

**47-63 GALLIPOLI STREET
TEMORA NSW 2666**

**PRELIMINARY
SITE INVESTIGATION**

**FOR THE PROPOSED
REZONING OF LAND**

NOVEMBER 2023

REPORT NO: 9668

DM McMahon Pty Ltd

6 Jones St (PO Box 6118)

Wagga Wagga NSW 2650

t (02) 6931 0510 www.dmmcmahon.com.au

Report type

Preliminary Site Investigation

For the proposed rezoning of land

Site address

47-63 Gallipoli Street

Temora NSW 2666

Report number

9668

Prepared for

Claire Golder

Temora Shire Council

105 Loftus Street

Temora NSW 2666

Tel: 0269 801 100

Email: cgolder@temora.nsw.gov.au**Prepared by**

DM McMahon Pty Ltd

6 Jones Street (PO Box 6118)

Wagga Wagga NSW 2650

Tel: 0269 310 510

Email: admin@dmmcmahon.com.au**Document control**

Role	Name	Signed	Date	Revision
Prepared by	David McMahon CEnvP SC BAppSc SA GradDip WRM MEnvMgmt MALGA MEIANZ MSSA		6/11/2023	00
 				

Contents

1.0	Executive summary	4
2.0	Objectives	6
3.0	Scope of work	7
4.0	Site identification	8
5.0	Site history	9
6.0	Site condition and surrounding environment.....	15
7.0	Sampling and analysis quality plan and sampling methodology	18
8.0	Results.....	22
9.0	Conceptual site model.....	23
10.0	Conclusions and recommendations.....	26
11.0	Limitations and disclaimer	27
12.0	Unexpected findings.....	27
13.0	Notice of Copyright.....	27
14.0	Attachments	27

1.0 Executive summary

DM McMahon Pty Ltd (McMahon) conducted this Preliminary Site Investigation (PSI) at the request of Claire Golder of Temora Shire Council for the proposed rezoning of land at 47-53, 55, 57, and 59-63 Gallipoli Street Temora NSW. The 1.09ha land parcel (the site) is currently zoned general industrial and is proposed to be rezoned and developed for low-medium density residential land use. Location maps of the site and the current and proposed zoning can be seen in **Attachment A**.

The issue of potential contamination is required to be considered whenever a planning proposal is presented to a planning authority where the new use may increase risk from contamination if it is present. Therefore, the objective of this investigation is to provide Temora Shire Council and the planning authority with a statement of site suitability for the proposed rezoning of land and future land use and provide recommendations for site management.

The scope of work includes:

- A desktop study used to collect basic site information and identify the site characteristics.
- A detailed site inspection to complement the findings of the desktop study and site history and to identify any additional relevant site information.
- Conduct limited sampling using data quality objectives to assess the need for further investigation.
- From the information collected, develop a conceptual site model detailing the potential contamination source-pathway-receptor linkages.
- Conduct a risk assessment for site suitability regarding potential contamination and the proposed development.
- Provide a statement of site suitability for the proposed rezoning of land and future land use and provide recommendations for further investigation and site management if required.

Findings of the investigation include:

- The desktop study found the following:
 - 47-53 Gallipoli Street has a history of residential and commercial land use with a single storey weatherboard house and several sheds and outbuildings, some of which were used for a former home nursery business with animal yards.
 - 57 Gallipoli Street is occupied by a single storey weatherboard house.
 - 55 and 59-63 Gallipoli Street is undeveloped land with 59-63 Gallipoli Street having been used as a laydown area for farm equipment, truck trailers, and materials from the adjacent metal fabrication/engineering workshop.
- The site inspection complemented the desktop study and found the following sources of potential contamination that may materially affect the development:
 - Agricultural chemicals that may have been used at the former home nursery business and in the animal yards at 47-53 Gallipoli Street.
 - Chemical storage in the shed and at the front of the outbuilding at 47-53 Gallipoli Street.
 - Asbestos and hazardous building materials on the existing houses at 47-53 and 57 Gallipoli Street.

- Potential septic system at 57 Gallipoli Street.
- Fuel and oil leaks and spills at 59-63 Gallipoli Street associated with its use as a laydown area for farm equipment, truck trailers, and materials from the adjacent metal fabrication/engineering workshop.
- The site inspection found the former home nursery was a small-scale business and gross contamination from agricultural chemicals is unlikely. The size and nature of the business (selling plants and ceramic pots) suggests that widespread agricultural chemical use was limited. Contamination from agricultural chemicals in the animal yards is also unlikely as no livestock were observed in the yards at the time of investigation or in the available aerial photographs.
- Chemical storage in the shed is likely and household chemicals, cleaning supplies and weed management supplies were observed in front of the large outbuilding. However, these sources are assessed to be low risk as the chemicals are stored in or near the slab on grade shed and any potential spills or leaks are considered to be localised.
- Gross contamination from fuel and oil leaks and spills at 59-63 Gallipoli Street is considered to be unlikely as no machinery or vehicles were parked at the time of investigation and no visual or olfactory indicators of contamination were observed. However, a thorough visual inspection was hampered by thick grass.
- Other potential sources of contamination include asbestos and hazardous building material on the houses at 47-53 and 57 Gallipoli Street and a potential septic system at 57 Gallipoli Street. Off-site sources of potential contamination include the surrounding industrial businesses, including a future service station with assumed underground fuel storage tanks.
- Soil sampling was conducted to assess contamination from agricultural chemicals at the former home nursery business and in the animal yards at 47-53 Gallipoli Street and from fuel and oil leaks and spills at the laydown area at 59-63 Gallipoli Street. Sampling was limited to these as the remaining potential contamination sources are point source and are of low significance if managed during development.
- The sampling returned chemical results that were below the criteria for residential land use.
- From the information collected, it is assessed that the potential contamination sources could pose a risk to future site users (through dermal contact, ingestion, or inhalation of potentially contaminated soils and fibres) but based on the results is unlikely.
- The risk assessment undertaken suggests that contamination from agricultural chemicals or fuel and oil leaks and spills is not present at the site and the remaining potential contamination sources are assessed to be low risk given appropriate site management during development.
- In summary, the site is assessed to be suitable for the proposed rezoning and future residential development given the management strategies outlined in **Section 10.0** are implemented.

This executive summary and the findings of this PSI are subject to the recommendations in **Section 10.0** and limitations as stated in **Section 11.0**. A protocol for unexpected finds as outlined in **Section 12.0** has also been developed as part of this risk assessment framework if additional potential contamination sources are identified during planning or development.

2.0 Objectives

The objective of this investigation is to:

- Provide information regarding potential contamination on site.
- Provide a factual record of the works completed and results.
- Undertake a risk assessment for health risk to future site users and the environment.
- Provide a statement of site suitability and recommendations for site management.
- Prepare the PSI in general accordance with the relevant guidelines and legislation, namely:
 - NSW EPA, Consultants Reporting on Contaminated Land: Contaminated Land Guidelines, (2020).
 - State Environmental Planning Policy (Resilience and Hazards) 2021.
 - National Environment Protection (Assessment of Site Contamination) Measure (NEPM), (2013).

3.0 Scope of work

The scope of work includes the following:

- Review the available information regarding historical, current, and proposed land use of the site and surrounds.
- Review the environmental setting of the site and surrounds.
- Assess the potential contamination sources and contaminants of potential concern.
- Conduct limited sampling at the former home nursery business and in the animal yards and at the laydown area to assess the need for further investigation.
- Assess the potential contamination source-pathway-receptor linkages from the contaminants of potential concern, environmental setting, and land use.
- Develop a conceptual site model to assess potential contamination risk from the source-pathway-receptor linkages.
- Provide a clear statement on site suitability for the present and future land use and the need for further investigation and site management if required.

4.0 Site identification

The site identification and details are as follows.

- Addresses: 47-53 and 55, 57, 59-63 Gallipoli Street Temora NSW 2666.
- Real property descriptions:
 - 47-53 Gallipoli Street – Part Lot A DP 370331.
 - 55, 57, 59-63 Gallipoli Street – Lots 1-5 DP 1152018.
- Development area centre co-ordinate: 550215E 6188213N MGA GDA z55.
- Property size: 1.09ha (total area).
- Owner:
 - 47-53 Gallipoli Street – Regional Growth and Development Pty Ltd.
 - 57 Gallipoli Street – Mark McDonald Roache.
 - 55, 59-63 Gallipoli Street – Hammersley Investments Pty Ltd.
- Local Government Area: Temora Shire Council.
- Current zoning: E4 General Industrial.
- Proposed zoning: R1 General Residential.
- Present use: Industrial and residential.
- Development Application reference: Not known.

5.0 Site history

From research of the available resources, the following site history is offered.

Historical owners and occupiers

As follows are the registered owners and occupiers:

47-53 Gallipoli Street (Part Lot A DP 370331).

- 1903 owned by Michael Crowley (labourer). Known as Portion 605.
- 1911 owned by Bridget Crowley (Michael Crowley's wife).
- 1924 owned by Michael Joseph Crowley (farmer).
- 1928 owned by Carl Edward Salzke (labourer).
- 1951 the land was consolidated with adjacent lots. Portion 605 became known as Lot A.
- 1951 owned by Walter Thomas Loiterton (farmer).
- 1983 owned by Kevin William Bett and Rosalynne Anne Lee.
- 1986 owned by Kevin William Bett.
- Other owners unknown until it was owned by Regional Growth and Development Pty Ltd in 2021 to present.

55, 57, 59-53 Gallipoli Street (Lots 1-5 DP 1152018).

- 1903 owned by Michael Crowley (labourer). Known as Portions 607 and 608.
- 1911 owned by Bridget Crowley (Michael Crowley's wife).
- 1924 owned by Michael Joseph Crowley (farmer).
- 1928 owned by Carl Edward Salzke (labourer).
- 1951 the land was subdivided. Portion 608 and part Portion 607 became known as Lot C.
- 1955 owned by Ferdinand Heinrich Franke.
- 1957 owned by Otilie Martha Salzke (widow). Known as Lot 2.
- 1967 owned by Edna Dulcie Pfeiffer (married woman).
- 1972 owned by Brian William Moroney (engine driver) and Marie Hanna Moroney (his wife).
- 1976 owned by Elanron Pty Ltd.
- 1985 known as Lot 1-2 DP 714213.
- 1992 owned by Elaine Murray (domestic duties).
- 1995 owned by Barry Hilton Andersson and Rhona Beatrice Andersson.
- 2004 owned by Hammersley Investments Pty Ltd.
- 57 Gallipoli Street was sold by Hammersley Investments Pty Ltd to Mark McDonald Roache in 2021.

Council records

Council returned the following information on 26 September 2023:

- Site plan 19/06-1 (no date) – Proposed home business for D. and C. Bett, Gallipoli Street Temora (Lot A DP 370331). Legend – proposed 332.8m² residence, proposed driveway, proposed 6 lot carpark, proposed nursery, existing stables.
- Impact assessment (no date) – for commercial or industrial development.
 - Plant and machinery to be installed/used: garden hoses and shed.
 - Details of waste/effluent produced and method of disposal: water will be recycled through a tank (submersible) and pump. This will allow all irrigation run off to be collected on the property.
 - Details of stormwater generation and disposal: water collected off roof will be diverted into tank.
 - Water requirements and details: water already connected and will be recycled.
- Site plan (1993) – Proposed steel carport for D. and C. Bett, Gallipoli Street Temora (Lot A vol. 6324 fol. 114).
- DA0001/093C (2001) – Steel framed machinery shed. Applicant: DA & CM Bett, 47-53 Gallipoli Street Temora. Lot A DP 370331
- DA0506/111D (D/01/01) (2006) – Proposed home business – plant nursery. Applicant: DA & CM Bett, 47-53 Gallipoli Street Temora. Lot A DP 370331.
 - The site is located approximately 1.5km east of the central business district and is known as 47 Gallipoli Street Temora. The parcels are immediately surrounded by residential properties to the north, vacant residential land and industrial land (Gallaghers) to the south and vacant rural land to the east.
 - The parcel is zoned part Residential 2 (b) and Rural 1 (b) under the provisions of the Temora Local Environmental Plan 1987. The actual site where the nursery is to be located on the Rural 1 (b) segment of the allotment, adjoining industrial businesses.
 - The applicant contends that there will be no plant and machinery utilised in the nursery operation.
 - The applicant advises that there will be no use of pesticides involved in the running of the business.
 - The applicant has requested that the business will consist of the storage and sale of 100 ceramic pots and approximately 1200 pot plants.
- Objection letter KJD:BCB:D/01/01 from Hammersley Investments Pty Ltd (2006). We are writing to register our objection with the proposed Development Application No. 0506/111D. This development will have an impact on our development 55-63 Gallipoli Street and residents of Gallipoli Street in general.
- Temora Shire Council (no date). Registration of existing on-site sewage management system at 57 Gallipoli Street. Owner Barry and Rhona Andersson. A hand drawn map shows the septic tank in the centre of the rear yard.
- Email communication from Environmental Services Technical Officer Temora Shire Council (October 2023). The septic system at 47-53 Gallipoli Street was decommissioned in 2008 and connected to sewer. There are no records on file in regard to the location/registration of the septic tank.

EPA records

There are no records on the Contaminated Land Record Database for the site or adjacent properties pertaining to Preliminary Investigation Orders, Declaration of Significantly Contaminated Land, Approved Voluntary Management Plans, Management Orders, Ongoing Maintenance Orders, Repeal Revocation or Variation Notice, Site Audit Statement, or Notice of Completion or Withdrawal of Approved VMP. The Woolworths Caltex service station at 98-100 Hoskins Street, 1.4km north west of the site had a preliminary investigation order and its repeal issued in 2019. The site or adjacent properties have not been “notified” to the EPA on the list of NSW contaminated sites as of September 2023.

Internet search

- The Temora Star (NSW) December 1905 – Crown Lands Sale. Within the population area of Temora [...] adjoining M. Crowley's portions 605, 606 and 607.
- The Wyalong Advocate and Mining, Agricultural and Pastoral Gazette (NSW) March 1915 – Obituary. Mr M. Crowley, senr. In the last issues, brief reference was made to the death of Mr Michael Crowley, senr of 'Avondale', Temora.
- The Sydney Morning Herald (NSW) July 1929 – Mrs Bridget Crowley. The death occurred on July 15 of one of Temora's oldest pioneers- Mrs. Bridget Crowley, relict of the late Michael Crowley. With her late husband she was one of the earliest settlers of the district. For some years after the death of her husband Mrs. Crowley continued to conduct the farm on the Stockinbingal Road until advancing age made it imperative that she should retire, and she came to Sydney. [...] In 1862 she was married in Wollongong and in 1880 went with her husband to Temora.
- Government Gazette of the State of NSW (Sydney) *Notification of Closing of Roads and Approval of the Sale of the Lands Comprised therein under Road Purchase Application* Issue 194, November 1935 – Boundary (public) road separating portions 605 [...] Land District and Municipality Temora. (Carl Edward Salzke).
- Facebook – Betts Gardens on Gallipoli. 47-53 Gallipoli Street Temora. Garden Centre.
- dlook.com.au – About Betts Gardens on Gallipoli. Temora based Betts Gardens on Gallipoli are gardening and landscape supplies offering a range of products and services including shrubs and garden layouts for sale. If you need clarification or wish to understand what we can do also with turf or gardening equipment, or other products or services then contact us for more information.
- domain.com.au – 47-53 Gallipoli Street Temora. Sold March 1997. Sold October 2021. Listed November 2022 – not sold.
- onthefhouse.com.au – 47-53 Gallipoli Street Temora. Last listing description (November 2022). Temora's Newest Industrial Release. [...] The team of experienced investment developers at Regional Growth and Development bring you this golden opportunity to dream big. With a variety of block sizes, all on level ground, with connections in place for water, power, NBN and access roads all you need to do is step into your new space and make it your own.
- domain.com.au - 55 Gallipoli Street Temora. Sold January 1995. Sold April 2004.
- realestate.com.au – 57 Gallipoli Street Temora. Sold 2004. Sold 2021. 3-bedroom, 1 bathroom house.

Previous reports

Habitat Planning (2023) Planning Proposal Scoping Report. Ref: 23082.

The Planning Proposal Scoping Report has been prepared in support of a Planning Proposal to amend the Temora Local Environmental Plan 2010 (LEP).

- The proposal seeks to rezone the parcels of land from E4 General Industrial to R1 General Residential as well as applying a 750m² minimum lot size consistent with the other R1 zoned land within the council area.
- 55, 57, 59-63 Gallipoli Street – The site consists of five individual parcels of land, each generally rectangular in shape with road frontage to the adjoining Gallipoli Street. The land is unimproved with the exception of a single storey weatherboard dwelling contained on 57 Gallipoli Street. The topography of the land is generally flat but does however gently slope towards the east (rear) of the property. Vegetation consists largely of non-native planted trees, however the property does contain several scattered remnant gums. The land is centrally located and has access to all infrastructure and services and immediately adjoins residential zoned land that has been recently developed on the opposite side of Gallipoli Street.
- 47-53 Gallipoli Street – The area subject of the proposed rezoning comprises the western portion of the lot fronting Gallipoli Street. The land is improved and contains a single storey weatherboard dwelling located in the north western corner of the site, as well as a large number of outbuildings and structures including associated driveways. It is noted that the land was previously used for the purposes of a landscape material supplies business (Betts Gardens on Gallipoli). The topography of the land is generally flat but does however gently slope towards the east (rear) of the property. Vegetation consists largely of non-native planted trees around the dwelling, sheds and along the site frontage. The land is centrally located and has access to all infrastructure and services and immediately adjoins residential zoned land that has been recently developed on the opposite side of Gallipoli Street.
- The proposed rezoning of 55, 57, 59-63 Gallipoli Street will create an additional land supply of 5 new residential allotments. It is noted that these sites have remained vacant for some time and have not been developed due to their relatively small size (ave. 780sqm) and their location adjacent to residential development. A dwelling currently exists on 57 Gallipoli Street and is reliant upon existing use rights.
- The proposed rezoning of 47-53 Gallipoli Street will create a 7,000sqm residential development site. Given the general size and dimensions of this site, the proponent has indicated that this site does not lend itself to being subdivided for conventional residential purposes. Instead, the site will likely be developed for the purposes of a seniors housing or multi dwelling housing subject to a detailed design concept being prepared. This will create opportunities for small lot housing and a diversity of the housing mix within Temora.
- The subject lands are not identified as being bushfire prone nor is it identified as being flood prone.
- None of the land was identified on either Council's or the EPA contaminated land register. It is acknowledged however that 47-53 Gallipoli Street and the adjoining 55, 57, 59-63 Gallipoli Street may have the potential to contain contamination. Specifically, 47-53 Gallipoli Street was formerly used as a plant nursery and contains a number of buildings and structures that may have resulted in the previous use of fertilisers or other chemicals. Similarly, the adjoining 55, 57, 59-63 Gallipoli Street, whilst vacant

does adjoin industrial zoned land and has been used for informal parking/storage of machinery and equipment in the past.

- For these reasons, it is recommended that a Preliminary Site Investigation be prepared as part of the Planning Proposal.

Aerial photographs and satellite images

McMahon observed the following from a review of the available aerial photography.

47-53 Gallipoli Street

1961 – The house can be seen in the north west corner of the site with approximately five outbuildings also visible. Some trees can be seen around the house and the remainder of the site is cleared. The surrounding land use is agricultural to the north, east and south and residential to the west. Nixon Park can be seen to the south across Burley Griffin Way.

1978 – No change from 1961.

1986 – No change from 1975. An industrial estate has begun construction to the south of the site, across Burley Griffin Way.

1991 – Two of the outbuildings have been removed. Industrial development has begun to the south east of the site.

1997 – A large outbuilding has been built along the eastern boundary.

2006 – A large shed has been built in the north east corner of the site and the large outbuilding on the eastern boundary has been extended. A garden bed has been built around the southern half of the outbuilding. A small animal shelter has been built on the outside of the eastern fence. A small fenced yard can be seen adjacent to the animal shelter. A driveway from Gallipoli Street to the large shed and outbuilding at the rear has been gravelled. Some landscaping and small shrub and tree planting can be seen to the south of the house. A garden has also been established to the east (rear) of the house. Cars can be seen at the rear of the site. Industrial development has continued to the east and south east of the site.

2011 – No change from 2006.

2012 – No change from 2006.

2015 – No change from 2006.

2017 – More of the site has been gravelled to the south of the house.

2018 – No change from 2017.

2020 – No change from 2017.

2022 – No change from 2017.

57 Gallipoli Street

1961 to 2022 – The house and surrounding trees can be seen as early as 1961. By 1978, most of the trees have been cleared. A small shed can be seen to the north east of the house, along the northern boundary. By 1991, established trees can be seen in the front yard of the house and around the shed. By 2011 some of the trees around the shed have been removed. The trees in the front yard and the shed were removed sometime between 2020 and 2022. Two trees remain in the rear yard.

55 and 59-63 Gallipoli Street

1961 to 2022 – The site is vacant with some trees visible at 55 Gallipoli Street. By 1978, most of the trees have been cleared. A small shed can be seen in the south east corner at 55 Gallipoli Street. The shed was removed sometime between 2006 and 2011 but the concrete footprint remains. By 2006, trees have been planted along the boundary of Lots 3 and 4 of 59-63 Gallipoli Street. In 2011, five established trees are visible across Lots 3 and 4. Between 2018 and 2022, some machinery, truck trailers and materials can be seen on Lots 4 and 5 assumed to be from the adjacent truck and tractor dealership (built sometime between 1978 and 1986) and the metal fabrication/engineering workshop (visible in the 1961 photograph).

The aerial photographs and satellite images can be seen in **Attachment B**.

6.0 Site condition and surrounding environment

McMahon notes the following observations of the site condition as part of this PSI.

- The site is located within an industrial estate on the outskirts of Temora, approximately 1.4km west from the town centre.
- The surrounding land is residential to the north and west and industrial to the east and immediate south east. Agricultural land adjoins 47-53 Gallipoli Street to the east. A truck and tractor dealership adjoins 47-53 and 59-63 Gallipoli Street to the east and south east. A metal fabrication/engineering workshop adjoins 59-63 Gallipoli Street to the south and a former used car sales yard adjoins 59-63 Gallipoli Street to the south east.
- The former used car sales yard is being developed into a service station and at the time of inspection, approximately six new tanks had been partially buried in a large pit. It can be reasonably assumed these tanks will be used for fuel storage.

47-53 Gallipoli Street (Part Lot A DP 370331)

- A single storey weatherboard house with tin roof and attached carport built prior to 1961 exists in the north west corner of the lot. The house likely contains asbestos in the cladding and in the meter box although a thorough inspection for hazardous materials was outside the scope of work.
- The lot was formerly used as a home nursery business but now appears to be a private residence only. The lot is fenced by wire fencing along the eastern, southern, and part of the western boundaries. The northern boundary is fenced by low steel fencing.
- A truck trailer, horse float and box trailer were parked to the south of the house.
- A large slab on grade steel shed to the east of the house contains another truck trailer, hay bales, steel drums, stacked tyres, pallets, and plastic intermediate bulk containers. Chemical storage is likely to be present. Fuel storage was not observed but access was compromised at the time of investigation.
- An animal shelter and attached yard can be seen to the east of the large slab on grade shed.
- Some cleaning supplies, ladders and weed management supplies could be seen in front of a large outbuilding to the east of the large slab on grade shed. Planted trees line the front of the outbuilding.
- The lot is largely gravelled with gardens growing to the east and south of the house and around the large outbuilding on the eastern boundary. Trees line the southern boundary between 47-53 and 55 Gallipoli Street.
- Council records show the septic system was decommissioned in 2008 and the house was connected to sewer. No further records were held. No septic tank or disposal area was observed.

57 Gallipoli Street (Lot 2 DP 1152018)

- A single storey weatherboard house with tin roof built prior to 1961 exists in the approximate centre of the lot. The house likely contains asbestos in the cladding and in the meter box although a thorough inspection was outside the scope of work.
- A partial exposed aggregate concrete driveway provides access via Gallipoli Street.
- The house is fenced from the adjacent lots by wire fencing, with the rear fence made from steel fencing.
- The rear yard consists of maintained lawn and a large tree in the north east corner. The tree in the centre of the yard visible on the 2022 aerial photograph has been removed.
- A small shed made of corrugated iron and particle board exists in the south east corner. The shed does not appear on the 2022 aerial photograph although the shed does not appear to be new.
- Council records show the septic system was registered sometime between 1998 and 1999. The hand drawn map showed the location of the septic tank in the centre of the rear yard. No septic tank or disposal area was observed.

55, 59-63 Gallipoli Street (Lots 1, 3, 4, 5 DP 1152018)

- Vacant land with some scattered trees across the lots.
- The lots are fenced along the eastern boundary. They are not fenced along Gallipoli Street or along the southern boundary.
- Lot 1 has a small stockpile of branches in the north west corner. A concrete pad from a former shed can be seen in the north east corner. Timber and pavers have been stacked on the concrete pad. Concrete rubble is also visible. Thick grass hampered a thorough visual inspection of the remainder of the site surface.
- Lot 3 has a small stockpile of branches and scrap wood in the approximate centre of the lot. Thick grass hampered a thorough visual inspection of the site surface.
- Lot 5 is currently being used as a laydown area for grain augers, machinery parts, steel drums, a silo, and a small incinerator. This area is likely used by the adjacent metal fabrication/engineering workshop to the south. No fuel storage was observed. No spills or staining from fuel and oil were observed on the areas of bare ground however, thick grass hampered a thorough inspection of the majority of the site surface.

Maps of the site features and surrounding land uses can be seen in **Attachment C** and site photographs can be seen in **Attachment D**.

A summary of the site environmental setting is as follows.

Topography

The site is located on a generally north trending gently inclined lower slope at an elevation range of around 306m to 310m AHD.

Vegetation

47-53 Gallipoli Street is mostly covered by a gravelled driveway with some trees along the southern boundary of the lot. Trees have been established to the east of the house, along the western boundary fronting Gallipoli Street and along the eastern boundary in front of the large outbuilding. Some trees also exist at the southern boundary, adjoining 57 Gallipoli Street. 57 Gallipoli Street has a maintained lawn at the front and rear of the house. 55 and 59-63 Gallipoli Street are mostly covered with thick annual and perennial grasses and broadleaf weeds with trees concentrated on Lot 3 of 59-63 Gallipoli Street.

Natural Resources Sensitivity

A search of the Temora Local Environment Plan (2010) found the site is not mapped as having any natural resources sensitivity.

Weather

The average rainfall for Temora is approximately 525mm per annum, with the wettest months being July, October, and November. Temora is characterised by cold wet winters and hot dry summers.

Hydrology

The nearest named waterway is Trigalong Creek located approximately 4.3km to the west of the site. Trigalong Creek runs north and feeds into Narraburra Creek, the Bland Creek, and into Lake Cowal. In floods, Lake Cowal overflows onto the Lachlan River floodplains. The site is not mapped as being in a flood planning area.

Soil

Natural soils are typically red-brown clays with gravel addition.

Geology

Soils have formed on gentle to undulating footslopes of recent undifferentiated Quaternary alluvium and colluvium derived from intermediate Ordovician volcanics. The underlying volcanic rocks are associated with the Temora Formation and consist of andesite, trachyandesite, latite and basaltic andesite.

Hydrogeology

Groundwater beneath the site is likely to exist as interflow in the lower level of soil or as a low productivity intermediate groundwater system in the underlying fractured rock. There is generally a low level of connectivity between surface water and groundwater typical of Lachlan Fold Belt aquifers. There is one registered groundwater bore located within 1km of the site. It was drilled to a depth of 54.90m with water bearing zones from 12.20m to 15.20 and from 46.90m to 54.80m. Its intended purpose is recreation, and its licence status is unknown. Groundwater is generally not a resource in the locale.

7.0 Sampling and analysis quality plan and sampling methodology

The Data Quality Objectives (DQOs) of the site assessment have been developed to define the type and quality of data to meet the project objectives. The DQOs have been developed generally in accordance with the seven step DQO process as outlined in AS 4482.1 (2005) and the USA EPA Guidance on Systematic Planning Using the Data Quality Objectives Process (2006a). These DQOs are as follows:

1. **The problem**
2. **The goal of the study**
3. **Information inputs**
4. **Study boundaries**
5. **The analytical approach**
6. **Performance and acceptance criteria**
7. **Obtaining data**

These objectives have been further outlined in the following sections.

DQO 1 - The problem

Potential contamination from agricultural chemicals at the former home nursery business and in the animal yards at 47-53 Gallipoli Street and from fuel and oil leaks and spills in the laydown area at 59-63 Gallipoli Street. Insufficient data relating to these sources is available to determine land use suitability and the need for further investigation with the necessary level of confidence.

DQO 2 - The goal of the study

Goals of the study include:

- Undertake limited investigations, based on the data gaps to determine if there is contamination within the soil associated with the identified contamination sources.
- Determine if any contamination, should it be identified, poses a risk to current and/or future receptors at the site or within potential exposure pathways from the site, and if further investigation is required.
- Determining whether the site is currently, or can be made, suitable for the proposed development regarding contamination.

DQO 3 - Information inputs

- Desktop data including site inspections, site condition, history, geology, hydrogeology, and laboratory analysis to characterise the site.
- Observational data including visual and olfactory conditions obtained from the sampling.
- Analytical data relative to the assessment criteria.

DQO 4 - Study boundaries

- Intrusive investigation across the site.
- Temporal boundaries are limited to the proposed fieldwork timeframes in the fourth quarter of the year 2023.

DQO 5 - The analytical approach

Samples will be tested for organophosphate/organochlorine pesticides, heavy metals, total recoverable hydrocarbons, polycyclic aromatic hydrocarbons, solvents (benzene, toluene, ethylbenzene, xylene, naphthalene), phenols (speciated) and polychlorinated biphenyls that may be persistent in the soil from historical land use.

DQO 6 - Performance and acceptance criteria

Specific limits for the investigation are in accordance with the appropriate guidance made or endorsed by state and national regulations, appropriate data quality indicators, and industry standard procedures for field sampling and handling. To assess the validity of data for decision making, the data is assessed against a set of data quality indicators, the following predetermined data quality indicators have been adopted.

The key decision rules for the investigation are:

- 1) Has the analytical data been collected as part of the testing and met the data quality indicators? If they have then the data can be used to answer the decision rule/s and the decision statements developed in Step 2 of the DQOs. If not, then the need to collect additional data may be required.
- 2) Do contaminant concentrations exceed the investigation and screening criteria? If not, then the potential contamination does not pose an above low level of risk. Where results exceed the investigation and screening criteria, this may indicate an unacceptable level of risk. Further risk assessment and investigations may be warranted to determine the potential for impacts.

The key decision errors for the investigation are:

- i. deciding that the site is contaminated when it truly is not.
- ii. deciding that the site is not contaminated when it truly is.

The true state of nature for decision error (i) is that the site is not contaminated.

The true state of nature for decision error (ii) is that the site is contaminated.

The site assessment criteria were specifically derived and incorporate the following:

- The samples are not composited so the direct reading of contaminant levels will be found from each sample point on which an appropriate decision can be based off.
- The duplicate sample should have a Relative Percentage Difference (RPD) of <30%.
- The rinsate sample should return negligible concentrations for all parameters tested to ensure an appropriate sampling and decontamination procedure.
- If contaminant levels exceed the Tier 1 and statistical assessment criteria further investigation, assessment and management may be required.

Specific Tier 1 assessment criteria can be seen below, **Table 1**.

Table 1: Assessment criteria

Material	Analytes	Criteria
Soil	Pesticides	Health Investigation Levels (HILs)
	Heavy metals	-Residential A Schedule B1 NEPM (2013)
	Total recoverable hydrocarbons	-Table 1A(1), soils within 3m of surface
	Polyaromatic hydrocarbons	
	Solvents	Health Screening Levels (HSLs)
	Phenols	-Residential A Schedule B1 NEPM (2013)
	Polychlorinated biphenyls	-Table 1A(3), clay soils within 1m of surface
		-Residential A CRC Care Tech Report No 10
		-Table B4.
		Ecological Investigation Levels (EILs)
		-Urban residential Schedule B1 NEPM (2013)
		-Tables 1B(1-5), clay soils (pH 6 and CEC 10) within 2m of surface
		Ecological Screening Levels (ESLs)
		-Urban residential Schedule B1 NEPM (2013)
		-Table 1B(6), clay soils within 2m of surface

The Tier 1 assessment criteria are used as an initial screening of the data to determine whether further assessment is required. Where above criteria exceedance indicates a risk to human health or the environment, site specific risk assessment, statistical analysis, management, or remediation will be undertaken or recommended as appropriate.

DQO 7 - Obtaining data

The sampling pattern and strategy identifies the occurrence of potential contamination for suitable site characterisation. The sampling pattern and strategy has been devised based on site history, land uses, aerial imagery, site inspections, previous investigations and the NEPM (2013). The sampling pattern has been described in more detail below.

Sampling strategy and pattern

A judgemental sampling pattern has been chosen based on potential contamination sources, previous land use, and requirements to delineate potential contamination. Sampling was limited to localised targeted assessment as the remaining potential contamination sources are considered to be point source and are of low significance if managed during development. The adopted sampling pattern is suitable to make a quantitative statement about the level of confidence regarding the quality and accuracy of results. McMahon assesses that the sampling pattern is suitable to be used for decision making and site characterisation.

Key features of the sampling pattern include:

- Three soil sampling points at the former home nursery business at 47-53 Gallipoli Street.
- One soil sampling point in the animal yards at 47-53 Gallipoli Street.
- Four soil sampling points in the laydown area at 59-63 Gallipoli Street.
- Samples analysed for organophosphate/organochlorine pesticides, heavy metals, total recoverable hydrocarbons, polycyclic aromatic hydrocarbons, solvents (benzene, toluene, ethylbenzene, xylene, naphthalene), phenols (speciated) and polychlorinated biphenyls.
- One soil duplicate sample.
- One soil rinsate sample.

By reference to the DQOs, a map of the investigation locations can be seen in **Attachment E**.

Sampling design justification

- Samples 1-3: to assess the near surface soil contamination from potential persistent agricultural chemicals from the former home nursery business.
- Sample 4: to assess the near surface soil contamination from potential persistent agricultural chemicals from application in the animal yards.
- Sample 5-8: to assess the near surface soil contamination from potential fuel and oil leaks and spills in the laydown area.

Failure to meet objectives procedure

If the procedures undertaken do not satisfy the expected data quality objectives, a review of the sampling plan will be conducted prior to any further works.

Sampling and analysis methodology

The sampling officer wore unused disposable nitrile gloves to extract samples directly from the excavated pit to place into appropriately preserved sample receptacles. Collected sample containers were placed into a chilled esky for preservation prior to analysis. All in-field observations and any relevant comments are detailed in the field sheets and a Chain of Custody form was produced to accompany the samples to the laboratory.

Sampling standards

Sampling was undertaken by reference to:

- AS 4482.1:2005 - Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds (Withdrawn).
- AS 4482.2:1999 - Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances (Withdrawn).

Although these guidelines have been withdrawn, they have been used in the absence of other relevant Australian publications.

8.0 Results

The sampling for this PSI was conducted over one day on 26 October 2023. The weather was mild with light winds. A summary of the field observations and sample analytical results are as follows.

Soil and site surface

- Soils are red brown clays with some gravel.
- There were no visual or olfactory indicators of chemical contamination on site.

Soil analysis

- Pesticides are below the Limits of Reporting (LORs) and the adopted criteria.
- Heavy metals are below LORs and/or the adopted criteria.
- Hydrocarbons are below LORs and the adopted criteria.
- Solvents are below LORs and the adopted criteria.
- Phenols are below LORs and the adopted criteria.
- Polychlorinated biphenyls are below LORs and the adopted criteria.

Quality control and quality assurance results

- The duplicate sample was unable to be analysed as the sample jar was broken in transit. Given the results are well below the adopted criteria this is assessed to be of low significance.
- The rinsate sample returned results below the laboratory limit of reporting.
- There were no laboratory outliers.
- Based on the above, the laboratory quality control and quality assurance is of a suitable quality to rely on the results.

Tabulated results can be seen in **Attachment F**.

Laboratory reports can be seen in **Attachment G**.

9.0 Conceptual site model

A conceptual site model is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors and is presented and follows.

Summary

The site has a history of residential and commercial land use from at least the 1960s. Chemicals associated with historical agricultural use at the former home nursery business, in the animal yards, and from chemical storage at 47-53 Gallipoli Street may have accumulated in the soil. Hazardous building materials are likely to exist in the existing houses and services at 47-53 and 57 Gallipoli Street. A septic system may also be present. Contamination from fuel and oil leaks and spills may have accumulated in the soil at 59-63 Gallipoli Street. Off-site contamination sources include the surrounding industrial businesses, including a future service station site with assumed underground fuel storage tanks. Receptors include future construction workers, future residential site users, and the environment. Pathways are mainly from soil disturbance during development and occupation. Short to medium-term soil contact is likely for future construction workers, and long-term soil contact is possible for future occupants.

This conceptual site model outlines the source-pathway-receptor relationship for the identified contamination sources.

Potential and known sources of contamination

- Agricultural chemicals that may have been used at the former home nursery business and in the animal yards at 47-53 Gallipoli Street.
- Chemical storage in the shed and at the front of the outbuilding at 47-53 Gallipoli Street.
- Asbestos and hazardous building materials on the weatherboard houses at 57 and 47-53 Gallipoli Street.
- Potential septic system at 57 Gallipoli Street.
- Fuel and oil leaks and spills at 59-63 Gallipoli Street associated with its use as a laydown area for farm equipment, truck trailers and materials from the adjacent metal fabrication/engineering workshop.
- Off-site sources of potential contamination include the surrounding industrial businesses, including the future service station site.

List of contaminants of potential concern

From the potential contamination sources, the contaminants of potential concern are:

- Pesticides.
- Heavy metals.
- Asbestos.
- Lead paint.
- Hydrocarbons.
- Polycyclic aromatic hydrocarbons.

- Solvents.
- Phenols.
- Polychlorinated biphenyls.

Mechanism of contamination

The mechanism of contamination is predominantly top-down vertical and lateral migration of chemicals into the soil, and the release of fibres from the disturbance of asbestos.

Potentially affected environmental media

- Soil.
- Air.
- Surface water, but it is unlikely to be impacted owing to the distance to waterways.
- Groundwater, but it is unlikely to be impacted owing to the deep depths.

Consideration of spatial and temporal variations

Spatial variation in potential contamination from agricultural chemicals, septic systems and fuel and oil spills and leaks is possible. Temporal variation of persistent pesticides and heavy metals in the soil is likely. Spatial and temporal variation of asbestos is unlikely unless the asbestos is disturbed, and fibres are released.

Actual or potential exposure pathways

- Direct skin contact with soil for future construction workers, and future on-site occupants.
- Inhalation and/or ingestion of fibres, soil, vapour, and dust.
- Direct surface water contact, however, this is unlikely.
- Groundwater ingestion, however, this is unlikely.

Human and ecological receptors

- Future on-site users.
- Construction workers.
- Down gradient ecological receptors.
- Future landscaping and ecological receptors.

Frequency of exposure

- Construction workers are assessed to be a short-term exposure risk.
- Future on-site users are assessed to have a long-term exposure risk.
- Ecological receptors are assessed to be a medium to long-term exposure risk.

Source pathway receptor linkage assessment

- Based on the past uses, it is assessed that contamination from the identified potential contamination sources may be present at the site. If elevated concentrations of contaminants were identified then they could present potential health risks to construction workers or future site occupants (through dermal contact, ingestion, or inhalation of contaminated fibres, soils and/or vapours), if not adequately investigated, assessed, and managed during development.
- There is low risk of gross contamination from agricultural chemicals from the former home nursery business and animal yards at 47-53 Gallipoli Street as the sampling returned low results.
- Chemical storage in the shed is likely. Household chemicals, cleaning supplies, and weed management supplies were also observed in front of the large outbuilding. However, these sources are assessed to be low risk as the chemicals are stored in or near the slab on grade shed and any potential spills or leaks are considered to be localised.
- There is low risk of the release of asbestos fibres from the houses at 47-63 and 57 Gallipoli Street as the development proposes rezoning only. If future development proposes the removal or renovation of the houses, the asbestos containing material is to be removed in line with standard industry practice.
- No septic systems were identified during the site inspection however a septic system was registered to Temora Shire Council for 57 Gallipoli Street sometime between 1998 and 1999. Council records confirm the septic system at 47-53 Gallipoli Street has been decommissioned and is connected to sewer however no records regarding decommissioning were available for 57 Gallipoli Street. There is low risk of contamination from potential septic systems as it is regulated by Council however it is recommended they be decommissioned for future residential land use if they exist.
- There is low risk of gross contamination from fuel and oil leaks and spills at 59-63 Gallipoli Street as the sampling returned low results.
- Off-site contamination from the surrounding industrial businesses is possible owing to their location upgradient of the site. The surrounding businesses have large building structures and extensive areas covered with concrete and other hardstand materials which limits the migration of contaminants in soil. The former used car sales yard is being developed as future service station site, with assumed underground fuel storage tanks visible at the time of inspection. The potential for leaks from the underground storage tanks is possible when operational.

Discussion of multiple lines of evidence

A multiple lines of evidence approach is the process for evaluating and integrating information from different sources of data and uses best professional judgement to assess the consistency and plausibility of the conclusions which can be drawn, NEPM (2013).

Definitive information concerning the sources of potential contamination on site is satisfactory therefore the risk assessment relies heavily on the information provided by this PSI and is supplemented by the data collected during sampling.

10.0 Conclusions and recommendations

This investigation met the objective of investigating and assessing potential contamination and providing Temora Shire Council and the planning authority with a statement of site suitability for the proposed rezoning of land and future land use and recommendations for site management.

The results of the investigation conclude that gross contamination from agricultural chemicals or from fuel and oil leaks and spills is not present at the site, and it is suitable for the proposed rezoning and future land use given the following site management strategies are adopted:

- If the houses at 57 Gallipoli Street and 47-53 Gallipoli Street are proposed to be demolished or renovated, it is recommended that a licenced professional is engaged to undertake a hazardous building materials assessment and removal as necessary. This is normally a standard development consent condition.
- The septic system at 57 Gallipoli Street if present, will require decommissioning during development which is normally a standard development consent condition. Septic systems that are regulated by Council present low health and environmental risk when regularly inspected and serviced.

This executive summary and the findings of this PSI are subject to the limitations as stated in **Section 11.0**.

Care must be taken to identify and evaluate unexpected finds during development under the unexpected finds protocol in **Section 12.0**.

11.0 Limitations and disclaimer

DM McMahon Pty Ltd has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Temora Shire Council and only those third parties who have been authorised by DM McMahon Pty Ltd to rely on this report.

The information contained in this report has been extracted from field and laboratory sources believed to be reliable and accurate. DM McMahon Pty Ltd does not assume any responsibility for the misinterpretation of information supplied in this report. The accuracy and reliability of recommendations identified in this report need to be evaluated with due care according to individual circumstances. It should be noted that the recommendations and findings in this report are based solely upon the said site location and conditions at the time of assessment. The results of the said investigations undertaken are an overall representation of the conditions encountered. The properties of the soil, vapour and groundwater within the location may change due to variations in ground conditions outside of the assessed area. The author has no control or liability over site variability that may warrant further investigation that may lead to significant design and land use changes.

12.0 Unexpected findings

If any unconsolidated, odorous, stained, or deleterious soils and fill, or suspect bonded/friable/fibrous asbestos containing material, fuel tanks, or septic systems are encountered during any further excavation, suspected historical contaminating activities are encountered, or conditions that are not alike the above descriptions, the site supervisor should be informed, the work stopped, and this office be contacted immediately for further evaluation by an appropriately qualified environmental consultant. The unexpected findings may trigger the need for more investigation and assessment dependant on the scope and context of the unexpected finding.

13.0 Notice of Copyright

The information contained in this report must not be copied, reproduced, or used for any purpose other than a purpose approved by DM McMahon Pty Ltd, except as permitted under the Copyright Act 1968. Information cannot be stored or recorded electronically in any form without such permission. © DM McMahon Pty Ltd

14.0 Attachments

A. Site map and proposed zoning map	3 pages
B. Aerial photographs	14 pages
C. Site features	1 pages
D. Site photographs	10 pages
E. Sampling locations	1 page
F. Tabulated results	1 page
G. Laboratory reports	40 pages




Attachment A : *Site map and proposed zoning map*

47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2022

Legend

 Boundary

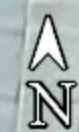
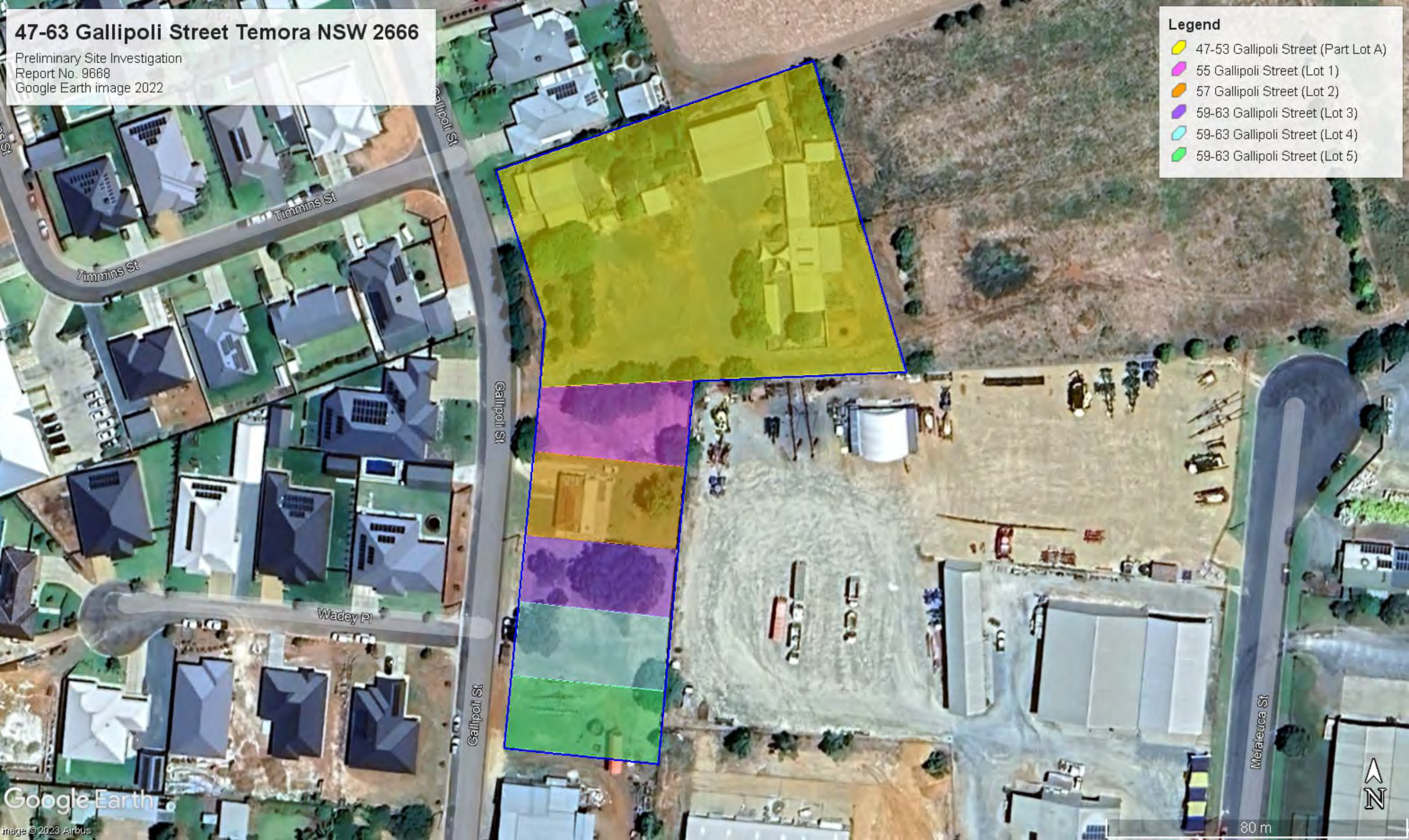


47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9688
Google Earth image 2022

Legend

- 47-53 Gallipoli Street (Part Lot A)
- 55 Gallipoli Street (Lot 1)
- 57 Gallipoli Street (Lot 2)
- 59-63 Gallipoli Street (Lot 3)
- 59-63 Gallipoli Street (Lot 4)
- 59-63 Gallipoli Street (Lot 5)



An extract of the existing and proposed Land Zoning and Minimum Lot Size Maps identifying the proposed changes sought by this Planning Proposal are provided in **Figures 4-7**.

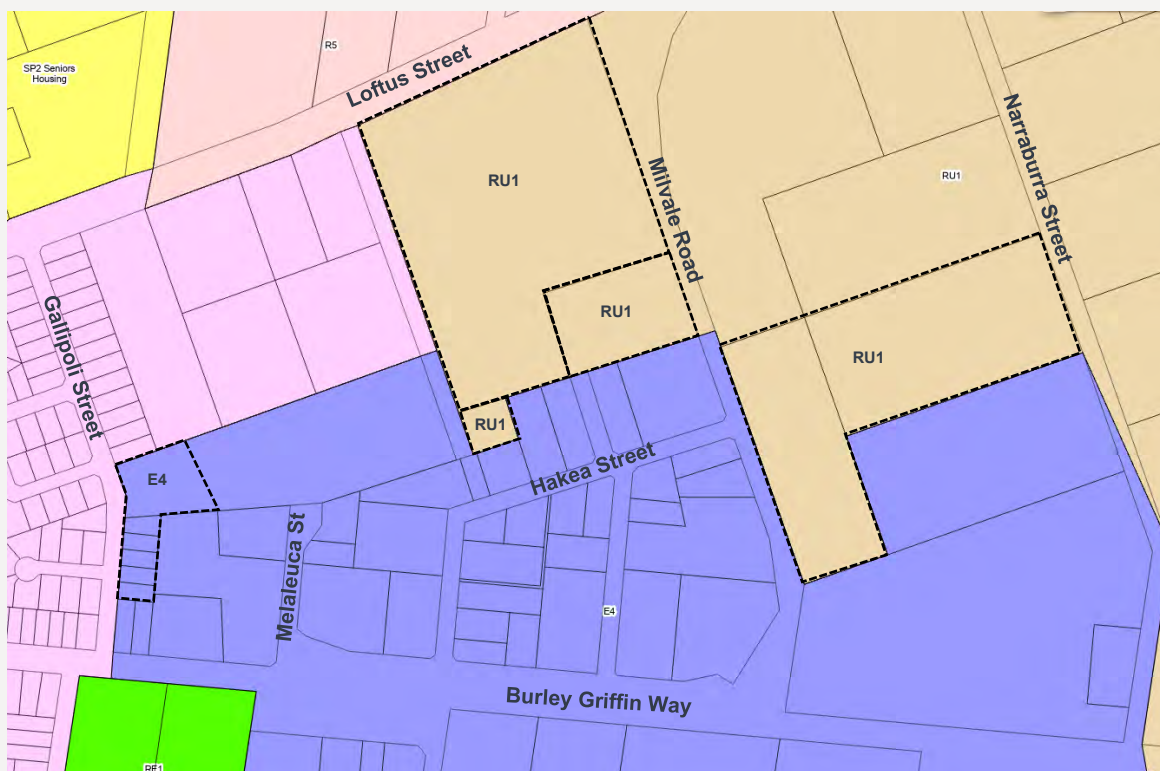


Figure 9 – Land Zoning Map: Existing

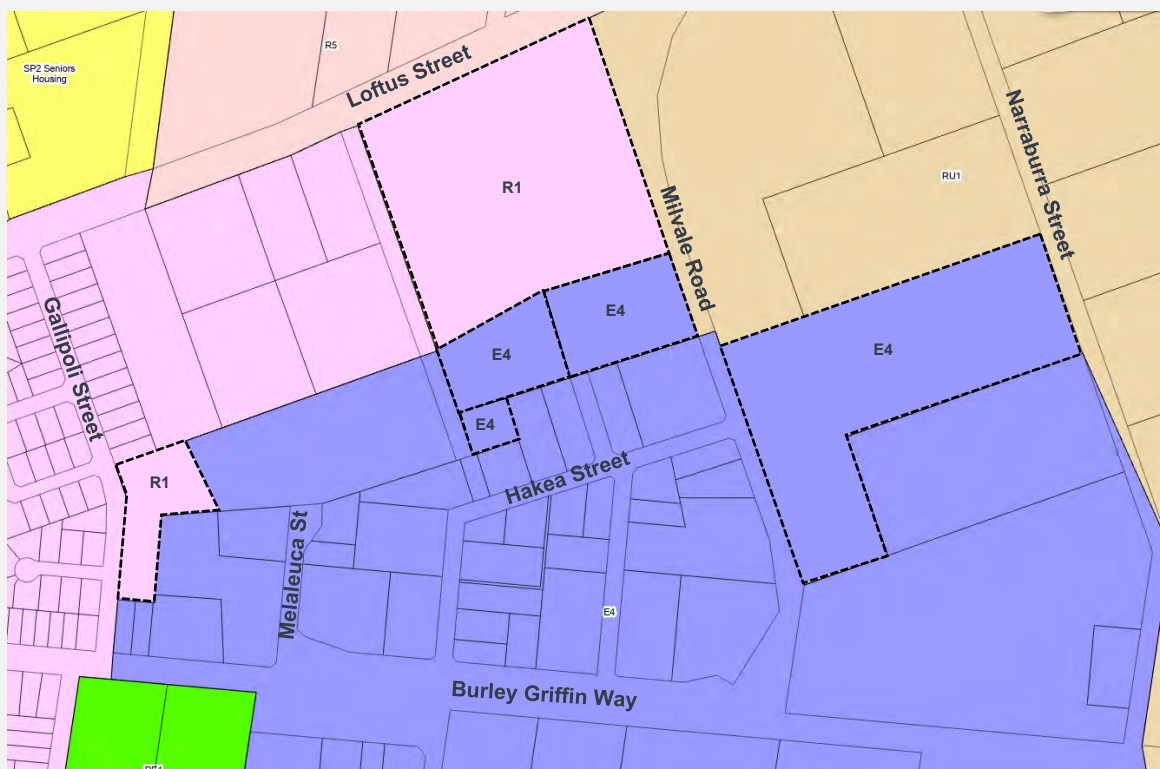


Figure 10 – Land Zoning Map: Proposed




Attachment B : *Aerial photographs and satellite images*

47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
NSW LPI image 1961

Legend

 Boundary




80 m

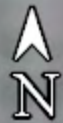
N

47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
NSW LPI image 1978

Legend

 Boundary

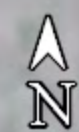


47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
NSW LPI image 1986

Legend

Boundary

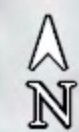


47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
NSW LPI image 1991

Legend

Boundary



47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
NSW LPI image 1994

Legend

Boundary



Timmins St

Timmins St

Gallipoli St

Gallipoli St

Gallipoli St

Wadey Pl


Melaleuca St



47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
NSW LPI image 1997

Legend


 Boundary



47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2006

Legend


 Boundary



47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2011

Legend


 Boundary



47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2012

Legend

 Boundary



47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2015

Legend

Boundary

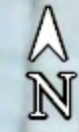


47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2017

Legend

Boundary

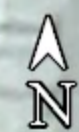


47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2018

Legend


Boundary



47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2020

Legend


 Boundary



47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2022

Legend

 Boundary



Attachment C : *Site features and surrounding land uses*

47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2022

Legend

- Animal shelter
- Animal yards
- Concrete footprint from removed shed
- Gardens
- House
- Laydown area (approx.)
- Outbuilding
- Removed shed
- Shed
- Surrounding land uses





Attachment D : *Site photographs*



Photograph 1: Residential land to the west.



Photograph 2: Agricultural land adjoining 47-53 Gallipoli Street, facing north west with 47-53 Gallipoli Street in the background.



Photograph 3: Truck and tractor dealership adjoining 47-53 and 59-63 Gallipoli Street, facing south.



Photograph 4: Metal fabrication/engineering workshop adjoining 59-63 Gallipoli Street, facing north.



Photograph 5: Former used car sales yard adjoining 59-63 Gallipoli Street, facing north.



Photograph 6: Single storey weatherboard house at 47-53 Gallipoli Street, facing east.



Photograph 7: Truck trailer, horse float and box trailer parked to the south of the house at 47-53 Gallipoli Street, facing north.



Photograph 8: Large slab on grade shed to the east of the house at 47-53 Gallipoli Street, facing north.



Photograph 9: Household chemicals, cleaning supplies and weed management supplies in front of the large building at 47-53 Gallipoli Street, facing north east.



Photograph 10: Animal shelter and attached yard at 47-53 Gallipoli Street, facing north west.



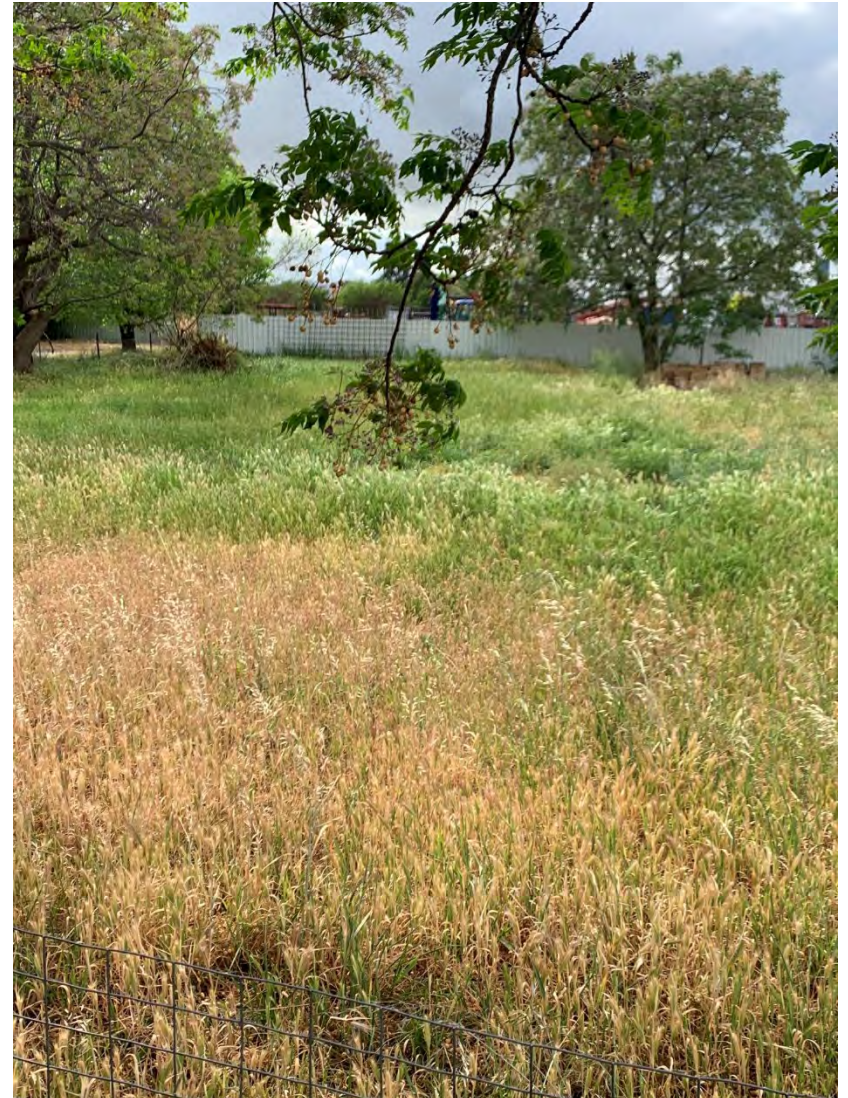
Photograph 11: Garden to the south of the house at 47-53 Gallipoli Street, facing south east.



Photograph 12: Single storey weatherboard house at 57 Gallipoli Street, facing east.



Photograph 13: Small shed in the north east corner of the rear yard at 57 Gallipoli Street, facing east.



Photograph 14: Lot 1 55 Gallipoli Street, facing east. The concrete pad can be seen to the right.



Photograph 15: Concrete pad in the north east corner of Lot 1 55 Gallipoli Street, facing east.



Photograph 16: Stockpile of branches and scrap wood on Lot 3 59-63 Gallipoli Street, facing south east.



Photograph 17: Lot 4 59-63 Gallipoli Street, facing east.
The laydown area is to the right.



Photograph 18: Laydown area at Lot 5 59-63 Gallipoli Street,
facing west.



Photograph 19: Laydown area at Lot 5 59-63 Gallipoli Street, facing south east.




Attachment E : *Sampling locations*

47-63 Gallipoli Street Temora NSW 2666

Preliminary Site Investigation
Report No. 9668
Google Earth image 2022

Legend

-  Animal yards
-  Laydown area (approx.)
-  Sampling locations



Attachment F : *Tabulated results*

Page: 1 of 1
Job number: 9668
Project: 47-63 Gallipoli Street Temora NSW

Compound	Sample date 26/10/23 26/10/23 26/10/23 26/10/23 26/10/23 26/10/23 26/10/23 26/10/23																Residential A Criteria				
	Sample location Nursery Nursery Nursery Yards Laydown area Laydown area Laydown area Laydown area																				
	Sample ID 1 2 3 4 5 6 7 8																				
	Sample depth (m)	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3	0-0.3					
LOR	Unit	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	HILs	HSLs	ACLs	EILs	ESLs
Arsenic	5 mg/kg	12	6	9	<5	6	<5	6	<5	-	-	-	-	100	-	-	100	-	-	-	-
Cadmium	1 mg/kg	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	20	-	-	-	-	-	-	-
Chromium	2 mg/kg	42	46	22	32	54	43	81	53	-	-	-	-	-	-	-	400	-	-	-	-
Copper	5 mg/kg	111	79	79	65	61	62	104	69	-	-	-	-	6000	-	-	190	-	-	-	-
Lead	5 mg/kg	22	25	30	23	28	24	32	18	-	-	-	-	300	-	-	1100	-	-	-	-
Nickel	2 mg/kg	10	11	8	10	10	11	19	12	-	-	-	-	400	-	-	170	-	-	-	-
Zinc	5 mg/kg	70	81	79	133	74	61	132	50	-	-	-	-	7400	-	-	400	-	-	-	-
Mercury	0.1 mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	40	-	-	-	-	-	-	-
PCBs	0.1 mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	1	-	-	-	-	-	-	-
HCB	0.05 mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	10	-	-	-	-	-	-	-
Heptachlor	0.05 mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	6	-	-	-	-	-	-	-
Chlordane	0.05 mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	50	-	-	-	-	-	-	-
Endrin	0.05 mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	10	-	-	-	-	-	-	-
Endosulfan	0.05 mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	270	-	-	-	-	-	-	-
Aldrin+dieldrin	0.05 mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	6	-	-	-	-	-	-	-
DDT+DDE+DDD	0.05 mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	240	-	-	-	-	-	-	-
Chlorpyrifos	0.05 mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	160	-	-	-	-	-	-	-
Phenols	0.5 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	3000	-	-	-	-	-	-	-
PAHs	0.5 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	300	-	-	-	-	-	-	-
Benzo(a)pyrene	0.5 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene TEQ (half LOR)	0.5 mg/kg	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	-	-	-	-	3	-	-	-	-	-	0.7	-
TRH C6-C10 minux BTEX (F1)	10 mg/kg	<10	<10	<10	<10	<10	<10	<10	<10	-	-	-	-	-	-	50/4400	-	-	-	180	-
TRH C10-C16 minus napthalene (F2)	50 mg/kg	<50	<50	<50	<50	<50	<50	<50	<50	-	-	-	-	-	-	280/3300	-	-	-	120	-
TRH C16-C34 (F3)	100 mg/kg	<100	<100	<100	<100	<100	<100	<100	<100	-	-	-	-	-	-	-/4500	-	-	-	1300	-
TRH C34-C40 (F4)	100 mg/kg	<100	<100	<100	<100	<100	<100	<100	<100	-	-	-	-	-	-	-/6300	-	-	-	5600	-
Benzene	0.2 mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	-	-	-	-	-	0.7	-	-	-	65	-
Toluene	0.5 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	480	-	-	-	105	-
Ethylbenzene	0.5 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	125	-
Xylenes	0.5 mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	-	110	-	-	-	45	-
Napthalene	1 mg/kg	<1	<1	<1	<1	<1	<1	<1	<1	-	-	-	-	-	-	5	-	-	170	-	-



Attachment G : *Laboratory reports*



Chain of Custody

DM McMahon Pty Ltd
6 Jones Street
PO Box 6118, Wagera NSW 2650
Ph: (02) 69 310 510

Turnaround Requirements: ☒ Standard TAT ☐ Non Standard or Urgent TAT (List Due Date):

Analysing Laboratory: ALS Environmental - Sydney

Project: 47-63 Gallipoli Street Temora NSW

Order No.: 9668

Project Manager: David McMahon

Contact Ph: (02) 69 310 510

Sampling Officer: W. Arthur

Report Format: Default

Email Reports to: admin@dmcmahon.com.au

Email Invoice to: accounts@dmcmahon.com.au

For Laboratory Use Only (Circle)

Custody Seal Intact?	Yes	No	N/A
Freeze/Frozen ice bricks present upon sample	Yes	No	N/A
Random sample temp on receipt:			°C
Other comments:			

QUOTE NO.: EN/222/21

COC SEQUENCE NUMBER

COC:	1	2	3	4	5	6	7	8
OF:	1	2	3	4	5	6	7	8

Relinquished by: W. Arthur
Date: 26/10/2023
Signature:

Received by: Ashvid
Date: 27/10/2023
Signature:

Relinquished by:
Date:
Signature:
Received by:
Date:
Signature:

SAMPLE DETAILS			CONTAINER INFORMATION		ANALYSIS REQUIRED								Additional Information	
LAB USE	SAMPLE ID	DATE/TIME	MATRIX (see below)	TYPE & PRESERVATIVE (see codes below)	TOTAL CONTAINERS	including suites (where metals are required, specify total or dissolved)								Comments on likely contaminant levels, dilutions, or samples requiring specific QC analysis etc.
						S-19 (TRH, BTEXN, PAH, Phenols, OC, OP, PCB, 8 Metals)	S-2 (Metals)	W-2 (Metals)						
1	9668/1		S	Unpreserved Glass Jar	1	✓								
2	9668/2		S	Unpreserved Glass Jar	1	✓								
3	9668/3		S	Unpreserved Glass Jar	1	✓								
4	9668/4		S	Unpreserved Glass Jar	1	✓								
5	9668/5		S	Unpreserved Glass Jar	1	✓								
6	9668/6		S	Unpreserved Glass Jar	1	✓								
7	9668/7		S	Unpreserved Glass Jar	1	✓								
8	9668/8		S	Unpreserved Glass Jar	1	✓								
9	Duplicate		S	Unpreserved Glass Jar	1		✓							
10	Rinsate		W	N	1			✓						
TOTAL					10									

Matrix

W - Water; S - Soil; P - Unpreserved Plastic; N - Nitric Preserved Oxic; SH - Sodium Hydroxide Preserved Plastic; AG - Amber glass Unpreserved; AP - Airtight Unpreserved Plastic; V - VOA Vial HCl Preserved; VB - VOA Vial Sodium Sulfate Preserved; VS - VOA Vial Sulfuric Preserved; AV - Airtight Unpreserved Vial; SG - Sulfuric Preserved Amber glass; H - HCl preserved Plastic; HS - HCl preserved Speciation bottle; SP - Sulfuric Preserved Plastic; F - Formaldehyde Preserved class; Z - Zinc Acetate Preserved Bottle; E - EDTA Preserved Bottle; ST - Sterile Bottle; ASS - Plastic Bag for Acid Sulphate Soils; B - Unpreserved Bag; A - Air; D - Dust.

Container Codes:

P - Unpreserved Plastic; N - Nitric Preserved Oxic; SH - Sodium Hydroxide Preserved Plastic; AG - Amber glass Unpreserved; AP - Airtight Unpreserved Plastic; V - VOA Vial HCl Preserved; VB - VOA Vial Sodium Sulfate Preserved; VS - VOA Vial Sulfuric Preserved; AV - Airtight Unpreserved Vial; SG - Sulfuric Preserved Amber glass; H - HCl preserved Plastic; HS - HCl preserved Speciation bottle; SP - Sulfuric Preserved Plastic; F - Formaldehyde Preserved class; Z - Zinc Acetate Preserved Bottle; E - EDTA Preserved Bottle; ST - Sterile Bottle; ASS - Plastic Bag for Acid Sulphate Soils; B - Unpreserved Bag; A - Air; D - Dust.

Environmental Division
Sydney
Work Order Reference
ES2337138



Telephone : + 61-2-8784 8556



SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order : **ES2337138**

Client	: DM MCMAHON PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: ADMIN	Contact	: Customer Services ES
Address	: 6 JONES ST Wagga Wagga NSW, AUSTRALIA 2650	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: admin@dmmcmahon.com.au	E-mail	: ALSEnviro.Sydney@ALSGlobal.com
Telephone	: +61 02 6931 0510	Telephone	: +61-2-8784 8555
Facsimile	: ----	Facsimile	: +61-2-8784 8500
Project	: 47-63 Gallipoli Street Temora NSW	Page	: 1 of 3
Order number	: 9668	Quote number	: EB2017DMMCMMA0001 (EN/222)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: W. Arthur		

Dates

Date Samples Received	: 27-Oct-2023 11:30	Issue Date	: 27-Oct-2023
Client Requested Due Date	: 03-Nov-2023	Scheduled Reporting Date	: 03-Nov-2023

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Not Available
No. of coolers/boxes	: 1	Temperature	: 16.1, 17.7, 17.7°C
Receipt Detail	: HARD ESKY	No. of samples received / analysed	: 9 / 9
		No. of samples NOT collected	: 1

General Comments

- This report contains the following information:
 - Sample Container(s)/Preservation Non-Compliances
 - Summary of Sample(s) and Requested Analysis
 - Proactive Holding Time Report
 - Requested Deliverables
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The laboratory will process these samples unless instructions are received from you indicating you do not wish to proceed. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- Sample 'Duplicate' was not received due to the following reason: Sample broken in transit
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Please be aware that APHA/NEPM recommends water and soil samples be chilled to less than or equal to 6°C for chemical analysis, and less than or equal to 10°C but unfrozen for Microbiological analysis. Where samples are received above this temperature, it should be taken into consideration when interpreting results. Refer to ALS EnviroMail 85 for ALS recommendations of the best practice for chilling samples after sampling and for maintaining a cool temperature during transit.



Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- No sample container / preservation non-compliance exists.

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process necessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.

If no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component

Matrix: **SOIL**

Laboratory sample ID	Sampling date / time	Sample ID	SOIL - EA055-103 Moisture Content	SOIL - S-19 TRH/BTEX/PAH/Ph/OC/OP/PCB/8 metals
ES2337138-001	26-Oct-2023 00:00	9668/1	✓	✓
ES2337138-002	26-Oct-2023 00:00	9668/2	✓	✓
ES2337138-003	26-Oct-2023 00:00	9668/3	✓	✓
ES2337138-004	26-Oct-2023 00:00	9668/4	✓	✓
ES2337138-005	26-Oct-2023 00:00	9668/5	✓	✓
ES2337138-006	26-Oct-2023 00:00	9668/6	✓	✓
ES2337138-007	26-Oct-2023 00:00	9668/7	✓	✓
ES2337138-008	26-Oct-2023 00:00	9668/8	✓	✓

Matrix: **WATER**

Laboratory sample ID	Sampling date / time	Sample ID	WATER - W-02T 8 metals (Total)
ES2337138-010	26-Oct-2023 00:00	Rinsate	✓

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.



Requested Deliverables

ACCOUNTS

- A4 - AU Tax Invoice (INV)

Email accounts@dmmcmahon.com.au

ADMIN

- *AU Certificate of Analysis - NATA (COA)
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)
- Chain of Custody (CoC) (COC)
- EDI Format - XTab (XTAB)

Email admin@dmmcmahon.com.au

Email admin@dmmcmahon.com.au

Email admin@dmmcmahon.com.au

Email admin@dmmcmahon.com.au

Email admin@dmmcmahon.com.au

Email admin@dmmcmahon.com.au



CERTIFICATE OF ANALYSIS

Work Order : ES2337138
Client : DM MCMAHON PTY LTD
Contact : ADMIN
Address : 6 JONES ST
Wagga Wagga NSW, AUSTRALIA 2650
Telephone : +61 02 6931 0510
Project : 47-63 Gallipoli Street Temora NSW
Order number : 9668
C-O-C number : ----
Sampler : W. Arthur
Site : ----
Quote number : EN/222
No. of samples received : 10
No. of samples analysed : 9

Page : 1 of 14
Laboratory : Environmental Division Sydney
Contact : Customer Services ES
Address : 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone : +61-2-8784 8555
Date Samples Received : 27-Oct-2023 11:30
Date Analysis Commenced : 31-Oct-2023
Issue Date : 04-Nov-2023 09:47



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Edwandy Fadjjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contract for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

ø = ALS is not NATA accredited for these tests.

~ = Indicates an estimated value.

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a,h)anthracene (1.0), Benzo(g,h,i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/1	9668/2	9668/3	9668/4	9668/5
Sampling date / time					26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		ES2337138-001	ES2337138-002	ES2337138-003	ES2337138-004	ES2337138-005
					Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		3.9	10.1	7.0	5.8	4.7
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		12	6	9	<5	6
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		42	46	22	32	54
Copper	7440-50-8	5	mg/kg		111	79	79	65	61
Lead	7439-92-1	5	mg/kg		22	25	30	23	28
Nickel	7440-02-0	2	mg/kg		10	11	8	10	10
Zinc	7440-66-6	5	mg/kg		70	81	79	133	74
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4,4'-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/1	9668/2	9668/3	9668/4	9668/5
Sampling date / time					26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		ES2337138-001	ES2337138-002	ES2337138-003	ES2337138-004	ES2337138-005
					Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued									
4,4'-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/1	9668/2	9668/3	9668/4	9668/5
Sampling date / time					26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		ES2337138-001	ES2337138-002	ES2337138-003	ES2337138-004	ES2337138-005
					Result	Result	Result	Result	Result
EP075(SIM)A: Phenolic Compounds - Continued									
2,6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg		<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	-----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	-----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	-----	0.5	mg/kg		0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	-----	0.5	mg/kg		1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	-----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	-----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	-----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	-----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	-----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/1	9668/2	9668/3	9668/4	9668/5
Sampling date / time				26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	
Compound	CAS Number	LOR	Unit	ES2337138-001	ES2337138-002	ES2337138-003	ES2337138-004	ES2337138-005	
				Result	Result	Result	Result	Result	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10	
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50	
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100	
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	<50	<50	<50	
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50	
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5	
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1	
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%	96.7	100	110	105	107	
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%	90.6	92.7	102	104	107	
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%	77.9	78.6	86.3	85.9	89.0	
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%	76.7	76.2	78.4	78.7	78.0	
2-Chlorophenol-D4	93951-73-6	0.5	%	97.6	97.2	101	98.8	97.6	
2,4,6-Tribromophenol	118-79-6	0.5	%	85.8	88.2	101	94.4	86.5	
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%	82.0	80.3	81.4	82.0	82.3	
Anthracene-d10	1719-06-8	0.5	%	92.3	90.8	91.9	92.0	93.4	
4-Terphenyl-d14	1718-51-0	0.5	%	87.5	85.6	86.3	86.9	88.2	
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%	101	100	97.6	99.9	96.7	
Toluene-D8	2037-26-5	0.2	%	109	105	103	104	106	



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/1	9668/2	9668/3	9668/4	9668/5
Sampling date / time					26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00
Compound	CAS Number	LOR	Unit		ES2337138-001	ES2337138-002	ES2337138-003	ES2337138-004	ES2337138-005
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		107	101	107	101	104



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/6	9668/7	9668/8	----	----
Sampling date / time					26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2337138-006	ES2337138-007	ES2337138-008	-----	-----
					Result	Result	Result	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		8.2	6.1	5.6	----	----
EG005(ED093)T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	6	<5	----	----
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	----	----
Chromium	7440-47-3	2	mg/kg		43	81	53	----	----
Copper	7440-50-8	5	mg/kg		62	104	69	----	----
Lead	7439-92-1	5	mg/kg		24	32	18	----	----
Nickel	7440-02-0	2	mg/kg		11	19	12	----	----
Zinc	7440-66-6	5	mg/kg		61	132	50	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Total Chlordane (sum)	----	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4,4'-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
4,4'-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/6	9668/7	9668/8	----	----
Sampling date / time					26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2337138-006	ES2337138-007	ES2337138-008	-----	-----
					Result	Result	Result	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
4,4'-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/5 0-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	<0.05	<0.05	----	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	<1	<1	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/6	9668/7	9668/8	----	----
Sampling date / time					26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2337138-006	ES2337138-007	ES2337138-008	-----	-----
					Result	Result	Result	----	----
EP075(SIM)A: Phenolic Compounds - Continued									
2,6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pentachlorophenol	87-86-5	2	mg/kg		<2	<2	<2	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	0.6	0.6	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	1.2	1.2	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	----	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	----	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	----	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/6	9668/7	9668/8	----	----
Sampling date / time					26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2337138-006	ES2337138-007	ES2337138-008	-----	-----
					Result	Result	Result	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	----	----
>C10 - C16 Fraction	-----	50	mg/kg		<50	<50	<50	----	----
>C16 - C34 Fraction	-----	100	mg/kg		<100	<100	<100	----	----
>C34 - C40 Fraction	-----	100	mg/kg		<100	<100	<100	----	----
^ >C10 - C40 Fraction (sum)	-----	50	mg/kg		<50	<50	<50	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	-----	50	mg/kg		<50	<50	<50	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
^ Sum of BTEX	-----	0.2	mg/kg		<0.2	<0.2	<0.2	----	----
^ Total Xylenes	-----	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	----	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		107	111	102	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		104	115	99.9	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		86.9	95.9	83.4	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		76.4	80.0	80.5	----	----
2-Chlorophenol-D4	93951-73-6	0.5	%		96.1	100	102	----	----
2,4,6-Tribromophenol	118-79-6	0.5	%		80.9	96.9	105	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		81.2	83.2	83.4	----	----
Anthracene-d10	1719-06-8	0.5	%		91.2	93.8	95.3	----	----
4-Terphenyl-d14	1718-51-0	0.5	%		86.2	87.9	90.0	----	----
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.2	%		94.8	99.4	101	----	----
Toluene-D8	2037-26-5	0.2	%		105	106	101	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	9668/6	9668/7	9668/8	----	----
				Sampling date / time	26-Oct-2023 00:00	26-Oct-2023 00:00	26-Oct-2023 00:00	----	----
Compound	CAS Number	LOR	Unit		ES2337138-006	ES2337138-007	ES2337138-008	-----	-----
					Result	Result	Result	----	----
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		101	99.9	106	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	Rinsate	----	----	----	----
Sampling date / time					26-Oct-2023 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2337138-010	-----	-----	-----	-----
					Result	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2,4,6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	63	125
Toluene-D8	2037-26-5	67	124
4-Bromofluorobenzene	460-00-4	66	131



QA/QC Compliance Assessment to assist with Quality Review

Work Order	: ES2337138	Page	: 1 of 8
Client	: DM MCMAHON PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: ADMIN	Telephone	: +61-2-8784 8555
Project	: 47-63 Gallipoli Street Temora NSW	Date Samples Received	: 27-Oct-2023
Site	: ----	Issue Date	: 04-Nov-2023
Sampler	: W. Arthur	No. of samples received	: 10
Order number	: 9668	No. of samples analysed	: 9

This report is automatically generated by the ALS LIMS through interpretation of the ALS Quality Control Report and several Quality Assurance parameters measured by ALS. This automated reporting highlights any non-conformances, facilitates faster and more accurate data validation and is designed to assist internal expert and external Auditor review. Many components of this report contribute to the overall DQO assessment and reporting for guideline compliance.

Brief method summaries and references are also provided to assist in traceability.

Summary of Outliers

Outliers : Quality Control Samples

This report highlights outliers flagged in the Quality Control (QC) Report.

- **NO** Method Blank value outliers occur.
- **NO** Duplicate outliers occur.
- **NO** Laboratory Control outliers occur.
- **NO** Matrix Spike outliers occur.
- For all regular sample matrices, **NO** surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

- **NO** Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- **NO** Quality Control Sample Frequency Outliers exist.

If samples are identified below as having been analysed or extracted outside of recommended holding times, this should be taken into consideration when interpreting results.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)								
Soil Glass Jar - Unpreserved (EA055)		26-Oct-2023	----	----	----	31-Oct-2023	09-Nov-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
EG005(ED093)T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T)		26-Oct-2023	01-Nov-2023	23-Apr-2024	✓	02-Nov-2023	23-Apr-2024	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T)		26-Oct-2023	01-Nov-2023	23-Nov-2023	✓	03-Nov-2023	23-Nov-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)		26-Oct-2023	01-Nov-2023	09-Nov-2023	✓	03-Nov-2023	11-Dec-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)		26-Oct-2023	01-Nov-2023	09-Nov-2023	✓	02-Nov-2023	11-Dec-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							

Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068)		26-Oct-2023	01-Nov-2023	09-Nov-2023	✓	02-Nov-2023	11-Dec-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM))		26-Oct-2023	01-Nov-2023	09-Nov-2023	✓	02-Nov-2023	11-Dec-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM))		26-Oct-2023	01-Nov-2023	09-Nov-2023	✓	02-Nov-2023	11-Dec-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP071)		26-Oct-2023	01-Nov-2023	09-Nov-2023	✓	02-Nov-2023	11-Dec-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
Soil Glass Jar - Unpreserved (EP080)		26-Oct-2023	31-Oct-2023	09-Nov-2023	✓	02-Nov-2023	09-Nov-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
Soil Glass Jar - Unpreserved (EP071)		26-Oct-2023	01-Nov-2023	09-Nov-2023	✓	02-Nov-2023	11-Dec-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							
Soil Glass Jar - Unpreserved (EP080)		26-Oct-2023	31-Oct-2023	09-Nov-2023	✓	02-Nov-2023	09-Nov-2023	✓
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							



Matrix: SOIL Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080)		26-Oct-2023	31-Oct-2023	09-Nov-2023	✔	02-Nov-2023	09-Nov-2023	✔
9668/1,	9668/2,							
9668/3,	9668/4,							
9668/5,	9668/6,							
9668/7,	9668/8							

Matrix: WATER Evaluation: ✖ = Holding time breach ; ✔ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)							
Rinsate	26-Oct-2023	31-Oct-2023	23-Apr-2024	✔	31-Oct-2023	23-Apr-2024	✔
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T)							
Rinsate	26-Oct-2023	----	----	----	01-Nov-2023	23-Nov-2023	✔



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	2	18	11.11	10.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	18	5.56	5.00	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard

Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	

Page : 6 of 8
 Work Order : ES2337138
 Client : DM MCMAHON PTY LTD
 Project : 47-63 Gallipoli Street Temora NSW



Matrix: **WATER**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification .

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	2	20	10.00	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	2	19	10.53	10.00	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	20	5.00	5.00	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-MS - Suite A	EG020A-T	1	19	5.26	5.00	✓	NEPM 2013 B3 & ALS QC Standard



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055	SOIL	In house: A gravimetric procedure based on weight loss over a 12 hour drying period at 105-110 degrees C. This method is compliant with NEPM Schedule B(3).
Total Metals by ICP-AES	EG005T	SOIL	In house: Referenced to APHA 3120; USEPA SW 846 - 6010. Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂) (Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3).
Pesticides by GCMS	EP068	SOIL	In house: Referenced to USEPA SW 846 - 8270 Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM Schedule B(3).
TRH - Semivolatile Fraction	EP071	SOIL	In house: Referenced to USEPA SW 846 - 8015 Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C40. Compliant with NEPM Schedule B(3).
PAH/Phenols (SIM)	EP075(SIM)	SOIL	In house: Referenced to USEPA SW 846 - 8270. Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM Schedule B(3)
TRH Volatiles/BTEX	EP080	SOIL	In house: Referenced to USEPA SW 846 - 8260. Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. Compliant with NEPM Schedule B(3) amended.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	In house: Referenced to APHA 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	In house: Referenced to APHA 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM Schedule B(3).
Preparation Methods	Method	Matrix	Method Descriptions



<i>Preparation Methods</i>	<i>Method</i>	<i>Matrix</i>	<i>Method Descriptions</i>
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	In house: Referenced to USEPA 200.2. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM Schedule B(3).
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	In house: Referenced to USEPA SW 846 - 5030A. 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids	ORG17	SOIL	In house: Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 30mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Digestion for Total Recoverable Metals	EN25	WATER	In house: Referenced to USEPA SW846-3005. Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM Schedule B(3)



QUALITY CONTROL REPORT

Work Order	: ES2337138	Page	: 1 of 14
Client	: DM MCMAHON PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: ADMIN	Contact	: Customer Services ES
Address	: 6 JONES ST Wagga Wagga NSW, AUSTRALIA 2650	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 6931 0510	Telephone	: +61-2-8784 8555
Project	: 47-63 Gallipoli Street Temora NSW	Date Samples Received	: 27-Oct-2023
Order number	: 9668	Date Analysis Commenced	: 31-Oct-2023
C-O-C number	: ----	Issue Date	: 04-Nov-2023
Sampler	: W. Arthur		
Site	: ----		
Quote number	: EN/222		
No. of samples received	: 10		
No. of samples analysed	: 9		



This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted, unless the sampling was conducted by ALS. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Edwandy Fadjjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini	LCMS Coordinator	Sydney Inorganics, Smithfield, NSW
Wisam Marassa	Inorganics Coordinator	Sydney Inorganics, Smithfield, NSW



General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis. Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
 Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
 CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
 LOR = Limit of reporting
 RPD = Relative Percentage Difference
 # = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG005(ED093)T: Total Metals by ICP-AES (QC Lot: 5395515)									
ES2337052-008	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	32	39.8	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	3	3	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	13	50.1	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	10	11	9.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	19	28	38.3	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	142	119	17.6	0% - 20%
ES2337073-003	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	25	28	12.2	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	23	27	13.8	0% - 50%
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	7	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	96	92	4.4	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	182	192	5.4	0% - 20%
		EG005T: Zinc	7440-66-6	5	mg/kg	695	678	2.4	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5395519)									
ES2337072-002	Anonymous	EA055: Moisture Content	----	0.1	%	2.2	3.6	45.6	No Limit
ES2337138-002	9668/2	EA055: Moisture Content	----	0.1	%	10.1	9.4	7.4	0% - 50%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5395516)									
ES2337052-008	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2337073-003	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.2	0.2	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 5391260)									
ES2336425-023	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES2337138-007	9668/7	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 5391259)									
ES2336425-023	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2337138-007	9668/7	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 5391259) - continued									
ES2337138-007	9668/7	EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 5391259)									
ES2336425-023	Anonymous	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES2337138-007	9668/7	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit

Page : 5 of 14
 Work Order : ES2337138
 Client : DM MCMAHON PTY LTD
 Project : 47-63 Gallipoli Street Temora NSW



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 5391259) - continued									
ES2337138-007	9668/7	EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 5391258)									
ES2336425-023	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES2337138-007	9668/7	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 5391258)									
ES2336425-023	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		205-82-3							
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Page : 6 of 14
 Work Order : ES2337138
 Client : DM MCMAHON PTY LTD
 Project : 47-63 Gallipoli Street Temora NSW



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 5391258) - continued									
ES2336425-023	Anonymous	EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2337138-007	9668/7	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			205-82-3						
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5391257)							
ES2336425-023	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2337138-007	9668/7	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5394647)									
ES2337138-001	9668/1	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES2337238-003	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5391257)									
ES2336425-023	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit

Page : 7 of 14
 Work Order : ES2337138
 Client : DM MCMAHON PTY LTD
 Project : 47-63 Gallipoli Street Temora NSW



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5391257) - continued									
ES2336425-023	Anonymous	EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES2337138-007	9668/7	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5394647)									
ES2337138-001	9668/1	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
ES2337238-003	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 5394647)									
ES2337138-001	9668/1	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES2337238-003	Anonymous	EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit		
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG020T: Total Metals by ICP-MS (QC Lot: 5393537)									
ES2336943-018	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
ES2337083-001	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.005	0.004	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.005	0.005	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.013	0.013	0.0	0% - 50%
		EG020A-T: Lead	7439-92-1	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.016	0.015	0.0	0% - 50%
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.032	0.030	6.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Acceptable RPD (%)
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5393563)									
EN2310837-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
ES2337200-003	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit



Method Blank (MB) and Laboratory Control Sample (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit			Result	LCS	Low
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5395515)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	121.1 mg/kg	94.4	88.0	113
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	0.74 mg/kg	117	70.0	130
EG005T: Chromium	7440-47-3	2	mg/kg	<2	19.6 mg/kg	105	68.0	132
EG005T: Copper	7440-50-8	5	mg/kg	<5	52.9 mg/kg	105	89.0	111
EG005T: Lead	7439-92-1	5	mg/kg	<5	60.8 mg/kg	87.7	82.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	15.3 mg/kg	82.3	80.0	120
EG005T: Zinc	7440-66-6	5	mg/kg	<5	139.3 mg/kg	79.6	66.0	133
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5395516)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.087 mg/kg	103	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5391260)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	111	62.0	126
EP068A: Organochlorine Pesticides (OC) (QCLot: 5391259)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	81.2	69.0	113
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	65.0	117
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	86.4	67.0	119
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	89.6	68.0	116
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	65.0	117
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.7	67.0	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	87.3	69.0	115
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	79.4	62.0	118
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	79.4	63.0	117
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	85.5	66.0	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	64.0	116
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	66.0	116
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.6	67.0	115
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.0	67.0	123
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.9	69.0	115
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	78.3	69.0	121
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	77.3	56.0	120
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	101	62.0	124



Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068A: Organochlorine Pesticides (OC) (QCLot: 5391259) - continued								
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	83.8	66.0	120
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.9	64.0	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	84.2	54.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5391259)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	79.3	59.0	119
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	62.0	128
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	91.9	54.0	126
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	76.7	67.0	119
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	90.0	70.0	120
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	89.4	72.0	120
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	85.7	68.0	120
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	83.6	68.0	122
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	87.3	69.0	117
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	91.0	76.0	118
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	84.5	64.0	122
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	92.4	70.0	116
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.4	69.0	121
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	79.1	66.0	118
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	76.5	68.0	124
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	83.6	62.0	112
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	74.5	68.0	120
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	95.7	65.0	127
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	52.4	41.0	123
EP075(SIM)A: Phenolic Compounds (QCLot: 5391258)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	6 mg/kg	96.3	71.0	125
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	6 mg/kg	103	72.0	124
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	6 mg/kg	97.4	71.0	123
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	12 mg/kg	93.8	67.0	127
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	6 mg/kg	74.2	54.0	114
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	6 mg/kg	93.0	68.0	126
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	6 mg/kg	93.6	66.0	120
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	6 mg/kg	99.0	70.0	120
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	6 mg/kg	82.1	70.0	116
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	6 mg/kg	80.6	54.0	114



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Acceptable Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)A: Phenolic Compounds (QCLot: 5391258) - continued								
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	6 mg/kg	76.4	60.0	114
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	12 mg/kg	38.7	10.0	80.0
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5391258)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	6 mg/kg	93.7	77.0	125
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	6 mg/kg	85.0	72.0	124
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	6 mg/kg	88.0	73.0	127
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	6 mg/kg	83.1	72.0	126
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	6 mg/kg	89.2	75.0	127
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	6 mg/kg	91.3	77.0	127
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	6 mg/kg	87.3	73.0	127
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	6 mg/kg	88.4	74.0	128
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	6 mg/kg	83.7	69.0	123
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	6 mg/kg	88.2	75.0	127
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	6 mg/kg	82.1	68.0	116
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	6 mg/kg	92.3	74.0	126
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	6 mg/kg	77.8	70.0	126
EP075(SIM): Indeno(1,2,3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	6 mg/kg	79.6	61.0	121
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	6 mg/kg	76.8	62.0	118
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	6 mg/kg	79.3	63.0	121
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5391257)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	300 mg/kg	102	75.0	129
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	450 mg/kg	103	77.0	131
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	300 mg/kg	103	71.0	129
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5394647)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	106	72.2	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5391257)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	375 mg/kg	108	77.0	125
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	525 mg/kg	101	74.0	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	225 mg/kg	104	63.0	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5394647)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	31 mg/kg	97.1	72.4	133
EP080: BTEXN (QCLot: 5394647)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	108	76.0	124

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result		LCS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 5393537)								
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	90.4	82.0	114
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	89.2	84.0	112
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	89.9	86.0	116
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	86.2	83.0	118
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	87.5	85.0	115
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	88.0	84.0	116
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	87.6	79.0	117
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5393563)								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.01 mg/L	97.4	77.0	111

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5395516) - continued							
ES2337052-008	Anonymous	EG035T: Mercury	7439-97-6	5 mg/kg	92.4	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5391260)							
ES2336425-023	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	101	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 5391259)							
ES2336425-023	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	91.7	70.0	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	96.0	70.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	98.6	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	95.7	70.0	130
		EP068: Endrin	72-20-8	2 mg/kg	77.4	70.0	130
		EP068: 4,4'-DDT	50-29-3	2 mg/kg	85.1	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5391259)							
ES2336425-023	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	83.4	70.0	130
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	95.7	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	102	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	83.7	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	76.1	70.0	130
EP075(SIM)A: Phenolic Compounds (QCLot: 5391258)							
ES2336425-023	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	102	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	117	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	118	60.0	130
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	96.3	70.0	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	65.5	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5391258)							
ES2336425-023	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	93.6	70.0	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	95.6	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5391257)							
ES2336425-023	Anonymous	EP071: C10 - C14 Fraction	----	480 mg/kg	111	73.0	137
		EP071: C15 - C28 Fraction	----	3100 mg/kg	89.5	53.0	131
		EP071: C29 - C36 Fraction	----	2060 mg/kg	118	52.0	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5394647)							
ES2337138-001	9668/1	EP080: C6 - C9 Fraction	----	32.5 mg/kg	112	60.4	142
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5391257)							
ES2336425-023	Anonymous	EP071: >C10 - C16 Fraction	----	860 mg/kg	103	73.0	137
		EP071: >C16 - C34 Fraction	----	4320 mg/kg	96.5	53.0	131
		EP071: >C34 - C40 Fraction	----	890 mg/kg	113	52.0	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5394647)							

Page : 14 of 14
 Work Order : ES2337138
 Client : DM MCMAHON PTY LTD
 Project : 47-63 Gallipoli Street Temora NSW



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5394647) - continued							
ES2337138-001	9668/1	EP080: C6 - C10 Fraction	C6_C10	37.5 mg/kg	103	61.1	142
EP080: BTEXN (QCLot: 5394647)							
ES2337138-001	9668/1	EP080: Benzene	71-43-2	2.5 mg/kg	106	62.1	122
		EP080: Toluene	108-88-3	2.5 mg/kg	97.4	66.6	119
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	103	67.4	123
		EP080: meta- & para-Xylene	108-38-3	2.5 mg/kg	113	66.4	121
			106-42-3				
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	117	70.7	121
		EP080: Naphthalene	91-20-3	2.5 mg/kg	101	61.1	115
Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 5393537)							
ES2336906-001	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	105	70.0	130
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	104	70.0	130
		EG020A-T: Chromium	7440-47-3	1 mg/L	101	70.0	130
		EG020A-T: Copper	7440-50-8	1 mg/L	99.1	70.0	130
		EG020A-T: Lead	7439-92-1	1 mg/L	104	70.0	130
		EG020A-T: Nickel	7440-02-0	1 mg/L	103	70.0	130
		EG020A-T: Zinc	7440-66-6	1 mg/L	102	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5393563)							
ES2336237-001	Anonymous	EG035T: Mercury	7439-97-6	0.01 mg/L	84.1	70.0	130