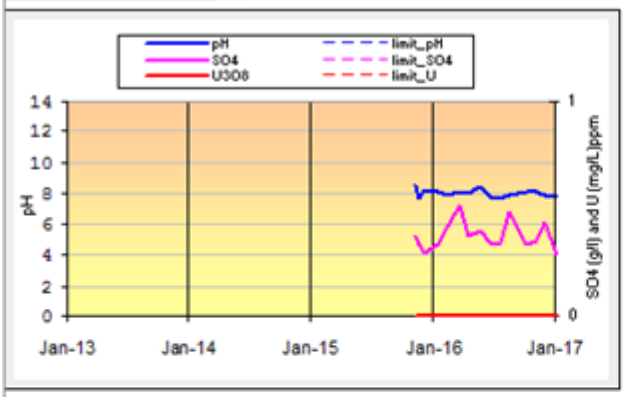

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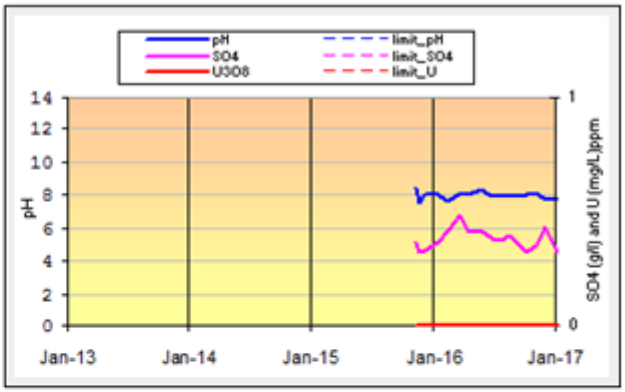

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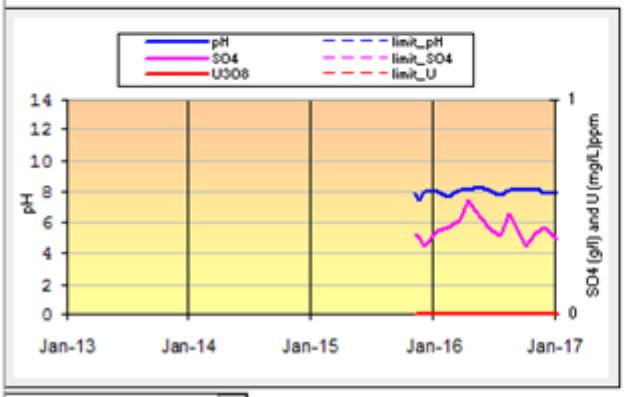

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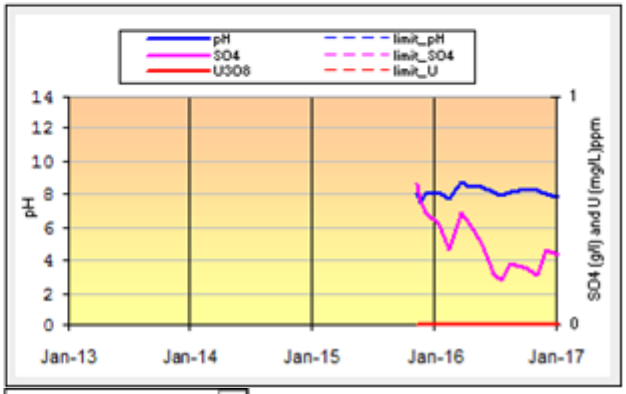

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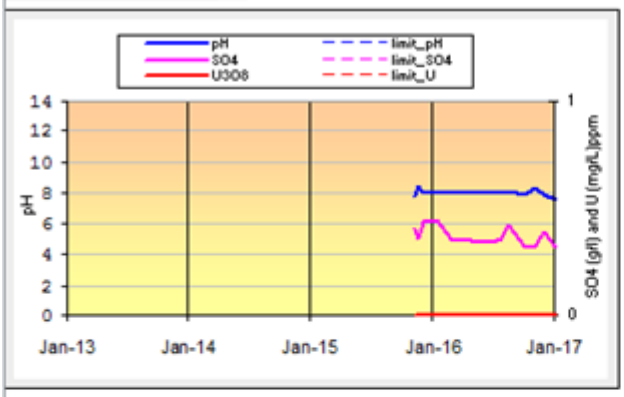

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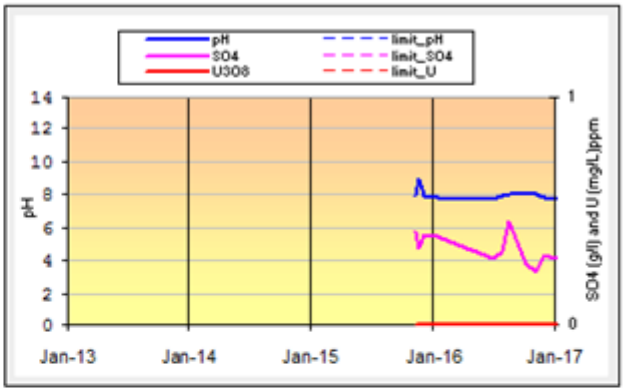

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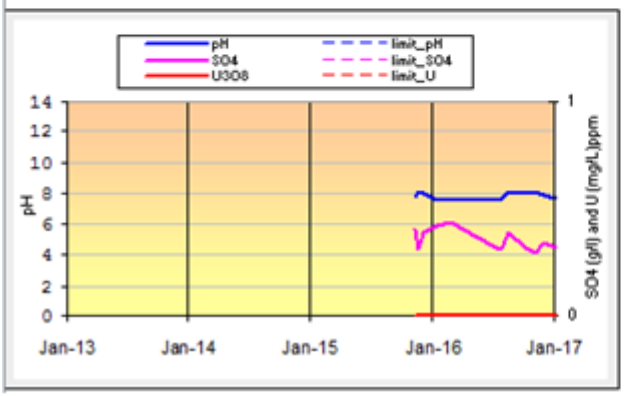

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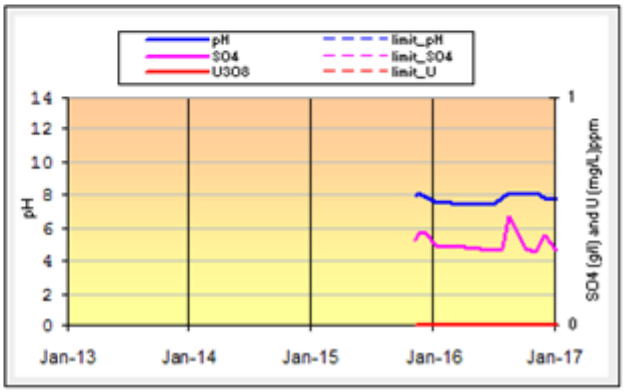
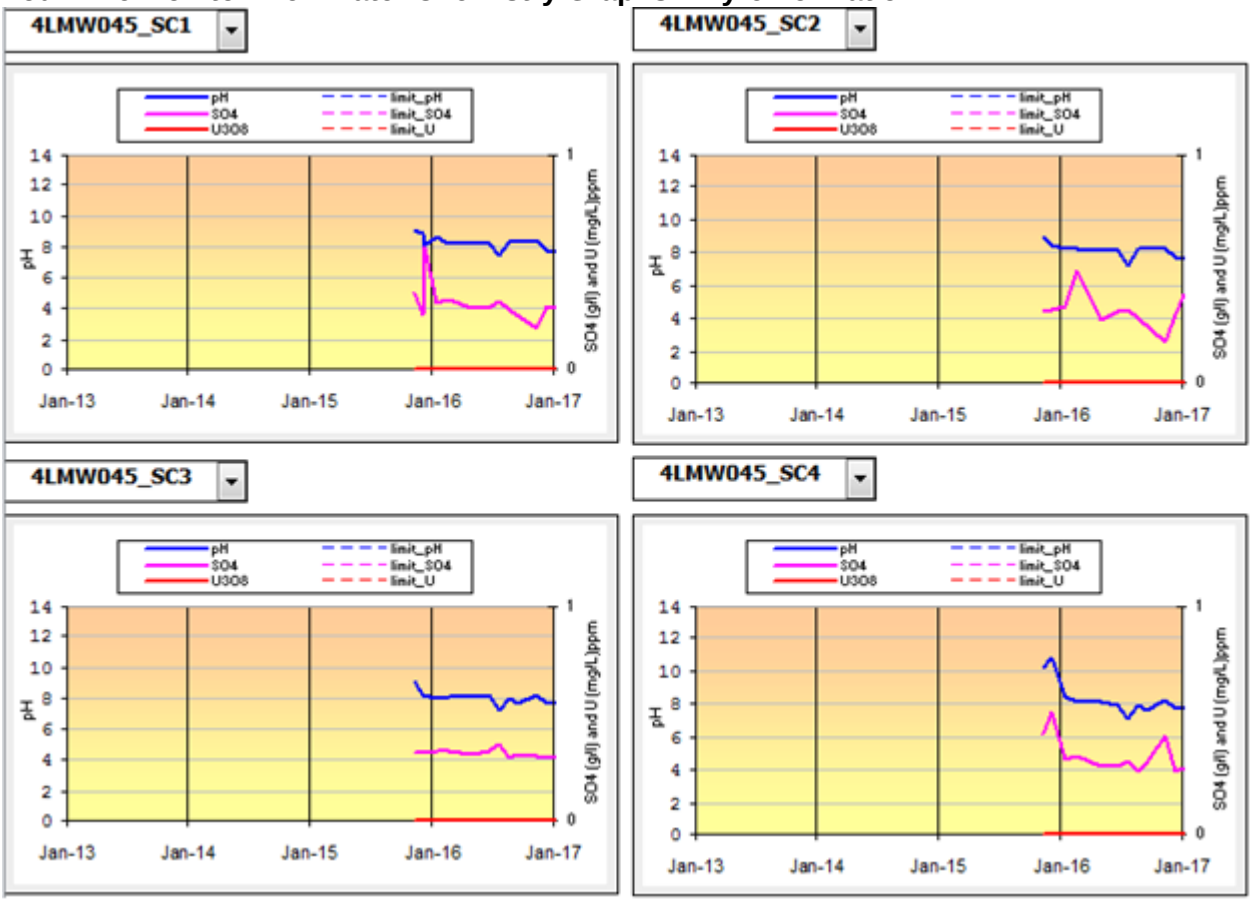


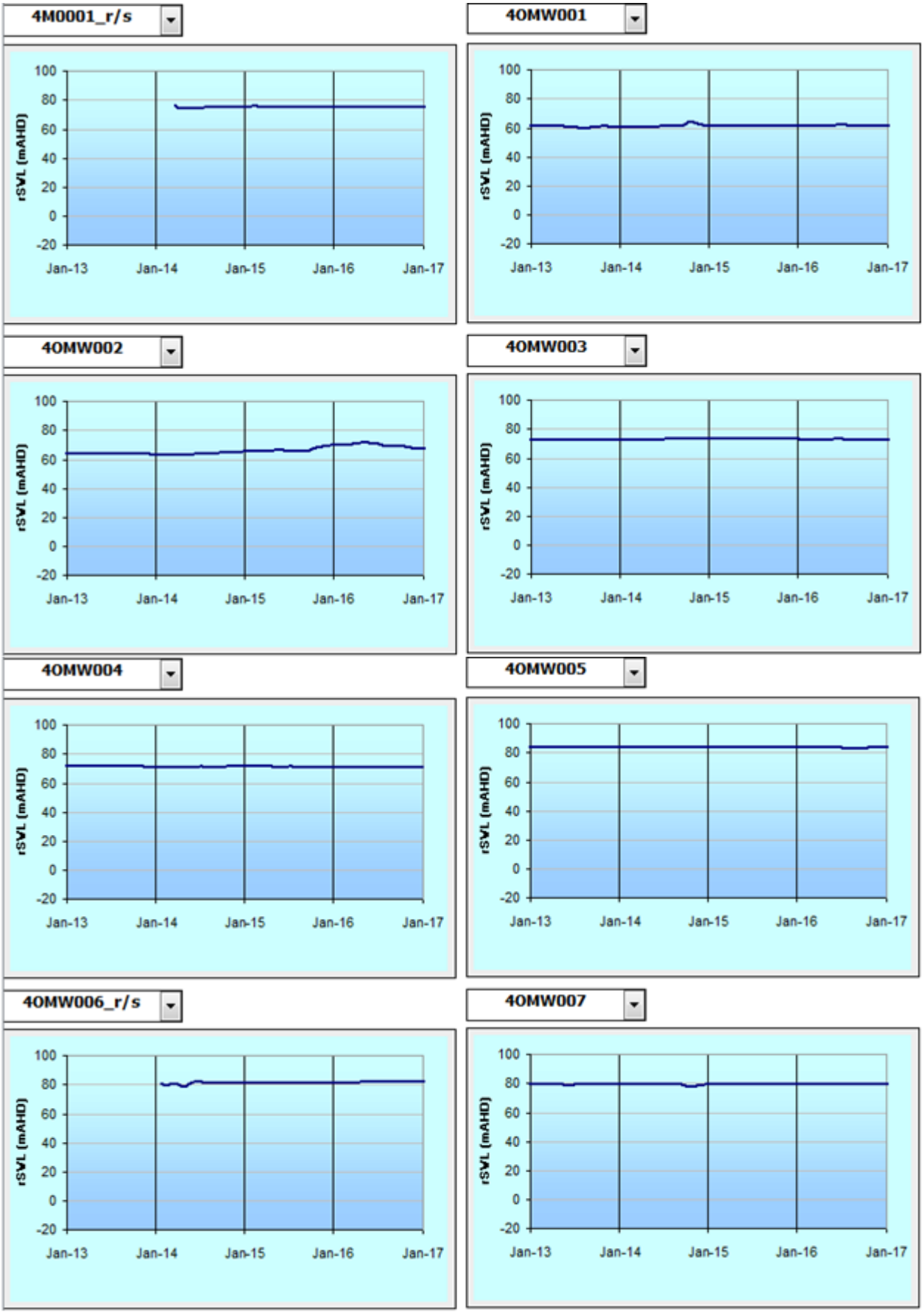
Four Mile Monitor Well Water Chemistry Graphs – Eyre Formation



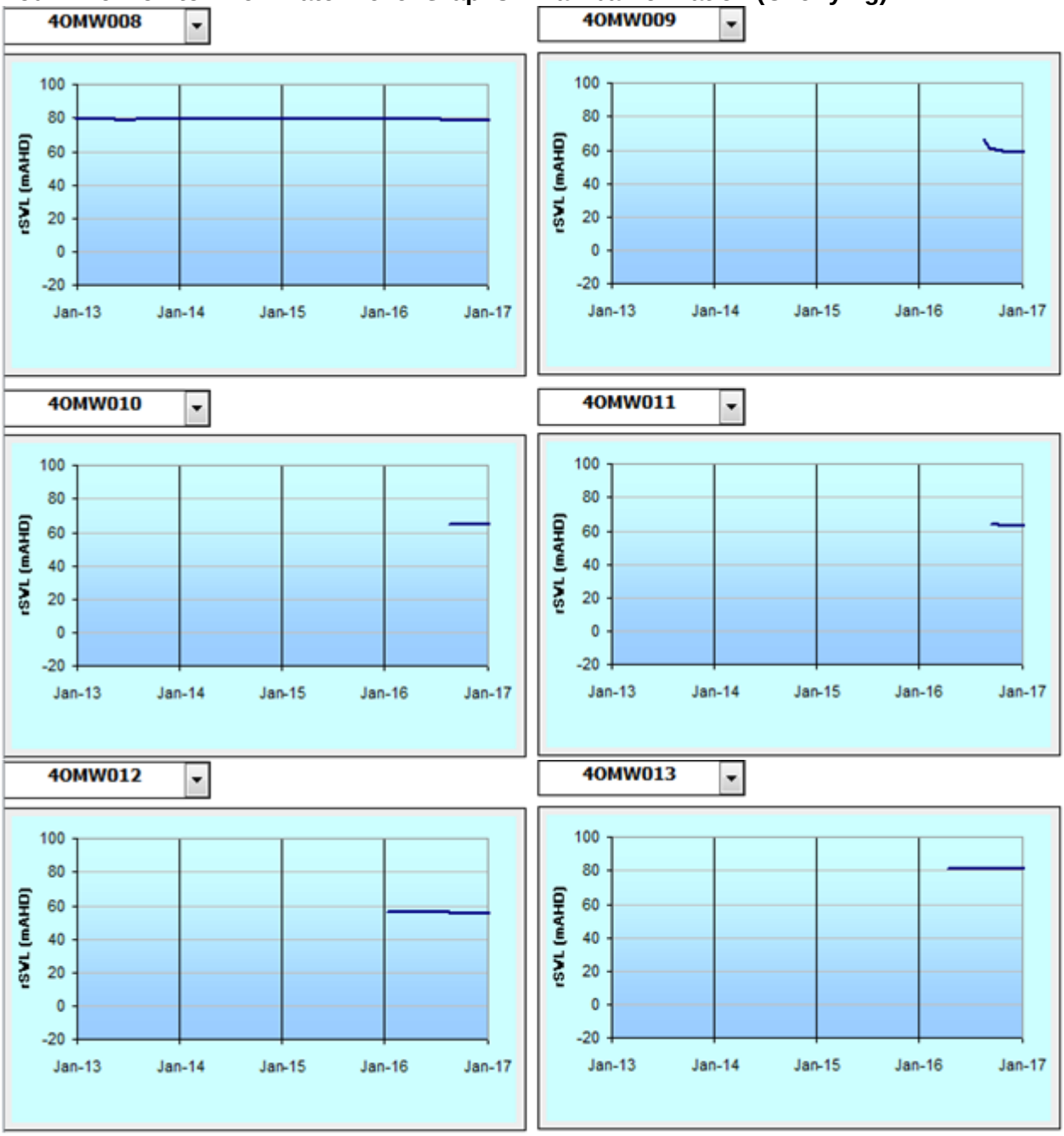
APPENDIX C

OVERLYING MONITOR WELL LEVEL GRAPHS – NAMBA FORMATION

Four Mile Monitor Well Water Level Graphs – Namba Formation (Overlying)



Four Mile Monitor Well Water Level Graphs – Namba Formation (Overlying)

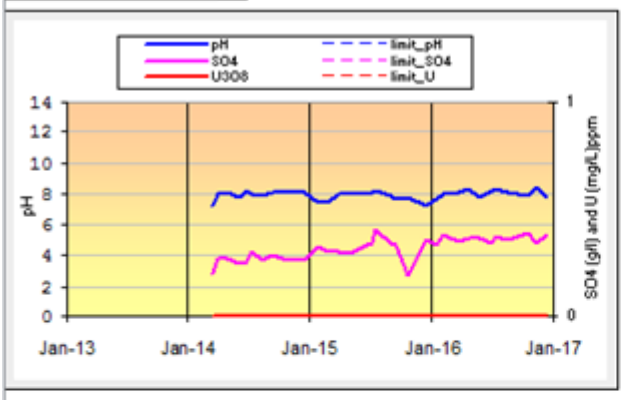


APPENDIX D

OVERLYING MONITOR WELL CHEMISTRY GRAPHS– NAMBA FORMATION

Four Mile Monitor Well Water Chemistry Graphs – Namba Formation (Overlying)

4M0001_r/s



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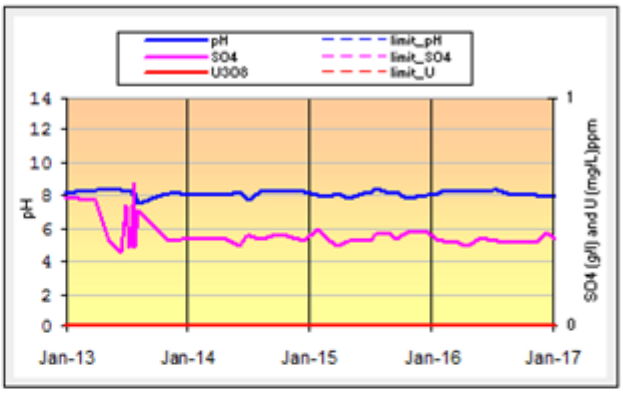

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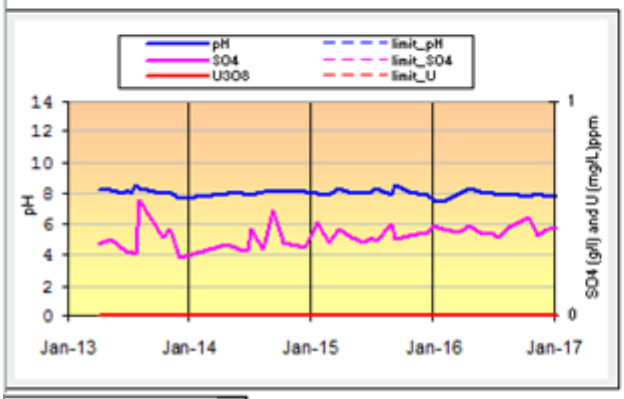

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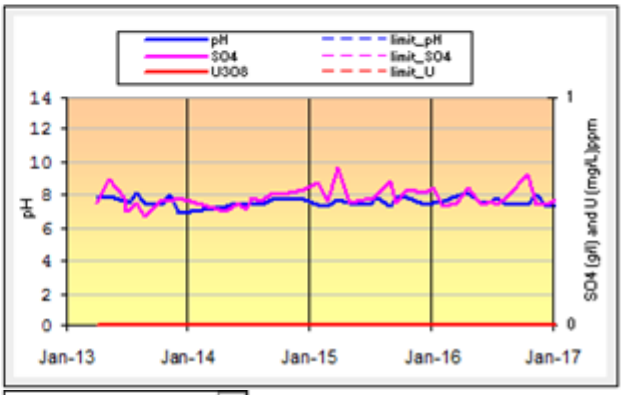

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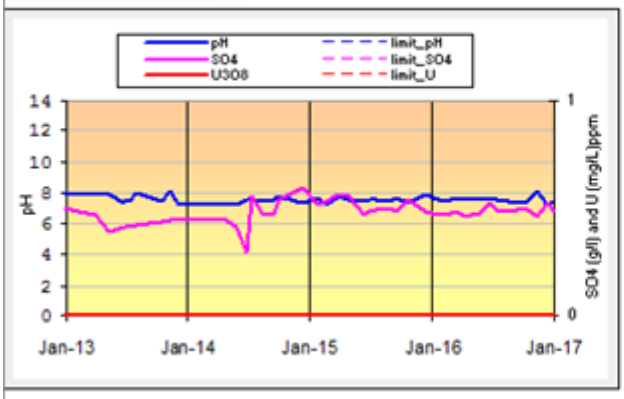

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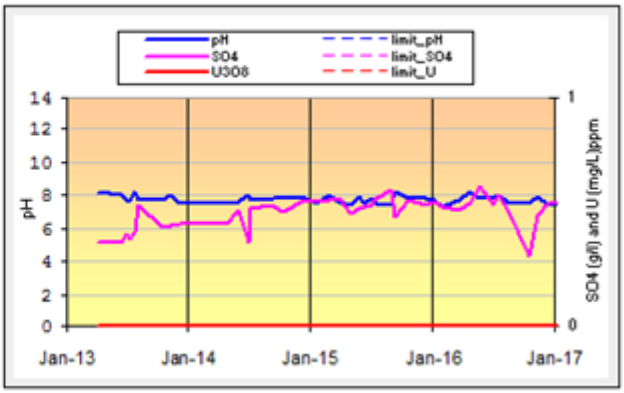

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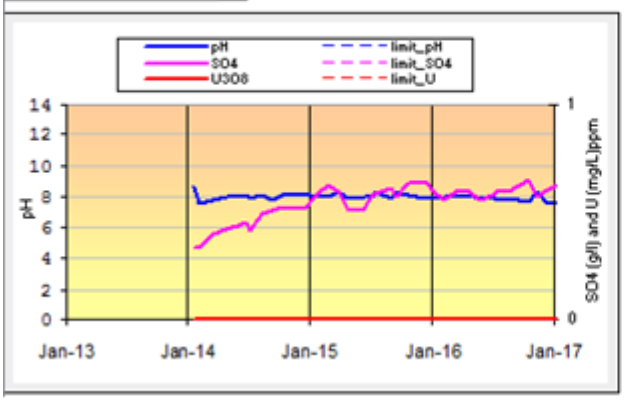

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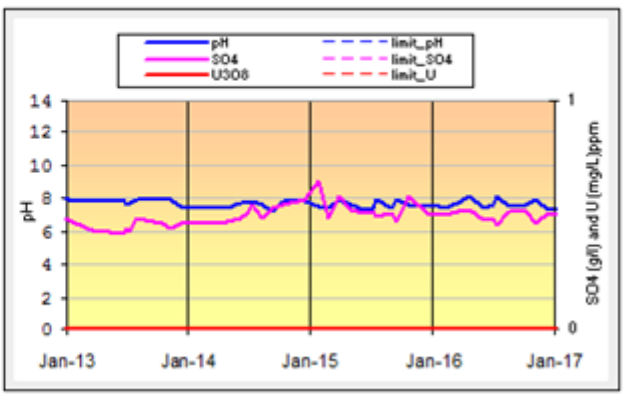

Four Mile Monitor Well Water Chemistry Graphs – Namba Formation (Overlying)

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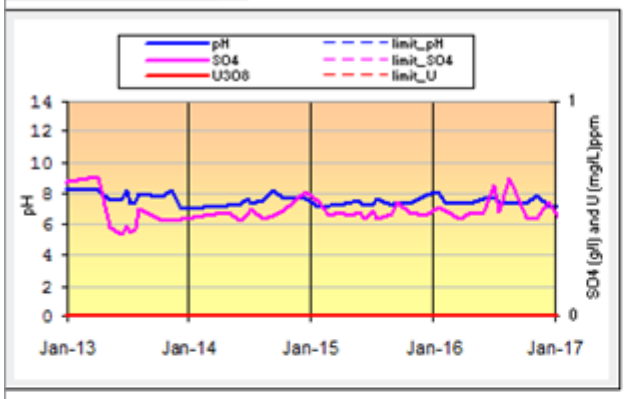

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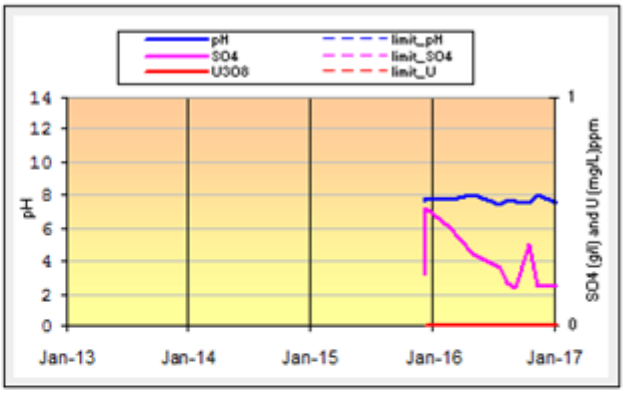

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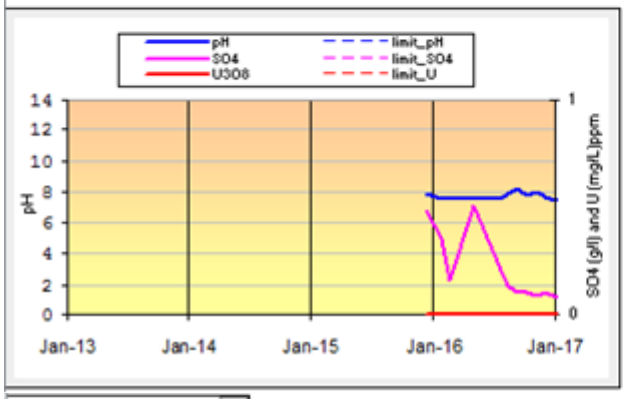

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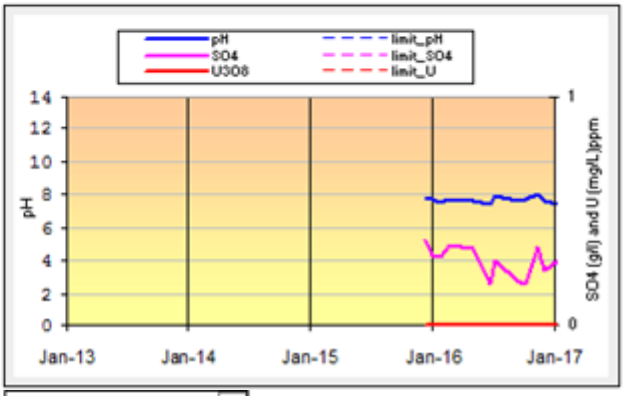

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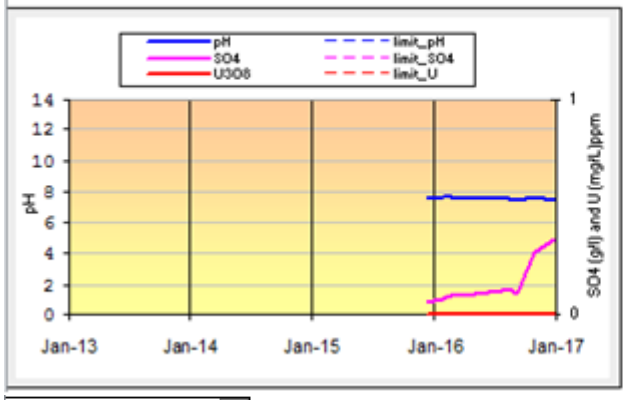

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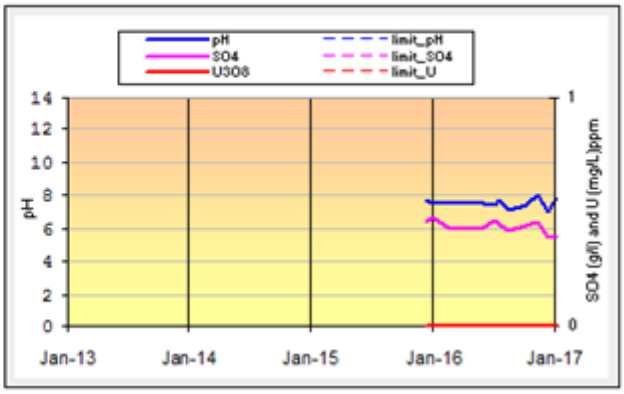

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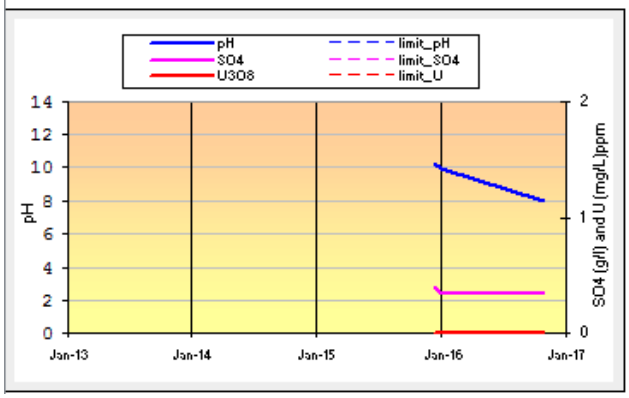
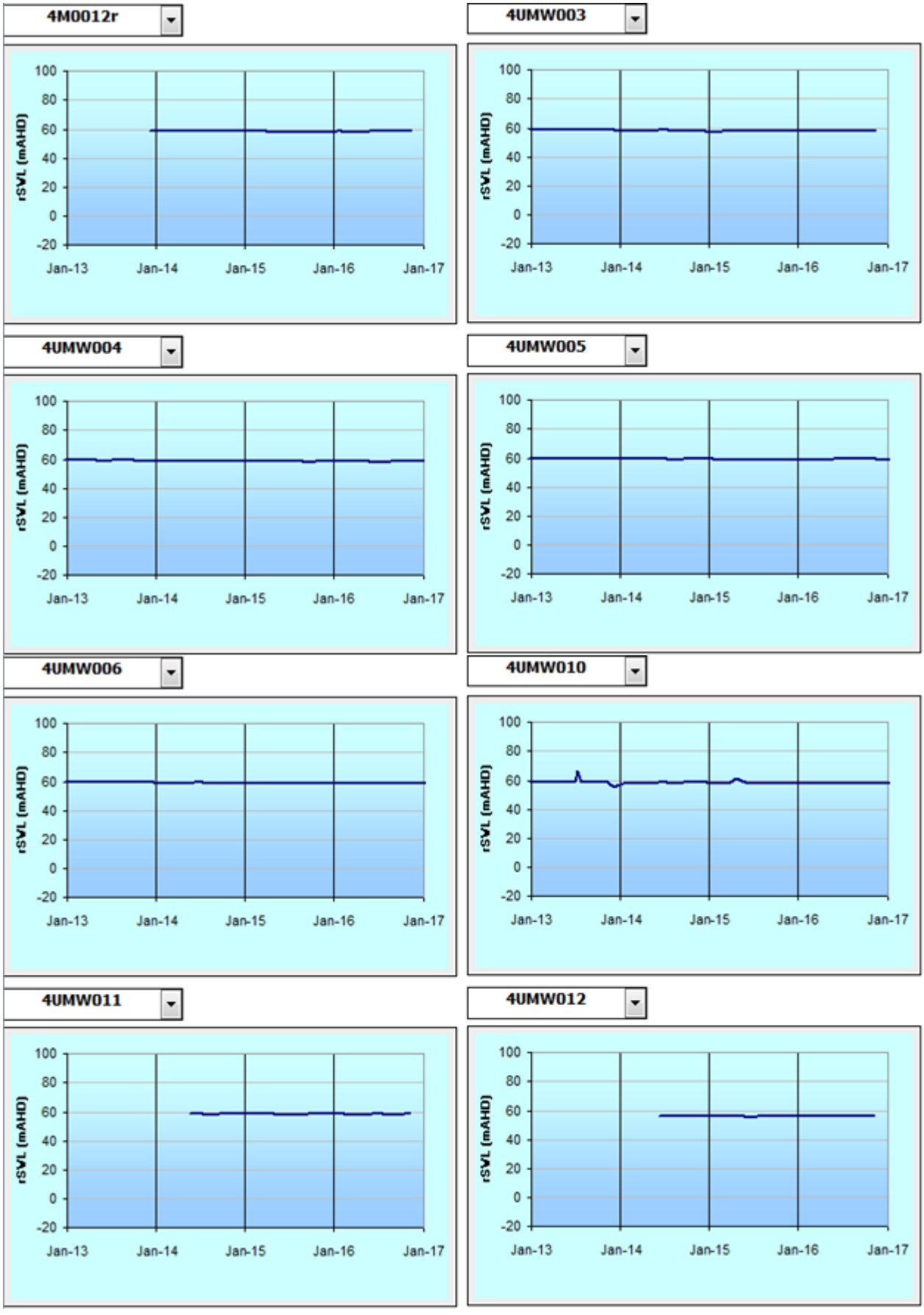


Appendix E

Underlying Monitor Well Level Graphs – Mt Painter Group Fractured Rock

Four Mile Monitor Well Water Level Graphs – Mt Painter Group Fractured Rock Formation



Four Mile Monitor Well Water Level Graphs – Mt Painter Group Fractured Rock Formation

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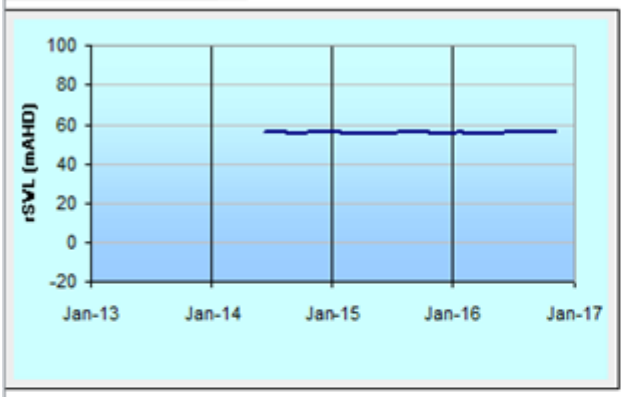

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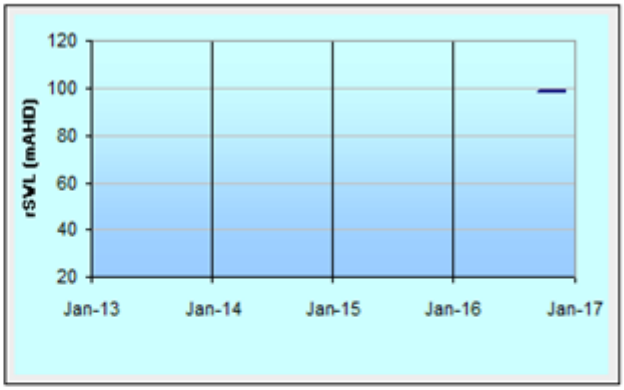

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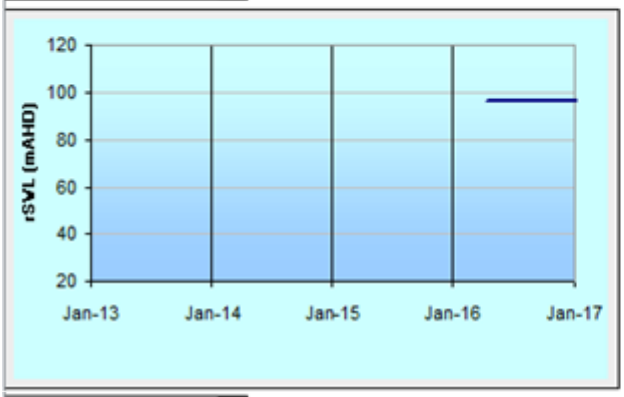

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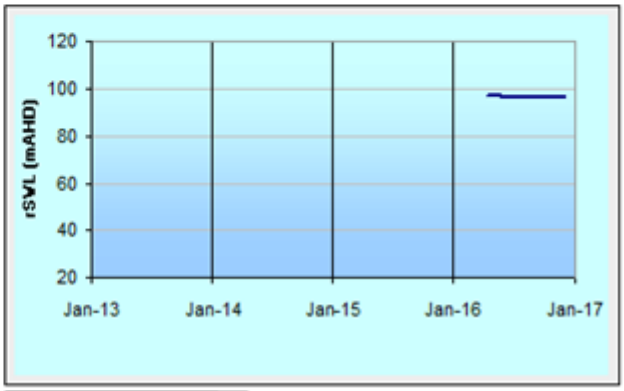

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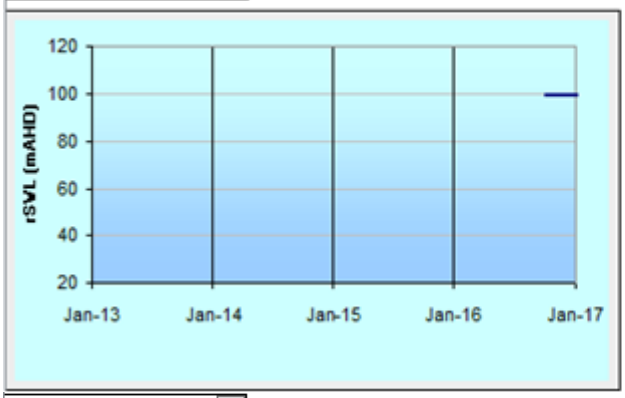

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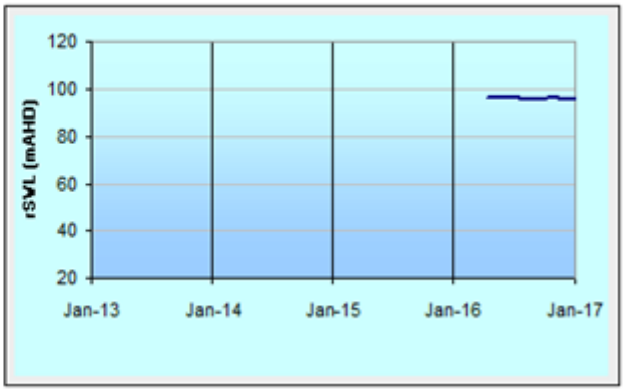

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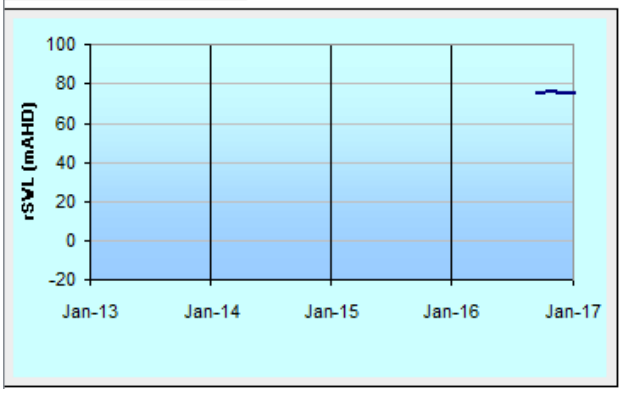
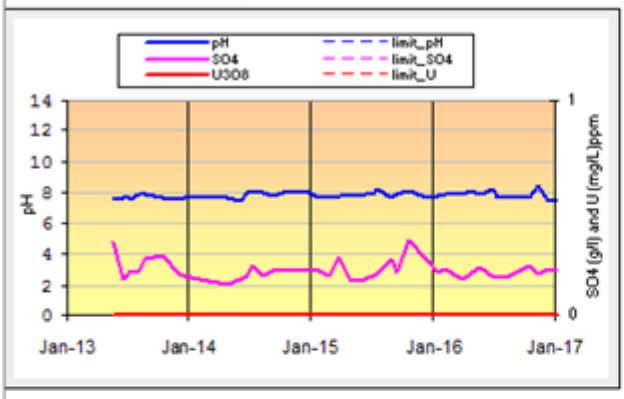


Appendix F

Underlying Monitor Well Chemistry Graphs – Mt Painter Group Fractured Rock

Four Mile Monitor Well Water Chemistry Graphs – Mt Painter Group Fractured Rock Formation

4M0012r



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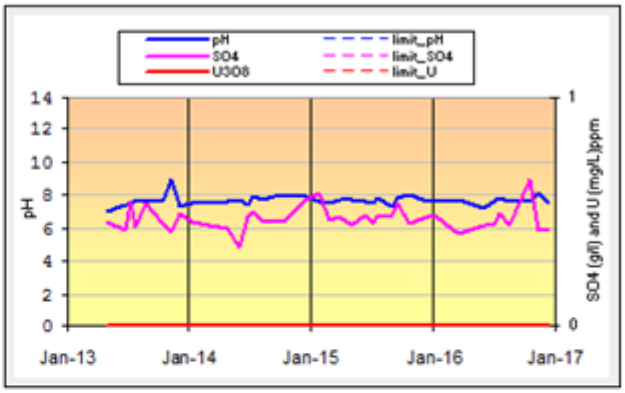

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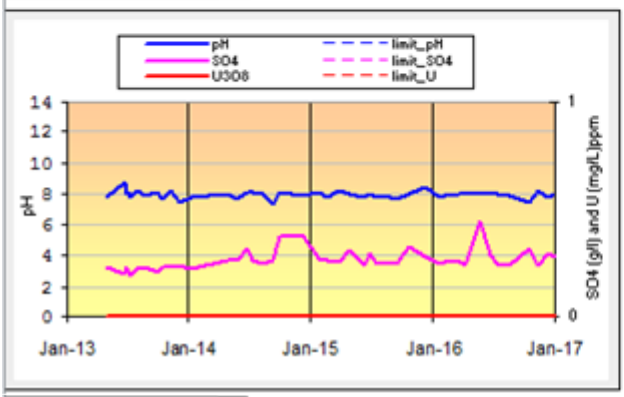

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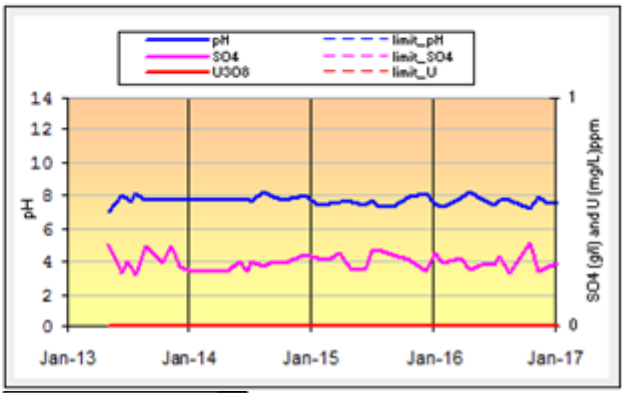

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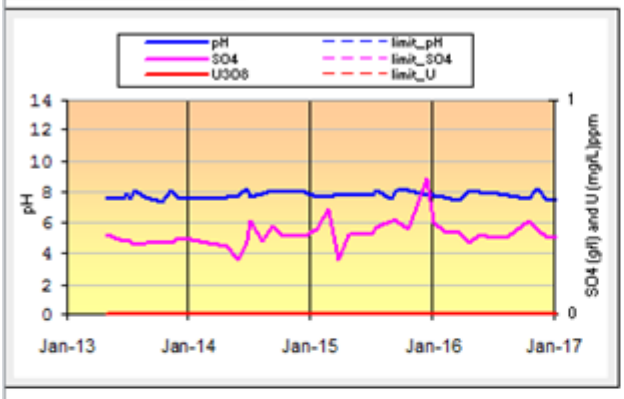

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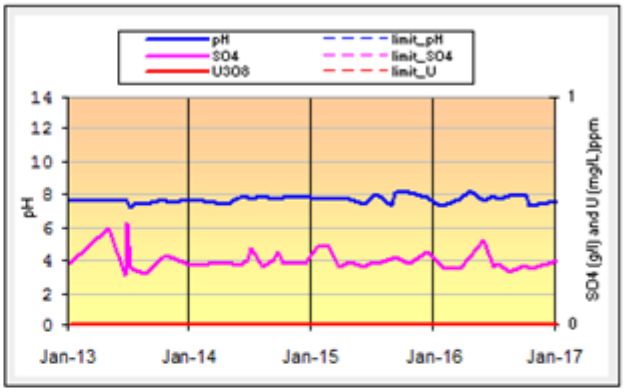

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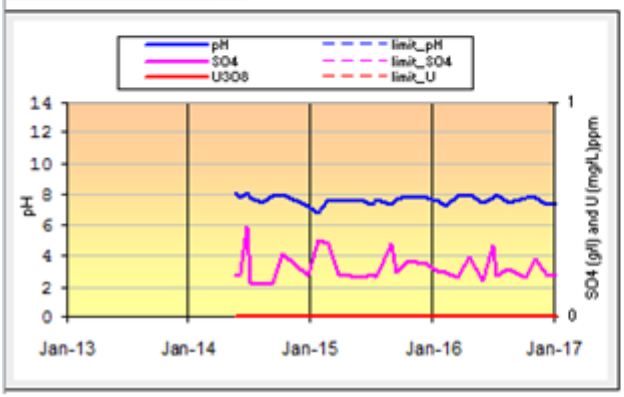

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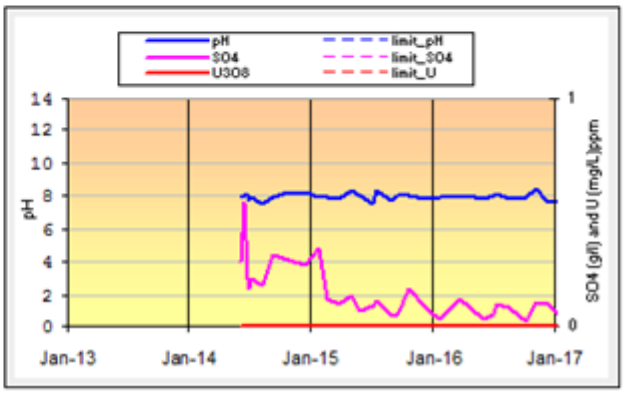
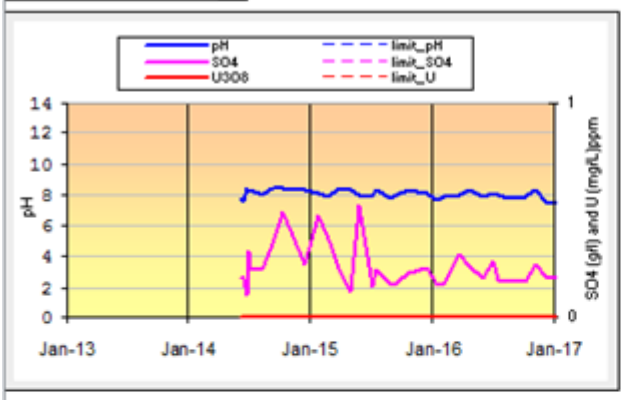


Four Mile Monitor Well Water Chemistry Graphs – Mt Painter Group Fractured Rock Formation

4UMW013



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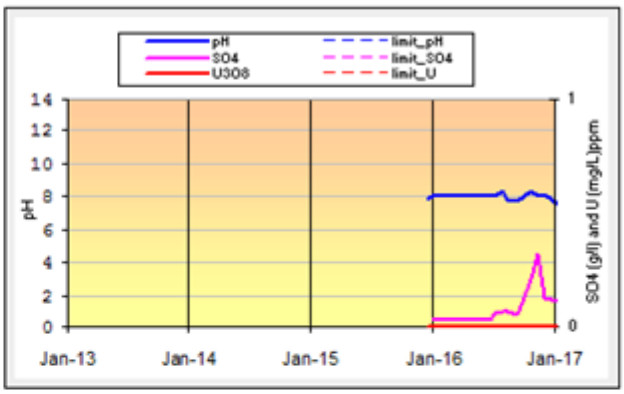

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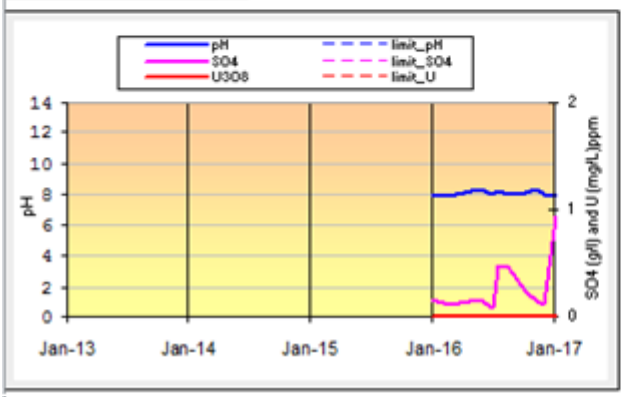

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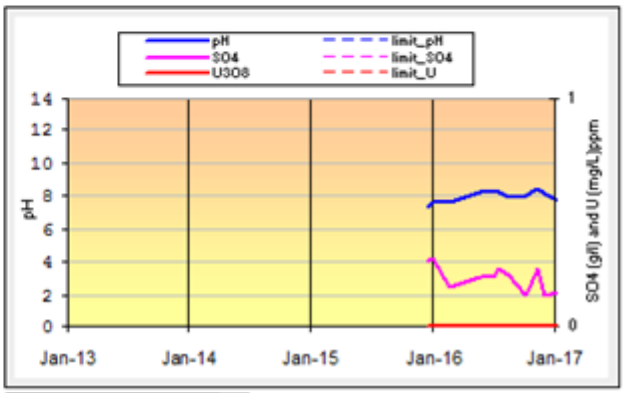

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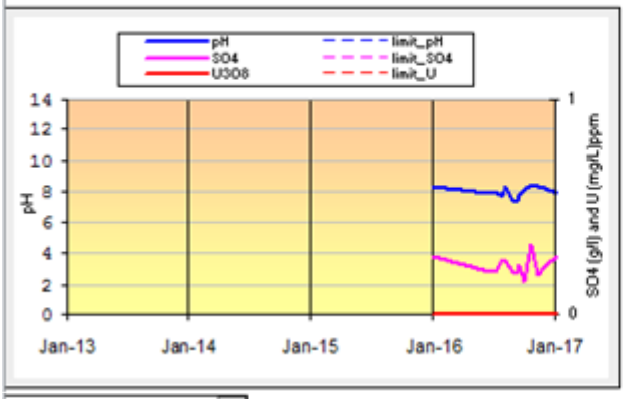

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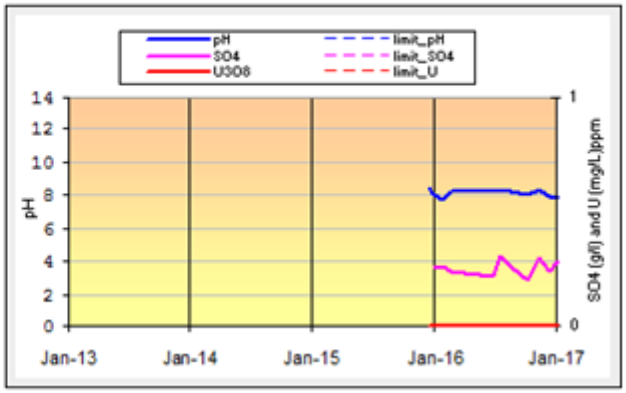

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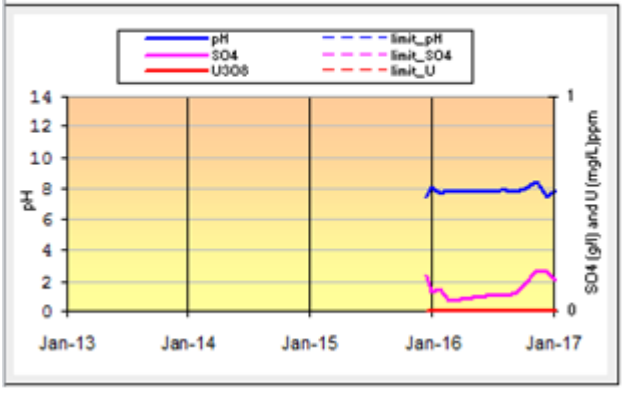

APPENDIX G

STATUS OF OBLIGATIONS, FOUR MILE ML 6402

Obligation Origin	**Condition**		**Status of Obligations**
State (DSD) Approval: First Schedule	1	Mining operations authorised by this Lease must only be for the recovery of uranium as outlined in the mining lease proposal document dated 7th January 2009 and subsequent response document dated 19th March 2009.	Compliant.
	2	The Lessee is authorised under section 10A(1) of the Mining Act 1971 to conduct mining operations to recover radioactive minerals.	Accepted. Commonwealth Government approval of the Four Mile Uranium Mine PEPR and Radioactive Waste Management Plan was granted on 23 December 2016.
	3	The Lessee is authorised by the Minister under section 10A(4) of the Mining Act 1971 to dispose and sell radioactive minerals.	Accepted.
	4	In accordance with Regulation 86(1)(a) the Lessee must provide a Compliance report every year, within 2 months after the anniversary of the date the Lease was granted, or at some other time agreed with the Minister.	Accepted. The Annual Compliance Report was submitted in digital format to DSD and Dept. of the Environment on 31 March 2016.
	5	The Lessee agrees to the approved Program for Environment Protection and Rehabilitation (PEPR) (section 70B(5)) and any Compliance or Incident report submitted in accordance with Regulation 86 or 87 being made available for public inspection.	Accepted.
	6	In accordance with Regulation 90(1) the Lessee must, prior to commencing operations under this Lease and for the duration of the Lease, maintain public liability insurance to cover all operations under the Lease in the name of the Lessee for a sum not less than $50 million or such greater sum as specified by the Minister, and make such amendments to the terms and conditions of the insurance as the Minister may require.	Compliant. Insurance current until 30 September 2017.
	7	In requesting a review of the bond required under the Mining Act 1971 the Minister may request that written quotes from an independent third party approved by the Minister are obtained by the Lessee for the cost of rehabilitating the site to the requirements specified in the approved Program under Regulation 65(2).	Accepted. Fulfilled through PEPR obligations.
	8	The Lessee must meet all the charges and costs in obtaining and maintaining the bond.	Accepted.
State (DSD) Approval: Second Schedule	1 A.	*Soil* The Lessee must, in constructing and operating the Lease ensure that soil affected by mining activities is suitable for a return to pre-mining use.	Accepted. Fulfilled through PEPR obligations.
State (DSD) Approval: Second Schedule	1 B.	*Radiation* The Lessee must, in constructing and operating the Lease, ensure that there are no adverse impacts to the environment due to radon release, uranium-bearing materials, or radiological aspects of seepages and spills.	Compliant. Fulfilled through PEPR obligations.

Obligation Origin	Condition		Status of Obligations
	1 C.	*Native Vegetation* The Lessee must, in constructing and operating the Lease, ensure no permanent loss of abundance or diversity to native vegetation on or off the Lease area through: • clearance • dust contaminant deposition • fire or • other damage unless prior approval under the Native Vegetation Act 1991 is obtained.	Compliant. Fulfilled through PEPR obligations.
	1 D.	*Weeds and Pests (feral animals)* The Lessee must, in constructing and operating the lease ensure no introduction of new species of weeds[26], plant pathogens or pests (including feral animals), nor increase in abundance of existing weed or pest species in the lease area compared to adjoining pastoral properties. [26] *Weeds are defined in this condition as any invasive plant that threatens native vegetation in the local area or any species recognised as invasive in South Australia.*	Compliant. Fulfilled through PEPR obligations.
	1 E.	*Surface Water* The Lessee must in constructing and operating the lease ensure no compromise of pastoral use of downstream surface water bodies.	Compliant. Fulfilled through PEPR obligations.
	1 F.	*Groundwater* The Lessee must, in constructing and operating the lease, ensure that there is no compromise to the environmental values of the Willawortina aquifer, should it be saturated. The Lessee must, in constructing and operating the lease ensure that there is no compromise to the environmental values of the Namba aquifer. The Lessee must, in constructing and operating the lease ensure that there is no compromise to the environmental values of the Eyre Formation aquifer outside the mining lease. The Lessee must, in constructing and operating the lease ensure that there is no compromise to the environmental values, or reduction in aquifer pressure of the Mt Painter Group of the Fractured Rock aquifer outside the ML. Mining of ore along a Lease boundary such that mining fluids may transgress into another Mining Lease also granted for the purposes of Uranium mining in the Eyre Formation may, on application, be approved by the Director of Mines, subject to: 1 An agreement between the adjoining tenement holders to the satisfaction of the Director of Mines, and 2 Approved updated PEPRs for both tenements.	Compliant. Fulfilled through PEPR obligations. Regarding mining of ore along a Lease boundary, a Cross Boundary Coordination Agreement was executed between adjoining tenement holder's Quasar and Heathgate (subsequent to the sale of Alliance Craton Explorers sale of its 25% interest in the JV to Quasar on 18 September 2015). The agreement was approved by the Director of Mines on 22 December 2015. An updated Four Mile PEPR was approved on 23 December 2016.
	1 G.	*Native Fauna* The Lessee must in constructing and operating the lease ensure that there are no net adverse impacts from the site operations (including fire) on native fauna abundance or diversity in the lease area and in adjacent areas.	Compliant. Fulfilled through PEPR obligations, compliance demonstrated in the 2014 Annual Compliance Report.

Obligation Origin	Condition		Status of Obligations
	1 H.	*Aboriginal Heritage* The Lessee must, in constructing and operating the Lease, ensure that there is no disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained	Compliant. Fulfilled through PEPR obligations. No disturbances of any site identified by Native Title Holders has occurred since this time.
	1 I.	*Public Safety* The Lessee must, in constructing and operating the Lease, ensure that unauthorised entry to the site does not result in any public injuries or deaths that could have been reasonably prevented.	Compliant. Fulfilled through PEPR obligations.
	1 J.	*Protection of Third Party Property* The Lessee must, in constructing and operating the Lease, ensure that there is no unauthorised damage (including that caused by fire) to adjacent public or private property and infrastructure.	Compliant. Fulfilled through PEPR obligations.
	1 K.	*Closure and Rehabilitation* The Lessee must demonstrate to the satisfaction of the Director of Mines that the following mine closure outcomes (in so far as they may be affected by mining operations) are expected to be achieved and sustained after mine closure: a. No compromise to the environmental values of the Namba aquifer. b. No compromise to the environmental values of the Eyre Formation. c. No change, outside of natural background variation, to the pre-mining water quality and aquifer pressure of the Mt Painter Fractured Rock aquifer. d. The external visual amenity of the site is acceptable as determined by the Director of Mines in consultation with relevant stakeholders. e. The risks to the health and safety of the public and fauna are as low as reasonably achievable. f. Re-establishment of the pre-mining ecosystem and landscape function.	Accepted. Fulfilled through PEPR obligations. Mining not completed.
	2	The Lessee must, within 10 years of the cessation of mining, demonstrate performance against approved closure criteria such that the outcomes listed under "Closure and Rehabilitation" in Condition 1 will be achieved	Accepted. Fulfilled through PEPR obligations. Mining not completed.
	3	*Waste Disposal and Hazardous Substances* The Lessee must, in constructing and operating the Lease, ensure that all commercial or industrial waste is disposed of in accordance with relevant legislation	Compliant. Fulfilled through PEPR obligations.
	4	*Community Consultation* a. The Lessee must take responsibility for establishing and implementing a Community Engagement Plan for the term of the Lease to the satisfaction of the Director of Mines. b. The Community Engagement Plan must comply with the requirements approved by the Director of Mines.	Compliant. Fulfilled through PEPR obligations.

Obligation Origin	Condition		Status of Obligations
	5	*Landholder Liaison* The Lessee must ensure that the occupier of the land is fully advised of their program of activities, particularly in regard to the impact of operations on the land and rehabilitation progress.	Compliant. Compliant. Fulfilled through PEPR obligations. Refer to local community consultation in Section 4 of this report.
	6 a. b. c. d.	*Leading Indicators* The PEPR must include additional leading indicator criteria for the following outcomes: Ensure that soil affected by mining activities is suitable for a return to pre-mining use. Ensure that there is no compromise to the environmental values of the Namba aquifer. Ensure that there is no compromise to the environmental values of the Eyre Formation. Ensure that there is no compromise to the environmental values, or reduction in pressure of the Mt Painter Fractured Rock aquifer.	Compliant. Leading indicator criteria included in the approved PEPR.
Commonwealth Conditions	1 (a) (b) (c) (d) (e) (f) (g) (h) (i) (j)	The person taking the action must ensure that the action does not result in any: Adverse impacts on other existing users of water from the Great Artesian Basin. Reduction in the Environmental Values of the Willawortina, Eyre Formation, Namba or Mt Painter Group Fractured Rock aquifers outside the Four Mile Mining Lease. Reduction in aquifer pressure of the Mt Painter Group Fractured Rock aquifer (in order to protect the Paralana Hot Springs). Permanent loss of abundance or diversity of native vegetation on or off the Four Mile Mining Lease through clearance, dust or contaminant deposition, fire or other damage unless prior approval under the relevant legislation is obtained. Net adverse impacts (including from fire) from the site operations on native fauna abundance or diversity in the Four Mile Mining Lease areas and adjacent areas. Introduction of new weeds, plant pathogens or pests (including feral animals), or increase in abundance of existing weed or pest species in the Four Mile Mining Lease compared to adjoining pastoral areas. Disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained. Compromise of pastoral use of downstream surface water bodies. Soil affected by mining activities being unsuitable for return to pre-mining land use following mine closure. Adverse impacts to the environment from radiological aspects of the action.	Accepted. Fulfilled through PEPR obligations.
	2	The person taking the action must not dispose of any unauthorised waste within the Four Mile ML.	Compliant. All waste, both liquid and solid is transferred to the Beverley ML for appropriate disposal.

Obligation Origin	Condition		Status of Obligations
	3	The person taking the action must develop a Monitoring and Management Plan to measure the achievement of each outcome in Condition 1. The Monitoring and Management Plan must specify:	Compliant as per the approval of the Four Mile PEPR.
	a.	criteria to demonstrate the clear and unambiguous achievement of the outcomes in Condition 1	
	b.	the parameters to be monitored	
	c.	how frequency of monitoring will be determined	
	d.	the responsibility for interpreting the monitoring results	
	e.	the threshold triggers and the response activities that will be implemented if a threshold is reached.	
	f.	the trigger levels at which mining must cease until approval is obtained from the Minister to recommence.	
	g.	an outline of control and management strategies that may be used to achieve the groundwater outcomes in Condition 1.	
		reporting arrangements to management, external stakeholders and the public, including procedures for reporting non-compliance.	
	h.	The Monitoring Plan must also include a program for obtaining monitoring data to validate predictions of enhanced natural attenuation of mining fluids and determine the impact of groundwater flush.	
		The action cannot commence operation until the Monitoring Plan is approved by the Minister. The approved Monitoring Plan must be implemented.	

Obligation Origin	Condition		Status of Obligations
	4 (i)	The person taking the action must develop a Mine Closure and Completion Plan for the Four Mile Lease (the Mine Closure Plan). The Closure Plan must demonstrate that the following outcomes, in so far as they may be affected by mining operations, will be achieved indefinitely post mine closure:	Compliant. Plan is included in the Four Mile PEPR approved on 23 December 2016.
	a.	No change, outside of natural background variation, to the water quality of the Namba aquifer.	
	b.	No reduction in the Environmental Values of the Mt Painter Fractured Rock aquifer.	
	c.	No change, outside of natural background variation, to the aquifer pressure in the Mt Painter Fractured Rock aquifer.	
	d.	The health and safety of the public and fauna are not compromised	
	e.	Ecosystem and landscape function is resilient, self-sustaining and indicating that the pre-mining ecosystem and landscape function will ultimately be achieved.	
		The action cannot commence operation until the Mine Closure Plan is approved by the Minister.	
	(ii)	The Mine Closure Plan must be revised by the person taking the action prior to mine closure to take into account the results of the monitoring in Condition 3 to validate predictions of enhanced natural attenuation of mining fluids. The revised Plan must be submitted to the Minister for approval. The revised Mine Closure Plan must:	
	(a)	Specify closure criteria that will be used to demonstrate the clear and unambiguous achievement of the closure outcomes;	
	(b)	Show how closure criteria can be achieved within 10 years of the cessation of mining;	
	(c)	Include a program for monitoring progress towards achievement of closure criteria;	
	(d)	Include remedial actions to be taken in the event that monitoring demonstrates that closure criteria will not be achieved in the 10 year period.	
		The revised Mine Closure Plan must be submitted to the Minister for approval. The approved revised Mine Closure Plan must be implemented until the Minister is satisfied that the closure criteria have been achieved.	

Obligation Origin	Condition		Status of Obligations
	5	To secure compliance with Condition 3 and 4 of this approval, the person taking the action must, before commencing operation of the mine, comply with any requirement under the relevant approval granted by the government of South Australia to provide a bond in accordance with s 62 of the *Mining Act 1971 (SA)*.	Pre-September 28, 2015 DSD held $3,360,890 in bond for ML6402, which comprised $2,520,675 for Quasar Resources portion, $840,225 for Alliance Craton Explorer's portion in accordance with their respective JV equities. On 18 September 2015, Alliance sold its 25% interest in the JV to Quasar and accordingly on 25 September 2015, Quasar provided a bank guarantee in replacement or Alliances portion of the bond. As per correspondence from the Mining Registrar (DSD) dated 23 January 2017, $5,000,000 is currently held for the Four Mile Mineral Lease bonds.
	6 (a) (b) (c) (d) (e)	To secure compliance with Conditions 3 and 4 of the approval; If at any time the Minister determines in writing that he is not satisfied that either the Monitoring and Management Plan or the Mine Closure Plan is not being or will not be implemented, the Minister may require the person taking the action to provide a bond in favour of the Commonwealth for the full cost of rehabilitation liability. The Minister may vary the bond amount required under Condition 6(a) to cover the full cost of rehabilitation liability at any time. In providing for or varying a bond amount in accordance with Condition 6 (a) and 6(b), the Minister may request that the person taking the action obtain written quotes for the cost of rehabilitation liability under the Mine Closure Plan from a third party approved by the Minister. The person taking the action must meet all the charges and costs in obtaining and maintaining the bond. The bond shall not be returned to the person taking the action unless and until the Minister is satisfied that the closure criteria specified in the approved Mine Closure Plan have been achieved.	Compliant as per the approval of the Four Mile PEPR.
	7	The person taking the action must prepare a Community Engagement Plan to enable open dialogue with stakeholders on compliance with the approval conditions. The action cannot commence operation until the Community Engagement Plan is approved by the Minister. The Community Engagement Plan must be implemented.	Compliant through approval of the Four Mile ML PEPR.

Obligation Origin	Condition		Status of Obligations
	8	Within 14 days of commencement of the action, the person taking the action must advise the Department of the actual date of commencement.	Compliant. On 20 November 2013 Heathgate advised the DEH (C Twigg) and DSD (M Smith) via email that the Four Mile Uranium Mine had commenced construction on 8 November 2013.
	9	Within three months of every anniversary of the commencement of the action, or by a date otherwise agreed by the Minister, the person taking the action must provide a report to the Department addressing compliance with the conditions of this approval. The person taking the action must ensure that the report is publicly available on the internet within 30 days of it being submitted to the Minister. Reports must be provided until the Minister is satisfied that the closure outcomes in Condition 4 have been met.	Compliant. The Annual Compliance Report was submitted in digital format to DSD and Dept. of the Environment on 31 March 2016.
	10	If at any time after five years from the date of this approval, the Minister notifies the person taking the action in writing that the Minister is not satisfied that there has been substantial commencement of the action, the action must not thereafter be commenced without the written agreement of the Minister.	Compliant. Construction commenced on 8 November 2013. Mining commenced on 14 April 2014.
	11	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Accepted. The Minister has not directed for an independent audit to be undertaken. An independent audit of Lease Holder capabilities and systems was however requested by the State Minister Hon Tom Koutsantonis MP and was submitted to the Director of Mines - DSD (with copies provided to DEH) prior to commencement of mining on 14 April 2014.
	12	If the person taking the action wishes to carry out any activity otherwise than in accordance with the Plans referred to in Conditions 3, 4 and 7, the person taking the action must submit a revised Plan for the Minister's approval. If the Minister approves the revised Plan submitted, the person taking the action must implement this Plan instead of the Plan originally approved.	Accepted

Obligation Origin	Condition		Status of Obligations
	13	If the Minister believes that it is necessary or desirable for the better protection of the environment to do so, the Minister may request the person taking the action to make specified revisions to the Plan approved pursuant to Conditions 3, 4 and 7, and to submit a revised Plan for the Minister's approval. The person taking the action must comply with any such request. If the Minister approves the revised Plan pursuant to this paragraph, the person taking the action must implement this Plan instead of the Plan originally approved.	Accepted
	14	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the above conditions of approval, and make them available upon request to the Department. Such records may be subject to audit by the Department and used to verify compliance with the conditions of approval.	Accepted
		In addition to the above conditions, the following Commonwealth condition applies to those construction works to be undertaken (for the Four Mile project) on the Beverley ML. The person taking the action must ensure that the action, and any other activity it undertakes on the Beverley Mining Lease, achieves the following outcomes (in so far as they may be affected by mining operations): a. No compromise to other existing Great Artesian Basin users within the Beverley mine region. b. No compromise to pastoral use of the Willawortina aquifer. c. No compromise of potential pastoral use (should it meet pastoral water quality standards) of the Namba aquifer outside the Beverley mining lease. d. No loss of abundance or diversity on or off the Beverley mining lease to native vegetation through clearance or other damage unless prior approval under relevant legislation is obtained. e. No net adverse impacts from the site operations on native fauna abundance or diversity in the lease area and adjacent areas. f. No introduction of new weeds, plant pathogens or pests (including feral animals), or increase in abundance of existing weed or pest species in the lease area compared to adjoining pastoral areas. g. No uncontrolled fires caused by mining operations. h. No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained. i. No compromise of pastoral use of downstream surface water bodies. j. Soil affected by mining activities is suitable for return to pastoral use. k. No adverse impacts to the environment due to radon release, uranium-bearing materials, or radiological aspects of seepages and spills. l. No contamination of land and soils either on or off the site caused by waste products and hazardous materials used in the mine operations that would compromise a return to pastoral use	Accepted