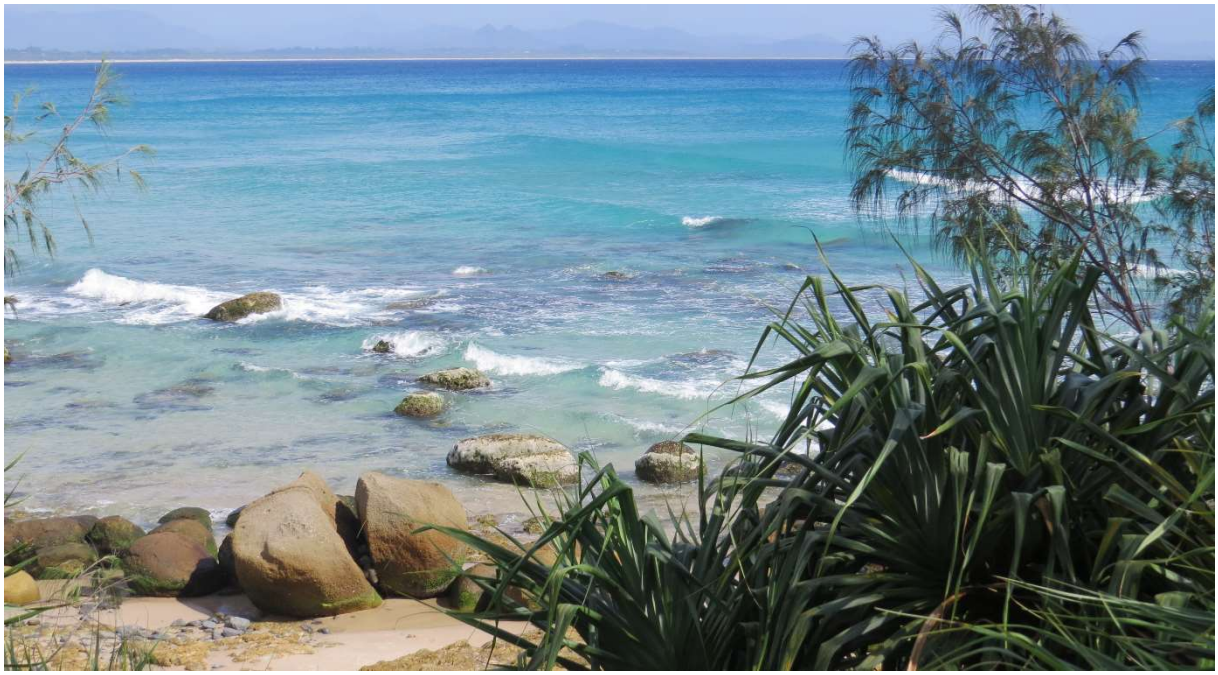
Detailed Site Investigation

146 – 152 Johnston Street

Casino, NSW

October 2023, Ref. 23034.2



Easterly Point Environmental

www.easterlypoint.com

Report details

The following report was commissioned by Momentum Collective:

Detailed Site Investigation

146 – 152 Johnston Street, Casino, NSW

October 2023, Ref. 23034.2

This report was prepared in accordance with the scope of work described in Easterly Point Environmental's proposals and the project contract, for the sole use of Momentum Collective, their agents, and the relevant regulatory authorities, including a contaminated land auditor if applicable. It is subject to the *Limitations to contaminated land information*, described in Section 1.4 of the report.

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Executive summary

The site is proposed to be developed by Momentum Collective for community housing as free-standing and semi-detached residences, with some open space and playgrounds, associated car parking, and some commercial spaces. Based on the proposed land use, the site has been assessed against the more conservative land use of Residential with accessible soil, noting that other less sensitive land uses may also apply.

Past site land uses appear to be restricted to agricultural uses of grazing and cropping, with some past use in the 1990s for temporary soil stockpiling, and an access track to the adjacent residential development site to the north. Some filling of the site by application to land of earthen material may have also occurred at this time.

A preliminary site investigation (PSI) and surficial soil sampling and associated analysis was conducted in 2020, which found impacts by arsenic in the shallow surface soils that were assumed to be related to the former agricultural uses. This detailed site investigation (DSI) was commissioned to provide an update to the PSI, including to investigate the subsurface further, and to determine if additional contamination exists at the site.

Stage 1 of this DSI included the excavation of 13 test pits across the site, and selective sampling and analysis for the potential contaminants of concern (PCOCs) identified in the site history review. As the surficial contaminants detected by Easterly Point differed markedly from the previous findings, an additional Stage 2 investigation was conducted which targeted surficial soils.

Based on the findings of this DSI, Easterly Point considers that the previously identified arsenic contamination has not been confirmed, and that the recommended remediation of arsenic in surface soils is not necessary. Some fill material was identified at the site, which with soil identified as reworked natural overlaying and intermixed with the fill, occurs over approximately 50% of the site, from the centre to the western boundary. Limited areas of building wastes, with some asbestos containing materials (ACMs), were identified in the fill and reworked natural soils.

Contrary to the previous investigation, metal concentrations in soil were low and generally consistent with background, and organic compounds were generally non detect or at low concentrations and not considered to be significant. Whereas asbestos was detected in building materials within the fill/reworked natural soils, no asbestos fibres were identified in site soils.

Based on the site history and the investigations conducted by Easterly Point, it is considered that the site is suitable for the proposed development, if specific management protocols are developed for both the site development and the ongoing use of the site. These include:

- a construction environmental management plan (CEMP) for any development;
- an unexpected findings protocol (UFP) for incorporation into the CEMP, and any ongoing site management documentation; and
- an asbestos register and an asbestos management plan (AMP) in accordance with the requirements of the *Work Health and Safety Regulation* 2017.

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1.0 Introduction

This detailed site investigation (DSI) was conducted by Easterly Point Environmental for Momentum Collective at a site located at 146 – 152 Johnston Street, Casino, New South Wales. The proposed scope of work was detailed in Easterly Point's proposals to Momentum Collective on 21 April and 12 July 2023, with their acceptance of the engagement confirmed on 3 May and 17 July 2023.

This report should be read in full, including the *Limitations to environmental information* in Section 1.4 and the attachments.

1.1 Background

The site is proposed to be developed by Momentum Collective for community housing as free-standing and semi-detached residences, with some open space and playgrounds, associated car parking, and some commercial spaces. Based on the proposed land use, the site has been assessed against the more conservative land use of *Residential with accessible soil*, noting that other less sensitive land uses may also apply.

Past site land uses appear to be restricted to agricultural uses of grazing and cropping, with some past use in the 1990s for temporary soil stockpiling, and an access track to the adjacent residential development site to the north. Some filling of the site by application to land of earthen material may have also occurred at this time.

A preliminary site investigation (PSI) with some surficial soil sampling and associated analysis was conducted in 2020 by HMC Environmental Consulting (HMC). They found impacts by arsenic in the shallow surface soils, assumed to be related to the former agricultural uses. This DSI was commissioned to provide an update to the PSI, including to investigate the subsurface further, and to determine if additional contamination exists at the site.

Stage 1 of this DSI included the excavation of 13 test pits across the site, and selective sampling and analysis for the potential contaminants of concern (PCOCs) identified in the site history review. As the surficial contaminants detected by Easterly Point differed markedly from those identified by HMC, an additional Stage 2 investigation was conducted which targeted surficial soils. The findings of the two stages are reported herein, along with updated site history information, and a critique of the previous investigation.

1.2 Objectives and scope

The objective of a DSI is to provide more complete and definitive information on issues raised in the PSI, and to provide information on the type, extent, and level of contamination for the site (EPA 2020).

As part of this DSI, the site history information from the PSI was updated to confirm that:
- all past and present potentially contaminating activities were reasonably identified;
- all potential contamination types were reasonably identified;
- the site condition was discussed; and
- the need for further investigation was assessed.

To meet these objectives, the following scope of work was undertaken:

- Review of the existing contaminated land report, HMC (December 2020) *Preliminary Site Investigation, Proposed Childcare Centre, Lot 155, 155, 157, 158 DP 834821, 146 - 152 Johnston Street, Casino*, (Ref. HMC2020.237).

- Revision of site history information and conducting relevant environmental searches, including:

- available investigation reports;
- published historical information;
- historical parish maps;
- aerial photographs;
- Before You Dig Australia (BYDA) services search;
- climate and groundwater databases;
- acid sulfate and other environmental searches; and
- state and commonwealth databases regarding contaminated land and heritage.

- Review of relevant topographic, soils, and geological maps, and the associated notes.

- Development of investigation design documents, including a preliminary conceptual site model (CSM), data quality objectives (DQOs), a sampling, analysis, and quality plan (SAQP), and an environmental and safe work method statement (E&SWMS), based on the site history review and the existing HMC (2020) data.

- Completion of a site inspection and subsurface soil sampling program, including the excavation of 13 test pits across the site, geological logging, field screening, and collection of surface and depth soil samples for analysis at a National Association of Testing Authorities (NATA) accredited laboratory.

- Completion of a Stage 2 field program, restricted to sampling of shallow soils at 24 locations and analysis for metals and selectively for organic compounds and asbestos.

- Completion of geological logs, verification and validation of the analytical data, including conducting a data usability assessment of field quality assurance (QA) and field and laboratory quality control (QC), and data analysis and interpretation.

- Reporting of the DSI results in accordance with relevant guidance, including developing a conceptual site model (CSM). The completed DSI reporting checklist from EPA (2020) is included in Appendix A.

1.3 Regulatory framework

HMC (2020) was prepared in response to development application requirement, for a proposed childcare centre at the site. Richmond Valley Council (RVC) issued an information request on 3 September 2020, during the assessment of the development application (DA2021/0033). Item 5 specified that "A preliminary contaminated land assessment in accordance with SEPP 55[1]" was required.

Section 4.6, *Contamination and remediation to be considered in determining development application*, of *State Environmental Planning Policy (Resilience and Hazards)* 2021 (which replaces SEPP 55), specifies that in determining development approvals, consent authorities must consider whether the land is contaminated, and if so, whether the land will be suitable, with or without remediation, for the purpose of the proposed development. Where a change in land use is proposed, the consent authority must consider the findings of a preliminary site investigation (PSI). If warranted by the findings of the PSI, a consent authority may require a detailed site investigation (DSI) to be conducted.

In conducting the required investigations, Section 4.14, *Guidelines and notices: all remediation work*, of the SEPP requires that all remediation work, including associated investigations, must be carried out in accordance with, amongst others, the made and approved guidelines specified in Section 105 of the *Contaminated Land Management (CLM) Act* 1997.

[1] *State Environment Planning Policy 55: Remediation of Land*, now replaced by *State Environmental Planning Policy (Resilience and Hazards)* 2021.

The primary technical guidance for contaminated land site investigations is the National Environment Protection Council (NEPC) (2013) *National Environment Protection (Assessment of Site Contamination) Measure 1999*, including *Amendment Measure 2013 (No. 1)* (ASC NEPM), including *Schedule B2: Guideline on Site Characterisation*.

Additional germane guidance which is referenced herein includes:
- Department of Environment and Conservation (DEC) (2005a) *Contaminated Sites: Guidelines for Assessing Former Orchards and Market Gardens*;
- DEC (2007) *Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination*;
- EPA (2015) *Guidelines on the Duty to Report Contamination under the* Contaminated Land Management Act *1997*;
- EPA (2020) *Consultants reporting on contaminated land, Contaminated land guidelines*;
- EPA (2022a) *Contaminated Land Guidelines: Sampling design part 1 – application; and*
- EPA (2022b) *Contaminated Land Guidelines: Sampling design part 2 – interpretation.*

1.4 Limitations to environmental information

The findings of this reporting are based on the objectives and scope of the services provided. Easterly Point Environmental performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment profession. No warranties or guarantees, expressed or implied, are made.

Easterly Point's review/assessment is strictly limited to identifying the environmental conditions associated with the subject property in regard to site contamination, and does not seek to provide an opinion regarding other aspects of the environment not related to site contamination, or to the suitability of the site in regard to:
- other aspects of the environment not related to site contamination; or
- hazardous building materials in buildings or structures; or
- structures, footings, infrastructure, and the like, whether above or below ground; or
- the suitability of fill materials for any use and any geotechnical considerations; or
- to the suitability of the site in regard to land use planning or legal use of the land; or
- regulatory responsibilities or obligations (for which a legal opinion should be sought); or
- the work health and safety (WHS) legislation; or
- the suitability of any engineering design.

Reviews of such information are only in relation to the contaminated land aspects of any project or site. If specialist technical review of such documents is required, these should be obtained by an appropriate technical or legal specialist.

The reporting and conclusions are based on the information obtained at the time of the assessments. Changes to the subsurface conditions may occur subsequent to the investigation described, through natural processes or through the intentional or accidental addition of contaminants, and these conditions may change with space and time.

Field monitoring, sampling and chemical analysis of environmental media and structures are based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate, based on regulatory requirements, site history, and the proposed land use, not on sampling and analysis of all media, at all locations, for all potential contaminants.

Limited field monitoring, and environmental sampling and laboratory analyses, were undertaken as part of the investigations reviewed or conducted by Easterly Point, as described. Ground conditions, contaminants, and material types/composition can vary between sampling locations, and this should be considered when extrapolating between sampling locations. Except at each sampling location, the nature, extent and concentration of contamination is inferred only.

Furthermore, the test methods used to characterise the contamination at each sampling location are subject to limitations and provide only an approximation of the contaminant concentrations. Monitoring and chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history, and which may not be expected at the site.

The absence of any identified hazardous or toxic materials at the site should not be interpreted as a warranty or guarantee that such materials do not exist at the site. Therefore, future work at the site which involves subsurface excavation or removal of structures or parts thereof, should be conducted based on appropriate management plans. These should include, *inter alia*, environmental management plans, including unexpected findings protocols, hazardous building materials management plans, and work health and safety plans.

If additional certainty is required, then additional site history information should be obtained, or additional exploration and sampling and analysis should be conducted. This decision should be made by the user of this information based on an appropriate risk management process, and the user should commission additional services if required.

2.0 Site identification and surrounds

2.1 Site identification and land use

The site location is shown in Figure 2.1 (overleaf), along with the surround land uses and the environmental setting. The site identification and land use details are:

Street address:	146 – 152 Johnston Street, Casino, NSW 2470;
Property description:	Lots 155, 156, 157, and 158 DP 834821;
Property size:	Approximately 3,200 m^2;
Local government area:	Richmond Valley;
Land use – existing:	Vacant;
Land use – proposed:	Community housing, residential with accessible soil;
Zoning – existing:	E1 Local centre; and
Zoning – proposed:	E1 Local centre.

2.2 Surrounding land use

The site is located on the eastern edge of the township of Casino, in an area of mixed residential, open space, and commercial/industrial land uses. Agricultural land uses occur within 500 m to 1,000 m of the site, including grazing, cropping, and orchards. The surrounding land uses include:

North:	Low density residential land use, followed by agricultural land and the Richmond Valley Events Centre;
East:	Low density residential land use to the north of Johnston Street, and a mix of low density residential land use and commercial land use to the south of Johnston Street;
South:	Albert Park recreational grounds, Discovery Parks caravan park, low density residential land use, and commercial land use, followed by recreational land and the Richmond River; and
West:	United Petroleum service station, other commercial land uses, and medium density and low density residential land use.

2.3 Surrounding environment

The Richmond River runs approximately 350 m to the south of the site, in an eastly and then south-easterly direction for approximately 30 km to Coraki, where it is joined by the Wilson River, and continues to Woodburn. Here it splits to continue south-east to Evans Head as the Evans River, or as the major flow to the north-east to Ballina. In both cases, the rivers discharge to the South Pacific Ocean through estuary systems.

Where the Richmond River runs through the town of Casino, it is described as being "effectively a gorge with high banks, exposed rock beds and river bed levels dropping over 8 m through town[2]".

[2] https://www.ses.nsw.gov.au/flood-awareness-nsw/northern-rivers/richmond-valley-lga/casino/

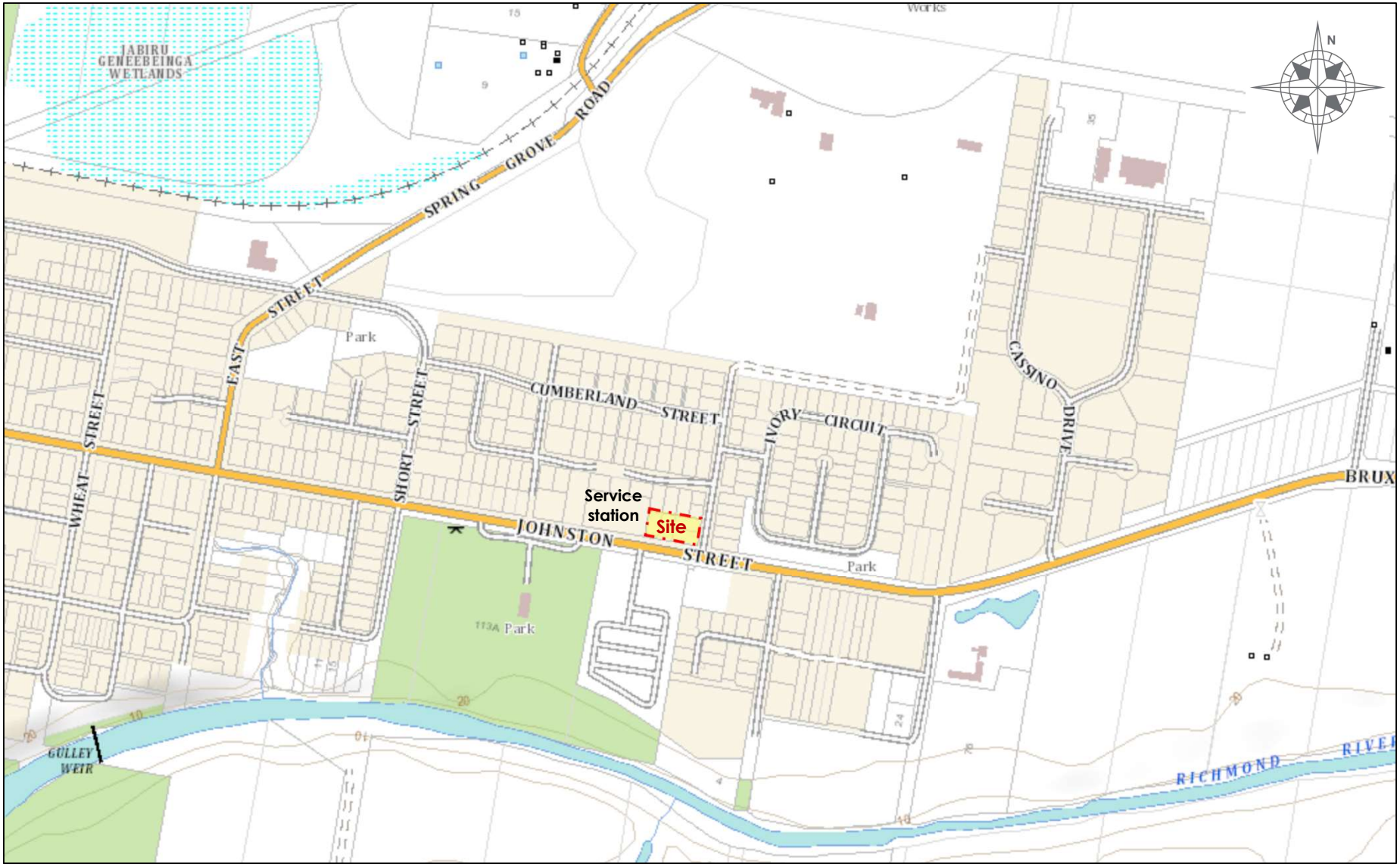

Figure 2.1: Site location and surrounding environment
Source: SIX Maps, 2023

The Jabiru Geneebeinga Wetlands are located approximately 700 m to the north-west of the site, which drain to the north-east to Barlings Creek, and then to Tomki Creek, which joins the Richmond River about nine kms to the east of the site.

The Jabiru Geneebeinga Wetlands are mapped[3] as a moderate potential groundwater dependent ecosystems (GDE), whereas the Richmond River is mapped as a high potential GDE. The site and surrounds are not mapped as terrestrial GDEs, however areas to the north and north-east are, including the surrounds of Barling Creek and the Jabiru Geneebeinga Wetlands. For subterranean GDEs, no ecosystem analysis was reported for the entire LGA.

2.3.1 Environmental values

For waters, the water quality objectives (WQOs) consist of the assigned environmental values (EVs), their indicators, and associated guideline levels. The EVs are the particular values or uses of the environment that are important for a healthy ecosystem and/or for public benefit, welfare, safety, or health, which require protection from the effects of pollution, waste discharges, and other deposits. They are the agreed environmental values and long-term goals for NSW's surface waters and groundwaters. The numerical default criteria, or trigger values (TVs), to support the EVs established by the WQOs are primarily included in ANZG (2018), ANZECC/ARMCANZ (2000), and NHMRC/NRMMC (2022).

DEC (2007) describes that all relevant EVs should be considered, including current and potential uses of the groundwater and ecosystems, and specify that:

> *It should always be assumed that groundwater is discharging to identified surface water bodies and, therefore, all environmental values of the surface water such as recreational uses, visual amenity and aquaculture operations, require consideration unless the local hydrogeology has been fully characterised and groundwater discharge is unlikely to occur.*

The site and surrounding urban areas are mapped as *Waterways affected by urban development*, within the Richmond River Catchment. For these waters, the NSW Water Quality and River Flow Objectives website[4] defines the EVs as:
- aquatic ecosystem;
- visual amenity;
- secondary contact recreation; and
- primary contact recreation.

Downgradient of Casino, the Richmond River and associated creeks are mapped as *Uncontrolled streams*, with the following EVs specified:
- aquatic ecosystem;
- visual amenity;
- secondary contact recreation;
- primary contact recreation;
- livestock water supply;
- irrigation water supply;
- homestead water supply;
- drinking water at point of supply-disinfection only;
- drinking water at point of supply-clarification and disinfection;
- drinking water at point of supply-groundwater; and
- aquatic foods (cooked).

[3] http://www.bom.gov.au/water/groundwater/gde/map.shtml

[4] https://www.environment.nsw.gov.au/ieo/

In regard to drinking water, NSW Health[5] recommends that people use the public drinking water supply in urban areas for drinking, food preparation, and personal hygiene (including cleaning teeth/oral hygiene and bathing), because it is filtered, disinfected and generally fluoridated. The quality of public water supplies is regularly monitored. People who choose to use private groundwater supplies for drinking, food preparation, and personal hygiene (including oral hygiene), should be aware of the potential risks associated with microbiological, chemical, and radiological contamination.

Notwithstanding the NSW Health recommendation, some use of shallow groundwater for domestic purposes may occur, and should be considered where potential impacts to groundwaters are identified.

[5] https://www.health.nsw.gov.au/environment/water/Pages/groundwater.aspx

3.0 Environmental setting

The desktop study of the environment at and around the site is summarised, including published climatic, topographic, geologic, soils, potential and actual acid sulfate soils (PASS/ASS), and hydrogeological information.

3.1 Local climate

A summary of the climatic data for Casino Airport, located approximately 2 km to the south of the site, is shown in Table 3.1. Casino experiences a humid subtropical climate, with hot humid summers, and mild dry winters. The temperatures are highest between November to March, and coldest in the winter months of June to August, with the highest average rainfall occurring between November and March.

Table 3.1: Climatic summary [1]

	Temperature ^{0}C		Rainfall mm		Average number of rain days [2]
	Mean minimum	Mean maximum	Mean monthly	Highest monthly	
January	19.1	30.6	131	368.4	9.2
February	19.0	29.8	147.3	358.2	10.3
March	17.7	28.4	142	451.2	11.2
April	14.1	26.0	68.2	168.8	8
May	10.5	23.2	80.8	513.8	7.1
June	8.4	20.7	75.0	249.4	6.5
July	6.6	20.8	32.1	114.2	4.7
August	7.0	22.7	43.3	196.4	4.3
September	10.3	25.8	32.6	111.2	4.7
October	13.4	27.6	68.2	244.4	7.3
November	15.9	29.0	106.6	250	8.8
December	17.9	30.1	137.6	438.6	10

Notes:
1. Data from the Bureau of Meteorology climate averages website for Casino Airport.
2. Number of days in a calendar month with ≥1 mm of precipitation.

3.2 Topography and hydrology

Based on the 1:25,000 Casino topographic map, the site is located at approximately 20 m Australian Height Datum (AHD), while a topographically low area follows the Richmond River, as it runs through the town at approximately 10 m AHD. The topography of the site is consistent with that of the surrounding land, remaining relatively flat throughout the surrounding area.

The landscape is described (Morand 1994a) as level to gently undulating broad to extensive alluvial plains and backplains of extremely low relief. Local relief is < 5 m overall, and up to 15 m on the banks of scours, terraces and channels. Drainage from the site is understood to flow to the Johnston Street stormwater system, and thence to the Richmond River.

3.3 Geology and soils

3.3.1 Geology

The surficial geology at 1:100,000 is mapped (Hashimoto and Troedson 2008) as *Qhap Holocene floodplain: silt, fluvial sand clay*, as shown in Figure 3.1.

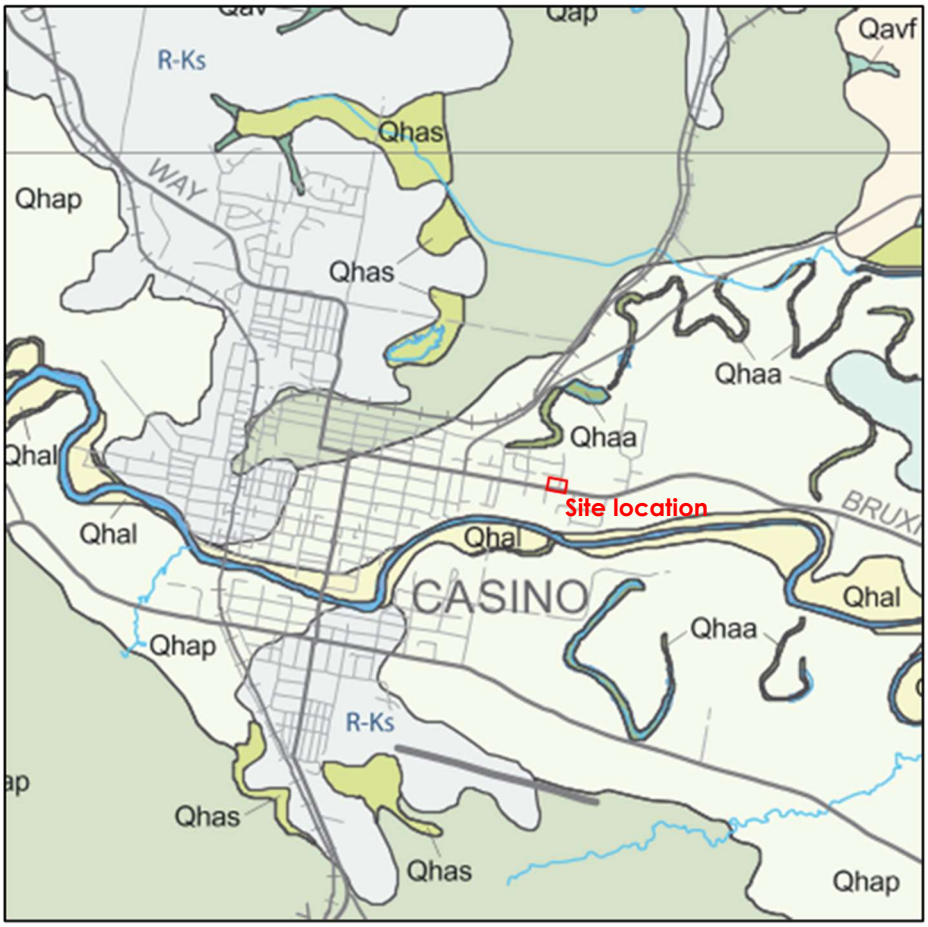

Figure 3.1: Geology sheet for site and surrounds
Lismore Area 1:100,000 Quaternary Geology Sheet

At 1:250,000, the site is shown as being underlain by Jurassic – Cretaceous aged sandstone, siltstone, claystone, and coal of the Grafton Formation (Geological Survey of NSW 1972). In the area of Casino, this geological unit is commonly overlain with *Qa*, Quaternary aged river gravels, alluvials, sand, and clay. It is also noted that the Richmond River drains through areas of Lamington Group basalts upstream of the site.

3.3.2 Soils

The soil landscape at the site is mapped at 1:100,000 as *Leycester* (le) (Morand 1994b). This is described as "level to gently undulating broad to extensive (500 - > 1,500 m) alluvial plains of extremely low relief". The soils are described as:

> *Leycester (le) – deep (>200 cm), poorly drained to moderately well drained alluvial Black Earths (Ug5.15, Ug5.17) and Structured Clays (Uf6.42) occur throughout the floodplains.*

A schematic cross-section and a summary of the Leycester soil landscape are shown in Figure 3.2 and Table 3.2. Morand (1994a) describes the soil limitations of *le2* to include low permeability, and the overall landscape limitations to include localised waterlogging.

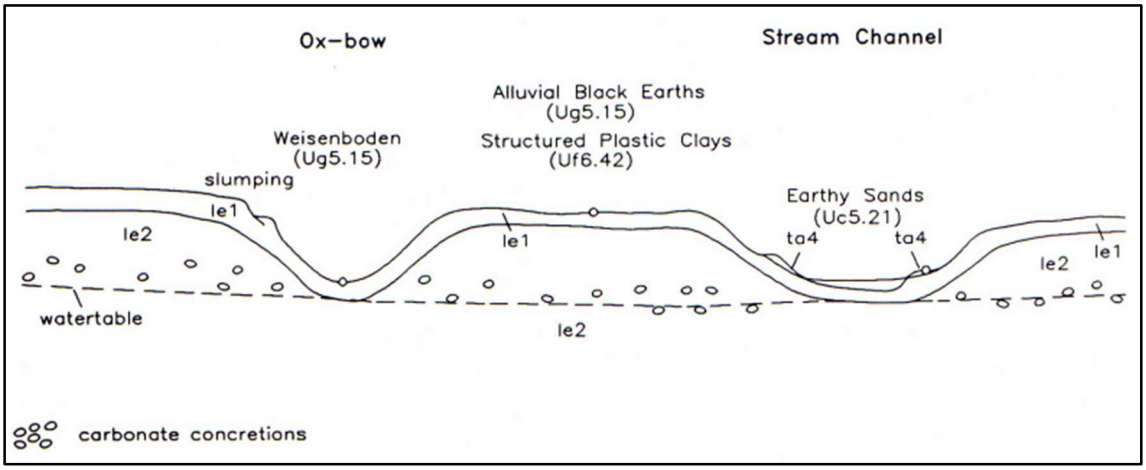

Figure 3.2: Cross-section of Leycester soil landscape
Including the occurrence and relationship of dominant soil materials

Table 3.2: Leycester (le) soil landscape summary

Dominant soil materials		Clay	Silt	Fine sand	Coarse sand	USCS class	pH	Organic matter	Cation exchange capacity
Le1	Self-mulching black light clay (topsoil – A_{11} and A_{12} horizons).	27	30	30	13	CL-CH	4.7	2.2	27.6
Le2	Cracking medium heavy clays (subsoil – B_{11}, B_{12}, B_2 horizons).	42	18	31	9	CL-CH	5.2	1.3	41.3
-	Average	34.5	24	30.5	11	-	5.0	1.8	34.5

Notes:
- Summary compiled from Morand D.T. (1994a) *Soil Landscapes of the Lismore-Ballina 1:100,000 Sheet* (report), Department of Land and Water Conservation, Sydney;
- Fine earth particle size analysis in % from Appendix 7.2.4. Fine earth fraction of a soil is the proportion that is composed of particles < 2 mm in diameter and does not include gravel. Clay < 0.002 mm, silt 0.002-0.02 mm, fine sand 0.02-0.2 mm, coarse sand 0.2-2 mm, and gravel 2-60 mm;
- Unified soil classification system (USCS) from Appendix 7.2.4. CL – Inorganic clays of low to medium plasticity, gravely clays, sandy clays, silty clays, lean clays; CH – Inorganic clays of high plasticity, fat clays;
- pH in pH units from Appendix 7.2.7. The activity of the negative log of hydrogen ions in a suspension of 1:5 soil:0.01M CaCl2. 0.75 pH units are added to approximate pH in 1:5 soil:water;
- Organic matter in % from Appendix 7.2.7. Soil organic matter = organic carbon x 1.755. Organic carbon by Walkey-Black method, which measures the amount of carbon in plant and animal remains including soil humus but not charcoal or coal. 0.5-1.0 very low, 1.0-2.0 low, 2.0-3.0 moderate, 3.0-5.0 high, and >5.0 very high. Used as an indicator of potential contamination retention, i.e. higher organic matter higher contaminant retention potential; and

- Cation exchange capacity (CEC) in (me/100 g) from Appendix 7.2.10. CEC is an indication of the number of exchange sites within a soil which may temporary hold positively charged ions. It is generally determined by the amount and type of clay and the amount of organic matter. <6 very low, 6-12 low, 12-25 moderate, 25-40 high, and > 40 very high. Used as an indicator of potential contamination retention, i.e. higher CEC higher contaminant retention potential.

3.3.3 Acid sulfate soils

Based on the site's elevation, geology, and soil type, acid sulfate soils or potential acid sulfate soils (ASS/PASS) are not considered to be relevant at the site. This was confirmed by review of the Department of Planning and Environment's Acid Sulfate Soils Risk mapping on eSPADE web map[6].

3.4 Hydrogeology

A search of known groundwater bores[7, 8] showed five bores within 500 m of the site. These are shown in Figure 3.3, and described in Table 3.3 (overleaf), with the available WaterNSW work summary reports shown in Appendix B.

Three are located on the adjacent service station site, and are described as for monitoring purposes. One is located to the north and is described as for irrigation purposes, and one to the east is described as for water supply.

Figure 3.3: Identified groundwater bores
Source: NSW Water, 2023

[6] https://www.environment.nsw.gov.au/eSpade2Webapp/

[7] https://realtimedata.waternsw.com.au/water.stm

[8] http://www.bom.gov.au/water/groundwater/explorer/map.shtml

Table 3.3: Summary of groundwater bore information

Bore	Depth (m)	SWL (m)	Date drilled, purpose, and status	Material description
GW026872	15.7	4	1967, irrigation, unknown.	Clay, sand, sandstone.
GW307744	8.5	??	2011, monitoring, functioning.	Not specified.
GW307745	8	??	2011, monitoring, functioning.	Not specified.
GW307746	9	??	2011, monitoring, functioning.	Not specified.
GW309219	25	??	2020, water supply, functioning.	Clay/sandstone

4.0 Site history

The site history information is summarised, based on information from HMC (2020) and the referenced sources.

4.1 Site history summary

Based on the limited historical information for the site, land uses have been identified as agriculture with grazing and cropping occurring, along with some storage and possibly filling with earthen material as part of the adjacent land's development. It appears that the site has been generally vacant since the 1990s, although some services including stormwater have been constructed, which would have included some disturbance and filling at the site. No specific records were sighted or provided to Easterly Point in regard to other land uses or activities.

4.2 Land use information

HMC (2020) reported that a land titles search in November 2020 reported Doyle Enterprises (Casino) Ltd as the site owner, since at least 2009. The site is understood have then been bought by Hewbrae Pty Ltd, who sold it in 2023 to the current owner, Third Sector Australia Ltd, trading as Momentum Collective.

4.2.1 Council records

No council records were obtained as part of this investigation.

4.2.2 Aerial photograph review

Four aerial photographs were reviewed from the NSW Government Spatial Services Historical Viewer[9] and SIX Maps[10]. The aerial photographs are shown in Appendix C, with the following information determined from interpretation of the aerial photographs.

Table 4.1: Aerial photograph review summary

Photographs	Site	Surrounds
1958 black & white	The site is part of a large paddock, although given the scale of the photograph, it is not clear if it is being used for grazing and/or cropping.	Agricultural land, with buildings and structures visible; assumed to be farmhouses and farm sheds.
1966 black & white	Ongoing agricultural use, with some cropping discernible as rows.	Agricultural land, with buildings and structures visible; assumed to be farmhouses and farm sheds.
1990 colour	Agricultural use has stopped, and the site appears to be being used for the stockpiling of soil and as access to the development site to the north, with an earthen track running from south central on Johnston Street, and swinging to the west parallel to the western boundary.	Ongoing development, including playing fields and the caravan park have been developed to the south-west; commercial/ industrial land use to the south-east; a service station to the immediate west followed by residential development; an ongoing development site to the north; and continued agricultural use to the north-east and east.

[9] https://www.spatial.nsw.gov.au/products_and_services/aerial_and_historical_imagery

[10] https://maps.six.nsw.gov.au/?search

Photographs	Site	Surrounds
2015 colour	Vacant grassed land, with one large tree to the east. Some services discernible through pits and access covers, and linear shallow depression with greener grass.	Similar to current, with low density residential use to the west, north, and east fully developed; a service station and other commercial uses immediately to the west, and playing fields, open space, caravan park, low density residential, and some commercial to the south.

Based on review of the aerial photographs, the site has been used for agriculture as grazing and cropping, with some storage and possibly filling with earthen material as part of the adjacent land's development.

4.3 Activities conducted

4.3.1 Chemical usage and storage

No records in regard to chemical usage or storage at the site were sighted or reported to Easterly Point. Based on the observable cropping in the 1966 aerial photograph, it is expected that some agrochemical were used to control pest and/or weeds, potentially including pesticides applied as insecticides, fungicides, herbicides, and/or as soil fumigants. DEC (2005) describes that:

> *Pesticides are the chemicals most likely to have been used on former orchards and market gardens. The types and quantities of chemicals will vary according to the specific crops grown and production systems used.*

A range of organic and inorganic compounds may have been used, with DEC (2005) describing that registered chemical use in NSW included organochlorines, organophosphates, carbamates, synthetic pyrethroids, triazines, phenoxy aliphatics, sulfonylureas, plant hormones, arsenicals (which also often have a lead component), copper, and mercury-based products. The inorganic compounds are generally more persistent in the environment and are therefore of greater concern as a source of residual contamination.

Organochlorines are typically the more persistent organic compound, with DES (2005) noting that:

> *Many of the organic compounds are likely to have decomposed in the soil within a year of application. Carbamates, synthetic pyrethroids and organo-phosphates are not considered major soil contaminants because they are generally not 'persistent'.*

Other contaminants can include fertilisers related contaminant residues such as cadmium, and zinc from galvanised products. Accordingly, a potential for metals and organochlorine pesticides is considered to exists at the site.

Based on a preliminary inspection, the adjacent service station includes multiple petrol and one diesel underground storage tanks (USTs). The diesel UST is noted to be close to the site's western boundary. A groundwater monitoring well appears to be located in an assumed down gradient position of the diesel UST, and close to the site's western boundary.

It is assumed that the UST is being monitored in accordance with the requirements of the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation* 2019. Section 20 of the Regulation specifies that the storage system should not be

used unless "the groundwater in each groundwater monitoring well on the storage site has been tested for contamination by petroleum, during the last 6 months".

4.3.2 Incidents and spills

No records in regard to incidents or chemical spills were sighted or reported to Easterly Point.

4.3.3 Waste management

No records in regard to waste management were sighted or reported to Easterly Point.

4.3.4 Filling

No information in regard to filling was sighted or reported to Easterly Point. From the 1990 aerial photograph, it appears that the site was used as part of the adjacent land development to the north. Multiple stockpiles are evident on the western portion, and a track transects the site in an arc from the south (Johnston Street) to the building site to the north.

The stockpiles and the road appear to be generally tan coloured (site soils are expected to be predominately black – dark grey), suggesting imported material; although noting that at the scale of the aerial photograph, the image becomes pixelated such that it is not possible to clearly discern the details.

4.4 Services

A services search was conducted through Before You Dig Australia (BYDA) on 28 April 2023, with the relevant plans shown in Appendix D. The identified asset holders were:
- Essential Energy (above ground);
- Richmond Valley Council (water and sewer);
- NBN (telecommunications); and
- Telstra (telecommunications).

Below ground services have a potential to act as preferential pathways due to the excavation of natural soils and backfilling with generally more permeable coarse sands and gravels. This is more of a concern for deeper assets, including sewer and stormwater, and where groundwater impacts exist.

4.5 Licences, permits, and notices

Table 4.3 outlines a list of online data bases pertaining to licences, permits, and notices for the site as reviewed in May 2023.

Table 4.3: Database searches for contaminated land

Data base	Use of data base	Result
NSW EPA List of Contaminated Sites	The register lists contaminated sites in NSW that have been notified to the EPA under the duty to report obligations under the CLM Act. Sites appearing on this list indicate the contamination may or may not be significant enough to warrant further investigation, remediation or regulatory intervention by EPA.	At the time of this search, the site or sites in the immediate vicinity are not listed on the register. The Casino Road House, located approximately 600 m to the west of the site is listed as "Contamination currently regulated under CLM Act".

Data base	Use of data base	Result
NSW EPA Contaminated Land Record	The register lists sites that present a significant risk of harm to human health and/or the environment under the CLM Act 1997. The register shows all current and former remediation orders issued on sites in NSW.	At the time of this search, the site or sites in the immediate vicinity are not listed on the register. A Notice of Completion or Withdrawal of Approved VMP was issued on 12 April 2023 for the Casino Road House.
Licensed Activities under the POEO Act	Current and former licensed activities under the POEO Act.	There are no current licences that exist for the site under the POEO Act.
EPA and Defence PFAS Investigation Programs	Sites that are part of the EPA PFAS investigation program and sites that are being investigated by the Department of Defence for PFAS.	There are no records for the site and surrounding area within 500 m.
NSW Heritage Database	The State Heritage Register is a list of places and objects of particular importance to the people of NSW. To be listed, an item must be significant for the whole of NSW.	The site is not listed on the NSW Heritage Database.
NSW Department of Primary Industries register for cattle dip sites.	The register lists the known cattle dip sites in the Northern Rivers Region that the NSW Government was involved with.	At the time of the search, the site was not identified on the register. The Casino Common dip on Springgrove Road is located approximately 650 m to the north-west of the site.

4.6 Anecdotal information

HMC (2020) reported interviews between Helen Tunks of HMC and:

- Luke Cattlan of United Petroleum on 9 November 2020, who described that:
  - there are 4 groundwater bores being monitored on the service station immediately to the west of the subject site (3 bores are on the boundary according to Office of Water records);
  - groundwater monitoring has been carried out since 2013;
  - standing water ranges in depth from 1.4 m to 2.2 m on their site; and
  - there have been no odours detected in the bores and there have been no previous notifications to the EPA for site contamination.

- Ian Savins, a real estate agent, on 17 November 2020, who described that:
  - he has been an agent in Casino for 40 years and is familiar with the property;
  - to the best of his knowledge, the lot has always been vacant land, and was previously used for cattle grazing;
  - the property was previously owned by a Mr Scholles, who subdivided the land in approximately 1991, to form the current lot; and
  - the property was sold in 1993 to the current owners, Noel and Kate Doyle of Meheba Pty Ltd.

4.7 Previous investigations

The HMC (2020) modified PSI is reviewed and summarised herein; noting that the full report was not provided to Easterly Point, and that the laboratory analytical reports were not provided. The investigation was described as PSI, with field work reported on 2 November 2020 and 25 November 2020.

4.7.1 Objectives

HMC described that the objectives of the PSI were to:
- assess the current and former land use on the site for potentially contaminating activities; and
- if potentially contaminating activities were identified, to undertake a preliminary soil investigation across the area of potential concern to assess the suitability of the development site for the proposed residential land use.

4.7.2 Sampling strategy and scope

The media of concern was considered to be soils. The sampling strategy was a combination of systematic and targeted as:
- targeted sampling locations along the western boundary adjacent to the service station; and
- systematic sampling of the surface soils across the site, at depths of 0 – 0.075 m (or 0 – 100 mm) and 0.075 – 0.15 m.

HMC (2020) describes that the sampling density of 10 sample locations for an area of 3,200 m^2 was developed using the EPA (2005) [*sic*] guidelines". Based on EPA (1995), the then current guidance, 10 sample locations are described as the "Minimum sampling points required for site characterisation based on detecting circular hot spots by using a systematic sampling pattern".

The scope of work undertaken during the investigation was described by HMC as:
- a desktop assessment of current and former land use, including searches of available records and interviews with persons associated with the site;
- a detailed site inspection;
- preparation of a sampling and analysis quality plan (SAQP);
- collection of 13 primary soil samples and laboratory analysis for the potential contaminants of concern (PCOCs), at a NATA certified laboratory, followed by collection of 10 primary soil samples and laboratory analysis for arsenic (As) at a NATA accredited laboratory; and
- laboratory analysis of two quality control (QC) soil samples as part of each field program (field and interlaboratory duplicates).

The targeted samples were described as being analysed for total petroleum hydrocarbons (TPHs), benzene, toluene, ethylbenzene, xylenes, and naphthalene (BTEXN), and polycyclic aromatic hydrocarbons (PAHs). The surface systematic samples were analysed for metals (As, cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), and zinc (Zn)), and organochlorine pesticides (OCPs). The deeper systematic samples were only analysed for As.

HMC also described that the samples with the highest arsenic concentrations (JS3A, JS7A), were subject to leaching via the total characteristic leaching procedure (TCLP), with the leachate analysed for As.

4.7.3 Sampling and analytical methodology

The field methods were described by HMC (2020) as:
- soil sampling was conducted by experienced site contamination practitioners;

- individual clean stainless-steel trowels were used to collect each sample from immediately below the surface (0 – 150 mm) using disposable nitrile gloves;
- no decontamination procedures were necessary as dedicated, clean stainless-steel trowels were used for each sampling location;
- field QA/QC protocols implemented included details of collection and analysis of replicate and split samples;
- chain of custody (COC) documentation was completed; and
- the laboratory results and quality assurance/quality control (QA/QC) reports including a description of the analytical methods used and reporting for surrogates was also completed.

The soil samples were described as being analysed by ALS Environmental in Brisbane and Sydney; however the laboratory analytical reports were not included in the information provided to Easterly Point.

4.7.4 Results

The soil samples were not described, and no subsurface information was provided. Cadmium and mercury were not detected at appropriate limits of reporting (LORs), with all other metals being detected, as shown in Figure 4.1 and Figure 4.2 (overleaf). All metals were below the HIL-A land use criteria, except for arsenic which at a maximum of 175 mg/kg exceed the HIL-A criterion of 100 mg/kg. Leachable arsenic was described as not detected, although the LOR was described variously as 0.1 mg/L and 5 mg/L.

Copper, while below the land use criterion of 6,000 mg/kg, was elevated and ranged between 4,380 mg/kg and 4,990 mg/kg. This range is significantly above the residual soil level (RSL) of 200 mg/kg. All OCPs and petroleum compounds were shown in the summary tables as being non detect at appropriate LORs.

4.7.5 Conclusions

HMC (2020) concluded that "All the soil arsenic total concentrations results in the surface soil exceeded the HIL A, although very low concentrations were recorded in a subsequent subsoil investigation"; that is the deeper soils of 0.075 mm – 0.15 mm. They also described that "The remediation of the site would appear feasible, the arsenic-impacted soil meets the criteria for solid waste, and would be able to be accepted at an approved waste facility".

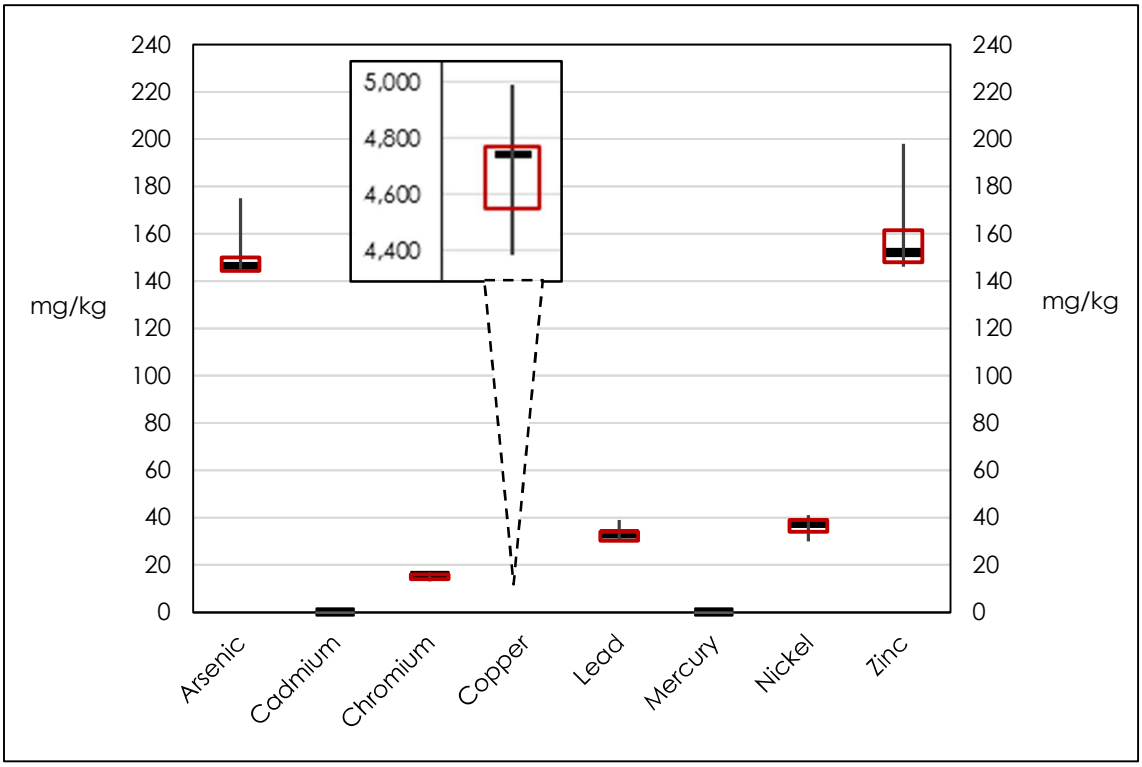

Figure 4.1: Summary of metals in soil (mg/kg), HMC (2020)

range median inter-quartile range

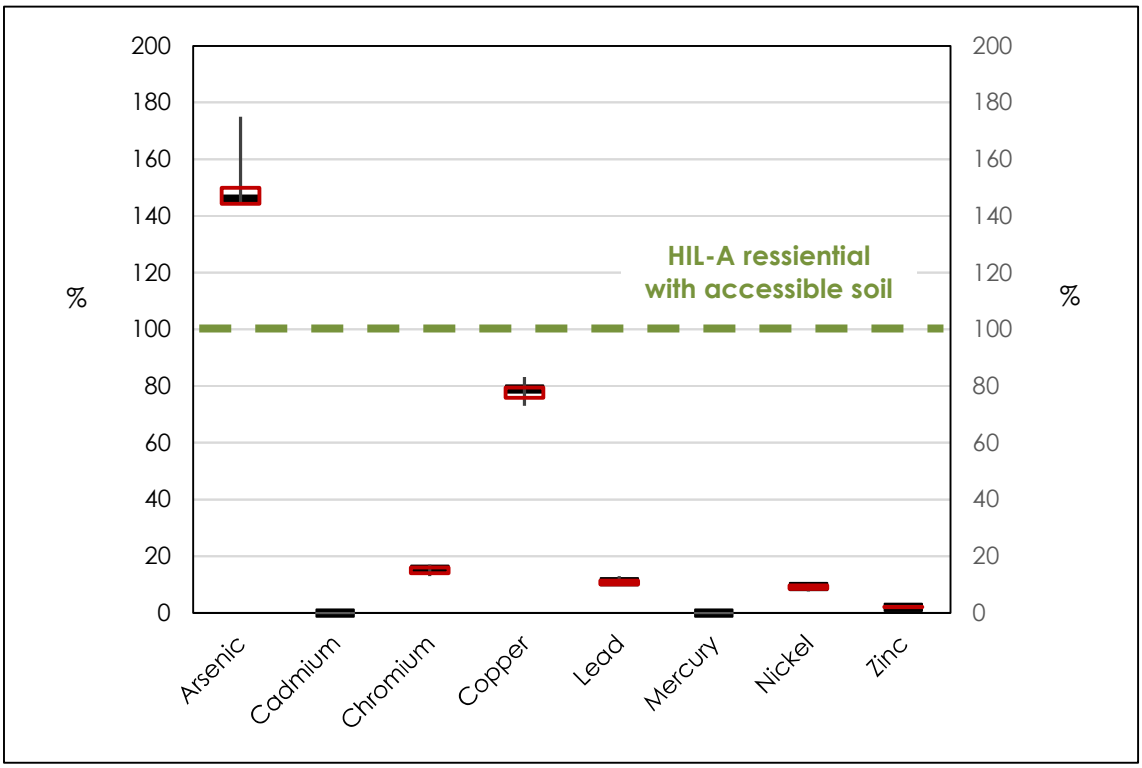

Figure 4.2: Standardised summary of metals in soil (%), HMC (2020)
Standardise to HIL-A residential with accessible soil

5.0 Site features and condition

The site condition described below is based on Easterly Point's inspections on 2 May 2023. The inspection was conducted by Marc Salmon and Andre Torre, and was for the purposes of this contaminated land investigation. The site inspection and this associated reporting does not constitute an environmental site audit or a hazardous materials survey.

5.1 Site features and conditions

The site is a large grass area, with one mature tree towards the eastern boundary. There are no buildings or structures at the site. The vegetation appears to be in good condition, and no signs of contamination such as wastes, staining, vegetation dieback, or odours were apparent. There were some services apparent, including an access hole cover, service pits, and a linear depression with greener grass, consistent with the location of stormwater services. The site inspection findings were also consistent with those reported by HMC (2020).

The site condition is shown in Plate 5.1.

Plate 5.1: View across the site from west to east

5.2 Integrity assessment

Based on the historical information available for review, there is generally good agreement between the various sources of information in regard to site history and usage. The site history information documented in Section 4, including anecdotal information, is generally consistent with the physical findings at the site discussed above.

5.3 Preliminary CSM

The ASC NEPM (2013, B2) describes that:

> *A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between*

those sources and receptors. The development of a CSM is an essential part of all site assessments and provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future.

A preliminary CSM based on the site history information and site inspection is shown in Figure 5.1, with uncertainties highlighted.

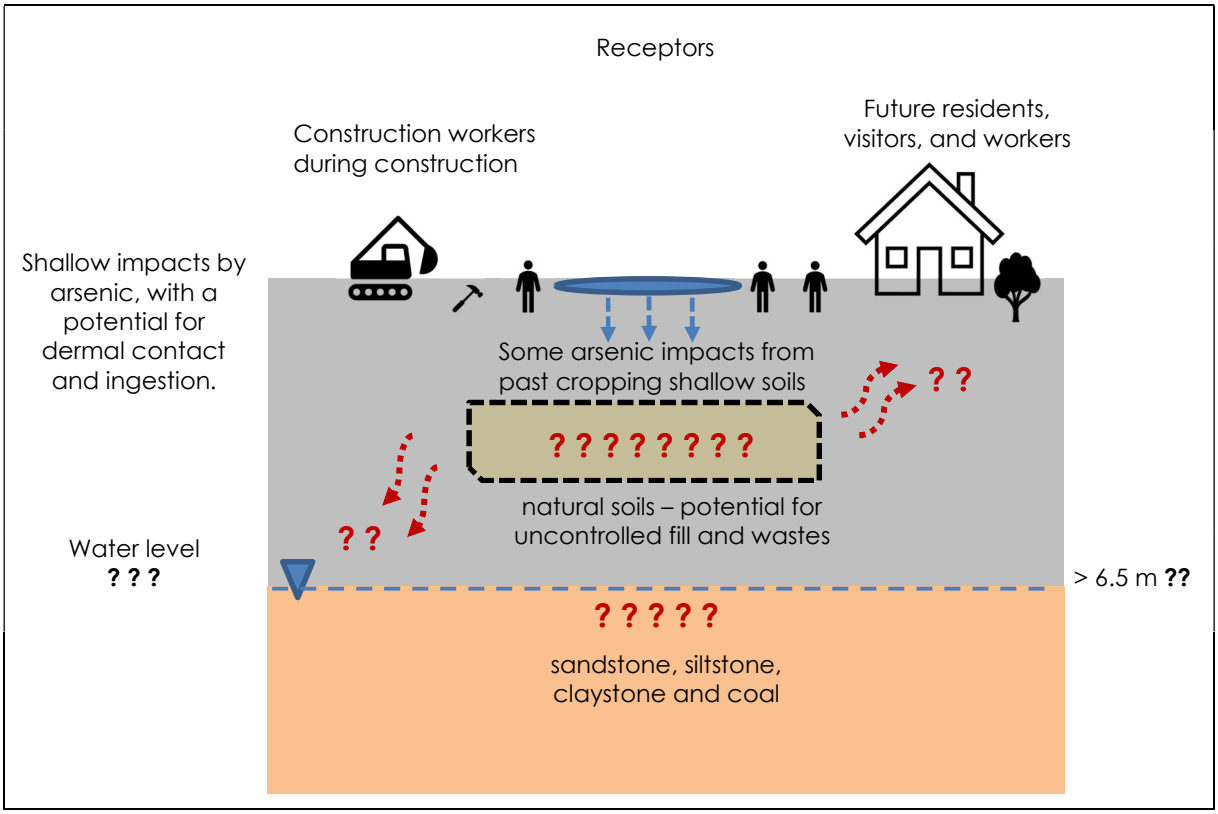

Figure 5.1: Preliminary conceptual site model

Sources:
- arsenic (As) and copper (Cu) from previous agricultural use identified in shallow soils (~ < 0.1 m), but not in deeper samples (~ 0.1 m – 0.15 m);
- some evidence of earthen material stockpiles and potential for uncontrolled filling from surface to depth, with a potential for a range of contaminants and/or wastes.

Exposure pathways:
- primary exposure route for As and Cu is dermal contact, ingestion, and inhalation of dust;
- potential for other contaminants and/or wastes to be buried below the surface from previous agricultural activities, and/or from uncontrolled filling. Dermal contact, inhalation, and ingestion are potential exposure pathways, depending on specific contaminants and media.

Receptors:
- future residents and visitors (adults and children);
- future site workers (adults), including construction workers during redevelopment, site staff, maintenance workers, and contractors;
- on-site plants and animals;
- off-site human health and/or ecological impacts from contaminants and/or wastes transported off-site through excavation and disposal by land application, and/or erosion, leaching, migration, etc.

6.0 Contaminants, media, and assessment criteria

This section discusses the potential contaminants of concern (PCoCs), the environmental media of interest, and the adopted assessment criteria.

6.1 Potential contaminants of concern

The PCoCs are shown in Table 6.1, along with the associated activities or sources of these contaminants.

Table 6.1: Primary contaminants and origins

Activity or Source	Contaminants
Agrochemicals	8-metals (arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), and zinc (Zn)), organochlorine pesticides (OCPs), and organophosphorus pesticides (OPPs).
Uncontrolled filling	8-metals, total recoverable hydrocarbons (TRHs), benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN), polycyclic aromatic hydrocarbons (PAHs), OCPs, OPPs, polychlorinated biphenyls (PCBs), halogenated phenols, non-halogenated phenols, and asbestos.
Storage of fuels/oils on the adjacent site	TRHs, BTEXN, PAHs, and lead.

6.1.1 PFAS

A review of Appendix B of the per-and poly-fluoroalkyl substances (PFAS) *National Environmental Management Plan* (HEPA 2020) was undertaken to determine if activities which are associated with PFAS contamination are relevant to the site. Based on available information, the following potentially applicable activities were identified for the site:

- agriculture, potentially used as an adjuvant or active ingredient in fertilisers and pesticides; and
- uncontrolled fill, can be a contaminant in soils.

However, given the age of the cropping conducted and the filling assumed to be from the adjacent buildings site, also former agricultural land, PFAS is not considered to be a PCOC at the site.

A search of the surrounding area identified that the Casino fire station is located approximately 1.1 km to the south-west of the site. A search of the NSW rural fire service website[11] indicated that the Casino fire station is not currently, and has not previously, been subject to a PFAS investigation by NSW Fire and Rescue. Based on the distance from site, the location of the fire station in the town centre, and it being cross-gradient from the site, it is not considered to be a potential source in regard to the site.

6.2 Environmental media

The environmental medium of interest, based on the understanding of the site from the available information, was soils and potentially fill materials, which may include wastes. Groundwater was not considered to be a medium of interest at this time, based on the review of factors shown in Table 6.2 (overleaf).

[11] https://www.rfs.nsw.gov.au/news-and-media/pfas-environmental-investigation

Table 6.2: Review of groundwater factors

Groundwater factor	Assessment
On-site sources?	No on-site sources of significant groundwater contaminants have been identified.
Whether sources have been removed?	Not applicable.
Contaminant sources unrelated to the site?	Potential hydrocarbon impacts from adjacent service station. None identified, and monitored in accordance with the UPSS Regulation.
Quantity/mobility characteristics of contaminants?	Not applicable.
Permeability of strata on the site; potential preferential pathway?	Considered to be low. The Leycester soil landscape includes soil limitations of le2 low permeability, and the landscape limitations include localised waterlogging.
Known or expected depth to groundwater?	Significant groundwater is expected to be at ~ 6.5 m depth, based on topography, the information from the bore search, and previous investigation within Casino, e.g. North Street.
Background groundwater quality?	No known background groundwater quality issues related to contaminants.
Potential receptors?	Residents, visitors, and workers at down gradient residential, open space, and commercial land uses through use of water, or volatiles if present, and the Richmond River and the aquatic ecosystem and associated dependent species.

Whereas groundwater at the site is not considered to be a medium of interest at this time, if soil impacts with a potential to generate groundwater contaminants are identified at the site, groundwater may be determined to be of interest. Similarly, if evidence of soil and/or groundwater impacts with a potential to generate volatiles and/or ground gases are identified at the site, air may be determined to be of interest.

6.3 Criteria

The relevant land use criteria used for site characterisation are described, with the specific criteria considered to be relevant to the site and the proposed land use being described in Section 6.6.

6.3.1 Human health criteria

The ASC NEPM (2013, B1) provides a range of criteria for the protection of human health, referred to as health investigation levels (HILs) and health screening levels (HSLs). The HILs have been developed for a broad range of metals and organic substances, and for vapour intrusion, whereas HSLs have been developed for selected volatile petroleum compounds, hydrocarbon fractions, and asbestos.

The HILs and HSLs are designed to be used in the first stage, or Tier 1 screening, of an assessment of potential risks to human health from chronic exposure to contaminants. They are intentionally conservative and are based on reasonable worst-case scenarios for four generic land use settings, described in ASC NEPM (2013, B1) as:

- Residential A, with garden/accessible soil (home grown produce < 10% fruit and vegetable intake, (no poultry)), also includes children's day care centres, preschools, and primary schools (HIL-A).

- Residential B, with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats (HIL-B). Landscaped/playground (including sandpit) areas used for recreation within HIL-B land uses to be assessed against more conservative HIL-C.

- Recreational C, public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools, and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves) which should be subject to a site-specific assessment where appropriate (HIL-C).

- Commercial/industrial D, such as shops, offices, factories, and industrial sites (HIL-D).

The HILs apply to the different land use scenarios, are generic to all soil types, and apply generally to a depth of 3 m below the surface for residential use, with the ASC NEPM (2013, B1) noting that site-specific conditions should determine the depth to which HILs apply for other land uses. The HSLs apply to the different land use scenarios and the dominant soil type (sand, silt, or clay), with site specific conditions determining the depths to which they apply.

The ASC NEPM (2013, B1) defines asbestos as:

- Bonded asbestos containing material (ACM) – asbestos containing material which is in sound condition, although possibly broken or fragmented, and where the asbestos is bound in a matrix such as cement or resin (e.g. asbestos fencing and vinyl tiles). This term is restricted to material that cannot pass a 7 mm x 7 mm sieve.

- Fibrous asbestos (FA) – friable asbestos material and includes severely weathered cement sheet, insulation products, and woven asbestos material. This type of friable asbestos is defined here as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure. This material is typically unbonded or was previously bonded and is now significantly degraded (crumbling).

- Asbestos fines (AF) – free fibres, small fibre bundles, and also small fragments of bonded ACM that pass through a 7 mm x 7 mm sieve. Note that for bonded ACM fragments to pass through a 7 mm x 7 mm sieve implies a substantial degree of damage which increases the potential for fibre release.

The HSLs from the ASC NEPM (2013, B1) for asbestos are shown in Table 6.3.

Table 6.3: HSLs for asbestos contamination in soil (% W/W) [1]

Land use	Bonded ACM	FA and AF [2] (friable asbestos)	All forms of asbestos
HSL-A accessible soil	0.01%	0.001%	No visible asbestos for surface soil
HSL-B non-accessible soil	0.04%		
HSL-C open space	0.02%		
HSL-D commercial	0.05%		

Table notes:
1. From ASC NEPM (2013, B1).
2. The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures (refer Section 4.10, ASC NEPM (2013, B1)). This screening level is not applicable to free fibres.

6.3.2 Ecological criteria

The ASC NEPM (2013, B1) provides a range of soil investigation levels for the protection of ecosystems, referred to as ecological investigation levels (EILs) and ecological screening levels (ESLs). These are applicable for the assessment of risk to terrestrial ecosystems, typically to a maximum depth of 2 m.

EILs have been derived based on the land use setting, and in consideration of the physiochemical properties of soil and contaminants, and the capacity of the local ecosystem to accommodate increases in contaminant levels; referred to as added contaminant limits (ACL) above ambient background concentrations (ABCs). EILs have been derived for various metals and organic compounds, whereas the ESLs relate to petroleum compounds. Where site specific soil properties have not been determined, the generic EILs, ACLs, and ESLs are adopted for the appropriate land use setting, where available.

Where site specific soil properties have not been determined and generic values are not available, Easterly Point uses residual soil levels (RSLs) as an initial Tier 1 ecological screening approach (Salmon 2017). The RSLs are based on a review of the ASC NEPM and the associated methodologies for determining background soil concentrations, as well as a number of background soil concentration studies from Queensland.

6.3.3 Petroleum management Limits

Following appropriate consideration of the HSLs and ESLs, the purpose of the management limits are to "avoid or minimise" potential effects of petroleum hydrocarbons. The ASC NEPM (2013, B1) provides these as interim Tier 1 guidance to manage the effects of:

- formation of observable light nonaqueous phase liquids (LNAPLs);
- fire and explosive hazards; and
- effects on buried infrastructure.

Management limits are provided for "residential, parkland and public open space" and for "commercial and industrial" land uses, and for either coarse grained or fine grained soils.

6.4 Aesthetic criteria

There are no specific numeric aesthetic criteria, however site assessments require balanced consideration of the quantity, type, and distribution of foreign material or odours in relation to the specific land use and its sensitivity. For example, higher expectations for soil quality would apply to residential properties with gardens compared with industrial settings (ASC NEPM 2013, B1). Issues to be addressed include odours, staining, monolithic deposits, and potentially dangerous materials such as rubble, steel, sharps, glass, and the like.

6.5 Application of criteria

The ASC NEPM (2013, B1) describes that:

> *The selection of the most appropriate investigation levels for use in a range of environmental settings and land use scenarios should consider factors including the protection of human health, ecosystems, groundwater resources and aesthetics.*

And that "A balance between the use of generic soil, soil vapour and groundwater criteria and site-specific considerations is essential practice in site assessment". Noting that the ASC NEPM (2013), describes that "Human health should be a primary concern when assessing land use and exposure scenarios".

It should also be noted that the criteria described herein principally relate to land use. The ASC NEPM (2013, B1) describes that "investigation and screening levels are not … desirable soil

quality criteria. The use of these levels in regulating emissions and application of wastes to soil is inappropriate", and that "The inclusion of an investigation and screening level in this guidance should not be interpreted as condoning discharges of waste up to these levels".

EPA (2018) describes that:

> *In NSW, these investigation and screening levels, and site-specific risk assessments are supported by the contaminated land framework and the* Contaminated Land Management Act *1997. They are used to assess if a site presents a risk to human health and the environment in relation to land use.*
>
> *When assessing the suitability of waste materials for land application in the context of resource recovery, the EPA cautions against relying solely on health-based investigation levels (HILs), health-screening levels (HSLs), ecological investigation levels (EILs), ecological screening levels (ESLs), and site-specific risk assessments to demonstrate a waste is suitable for reuse in the context of resource recovery.*

This approach is also relevant in regard to waste classification for legal disposal to licenced waste facilities. That is, contaminated land assessments principally relate to land use, both at the site and for potential off-site impacts, rather than to waste characterisation. Unless specifically addressed as waste characterisation, land use criteria should not be conflated with waste classification.

6.6 Criteria applied

The criteria considered to be relevant to the characterisation of the site are:
- HIL-A for Residential A with accessible soil;
- HSL-A for accessible soil for asbestos;
- HSL-A and HSL-B for low – high density residential with sand soil 0 m to < 1m;
- ACLs and EILs for urban residential and public open space;
- ESLs for urban residential and public open space as coarse grained soils;
- RSLs for screening of ecological risks; and
- management limits for residential, parkland and public open space as coarse grained soils.

The specific values for the relevant criteria are shown in the summary analytical tables in the tables section.

7.0 Easterly Point investigations

This assessment of site contamination (ASC) investigation was conducted over two mobilisations; May 2023 and August 2023. The ASC investigation was conducted in general accordance with the preliminary CSM, the project-specific data quality objectives (DQOs), and sampling, analysis, and quality plans (SAQPs) developed for each mobilisation.

The specific investigations are described, including the scope and sampling and analysis strategy, with the description of the sampling and analytical methodology and the data usability assessment combined for both investigations. The results of the investigations are presented in Section 8, and discussed in Section 9.

7.1 May 2023

This mobilisation included:
- excavation of 13 test pits;
- geological logging of the subsurface;
- collection of soil and material samples;
- field screening for volatile organic compounds (VOCs); and
- laboratory analysis of selected samples for the PCOCs.

The sampling strategy was a combination of targeted and systematic, with a randomised systematic sampling pattern being used to enable site coverage, whilst generating probabilistic data (TP01 – TP12). The targeted location was established as close to the service station boundary as possible, whilst avoiding potential services (TP13).

Based on a site area of 3,200 m^2, the minimum number of sample locations specified by EPA (2022a) is 10 sample locations. Based on site dimensions of 40 m by 80 m, a grid of 20 m by 13.3 m was established, giving 12 cells as shown in Figure 2. Within the cells, a random number generator was used to establish the specific sampling location as X m by Y m, starting from the south-east corner of each cell. The sample locations, including the systematic and targeted are shown in Figure 3. Figure 4 shows the combined sampling locations, i.e. HMC (2020) and Easterly Point May 2023.

The analytical strategy was based on the previous identification of metals as the primary PCOCs, with additional analyses conducted based on general site contaminants. The specific analyses by sample are shown in Table 7.1 (overleaf).

7.2 August 2023

This mobilisation included:
- collection of 24 shallow surface samples;
- geological logging of the subsurface;
- collection of soil samples;
- field screening for VOCs; and
- laboratory analysis of selected samples for the PCOs.

A grid of 10 m by 13.3 m was established, giving 24 cells as shown in Figure 5. Within the cells, a random number generator was used to establish the specific sampling location as X m by Y m, starting from the south-east corner of each cell. The sample locations are shown in Figure 6.

The analytical strategy was based on the previous identification of metals as the primary PCOCs, with additional analyses conducted based on general site contaminants. The specific analyses by sample are shown in Table 7.1 (overleaf).

Table 7.1: Analytical summary by mobilisation and sample

Sample ID	Analytes	Rationale
May 2023		
TP01 0 – 0.1, TP01 0.2 – 0.3, TP02 0 – 0.1, TP02 0.2 – 0.3, TP03 0 – 0.1, TP03 0.2 – 0.3, TP04 0 – 0.1, TP04 0.2 – 0.3, TP05 0 – 0.1, TP05 0.2 – 0.3, TP06 0 – 0.1, TP06 0.2 – 0.3, TP07 0 – 0.1, TP07 0.2 – 0.3, TP08 0 – 0.1, TP08 0.2 – 0.3, TP09 0 – 0.1, TP09 0.2 – 0.3, TP10 0 – 0.1, TP10 0.2 – 0.3, TP11 0 – 0.1, TP11 0.2 – 0.3, TP12 0 – 0.1, TP12 0.2 – 0.3, and TP13 0 – 0.1.	8-metals (25)	– identified PCOCs, primarily As; – to determine As migration; and – general contaminants of concern.
TP03 0.4 – 0.6, TP05 0.5 – 0.6, TP07 0.7 – 0.75, TP07 0.8 – 0.93, TP08 0.6 – 0.8, and TP13 0.2 – 0.3.	8-metals, BTEXN, TRHs, PAHs, OCPs, OPPs, PCBs, phenols, and asbestos in soil (6)	– general contaminants of concern; – uncontrolled filling; – petroleum impacts; and – potential agrochemicals.
TP07 A1 building product	Asbestos (1)	– uncontrolled filling; and – building material identified (cement roof tile).
August 2023		
SS14A, SS15A, SS16A, SS18A, SS19A, SS20A, SS21A, SS22A, SS24A, SS25A, SS26A, SS27A, SS28A, SS29A, SS30A, SS31A, SS35A, and SS37A.	8-metals (18)	– identified PCOCs, primarily As; – to determine As distribution; and – general contaminants of concern.
SS17A, SS23A, SS32A, SS33A, SS34A, and SS36A.	8-metals, BTEXN, TRHs, PAHs, OCPs, OPPs, PCBs, phenols, and asbestos in soil (6)	– general contaminants of concern; – uncontrolled filling; – petroleum impacts; and – potential agrochemicals.

7.3 Sampling and analytical methodology

The investigations were undertaken in general accordance with Easterly Point's standard operating procedures (SOPs), which are consistent with EPA made and approved guidelines and industry standards, and include:

- *EPFW-PR01 Soil sampling – general*;
- *EP SHE-PR02 Personal protective equipment*;
- *EP SHE-PR04 Decontamination of personnel*; and
- *EP SHE-PR06 Decontamination of sampling equipment*.

The soil sampling procedure is included in Appendix E. A general overview of the sampling methodology is provided below.

For the May 2023 mobilisation, test pits were established using a 5-tonne excavator, with soil samples collected directly from the test pit walls for shallow samples (~ 0.5 m – 0.8 m), and from the centre of the excavator bucket for deeper samples, using a gloved hand. Soil sampling was conducted over a sampling interval of approximately 0.1 m for surface samples, and between 0.1 m and 0.2 m for depth samples.

For the August 2023 mobilisations, the surface samples were collected from a sampling interval of approximately 0.075 m.

The soil profiles within the test pits and at the surface sample locations were logged, and field screening was conducted for VOCs using a photo-ionisation detector (PID). All soil samples were immediately collected into laboratory supplied glass jars and filled to the top to minimise headspace. Samples were then placed directly into chilled eskies for transportation to the laboratory under chain of custody (COC) documentation.

The primary laboratories were Eurofins Brisbane and Eurofins Melbourne for OCPs, OPPs, and PCBs. Eurofins are NATA accredited for the analyses undertaken (NATA Accreditation Number 1261). Eurofins analytical methods are in-house methods based on USEPA SW846, and are in accordance with the ASC NEPM (2013, B3). Extraction for volatiles is by purge & trap. The secondary laboratory was ALS Brisbane, who are NATA accredited for the analyses undertaken (NATA Accreditation Number 825).

7.4 Data usability

Information generated from environmental investigations requires some statement in regard to the usability of the data. Therefore, the use of quality assurance (QA) procedures and processes in collecting data, and testing using quality control (QC) methods, are an integral part of the analysis and interpretation of environmental data.

All site work was completed in general accordance with Easterly Point's standard sampling protocols, including a QA/QC programme, standard operating procedures (SOPs), and a set of data quality indicators (DQIs) and measurement quality objectives. A data usability assessment was performed on the soil data collected by Easterly Point, which is summarised in Appendix F, which includes background information on data usability.

8.0 Easterly Point Results

This section presents the sub-surface conditions encountered, the field screening results, and the analytical results from the laboratory analyses.

8.1 Subsurface conditions

The subsurface conditions encountered are summarised below, with site observations documented in the geological logs in Appendix G, including field observations, material descriptions, and notation of samples analysed.

8.1.1 May 2023

The eastern portion of the site showed natural soil consistent with the *Leycester* soil landscape, along with some lenses of sand and basalt gravels and cobbles. These were interpreted as being consistent with fluvial deposition, and are not thought to have resulted from site disturbance (TP01 – TP04, TP06, TP09, and TP11). There were no odours, staining, or artefacts noted within these locations.

Fill material was noted at various locations within the soil profile at the other locations, including towards the surface (TP10, TP12, and TP13), or at depths of approximately 0.5 m to 1.0 m (TP05 and TP07). The fill materials were variable, and included tan brown clay with mottles, dark tan clay, and dark brown clay. At times some fill appeared to consist of reworked natural materials with artefacts included.

Artefacts detected in the fill were generally sparse and inconsistent, and included a cement roofing tile (suspected ACM), broken house bricks, fragments of clay pipe, small pieces of metal, a concrete lid, sandstone gravels and cobbles, and limited rubbish. No odours or staining were noted, and all field screening results were < 1 ppm, indicating no volatile contaminants.

8.1.2 August 2023

The surface soil observed in the second mobilisation was very consistent, and was generally described as "Grass, over dark brown silty clay with some fine roots, self-mulching, some orange mottles, with trace medium basalt gravel. No odours, staining, or artefacts".

This material is considered to be consistent with the *Leycester* soil landscape le1. It is noted that based on the understanding of the subsurface from the test pitting, some of the material is residual natural soils, and some of it is reworked natural. Minor artefacts were detected in SS17, with the odd inclusion of gravel or plastic at other locations. No odours or staining were noted, and all field screening results were < 1 ppm, indicating no volatile contaminants.

8.2 Analytical results

8.2.1 May 2023

The summary analytical results for metals are summarised in Figures 8.1 and 8.2 (overleaf), and the summary data tables are included in Table 2 and Table 3 in the tables section. The laboratory analytical reports are shown in Appendix H.

In summary:

- Metals in both surface and depth, and natural and fill samples were detected in low concentrations, with only one arsenic approaching the land use criterion of 100 mg/kg. Sample TP05 0.2 – 0.3 m, from fill detected As at 88 mg/kg, as well as higher concentrations of Cr and Cu. All other sample results for metals, including As were low

and below the RSLs or were non detect. Interestingly, compared to the HMC findings, 65% of the As results were non detect at an LOR of 2 mg/kg.

- Asbestos fibres were not identified in any soil samples, based on the Australian Standard AS 4964 – 2004, with an LOR of 0.01% w/w. Asbestos was identified as chrysolite in a fragment of cement roofing tile.

- Organics were non detect in all samples at appropriate LORs, including in Test pit 13 in the vicinity of the service station.

Based on the discrepancy between the As and Cu results reported by HMC (2020), and those found by Easterly Point in this investigation, addition shallow surface sampling was proposed. HMC (2020) reported that for the surface samples in the "former cropping area", the sampling interval was 75 mm.

In regard to sampling intervals, the ASC NEPM (2013, B2) describes that:

> *At the surface, samples at 0 – 100 mm or 0 – 150 mm should be taken unless there is evidence of a thin superficial layer of contamination. Where there is good evidence that contamination is restricted to a thin superficial layer, a shorter sampling interval may be appropriate, however, a subset of deeper samples should be analysed to inform/confirm the CSM. At greater depths, the sampled interval should be no more than 500 mm to avoid a compositing effect.*

As agrochemicals are applied as sprays, a thin surficial layer of As and Cu impacts could explain the discrepancies between the two data sets. Accordingly, a shallow surface soil program was implemented as Stage 2 of the DSI.

8.2.2 August 2023

The summary analytical results for metals are summarised in Figures 8.3 and 8.4 (overleaf), and the summary data tables are included in Table 4 and Table 5 in the tables section. The laboratory analytical reports are shown in Appendix H.

In summary:

- Whereas some increased metal concentrations were noted for Pb and Zn, these were below the HIL-A land use criteria, and As and Cu were detected at low concentrations, i.e. at < 10% of the HIL-A land use criteria.

- Trace low molecular weight PAHs were detected PAHs were detected (fluoranthene and pyrene), with all other organic compounds being non detect.

- Asbestos fibres were not identified in any soil samples, based on the Australian Standard AS 4964 – 2004, with an LOR of 0.01% w/w.

A comparison of arsenic, copper, and zinc results between the various investigations and mobilisations is shown in Figure 8.5.

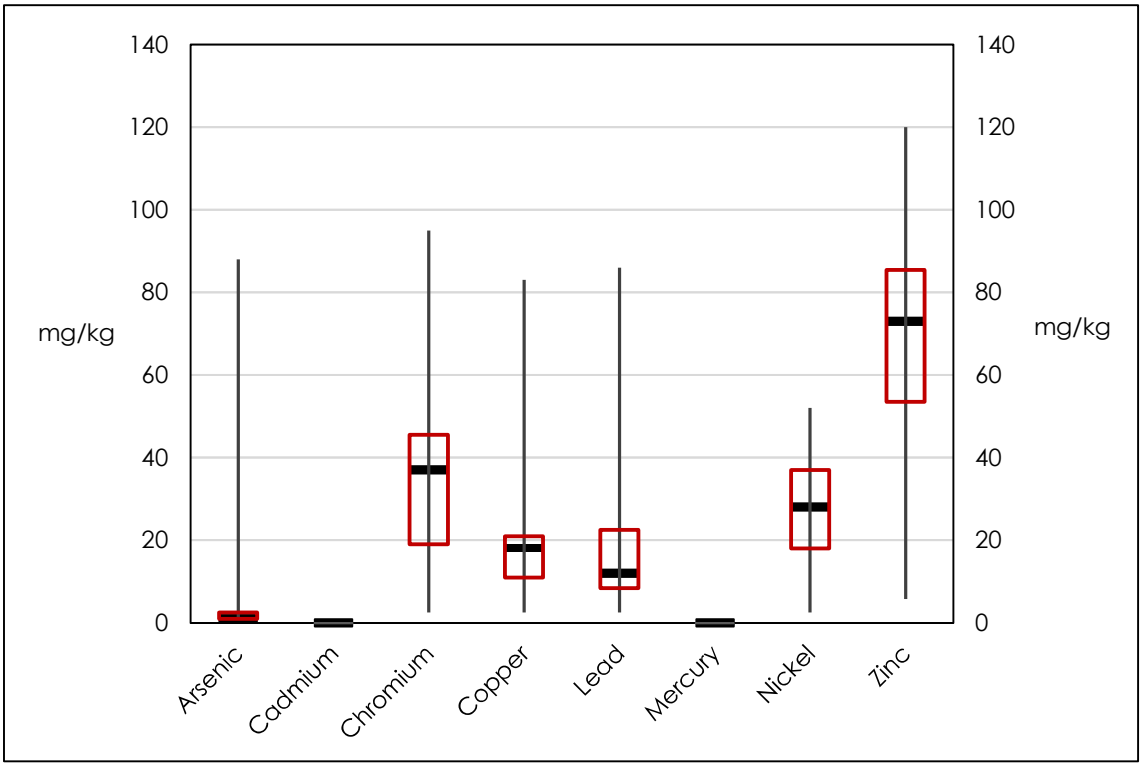

Figure 8.1: Summary of metals in soil (mg/kg), May 2023

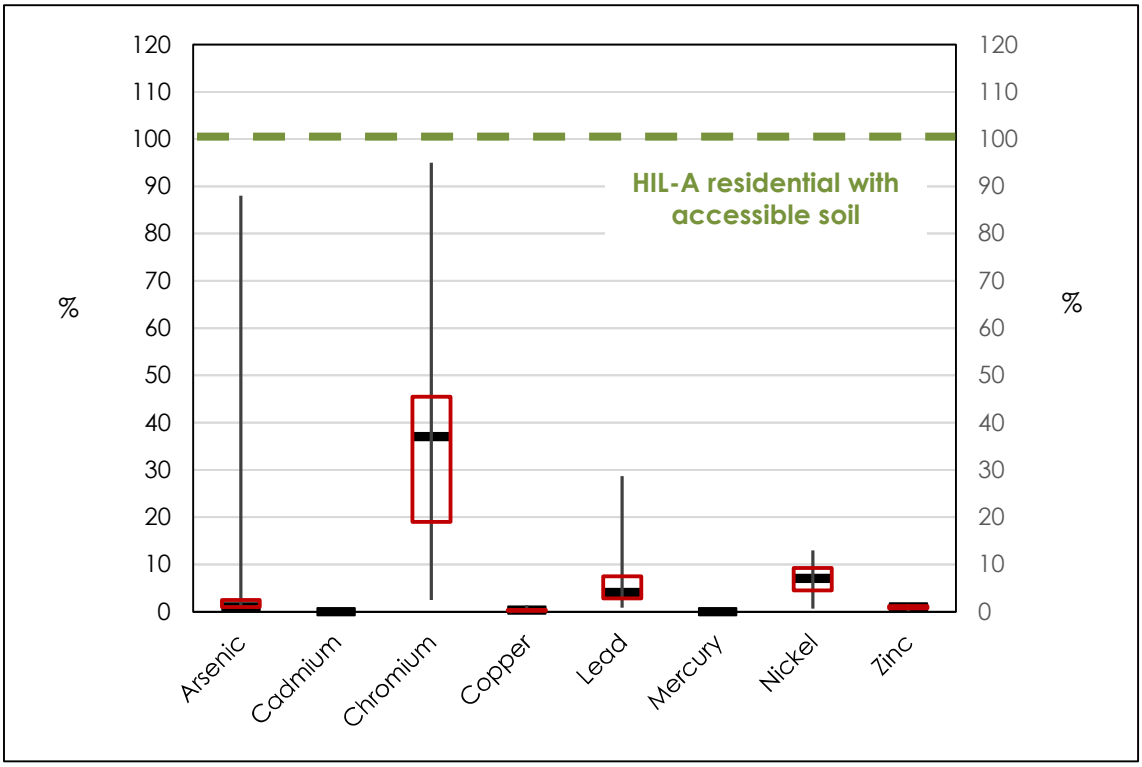

Figure 8.2: Standardised summary of metals in soil (%), May 2023
Standardise to HIL-A residential with accessible soil

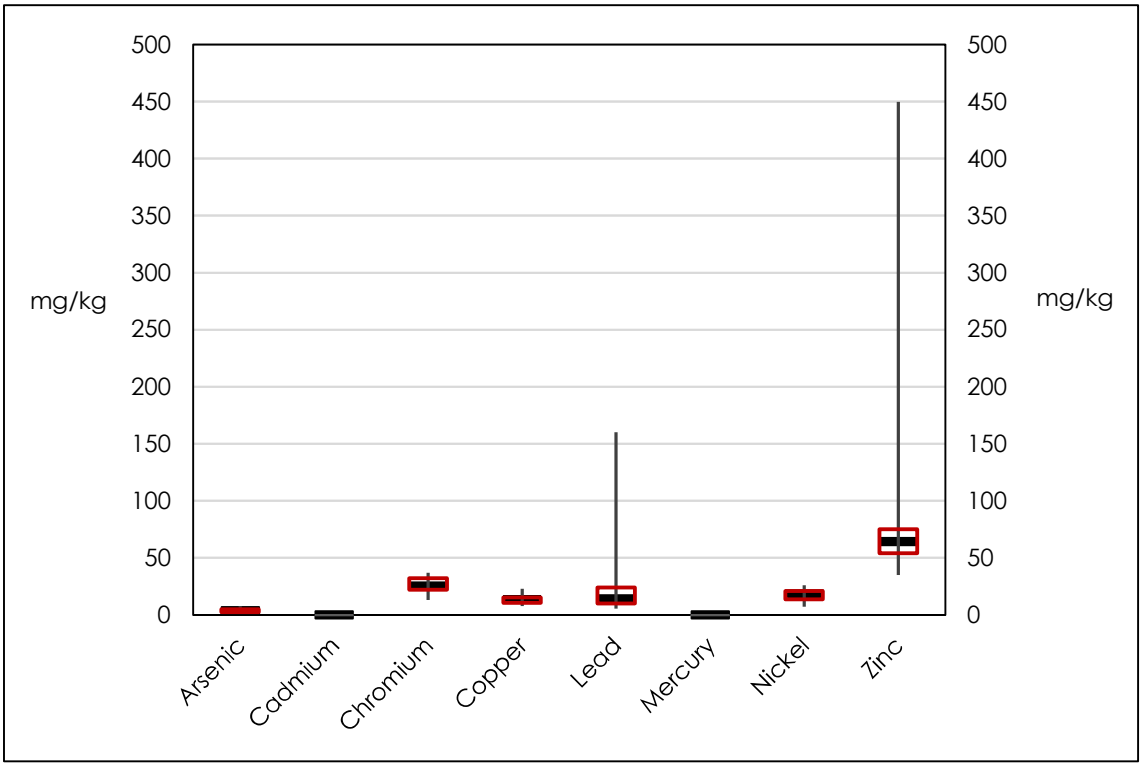

Figure 8.3: Summary of metals in soil (mg/kg), August 2023

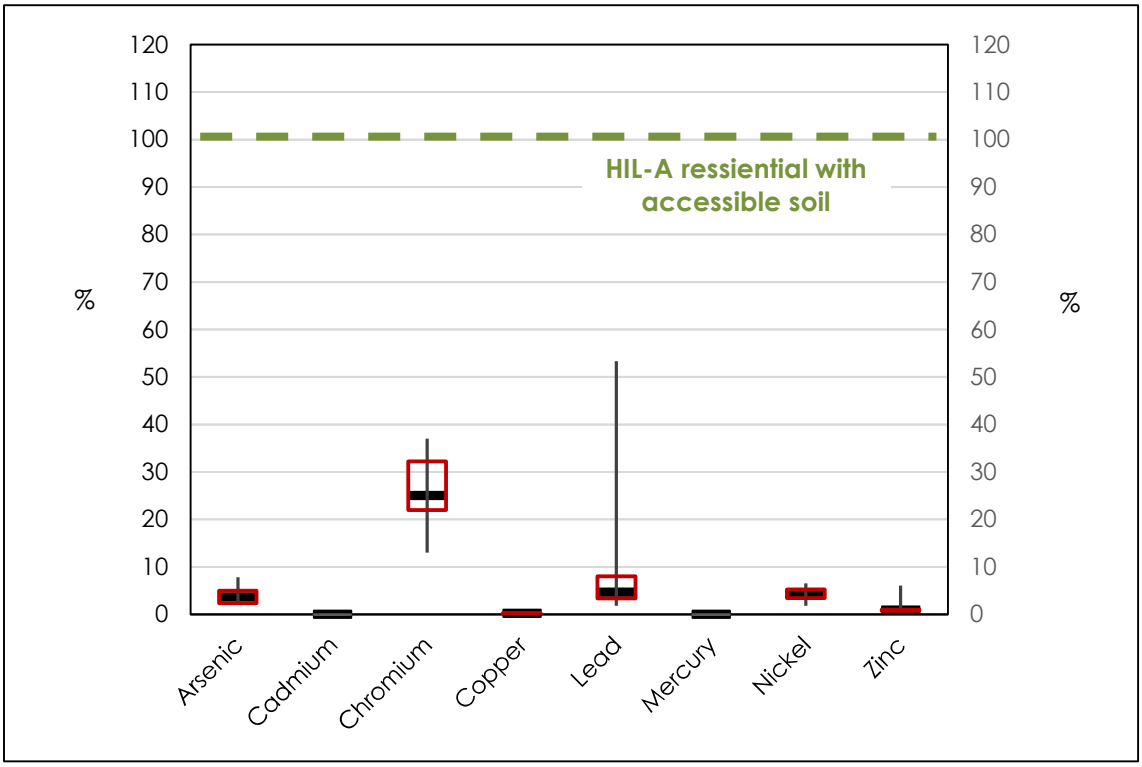

Figure 8.4: Standardised summary of metals in soil (%), August 2023
Standardise to HIL-A residential with accessible soil

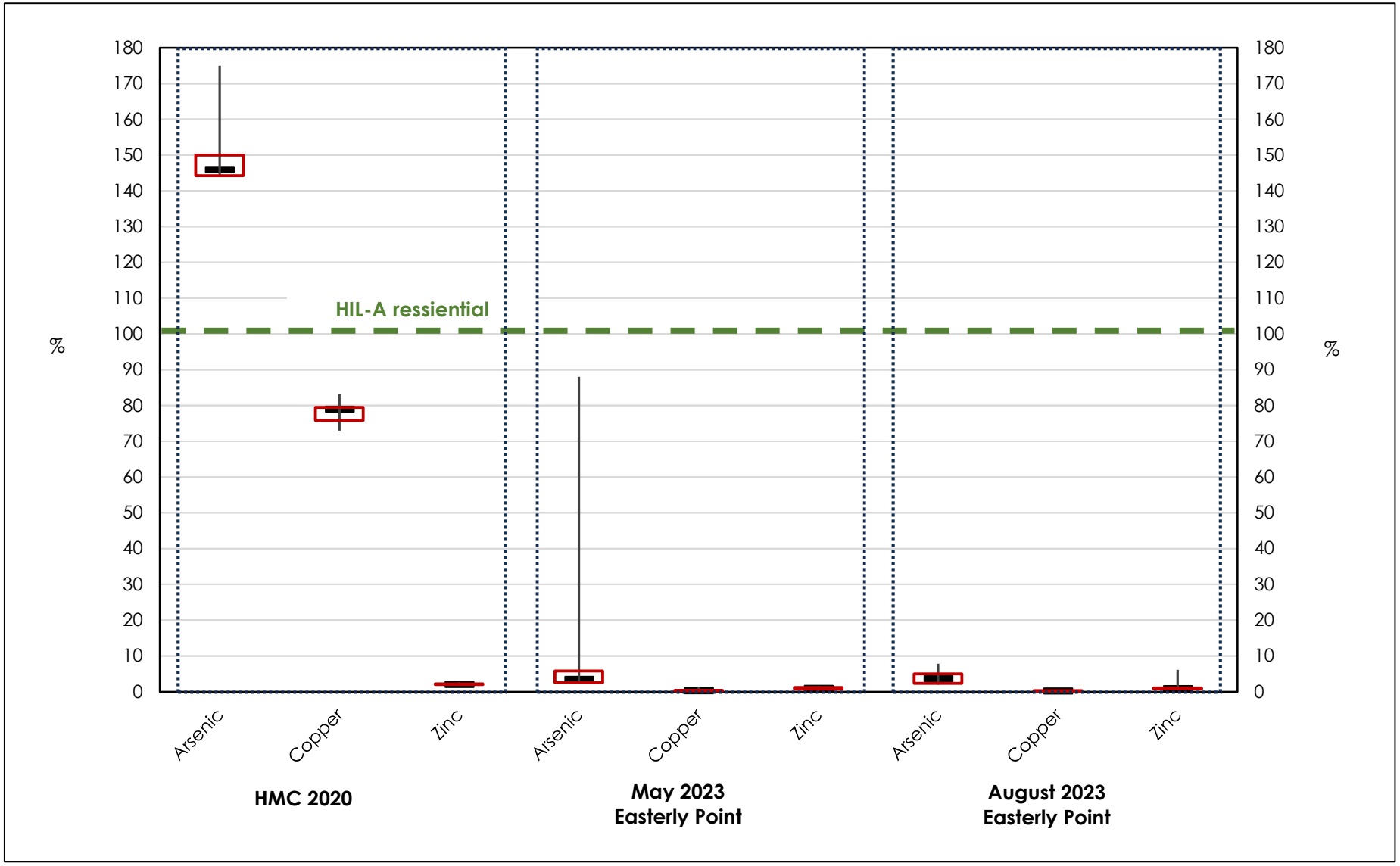

Figure 8.5: Comparison of arsenic, copper, and zinc results between investigations (%)
Standardise to HIL-A residential with accessible soil

9.0 Discussion and conclusions

The investigation discussion and conclusions are based on the information described in this report and appendices and should be read in conjunction with the complete report, including Section 1.4 *Limitations to environmental information*.

9.1 Discussion

The site appears to include placed fill materials and reworked natural soil, seemingly resulting from the identified stockpiles in the 1990s aerial photograph, and perhaps the identified road/track. Additionally, some of it may have originated from the installation of services. In places, the fill is below what appears to be re-worked natural. Assuming the fill/reworked natural soil is contiguous between test pits, it appears that approximately the western half of the site is impacted. The fill has not been identified as being significantly chemically impacted, although one fragment of ACM was identified; assumed to have originated from the adjacent development work.

Whereas surficial soils were identified by HMC to be impacted by As and to a lesser extent Cu, Easterly Point has not found this to be the case. The likely reason for this discrepancy is considered to be cross-contamination through the use of "new trowels" for each sample location, as described by HMC. Given the generally tight spread of their elevated As and particularly Cu results, Easterly Point considers that some "industrial" contamination was added, either through some sort of coating or protective material, which was transferred to the soil samples.

Regardless of the cause of the discrepancy, and based on the collection of 49 surface soil samples and analysis for metals, the 2023 DSI results are considered to be suitable for use in determining the site suitability and management options. Organic compounds were non detect in both the HMC investigation and the Easterly Point investigations, including towards the service station on the western boundary, except for traces of PAHs which are not considered to be significant.

While this suggests that impacts from the service station are not occurring, only shallow samples were collected, and the maximum extent of test pitting was ~ 2 m in TP13. No odours, sheens or staining were detected in this case, although noting that if groundwater impacts are occurring, they are likely to be at greater depths. As the service station is reported to be conducting groundwater monitoring in accordance with the UPSS Regulation, if contamination is occurring, it should be detected as part of that program and reported to the EPA.

The detection of variable fill material across the site, albeit towards the central and western portions, with various inclusions, including some building and demolition wastes and confirmed ACMs, suggests a potential for additional material to be uncovered during work which disturbs the subsurface. Additionally, while the assumed natural residual soils were targeted at depth in each testpit, the material may have also been reworked natural, and deeper impacts may exist. While this is not expected based on the site history review and the field work conducted, it cannot be ruled out.

It is therefore recommended that specific management protocols be developed for the development and ongoing use of the site, and that these include:
- a construction environmental management plan (CEMP) for any development;
- an unexpected findings protocol (UFP) for incorporation into the CEMP, and any ongoing site management documentation; and
- an asbestos register and an asbestos management plan (AMP).

This documentation should address the provisions of the *Work Health and Safety Regulation* 2017, which would provide legal enforceability. Section 425 requires that an asbestos register must be prepared and kept at the workplace, and Section 429 requires that an AMP is

prepared and maintained to ensure that the information in the plan is up to date. Additional management documentation may be appropriate subsurface works cause the enactment of the UFP.

Based on the investigations conducted by Easterly Point, and the associated findings as reported herein, Easterly Point does not consider that a duty to report exists under Section 60 of the *Contaminated Land Management (CLM) Act* 1997. Easterly Point's appreciation is that management of bonded asbestos under the WHS legislation is more appropriate, and that unless significant new findings are detected at the site, no ongoing environmental liability has been detected.

This position should be confirmed specially by an appropriately experienced legal specialist, as responsibilities under legislation are a legal matter, rather than environmental.

9.2 Conclusion

Following from Easterly Point's investigation, it is apparent that some uncontrolled filling has occurred at the site. While chemical contamination was not identified, asbestos has been confirmed and appropriate management will be required during both the development stage and throughout occupation. This is likely to best be managed under the requirements of the WHS legislation, including the development of an asbestos register and an asbestos management plan.

While previous investigations recommended remediation based on the As detected in surficial soils (HMC 2020), Easterly Point has not been able to replicate their results, including after conducting an additional, surficial sampling program at a high sample density. Therefore, Easterly Point considers that the previously reported arsenic (and copper) in surface soils were an artefact of sampling, rather than related to actual site contamination. As no other contaminants beyond bonded asbestos have been identified, Easterly Point does not consider that a duty to report exists, but rather that the site should be managed under the WHS framework in regard to asbestos.

The site is considered to be suitable for the proposed development, noting that appropriate management should be incorporated into the site development and use, as recommended herein. If unexpected findings are detected which are contrary to the current finding, appropriate controls and management should be conducted, and these should be specified in an unexpecting findings protocol developed for the site.

10.0 Glossary and references

10.1 Glossary

ACMs	asbestos containing materials, bonded
AF	asbestos fines
ASS	acid sulfate soil
BTEXN	benzene, toluene, ethylbenzene, xylenes, and naphthalene
CLM	contaminated land management
DSI	detailed site investigation
EILs	ecological investigation levels
ESLs	ecological screening levels
EVs	environmental values
FA	fibrous asbestos
GILs	groundwater investigation levels
HILs	health investigation levels
HSL	health screening levels
Metals	generally arsenic (As), cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), and zinc (Zn)
NATA	National Association of Testing Authorities
NEPM/C	National Environmental Protection Measure/Council
OCPs	organochlorine pesticides
OPPs	organophosphorus pesticides
PAHs	polycyclic aromatic hydrocarbons
PASS	potential acid sulfate soil
PCBs	polychlorinated biphenyls
PFAS	per-and poly-fluoroalkyl substances
PSI	preliminary site investigation
QA/QC	quality assurance/quality control
RAP	remediation action plan
RSLs	residual soil levels

SAQP	sampling, analysis, and quality plan
SWL	standing water level
WHS	work health safety
WQO	water quality objectives

10.2 References

Australian and New Zealand Environment and Conservation Council (ANZECC)/Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) (2000) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, ANZECC/ ARMCANZ, Paper No 4, Canberra.

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Australian Standard *AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples*.

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DEC (2007) *Contaminated Sites: Guidelines for the Assessment and Management of Groundwater Contamination*.

Environment Protection Authority (EPA) (1995) *Contaminated Sites: Sampling Design Guidelines*.

EPA (2015) *Guidelines on the Duty to Report Contamination under the* Contaminated Land Management Act *1997*.

EPA (2018) *Guidelines on resource recovery Orders and Exemptions, For the land application of waste materials as fill*.

EPA (2020) *Consultants reporting on contaminated land, Contaminated land guidelines*.

EPA (2022a) *Contaminated Land Guidelines: Sampling design part 1 – application*.

EPA (2022b) *Contaminated Land Guidelines: Sampling design part 2 – interpretation.*

Geological Survey of NSW (1972) *Tweed Heads 1:250,000 Geological Series Sheet, SH56-3*.

Hashimoto T.R. and Troedson A.L. (2008) *Lismore 1:100,000 and 1:25,000, Coastal Quaternary geology map series*, Geological Survey of New South Wales, Maitland.

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HMC (December 2020) *Preliminary Site Investigation, Proposed Childcare Centre, Lot 155, 155, 157, 158 DP 834821, 146 - 152 Johnston Street, Casino*, (Ref. HMC2020.237).

Morand D.T. (1994a) *Soil Landscapes of the Lismore-Ballina 1:100,000 Sheet* (report), Department of Land and Water Conservation, Sydney.

Morand D.T. (1994b) *Soil Landscapes of the Lismore-Ballina 1:100,000 Sheet* (map), Department of Land and Water Conservation, Sydney.

National Environment Protection Council (NEPC) (2013) *National Environment Protection (Assessment of Site Contamination) Measure 1999*, including *Amendment Measure 2013 (No. 1)* (ASC NEPM), including:
- *Schedule B1: Guideline on Investigation Levels for Soil and Groundwater*; and
- *Schedule B2: Guideline on Site Characterisation.*

National Health and Medical Research Council (NHMRC) and National Resource Management Ministerial Council (NRMMC) (2011) *Australian Drinking Water Guidelines*, Paper 6, National Water Quality Management Strategy, Version 3.7, updated January 2022.

Salmon M.C. (2017) *Background Concentrations of Metals in Queensland Soils*, Easterly Point Environmental, Byron Bay, NSW.

Figure 1: HMC PSI sampling locations, November 2020
Source: HMC 2020

Figure 2: Easterly Point proposed soil sampling plan, May 2023
Specific locations determined with a random number generator

Figure 3: Easterly Point soil sampling locations, May 2023
Source: Six Maps 2015. All locations approximate

Figure 4: Combined 2020 and May 2023 soil sampling locations
Source: Six Maps 2015 and HMC 2020. All locations approximate

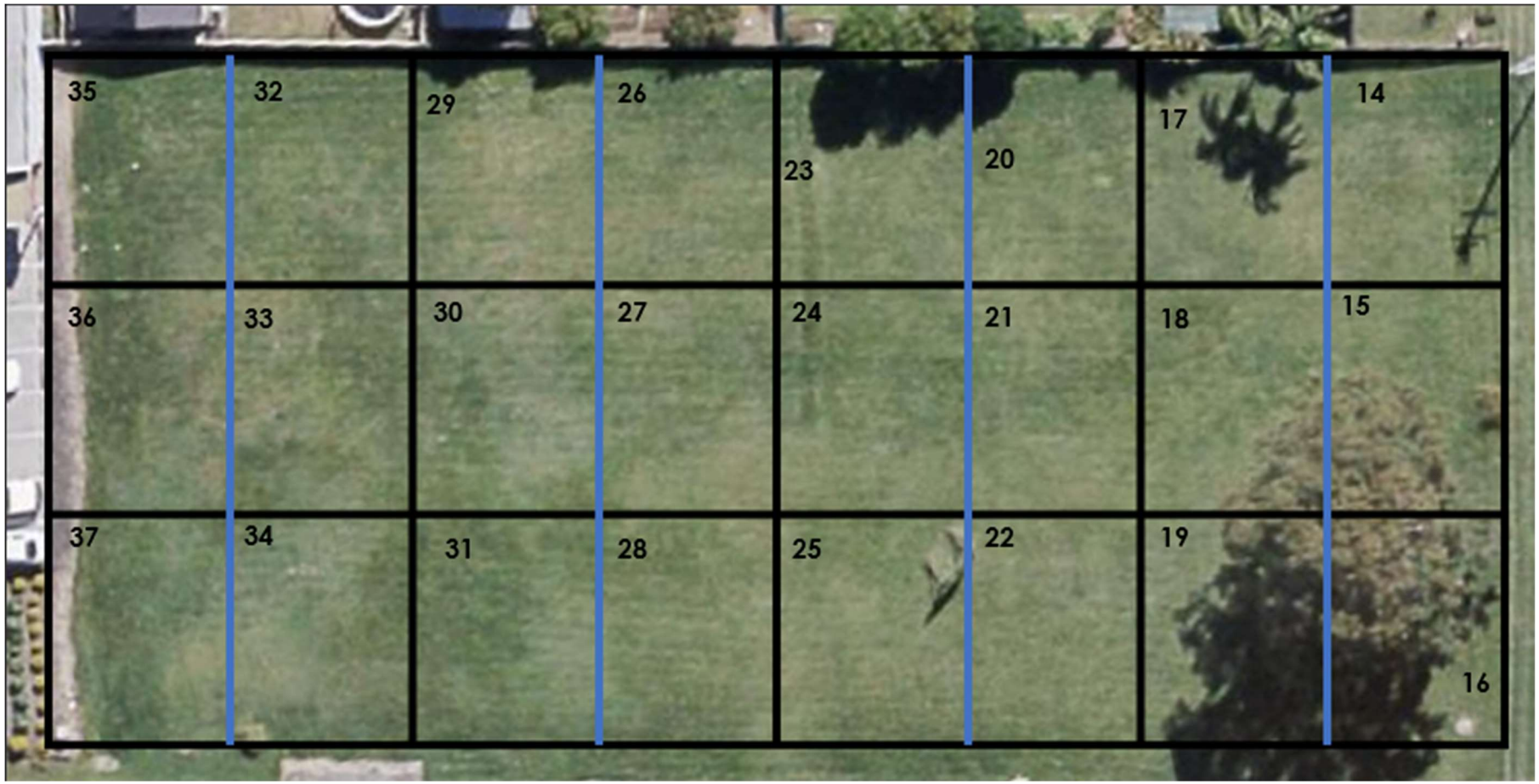


Figure 5: Easterly Point proposed soil sampling plan, August 2023
Specific locations determined with a random number generator

Figure 6: Easterly Point soil sampling locations, August 2023
Source: Six Maps 2015. All locations approximate

Tables

Table 1: Summary soil analytical metals (mg/kg), HMC 2020

Sample location	Depth (m)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
LORs		*5*	*1*	*2*	*5*	*5*	*0.1*	*2*	*5*
Analytical									
JS1A	0 - 0.075	144	nd	14	4,740	39	nd	39	198
JS2A	0 - 0.075	151	nd	15	4,740	34	nd	34	166
JS3A	0 - 0.075	175	nd	16	4,970	34	nd	34	148
JS4A	0 - 0.075	145	nd	16	4,480	34	nd	34	160
JS5A	0 - 0.075	147	nd	13	4,780	30	nd	30	146
JS6A	0 - 0.075	144	nd	16	4,380	31	nd	38	148
JS7A	0 - 0.075	160	nd	17	4,990	35	nd	41	153
JS8A	0 - 0.075	145	nd	16	4,540	32	nd	37	162
JS9A	0 - 0.075	147	nd	14	4,740	30	nd	39	148
JS10A	0 - 0.075	144	nd	14	4,580	30	nd	40	151
Statistics									
Number of samples		10	10	10	10	10	10	10	10
Number of detects		10	0	10	10	10	0	10	10
Percentage non detects		0%	100%	0%	0%	0%	100%	0%	0%
Maximum		**175**	-	17	**4,990**	39	-	41	198
Third quartile		150.0	-	16.0	4,770.0	34.0	-	39.0	161.5
Arithmetic average		150.2	-	15.1	4,694.0	32.9	-	36.6	158.0
Median value		146.0	-	15.5	4,740.0	33.0	-	37.5	152.0
First quartile		144.3	-	14.0	4,550.0	30.3	-	34.0	148.0
Minimum		144	-	13	4,380	30	-	30	146
Standard deviation		10.0	-	1.3	199.6	2.9	-	3.5	15.6
Coefficient of variation		0.1	-	0.1	0.04	0.1	-	0.1	0.1
Relative standard deviation		7%	-	9%	4%	9%	-	9%	10%
Margin of error		7.2	-	0.9	142.8	2.1	-	2.5	11.2
Maximum probable error		5%	-	6%	3%	6%	-	7%	7%
Criteria									
Residual soils levels		**50**	4	50	**200**	60	3	60	400
Residential, HIL-A		**100**	20	100	6,000	300	40	400	7,400
Residential, HIL-B		500	150	500	30,000	1,200	120	1,200	60,000
Parks/open space HIL-C		300	90	300	17,000	600	80	1,200	30,000
Commercial/industrial HIL-D		3,000	900	3,600	240,000	1,500	730	6,000	400,000

See table notes at end.

Table 2: Summary soil analytical range table (mg/kg), May 2023

Analyte	HIL-A land use criteria	Ecological criteria	Manage. limits	LORs	Number of samples	Minimum	Maximum	Exceedances of land use criteria and notes
Metals								
Arsenic	100	50	-	2	31	nd	88	-
Cadmium	20	4	-	0.5	31	nd	nd	-
Chromium	100	50	-	5	31	nd	95	-
Copper	6,000	200	-	5	31	nd	83	-
Lead	300	60	-	5	31	nd	86	-
Mercury	40	3	-	0.1	31	nd	nd	-
Nickel	400	60	-	5	31	nd	52	-
Zinc	7,400	400	-	5	31	6	120	-
Asbestos								
Asbestos in soil	-	-	-	0.01	6	nd	nd	-
Asbestos in materials	-	-	-	-	1	-	-	TP07A1 chrysotile
Asbestos % w/w AF/FA	0.001%	-	-	0.001	-	-	-	-
Asbestos % w/w bonded	0.01%	-	-	0.01	-	-	-	-
Petroleum compounds								
Benzene	0.5	50	-	0.1	6	nd	nd	-
Toluene	160	85	-	0.1	6	nd	nd	-
Ethylbenzene	55	70	-	0.1	6	nd	nd	-
Total xylenes	40	45	-	(0.1-0.3)	6	nd	nd	-
Naphthalene	3	170	-	1	6	nd	nd	-
TRHs C6 - C10 fraction	-	-	700	20	6	nd	nd	-
F1 TRHs >C6 - C10 less BTEX	45	180	-	20	6	nd	nd	-
TRHs >C10 - C16 fraction	-	-	1,000	50	6	nd	nd	-
F2 TRHs >C10 - C16 less N	110	120	-	50	6	nd	nd	-
F3 TRHs >C16 - C34 fraction	-	300	2,500	100	6	nd	nd	-
F4 TRHs >C34 - C40 fraction	-	2,800	10,000	100	6	nd	nd	-

Table 2: Summary soil analytical range table (mg/kg), May 2023

Analyte	HIL-A land use criteria	Ecological criteria	Manage. limits	LORs	Number of samples	Minimum	Maximum	Exceedances of land use criteria and notes
Polycyclic aromatic hydrocarbons (PAHs)								
Naphthalene	-	170	-	0.5	6	nd	nd	-
Acenaphthylene	-	-	-	0.5	6	nd	nd	-
Acenaphthene	-	-	-	0.5	6	nd	nd	-
Fluorene	-	-	-	0.5	6	nd	nd	-
Phenanthrene	-	-	-	0.5	6	nd	nd	-
Anthracene	-	-	-	0.5	6	nd	nd	-
Fluoranthene	-	-	-	0.5	6	nd	nd	-
Pyrene	-	-	-	0.5	6	nd	nd	-
Benz(a)anthracene	-	-	-	0.5	6	nd	nd	-
Chrysene	-	-	-	0.5	6	nd	nd	-
Benzo(b, j+k)fluoranthene	-	-	-	0.5	6	nd	nd	-
Benzo(a)pyrene	-	0.7	-	0.5	6	nd	nd	-
Indeno(1.2.3.cd)pyrene	-	-	-	0.5	6	nd	nd	-
Dibenz(a.h)anthracene	-	-	-	0.5	6	nd	nd	-
Benzo(g.h.i)perylene	-	-	-	0.5	6	nd	nd	-
Total PAHs (sum)	300	-	-	(0.5)	-	-	-	-
B(a)P TEQ	3	-	-	(0.5)	-	-	-	-
Phenols								
Phenol	3,000	-	-	0.5	6	nd	nd	-
Total halogenated	-	-	-	(0.5 - 10)	6	nd	nd	-
Total non-halogenated	-	-	-	(0.5 - 20)	6	nd	nd	-
Pentachlorophenol	100	-	-	1	6	nd	nd	-
Total cresols	400	-	-	(0.2 - 0.5)	6	nd	nd	-

Table 2: Summary soil analytical range table (mg/kg), May 2023

Analyte	HIL-A land use criteria	Ecological criteria	Manage. limits	LORs	Number of samples	Minimum	Maximum	Exceedances of land use criteria and notes
Organochlorine pesticides (OCPs)								
Total OCPs	-	-	-	-	6	nd	nd	-
Total DDT+DDE+DDD	240	180	-	(0.05)	6	nd	nd	-
Total aldrin and dieldrin	6	-	-	(0.05)	6	nd	nd	-
Total chlordanes	50	-	-	(0.1)	6	nd	nd	-
Total endosulfans	270	-	-	(0.05)	6	nd	nd	-
Endrin	10	-	-	0.05	6	nd	nd	-
Heptachlor	6	-	-	0.05	6	nd	nd	-
HCB	10	-	-	0.05	6	nd	nd	-
Methoxychlor	300	-	-	0.05	6	nd	nd	-
Mirex	10	-	-	0.1	6	nd	nd	-
Toxaphene	20	-	-	0.5	6	nd	nd	-
Organophosphorus pesticides (OPPs)								
Total OPPs	-	-	-	(0.2 - 2)	6	nd	nd	-
Chlorpyrifos	160	-	-	0.2	6	nd	nd	-
Polychlorinated biphenyls (PCBs)								
Total PCBs	1	-	-	(0.1)	6	nd	nd	-

See table notes at end.

Table 3: Summary soil analytical metals (mg/kg), May 2023

Sample location	Depth (m)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
LORs		2	0.5	5	5	5	0.1	5	5
Analytical									
TP01	0-0.1	nd	nd	31	14	6.4	nd	21	53
TP01	0.2-0.3	nd	nd	31	11	nd	nd	28	56
TP02	0-0.1	2.6	nd	35	14	10	nd	25	76
TP02	0.2-0.3	nd	nd	42	15	5.9	nd	35	70
TP03	0-0.1	nd	nd	37	14	12	nd	28	92
TP03	0.2-0.3	nd	nd	53	19	9.4	nd	38	68
TP03	0.4-0.6	nd	nd	nd	nd	nd	nd	nd	5.8
TP04	0-0.1	2.4	nd	41	21	24	nd	33	87
TP04	0.2-0.3	3.5	nd	52	23	22	nd	46	82
TP05	0-0.1	8.5	nd	61	27	13	nd	46	99
TP05	0.2-0.3	88	nd	95	83	23	nd	24	84
TP05	0.5-0.6	3.9	nd	16	30	7.2	nd	52	120
TP06	0-0.1	nd	nd	38	16	7.4	nd	30	73
TP06	0.2-0.3	nd	nd	60	20	8.3	nd	46	91
TP07	0-0.1	2.2	nd	32	18	11	nd	21	63
TP07	0.2-0.3	2.8	nd	43	21	86	nd	36	120
TP07	0.7-0.75	nd	nd	48	21	29	nd	31	100
TP07	0.8-0.93	nd	nd	12	nd	8.7	nd	nd	5.9
TP08	0-0.1	nd	nd	20	9.3	18	nd	13	64
TP08	0.2-0.3	nd	nd	24	12	17	nd	19	52
TP08	0.6-0.8	nd	nd	11	nd	8.5	nd	nd	7.9
TP09	0-0.1	nd	nd	48	19	13	nd	39	90
TP09	0.2-0.3	nd	nd	52	20	8.2	nd	41	83
TP10	0-0.1	5.4	nd	39	20	16	nd	35	78
TP10	0.2-0.3	2.3	nd	18	11	14	nd	17	46
TP11	0-0.1	nd	nd	42	21	8.7	nd	29	77
TP11	0.2-0.3	nd	nd	41	21	8.5	nd	50	65
TP12	0-0.1	nd	nd	13	9.9	24	nd	11	52
TP12	0.2-0.3	nd	nd	36	18	29	nd	27	74
TP13	0-0.1	nd	nd	16	8	26	nd	12	54
TP13	0.2-0.3	6.2	nd	8.2	7.6	30	nd	nd	43

Table 3: Summary soil analytical metals (mg/kg), May 2023

Sample location	Depth (m)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
LORs		2	0.5	5	5	5	0.1	5	5
Statistics									
Number of samples		31	31	31	31	31	31	31	31
Number of detects		11	0	30	28	29	0	27	31
Percentage non detects		65%	100%	3%	10%	6%	100%	13%	0%
Maximum		88	-	95	83	86	-	52	120
Third quartile		5.8	-	46.8	21.0	23.0	-	38.5	85.5
Arithmetic average		11.6	-	36.5	19.4	17.4	-	30.9	68.8
Median value		3.5	-	37.5	18.5	13.0	-	30.0	73.0
First quartile		2.5	-	21.0	13.5	8.5	-	22.5	53.5
Minimum		2	-	8	8	6	-	11	5.8
Standard deviation		25.4	-	18.6	13.6	15.3	-	11.6	28.2
Coefficient of variation		2.2	-	0.5	0.7	0.9	-	0.4	0.4
Relative standard deviation		219%	-	51%	70%	88%	-	38%	41%
Margin of error		9.3	-	6.8	5.0	5.6	-	4.3	10.3
Maximum probable error		80%	-	19%	26%	32%	-	14%	15%
Criteria									
Residual soils levels		**50**	4	**50**	200	**60**	3	60	400
Residential, HIL-A		100	20	100	6,000	300	40	400	7,400
Residential, HIL-B		500	150	500	30,000	1,200	120	1,200	60,000
Parks/open space HIL-C		300	90	300	17,000	600	80	1,200	30,000
Commercial/industrial HIL-D		3,000	900	3,600	240,000	1,500	730	6,000	400,000

See table notes at end.

Table 4: Summary soil analytical range table (mg/kg), August 2023

Analyte	HIL-A land use criteria	Ecological criteria	Manage. limits	LORs	Number of samples	Minimum	Maximum	Exceedances of land use criteria and notes
Metals								
Arsenic	100	50	-	2	24	nd	7.8	-
Cadmium	20	4	-	0.5	24	nd	nd	-
Chromium	100	50	-	5	24	13	37	-
Copper	6,000	200	-	5	24	7.8	23	-
Lead	300	60	-	5	24	5.5	160	-
Mercury	40	3	-	0.1	24	nd	nd	-
Nickel	400	60	-	5	24	7.3	26	-
Zinc	7,400	400	-	5	24	35	450	-
Asbestos								
Asbestos in soil	-	-	-	0.01	6	nd	nd	-
Asbestos in materials	-	-	-	-	-	-	-	-
Asbestos % w/w AF/FA	0.001%	-	-	0.001	-	-	-	-
Asbestos % w/w bonded	0.01%	-	-	0.01	-	-	-	-
Petroleum compounds								
Benzene	0.5	50	-	0.1	6	nd	nd	-
Toluene	160	85	-	0.1	6	nd	nd	-
Ethylbenzene	55	70	-	0.1	6	nd	nd	-
Total xylenes	40	45	-	(0.1-0.3)	6	nd	nd	-
Naphthalene	3	170	-	1	6	nd	nd	-
TRHs C6 - C10 fraction	-	-	700	20	6	nd	nd	-
F1 TRHs >C6 - C10 less BTEX	45	180	-	20	6	nd	nd	-
TRHs >C10 - C16 fraction	-	-	1,000	50	6	nd	nd	-
F2 TRHs >C10 - C16 less N	110	120	-	50	6	nd	nd	-
F3 TRHs >C16 - C34 fraction	-	300	2,500	100	6	nd	160	-
F4 TRHs >C34 - C40 fraction	-	2,800	10,000	100	6	nd	130	-

Table 4: Summary soil analytical range table (mg/kg), August 2023

Analyte	HIL-A land use criteria	Ecological criteria	Manage. limits	LORs	Number of samples	Minimum	Maximum	Exceedances of land use criteria and notes
Polycyclic aromatic hydrocarbons (PAHs)								
Naphthalene	-	170	-	0.5	6	nd	nd	-
Acenaphthylene	-	-	-	0.5	6	nd	nd	-
Acenaphthene	-	-	-	0.5	6	nd	nd	-
Fluorene	-	-	-	0.5	6	nd	nd	-
Phenanthrene	-	-	-	0.5	6	nd	nd	-
Anthracene	-	-	-	0.5	6	nd	nd	-
Fluoranthene	-	-	-	0.5	6	nd	1	-
Pyrene	-	-	-	0.5	6	nd	0.9	-
Benz(a)anthracene	-	-	-	0.5	6	nd	nd	-
Chrysene	-	-	-	0.5	6	nd	nd	-
Benzo(b, j+k)fluoranthene	-	-	-	0.5	6	nd	nd	-
Benzo(a)pyrene	-	0.7	-	0.5	6	nd	nd	-
Indeno(1.2.3.cd)pyrene	-	-	-	0.5	6	nd	nd	-
Dibenz(a.h)anthracene	-	-	-	0.5	6	nd	nd	-
Benzo(g.h.i)perylene	-	-	-	0.5	6	nd	nd	-
Total PAHs (sum)	300	-	-	(0.5)	6	nd	1.9	-
B(a)P TEQ	3	-	-	(0.5)	-	-	-	-
Phenols								
Phenol	3,000	-	-	0.5	6	nd	nd	-
Total halogenated	-	-	-	(0.5 - 10)	6	nd	nd	-
Total non-halogenated	-	-	-	(0.5 - 20)	6	nd	nd	-
Pentachlorophenol	100	-	-	1	6	nd	nd	-
Total cresols	400	-	-	(0.2 - 0.5)	6	nd	nd	-

Table 4: Summary soil analytical range table (mg/kg), August 2023

Analyte	HIL-A land use criteria	Ecological criteria	Manage. limits	LORs	Number of samples	Minimum	Maximum	Exceedances of land use criteria and notes
Organochlorine pesticides (OCPs)								
Total OCPs	-	-	-	-	6	nd	nd	-
Total DDT+DDE+DDD	240	180	-	(0.05)	6	nd	nd	-
Total aldrin and dieldrin	6	-	-	(0.05)	6	nd	nd	-
Total chlordanes	50	-	-	(0.1)	6	nd	nd	-
Total endosulfans	270	-	-	(0.05)	6	nd	nd	-
Endrin	10	-	-	0.05	6	nd	nd	-
Heptachlor	6	-	-	0.05	6	nd	nd	-
HCB	10	-	-	0.05	6	nd	nd	-
Methoxychlor	300	-	-	0.05	6	nd	nd	-
Mirex	10	-	-	0.1	6	nd	nd	-
Toxaphene	20	-	-	0.5	6	nd	nd	-
Organophosphorus pesticides (OPPs)								
Total OPPs	-	-	-	(0.2 - 2)	6	nd	nd	-
Chlorpyrifos	160	-	-	0.2	6	nd	nd	-
Polychlorinated biphenyls (PCBs)								
Total PCBs	1	-	-	(0.1)	6	nd	nd	-

See table notes at end.

Table 5: Summary soil analytical metals (mg/kg), August 2023

Sample location	Depth (m)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
LORs		2	0.5	5	5	5	0.1	5	5
Analytical									
SS14A	0 - 0.075	4.9	nd	23	14	5.7	nd	9	54
SS15A	0 - 0.075	2.4	nd	26	16	10	nd	14	69
SS16A	0 - 0.075	nd	nd	26	14	10	nd	18	63
SS17A	0 - 0.075	4.4	nd	35	23	34	nd	25	92
SS18A	0 - 0.075	2.2	nd	28	13	10	nd	20	74
SS19A	0 - 0.075	nd	nd	24	11	14	nd	18	58
SS20A	0 - 0.075	nd	nd	27	13	29	nd	19	66
SS21A	0 - 0.075	nd	nd	34	11	7.7	nd	24	54
SS22A	0 - 0.075	3.5	nd	23	12	6.7	nd	20	58
SS23A	0 - 0.075	7.8	nd	34	16	24	nd	21	79
SS24A	0 - 0.075	6.3	nd	37	17	20	nd	21	67
SS25A	0 - 0.075	3.1	nd	36	14	17	nd	25	87
SS26A	0 - 0.075	nd	nd	22	9.3	11	nd	15	46
SS27A	0 - 0.075	nd	nd	22	17	160	nd	11	450
SS28A	0 - 0.075	nd	nd	22	9.5	24	nd	14	71
SS29A	0 - 0.075	nd	nd	22	8.3	5.5	nd	14	38
SS30A	0 - 0.075	nd	nd	21	8.6	9.8	nd	13	35
SS31A	0 - 0.075	nd	nd	32	17	22	nd	25	65
SS32A	0 - 0.075	3.8	nd	32	15	17	nd	20	84
SS33A	0 - 0.075	nd	nd	19	13	12	nd	11	40
SS34A	0 - 0.075	2.1	nd	20	14	34	nd	14	120
SS35A	0 - 0.075	5.1	nd	33	15	14	nd	26	61
SS36A	0 - 0.075	2	nd	15	7.8	13	nd	8.1	44
SS37A	0 - 0.075	nd	nd	13	8.2	69	nd	7.3	63

Table 5: Summary soil analytical metals (mg/kg), August 2023

Sample location	Depth (m)	Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc
LORs		2	0.5	5	5	5	0.1	5	5
Statistics									
Number of samples		24	24	24	24	24	24	24	24
Number of detects		12	0	24	24	24	0	24	24
Percentage non detects		50%	100%	0%	0%	0%	100%	0%	0%
Maximum		7.8	-	37	23	**160**	-	26	**450**
Third quartile		5.0	-	32.3	15.3	24.0	-	21.0	75.3
Arithmetic average		4.0	-	26.1	13.2	24.1	-	17.2	80.8
Median value		3.7	-	25.0	13.5	14.0	-	18.0	64.0
First quartile		2.4	-	22.0	10.6	10.0	-	13.8	54.0
Minimum		2	-	13	7.8	5.5	-	7.3	35
Standard deviation		1.8	-	6.7	3.6	32.0	-	5.7	80.9
Coefficient of variation		0.5	-	0.3	0.3	1.3	-	0.3	1.0
Relative standard deviation		46%	-	26%	28%	132%	-	33%	100%
Margin of error		0.8	-	2.8	1.5	13.5	-	2.4	34.2
Maximum probable error		19%	-	11%	12%	56%	-	14%	42%
Criteria									
Residual soils levels		50	4	50	200	**60**	3	60	**400**
Residential, HIL-A		100	20	100	6,000	300	40	400	7,400
Residential, HIL-B		500	150	500	30,000	1,200	120	1,200	60,000
Parks/open space HIL-C		300	90	300	17,000	600	80	1,200	30,000
Commercial/industrial HIL-D		3,000	900	3,600	240,000	1,500	730	6,000	400,000

See table notes at end.

Table Notes

General:

LOR = limits of reporting. (x) LOR for multiple analytes within a category.
nd = non detect at LOR. < x = raised or specific LOR.
- = not analysed, no criteria, not relevant.
Bold value/bolded criteria = value exceeds criteria.

Analytes:

BTEXN = benzene, toluene, ethylbenzene, xylenes and naphthalene.
TRHs = total recoverable hydrocarbons.
F1 TRHs C6 - C10 fraction = TRHs C6 - C10 fraction less benzene, toluene, ethyl benzene, and xylenes.
F2 TRHs >C10 - C16 = TRHs >C10 - C16 less naphthalene.
PAHs = polycyclic aromatic hydrocarbons.
Polychlorinated biphenyls (PCBs).
Organophosphorus pesticides (OPPs).
Organochlorine pesticides (OCPs).

Statistics:

Quartiles are used to break up the data set into four equal parts, providing an indication of the distribution and variance of the data. When observations are ordered in ascending order according to their values:
- the first or lower quartile Q1, is the value of the observation at or below which one-quarter (25%) of observations lie, and is the 25th percentile;
- the second quartile Q2, is the median value at or below which half (50%) of observations lie, and is the 50th percentile; and
- the third or upper quartile Q3, is the value of the observation at or below which three-quarters (75%) of the observations lie, and is the 75th percentile.

Coefficient of variation (CV) is a measure of the relative homogeneity of a distribution (CV = $s/\bar{x}$). Low CV values (≤ 0.5) indicating a fairly homogenous contaminant distribution, and high CV values (> 1) indicating heterogenous distributions and probably skewed to the right. Also known as the relative standard deviation (RSD) and expressed as %.

For environmental data, the margin of error (MOE) is more commonly expressed as the confidence interval, where the MOE can be thought of as the "radius" to, or half the width of, the diameter of the interval. Confidence intervals are constructed as the range between the sample mean ($\bar{x}$) minus the MOE and $\bar{x}$ plus the MOE. The maximum probable error (MPE) is the MOE/$\bar{x}$. The MPE expressed as % along with the RSD can be used in estimating the number of samples required to determine the arithmetic mean.

Soil criteria:

Human health criteria as health investigation levels (HILs) and health screening levels (HSLs) from the National Environment Protection Council (NEPC) (2013) *Schedule B1, Guideline on Investigation Levels for Soil and Groundwater,* from the *National Environment Protection (Assessment of Site Contamination) Measure 1999* , including *Amendment Measure 2013 (No. 1)* (ASC NEPM).
Analysis for total Cr unless noted; HILs for hexavalent Cr (Cr VI).
Analysis and HILs for inorganic Hg unless noted; assessment of methyl mercury should only occur where there is evidence of a potential source. HILs do not address elemental Hg.
For As and Pb, site-specific bioavailability may be important and should be considered where appropriate.

Ecological criteria for organics as ecological investigation levels (EILs) and ecological screening levels (ESLs) from the ASC NEPM (2013, B1). For Tier 1 screening for metals, the residual soil levels are used from Salmon M. C. (2017) *Background Concentrations of Metals in Queensland Soils* , Presentation to ACLCA Queensland, Easterly Point Environmental Pty Ltd, Byron Bay NSW.

Management limits for TRHs fractions F1 - F4 in soil are from the ASC NEPM (2013, B1). Management limits are applied after consideration of relevant HSLs and ESLs. Separate management limits for BTEX and naphthalene are not available, and these should not be subtracted from the relevant fractions to obtain F1 and F2.

For Tier 1 screening, petroleum compounds are for surface (0 - < 1 m) and sand. For ESLs and management limits, the more conservative value of fine or coarse grained soil texture is used.

Appendix A

Detailed site investigation reporting checklist

Table 1: Detailed site investigation (DSI) reporting checklist [1, 2]

Report section	Required information	Included?
Document control	Document control date, version number, author and reviewer (including certification details) and who commissioned the report.	Included in Report details page.
Executive summary	Background – include a summary of site contamination.	Included in executive summary.
	Objectives of the investigation.	
	Scope of work.	
	A summary of key findings, observations and sampling results (if available).	
	Summary of conclusions and recommendations.	
Objectives	The objectives of the investigation/report and the broader objectives for the site/investigation.	Included in Section 1.2, Objectives and scope.
Scope of work	Summary of the scope of work.	Included in Section 1.2, Objectives and scope.
Site identification	Site identification and detail items from ASC NEPM Field Checklist 'Site information' sheet.	Included in Section 2, Site identification and surrounds.
Site history	Site history items from ASC NEPM Field Checklist 'Site information' sheet. A summary is enough if detailed information was included in an available referenced previous report.	Included in Section 4, Site history.
Site condition and surrounding environment	Site condition and surrounding environment items from ASC NEPM Field Checklist 'Site information' sheet. A summary is enough if detailed information was included in an available referenced previous report.	Site condition included in Section 5, Site features and condition. Surrounding environment included in Sections 2.2, 2.3, and 3.

Report section	Required information	Included?
Sampling and analysis plan and sampling methodology (if sampling is undertaken)	See Table 2.2 of NSW EPA (2020)[1], and note and explain the rationale for any deviations from the plan.	Included in Section 7, Easterly Point investigations. Sampling, analysis, and quality plans (SAQPs) were developed for the two stages, and no significant deviations from the plans occurred.
Results	Summary of previous results, if applicable.	Previous consultants investigation Included in Section 4, Site history and data summarised in Table 1 in Tables section.
	A table(s) of analytical results that: - shows all essential details such as sample identification numbers and sampling depth; - shows assessment criteria highlights all results exceeding any assessment criteria (not just the highest)	Included in Tables 2 – 5 in Tables section.
	Includes a summary/discussion of the analytical results.	Included in Section 8.
	Includes sample descriptions for all media where applicable (e.g. soil, sediment, surface water, groundwater, biota).	Included in Section 8.
	Includes test pit or bore logs (well construction details where appropriate for example groundwater level expressed in Australian height datum).	Included in Appendix G.
	Includes site plan showing all sample locations.	Included in Figures section.
	Includes site plan(s) showing the extent of soil and groundwater contamination exceeding selected assessment criteria for each sampling depth, including identification numbers and depths of all samples analysed.	
	Follows appropriate statistical procedures when comparing site data with the investigation and screening levels. Refer to ASC NEPM Schedule B1 sections 2, 3 and 4.	Included in Sections 8 and 9, and in tables in Tables section.

Report section	Required information	Included?
Quality assurance/quality control data evaluation (if sampling is undertaken)	See Table 2(c) of NSW EPA (2020)[1].	Included in Section 7 and Appendix F.
Conceptual site model	See Table 2(a) of NSW EPA (2020)[1].	Included in Section 5 and Section 9.
Site characterisation	Assessment of extent of contamination considering all relevant media, including offsite areas.	Included in Section 8 and Section 9.
	Assessment of aesthetic issues.	
	Assessment of secondary toxicity (if conducting an ecological risk assessment).	N/A
	Assessment of potential effects of contaminants on human health, and built structures (for example arising from risks to service lines from hydrocarbons in groundwater, or risks to concrete from acid sulphate soils).	Included in Section 8 and Section 9.
	Assessment of chemical degradation products.	N/A
	Assessment of possible exposure routes and exposed populations (human, ecological).	Included in Section 8 and Section 9.
	Any evidence of, or potential for, migration of contaminants from the site, including odour, air quality, stormwater, sedimentation, soil vapour, ground gases and groundwater issues.	Included in Section 8 and Section 9.
Waste management	Waste classification details in accordance with EPA Waste Classification Guidelines (see waste classification checklist.	N/A
	Statements regarding materials being disposed via appropriately licensed facility or re-used under an order or exemption.	N/A

Report section	Required information	Included?
	Waste disposal dockets or other waste documentation for any disposed waste.	N/A
Conclusions and recommendations	Summary of all findings.	Included in Section 9.
	Conclusions addressing the stated objectives.	
	Assumptions used in reaching the conclusions.	
	Extent of uncertainties in the results (quantified where possible).	
	A clear-cut statement that the consultant considers the site to be suitable for the proposed use (where applicable).	
	A statement detailing all limitations and constraints on the use of the site (where applicable).	
	Recommendations for further work, if appropriate.	

Table notes:
1. From NSW EPA (2020) *Consultants reporting on contaminated land: Contaminated Land Guidelines*;
2. EPA (2020) describes that:
   - where a consultant chooses to deviate from the relevant requirements in these checklists, clear reasons must be given to justify any significant deviations at each reporting stage: and
   - each item needs to be considered for all sites, but not all the items will be relevant to every contaminated site. Where not relevant, sufficient information should be provided to understand why it is appropriate to be considered as note relevant.

Appendix B

WaterNSW groundwater reports

WaterNSW
Work Summary

GW026872

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): IRRIGATION

Work Type: Bore open thru rock
Work Status:
Construct.Method:
Owner Type: Private

Commenced Date:
Completion Date: 01/01/1967
Final Depth: 15.70 m
Drilled Depth: 15.70 m

Contractor Name: (None)
Driller:
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m):
Salinity Description: 501-1000 ppm
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	ROUS	NORTH CASINO	21
Licensed:			

Region: 30 - North Coast
River Basin: 203 - RICHMOND RIVER
Area/District:
CMA Map: 9540-3N
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: (Unknown)
Northing: 6807822.000
Easting: 506065.000
Latitude: 28°51'26.3"S
Longitude: 153°03'43.9"E

GS Map: -
MGA Zone: 56
Coordinate Source: GD.,ACC.MAP

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1	1	Casing	Threaded Steel	-0.30	11.50	152			Suspended in Clamps
1	1	Opening	Screen	11.60	13.40	127		1	Stainless Steel, A: 0.25mm

Water Bearing Zones

From (m)	To (m)	Thickness (m)	WBZ Type	S.W.L. (m)	D.D.L. (m)	Yield (L/s)	Hole Depth (m)	Duration (hr)	Salinity (mg/L)
7.30	9.70	2.40	Unconsolidated	4.00					
10.40	13.40	3.00	Unconsolidated	4.00					

Drillers Log

From (m)	To (m)	Thickness (m)	Drillers Description	Geological Material	Comments
0.00	6.09	6.09	Clay	Clay	
6.09	7.31	1.22	Clay Sandy	Clay	
7.31	9.75	2.44	Sand Water Supply	Sand	
9.75	10.36	0.61	Clay	Clay	
10.36	13.41	3.05	Sand Black Water Supply	Sand	

13.41	15.24	1.83	Clay Sandy Coal Fossils:wood	Clay	
15.24	15.69	0.45	Sandstone	Sandstone	

***** End of GW026872 *****

WaterNSW
Work Summary

GW307744

Licence: 30BL185748 **Licence Status:** ACTIVE

Authorised Purpose(s): MONITORING BORE
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 28/02/2011
Final Depth: 8.50 m
Drilled Depth: 8.50 m

Contractor Name: APOD Soil Testing
Driller: Patrice Le Pla
Assistant Driller:

Property: BELVALE- KATVALE 136 Johnston St CASINO 2470 NSW
GWMA: -
GW Zone: -
Standing Water Level (m): 5.778
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	ROUS	NORTH CASINO	14//1091559
Licensed:	ROUS	NORTH CASINO	Whole Lot 14//1091559

Region: 30 - North Coast
River Basin: 203 - RICHMOND RIVER
Area/District:
CMA Map: 9540-3N
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6807457.000
Easting: 506095.000
Latitude: 28°51'38.2"S
Longitude: 153°03'45.0"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.50	0			Auger
1	1	Casing	P.V.C.	0.00	3.50				
1	1	Opening	Slots	3.50	8.00			0	PVC

Remarks

28/02/2011: Form A Remarks:
Nat Carling, 21-July-2015; All details were provided on Form-AG & location map.

***** End of GW307744 *****

WaterNSW
Work Summary

GW307745

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 28/02/2011
Final Depth: 8.00 m
Drilled Depth: 8.00 m

Contractor Name: APOD Soil Testing
Driller: Patrice Le Pla
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m): 5.757
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	ROUS	NORTH CASINO	14//1091559
Licensed:			

Region: 30 - North Coast
River Basin: 203 - RICHMOND RIVER
Area/District:
CMA Map: 9540-3N
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6807451.000
Easting: 506065.000
Latitude: 28°51'38.3"S
Longitude: 153°03'43.9"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	8.00	0			Auger
1	1	Casing	P.V.C.	0.00	3.50				
1	1	Opening	Slots	3.50	8.00			0	PVC

Remarks

28/02/2011: Form A Remarks:
Nat Carling, 21-July-2015; All details were provided on the Form-AG.

***** End of GW307745 *****

Warning To Clients: This raw data has been supplied to the WaterNSW by drillers, licensees and other sources. WaterNSW does not verify the accuracy of this data. The data is presented for use by you at your own risk. You should consider verifying this data before relying on it. Professional hydrogeological advice should be sought in interpreting and using this data.

WaterNSW
Work Summary

GW307746

Licence:
Licence Status:
Authorised Purpose(s):
Intended Purpose(s): MONITORING BORE

Work Type: Bore
Work Status: Equipped
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 28/02/2011
Final Depth: 9.00 m
Drilled Depth: 9.00 m

Contractor Name: APOD Soil Testing
Driller: Patrice Le Pla
Assistant Driller:

Property:
GWMA:
GW Zone:
Standing Water Level (m): 5.687
Salinity Description:
Yield (L/s):

Site Details

Site Chosen By:

	County	Parish	Cadastre
Form A:	ROUS	NORTH CASINO	14//1091559
Licensed:			

Region: 30 - North Coast
River Basin: 203 - RICHMOND RIVER
Area/District:
CMA Map: 9540-3N
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6807468.000
Easting: 506094.000
Latitude: 28°51'37.8"S
Longitude: 153°03'44.9"E

GS Map: -
MGA Zone: 56
Coordinate Source: Unknown

Construction

Negative depths indicate Above Ground Level; C-Cemented; SL-Slot Length; A-Aperture; GS-Grain Size; Q-Quantity; PL-Placement of Gravel Pack; PC-Pressure Cemented; S-Sump; CE-Centralisers

Hole	Pipe	Component	Type	From (m)	To (m)	Outside Diameter (mm)	Inside Diameter (mm)	Interval	Details
1		Hole	Hole	0.00	9.00	0			Auger
1	1	Casing	P.V.C.	0.00	4.50				
1	1	Opening	Slots	4.50	9.00			0	PVC

Remarks

28/02/2011: Form A Remarks:
Nat Carling, 21-July-2015; All details were provided on the Form-AG.

***** End of GW307746 *****

Appendix C

Historical aerial photographs

1958 Aerial photograph
Source: NSW Government Spatial Services

1966 Aerial photograph
Source: NSW Government Spatial Services

1990 Aerial photograph
Source: NSW Government Spatial Services

2015 Aerial photograph
Source: NSW Government SIX Maps

Appendix D

Before You Dig Australia search results

Job No 34094968

Phone: 1100
www.byda.com.au

Caller Details

Contact:	Marc Salmon	**Caller Id:**	3070761	**Phone:**	0419 985 090
Company:	Easterly Point Environmental Pty Ltd				
Address:	PO Box 2363 Byron Bay NSW 2481	**Email:**	marc@easterlypoint.com		

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.

User Reference: 23034
Working on Behalf of: Private

Enquiry Date:	Start Date:	End Date:
28/04/2023	01/05/2023	03/05/2023

Address:
146-152 Johnston Street
Casino NSW 2470

Job Purpose:	Onsite Activities:
Excavation	Manual Excavation, Mechanical Excavation
Location of Workplace:	**Location in Road:**
Both	Nature Strip, Footpath

- Check that the location of the dig site is correct. If not you must submit a new enquiry.
- Should the scope of works change, or plan validity dates expire, you must submit a new enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:
Not supplied

Your Responsibilities and Duty of Care

- The lodgement of an enquiry does not authorise the project to commence. You must obtain all necessary information from any and all likely impacted asset owners prior to excavation.
- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at **www.byda.com.au**
- **For more information on safe excavation practices, visit www.byda.com.au**

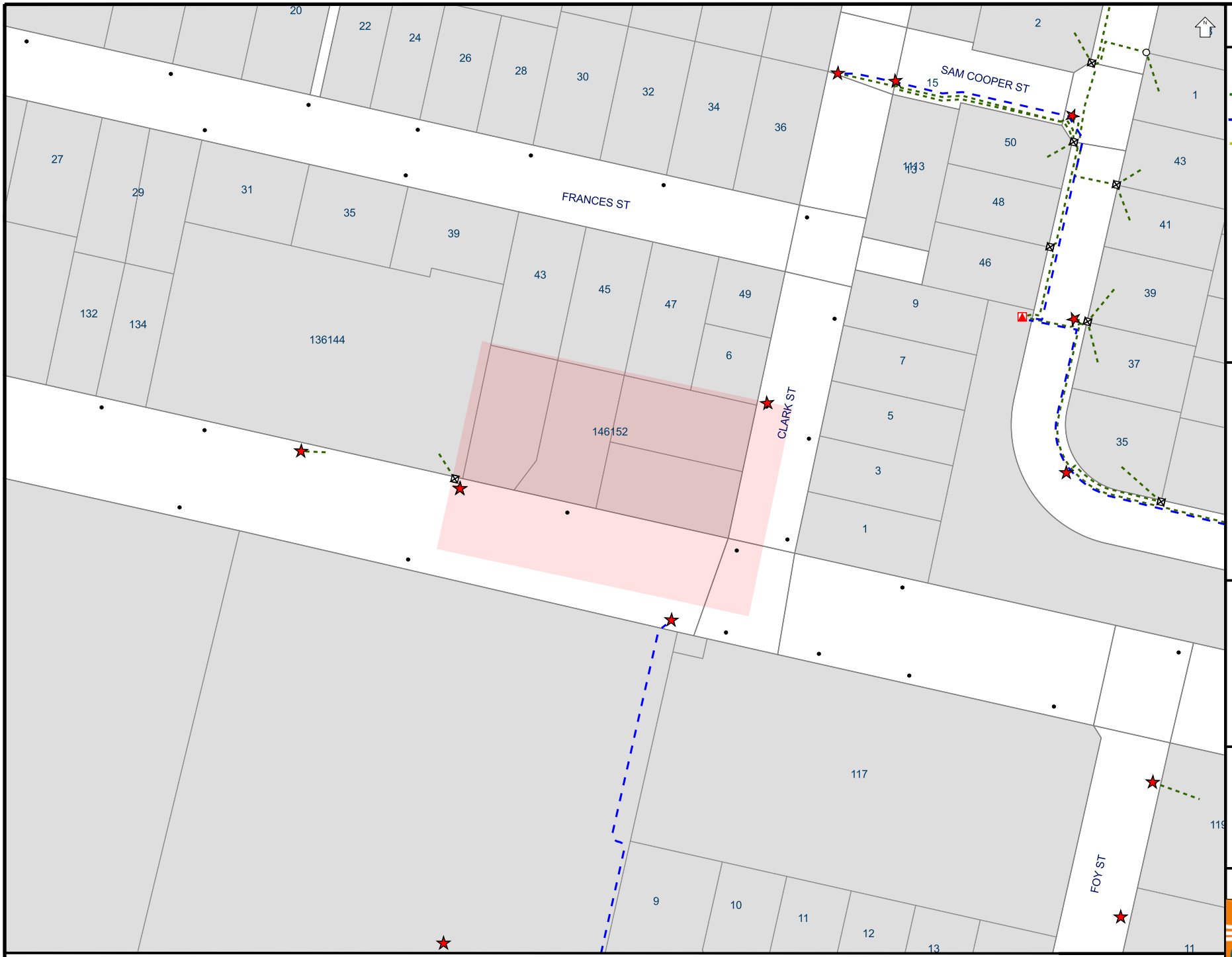
Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days.
Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.
** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.
# Asset owners highlighted with a hash # require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
223978244	Essential Energy	13 23 91	NOTIFIED
223978243	NBN Co NswAct	1800 687 626	NOTIFIED
223978241	Richmond Valley	(02) 6660 0300	NOTIFIED
223978242	Telstra NSW North	1800 653 935	NOTIFIED

END OF UTILITIES LIST

Lodge Your Free Enquiry Online – 24 Hours a Day, Seven Days a Week



Overhead wires not shown
LOOK UP & LIVE!

LEGEND

- LV Underground Cable
- HV Underground Cable
- Underground Pipe
- Underground Earth or Wires
- Ground Substation
- Pole
- Cubicle
- Pit
- Area of Interest

Critical Assets

Contact Essential Energy on 13 23 91

- Zone Substation
- Underground Cable
- Underground Fibre

Proposed Works

- Area of proposed works

Proposed assets are shown as orange symbols

THE INFORMATION ON THIS MAP MAY NOT BE ACCURATE. If details are incorrect, please notify Essential Energy on 13 23 91 (or fax 1800 354 636)

ISSUE DATE: 28/04/2023

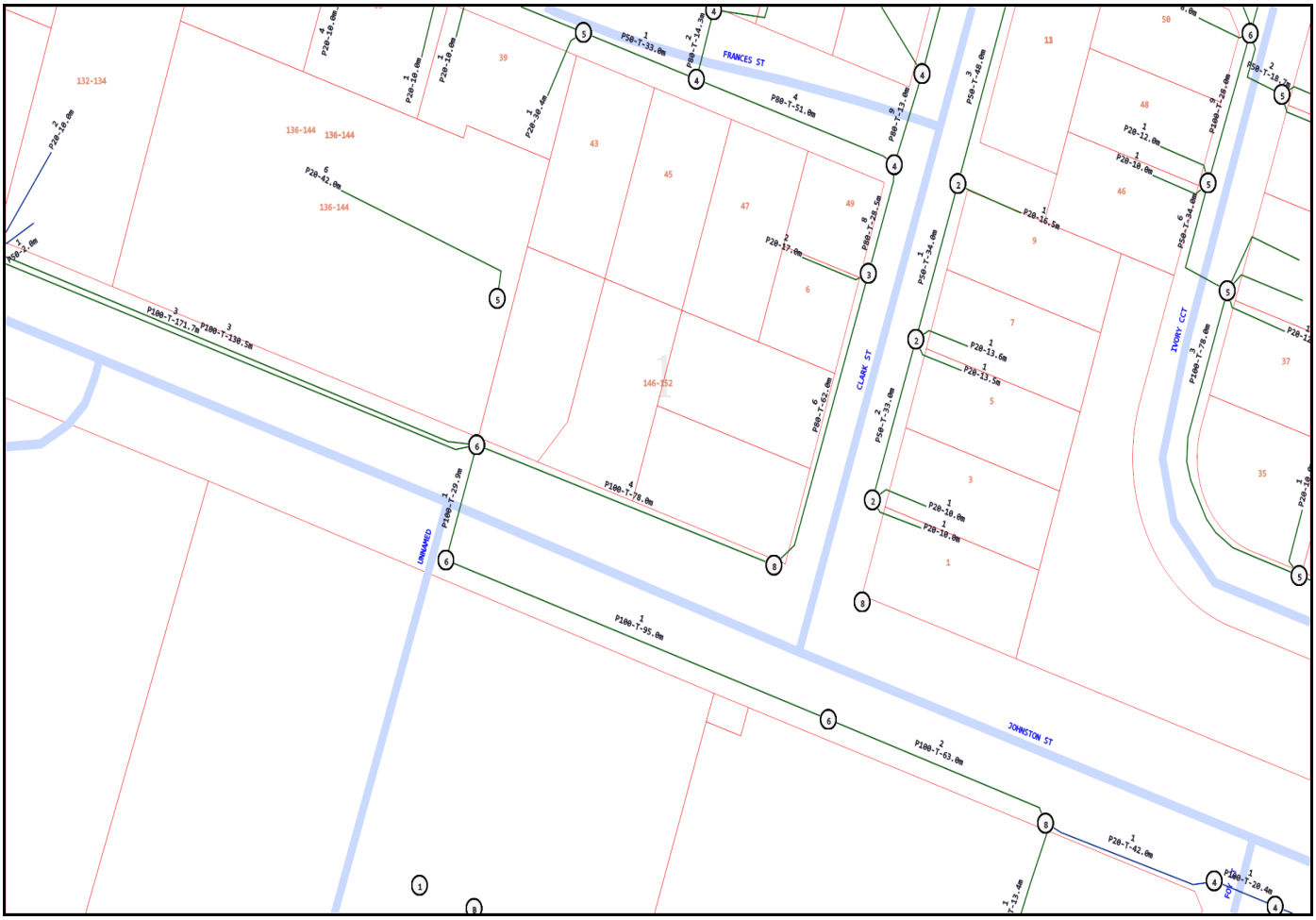
You must resubmit your request if you have not started work within 4 weeks of the 'Issue Date' above

A4 | SCALE: 1:1483

Job Number: 34094968 Sequence number: 223978244 Job location: 146-152 Johnston Street, Casino Map Centre: 153° 3' 46.7", -28° 51' 38.6"

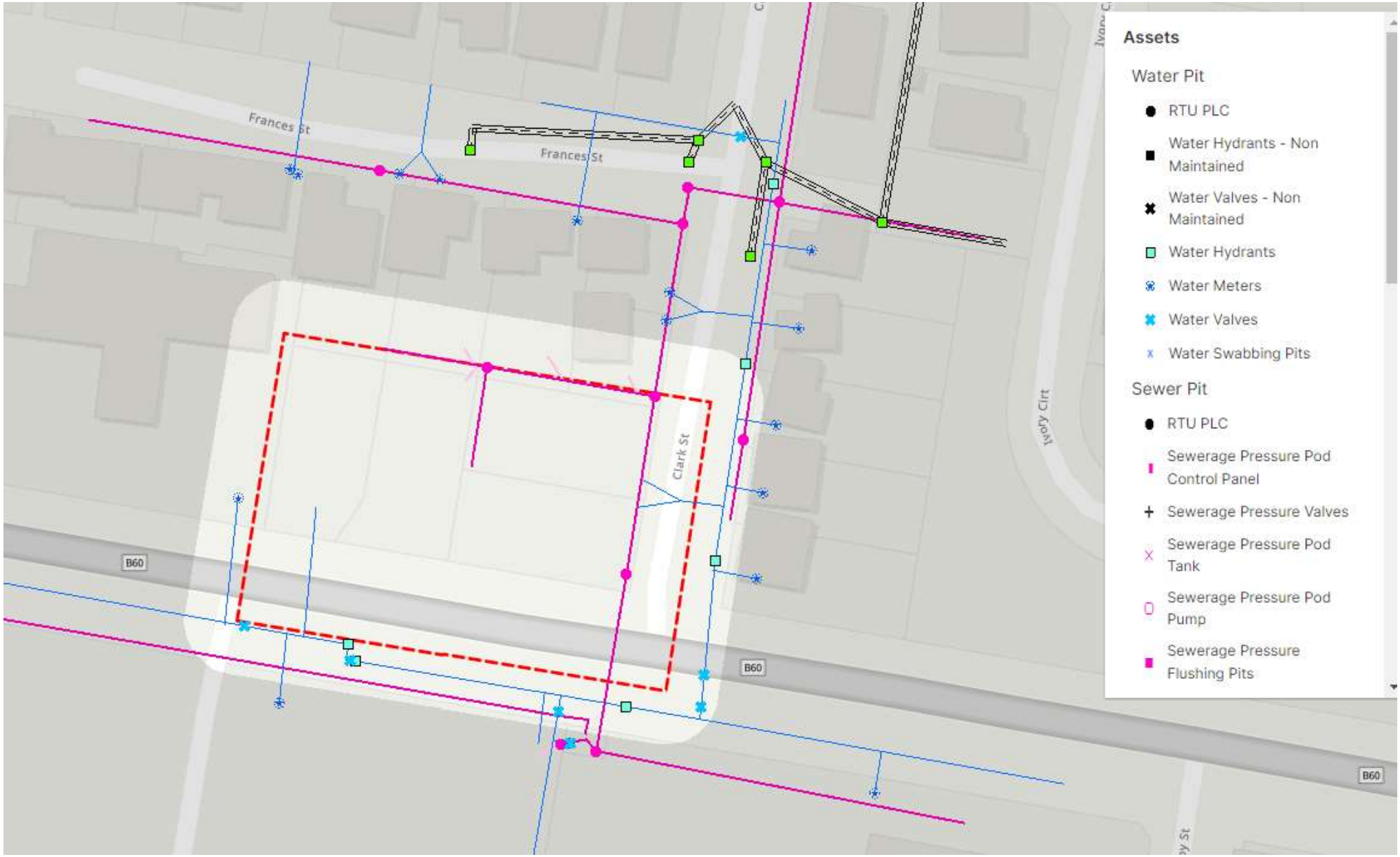
LEGEND

34	Parcel and the location
5	Pit with size "5"
2E	Power Pit with size "2E". Valid PIT Size: e.g. 2E, 5E, 6E, 8E, 9E, E, null.
	Manhole
	Pillar
2 PO – T- 25.0m P40 – 20.0m 5 9	Cable count of trench is 2. One "Other size" PVC conduit (PO) owned by Telstra (-T-), between pits of sizes, "5" and "9" are 25.0m apart. One 40mm PVC conduit (P40) owned by NBN, between pits of sizes, "5" and "9" are 20.0m apart.
2 10.0m 5 9	2 Direct buried cables between pits of sizes ,"5" and "9" are 10.0m apart.
5 9	Trench containing any INSERVICE/CONSTRUCTED (Copper/RF/Fibre) cables.
5 9	Trench containing only DESIGNED/PLANNED (Copper/RF/Fibre/Power) cables.
5 9	Trench containing any INSERVICE/CONSTRUCTED (Power) cables.
BROADWAY ST	Road and the street name "Broadway ST"
Scale	0 20 40 60 Meters 1:2000 1 cm equals 20 m

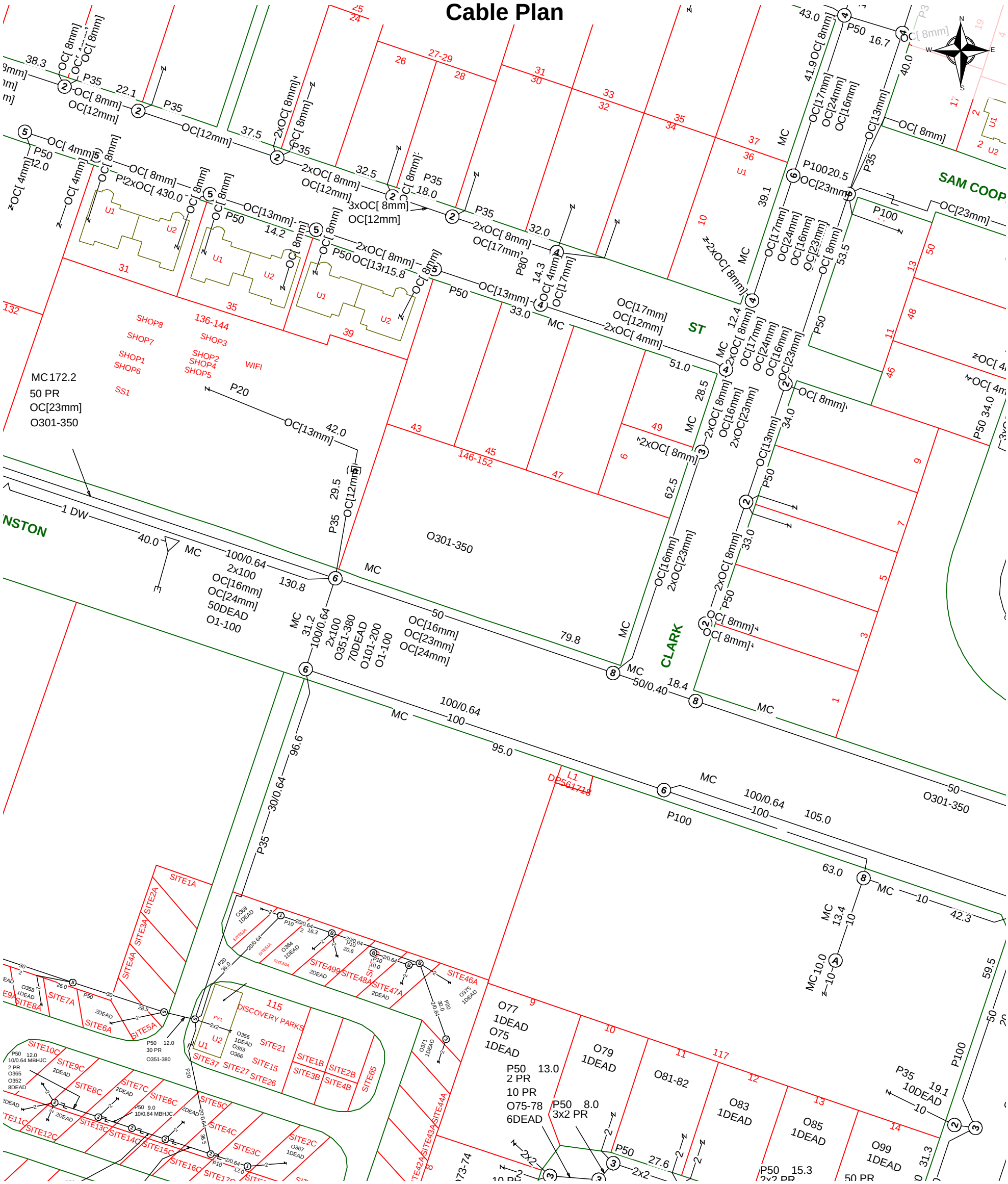


Emergency Contacts

You must immediately report any damage to the **nbn™** network that you are/become aware of. Notification may be by telephone - 1800 626 329.



Cable Plan



Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment
Ph - 13 22 03
Email - Telstra.Plans@team.telstra.com
Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries

TELSTRA LIMITED A.C.N. 086 174 781

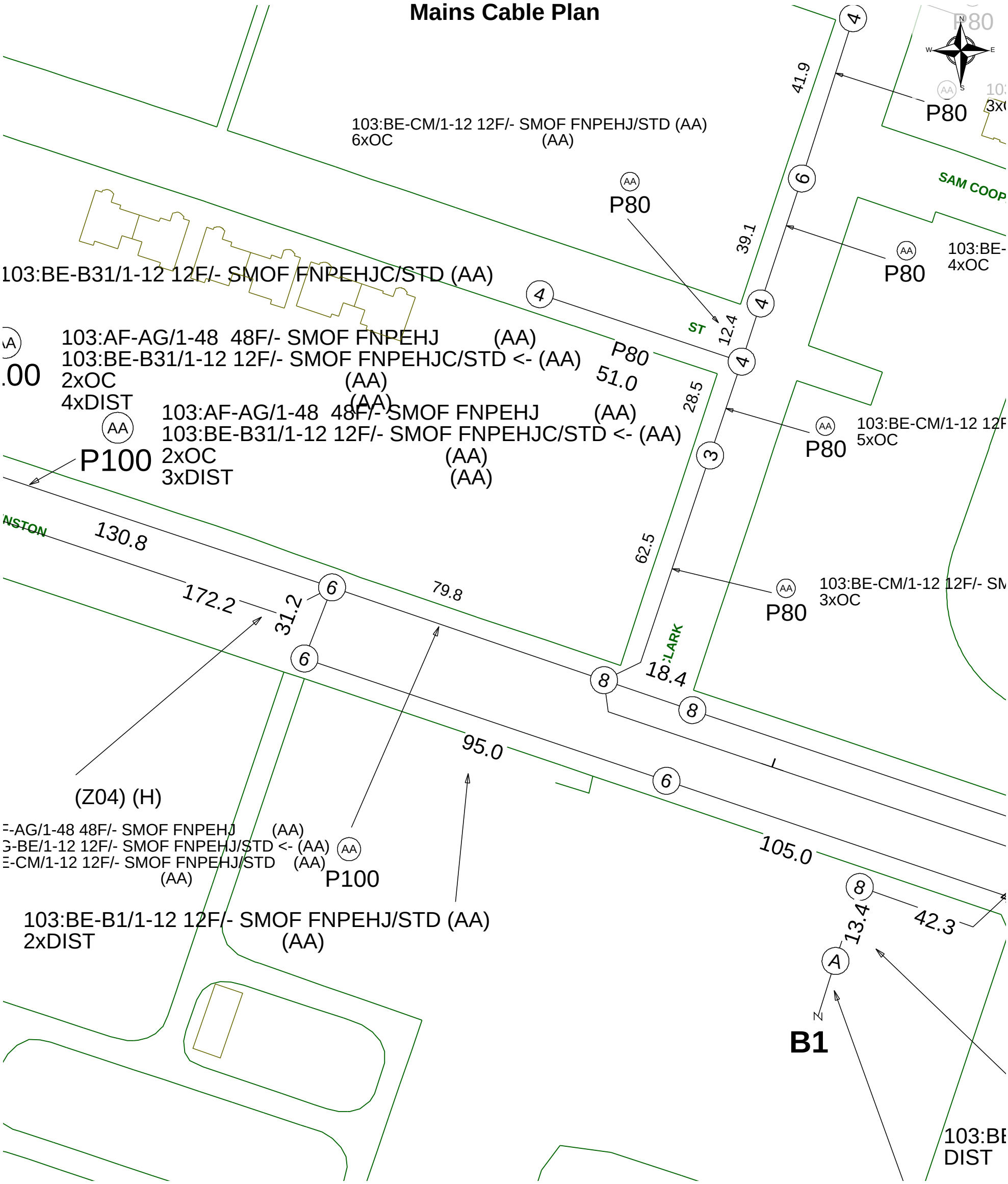
Generated On 28/04/2023 14:51:00

Sequence Number: 223978242

CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.

The above plan must be viewed in conjunction with the Mains Cable Plan on the following page

Mains Cable Plan



Report Damage: https://service.telstra.com.au/customer/general/forms/report-damage-to-telstra-equipment Ph - 13 22 03 Email - Telstra.Plans@team.telstra.com Planned Services - ph 1800 653 935 (AEST bus hrs only) General Enquiries	Sequence Number: 223978242
TELSTRA LIMITED A.C.N. 086 174 781	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.
Generated On 28/04/2023 14:51:01	

WARNING
Telstra plans and location information conform to Quality Level "D" of the Australian Standard AS 5488-Classification of Subsurface Utility Information.
As such,Telstra supplied location information is indicative only.Spatial accuracy is not applicable to Quality Level D.
Refer to AS 5488 for further details. The exact position of Telstra assets can only be validated by physically exposing it.
Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy.
Further on site investigation is required to validate the exact location of Telstra plant prior to commencing construction work.
A Certified Locating Organisation is an essential part of the process to validate the exact location of Telstra assets and to ensure the asset is protected during construction works.

See the Steps- Telstra Duty of Care that was provided in the email response.

Appendix E

Easterly Point's Sampling SOPs

Soil sampling - general EPEFW-PR01

1.0 Purpose and scope

Procedure for the collection of soil samples. This procedure is required to ensure that soil samples are collected in an appropriate and consistent manner, that the soil sampling is appropriate for the media and analytes, and to allow the documentation of standard operating procedures used for soil sample collection and handling.

This procedure is for sampling of in-situ and ex-situ soils and fills for general physical and chemical tests and analyses. Also for non-volatile, semi-volatile and volatile analyses.

Additional contaminant-specific requirements may apply, and the relevant guidelines should be referred to for additional information and sampling requirements.

2.0 Definitions

COC	chain of custody form;
WHS	work health and safety;
PID	photoionisation detector; and
VOCs	volatile organic compounds.

3.0 References

- NEPC (2013) *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1), Schedule A and Schedules B(1) – B(9)*, National Environment Protection Council;
- EPA (2022a) *Contaminated Land Guidelines - Sampling design part 1 – application*; and
- EPA (2022b) Contaminated Land Guidelines - Sampling design part 2 – interpretation.
- HEPA (2020) *PFAS National Environmental Management Plan*, Heads of EPAs Australia and New Zealand, Version 2.0.

4.0 General

Related environmental procedures include *EPESHE-PR06 Decontamination of sampling equipment*.

This procedure relates to the collection of soil samples using hand tools, push tubes, split spoon samplers, or augers. Where volatiles are a contaminant of concern, samples are not to be collected from auger flights. The exception is where WH&S considerations, e.g. potential for buried services, require auguring for the initial 0.5 m or similar.

In general samples should be collected at the surface, and at depth. They should be collected at regular intervals for consistent soil profiles (e.g. surface, 0.5 m, 1.0 m, 2.0 m etc.), or at changes in the soil profile (e.g. surface, A horizon, B horizon, etc.), or from the different layers where fill is present (e.g. surface, fill type 1, fill type 2, natural soils, etc.).

Sampling depths should ensure that the residual, natural soils are exposed/sampled to a reasonable depth, e.g. 0.3 - 0.5 m. If due to refusal by the sampler or exceedance of equipment reach, this cannot be achieved, the geological log should clearly document the reason sampling was discontinued and that fill material continues to greater depths.

Surface samples should be 0 - 0.10 m or 0 - 0.15 m and samples from depth should be less than 0.3 m, to avoid compositing effects. (Some landuses may require shallower surface samples, e.g. banana lands 0.075 m, and this should be established as part of the DQOs process). Where thinner layers or horizons exist, the sample size should be reduced accordingly, and no sample should consist of multiple layers/horizons/strata.

5.0 Procedure

5.1 Sample collection

Clean, disposable gloves are to be used for each sample by all personnel who will contact the soil. This is to prevent both exposure to contaminants and cross-contamination of samples. Any sampling equipment is to be de-contaminated before use.

The sampling procedure should also consider the order of sampling at each location based on the nature of other contaminants present and the likely level of impact, e.g. for PFAS, moving from areas of likely low concentrations of PFAS contamination towards likely higher concentrations.

5.1.1 Sample transfer

Once collected, samples are to be transferred immediately to the appropriate sample container, ensuring that the container is filled to the top and that no head-space remains.

5.1.2 Hand tools

Refers to samples collected from the land surface, walls and floors of test pits or excavations, stockpiles, etc. Hand tools include spatulas, trowels, shovels, spades, etc.

The surface to be sampled is first to be cleaned of any organic material, e.g. grass and roots, and the sample collected from fresh, exposed soil. The soil should be exposed to remove any smear affects from the sampling equipment, and to ensure any exposed surfaces which may not be representative of contamination are removed, e.g. where release of volatiles may have occurred from the exposed soil.

5.1.3 Test pits

Test pits or excavations less than 1m depth are not to be entered unless appropriate assessment of stability has been conducted and documented. Test pits over 1 m depth are not to be entered.

Where test pits or excavations cannot be entered for WHS reasons, sampling from excavator buckets is permissible, providing the following controls are observed:

- the excavator bucket is decontaminated between sample locations;
- the sample is collected from the centre of the bucket; and
- the sample is collected from the interior of soil clods or a mass of uncohesive material which is undisturbed and has not contacted the excavator bucket.

The sampler should direct the excavator operator as to where the sample is to be collected, and, where volatiles are a contaminant of concern, screen the bucket with a PID prior to sampling.

5.1.4 Soil cores

For push tubes, split spoons, etc., samples should be transferred directly to the sampling container.

5.1.5 Augers

Samples should be collected from the auger with a trowel, by cutting away the outside and collecting soil from the centre of the auger bit. Samples should then be transferred directly to the sampling container.

5.1.6 Field screening for VOCs

If volatiles are a contaminant of concern and field screening using a photo-ionisation detector (PID) is required, a sample should also be transferred to a ziplock plastic bag.

5.1.7 Composite sampling

Composite sampling is used to reduce analytical costs and involves the bulking and thorough mixing of soil samples (collected as above), to form one composite sample for laboratory analysis. Generally, the samples should be sent to the laboratory for compositing, with appropriate instructions recorded on the COC.

Composite sampling must comply with the following rules:
- volatile substances, including BTEXN compounds and TRHs C6 – C10 are not suitable for composite sampling;
- samples to be composited must be collected from the same soil/fill horizon;
- soil with high clay content is not suitable for composite sampling;
- no more than 4 sub-samples should be included in a composite sample; and
- the sub-samples should be equal in size, from immediately adjacent sampling points, evenly spaced, and composited laterally.

5.2 Sample containers

Sample containers are to be decontaminated, clean and dry, and of the appropriate size and material. They are to include the appropriately preservative if required, and to have gastight, non-absorptive seals, which allow no head-space. Generally, this is achieved using laboratory-supplied 125 mL to 250 mL clear glass jars. The laboratory should be contacted if numerous and/or specialty analytes are required, to confirm appropriate size or type of jar/s required.

Where per and poly-fluoroalkyl substances (PFAS) are contaminants of concern, polypropylene or HDPE sample containers should be used. Request PFAS-specific sample containers from the laboratory.

Polytetrafluoroethylene (PTFE) materials (such as Teflon©) or sampling containers with PTFE-lined lids should not be used, including standard glass containers with lined lids.

Asbestos

Where asbestos is a contaminant of concern, either as asbestos containing material (ACM) or free fibres within soil, there are various options for assessment and analysis:

- 10 L soil screen for investigation of bonded asbestos as ACMs. This is to be done in the field by placing approximately 10 L of soil (use a plastic bucket for measurement of soil volume) on a sheet of plastic and rake through the material using a 7 mm sieve. Identify and quantify the volume of ACMs, if any. Ensure to take photos and place all ACMs in a plastic sample bag. If unsure of ACM volume, weigh the sample bag full of ACMs when back in the office.

- Identification in soil WA guidelines at 0.001% w/w – a 500 ml sample volume (see Figure 5.1 below) is required to be collected and sent to the laboratory for analysis.

- Identification in soil (AS 4964) at 0.01% w/w - a 50 ml sample volume (see Figure 5.1 below) is required to be collected and sent to the laboratory for analysis.

Table 1.1: Asbestos analysis and sample containers

Analysis type	Volume required	Sample container
AS 4964 0.01%	100mL/50g (grab sample)	Small asbestos bag
WA 0.001% (FA/AF)	250-500g	Large asbestos bag
Presence/absence	Building material only (not a soil test)	N/A

Figure 5.1: Laboratory sample bags for asbestos analysis at the laboratory

5.3 Sample labelling

Samples should be labelled clearly on the outside wall of the container and the sample number should also be provided on the container lid. All labelling should be with waterproof pens/markers.

The following is to be included on the label:
- sample ID;
- project ID;
- date; and
- sampler's initials.

Sample ID must be a unique and logical identifier. This may include one of the following:
- SL for sample location;
- TP for test pit;
- BH for borehole; or
- MW for monitoring well.

The Sample ID needs to be be followed by the Sample location number, and either the sample depth or a letter, e.g. SL01-0-0.15 or TP03-A.

Duplicate samples are not to be labelled "duplicate" etc., and are to conform to the sample ID system used, e.g. if there are six sample locations, duplicates should be labelled as the seventh, etc.

5.4 Sample handling, storage and dispatch

The soil jars, once filled with sample, are to be wiped clean (after rinsing with clean water if necessary) to avoid contamination of the eskies or people later handling the samples. They are to be wrapped in bubble wrap/padding, and immediately placed in an esky containing frozen ice-blocks. Eskies should be kept out of direct sunlight, hot vehicles, etc., as far as practical.

A Chain of Custody (COC) form is to be filled out and the COC is to be sent with the sample/s to the laboratory. The COC/s is to be placed in a ziploc plastic bag or plastic folder. All samples sent to the laboratory are to be included on the COC/s, and if no analysis is required, marked as "Hold".

If additional air space exists in the esky, this should be filled with scrunched-up newspaper or bubble wrap or similar. Eskies are to be secured with heavy tape and security seals, and clearly show the laboratory's contact information and Easterly Point contact information.

All samples, including QC samples, are to be transported to the primary and secondary laboratories. If transportation is by courier, eskies are not to be dispatched on Fridays (or days before public holidays) unless delivery the next day has been organised.

If samples cannot be dispatched on the day of sampling, with refreshed ice-blocks or ice for over-night transport, then the samples are to be refrigerated until dispatch. The laboratory should be contacted if any delays to dispatch occur, to confirm appropriate time is available for extraction/analysis based on holding times.

PFAS-specific considerations

Where PFAS is a contaminant of concern, the following products should not be used or worn during any stage of sampling, including at the site and during transit:
- new clothing, footwear, PPE and treated fabrics with stain and water-resistant products;
- sunscreen, moisturisers, cosmetics;
- fast food wrappers and the-like;
- stickers and labels, inks, sticky notes, waterproof papers,
- drilling fluids,
- decontamination solutions; and
- reusable freezer blocks.

5.5 Sample location logging

A geological log is to be completed for each sample location by a qualified environmental scientist/engineer. Logs are to be completed for all sample locations, including for surface samples and ex-situ samples.

The log is to record the following data:
- job details, date, location, methods, climatic conditions, etc.;
- sample number and depth;
- soil classification (material type and texture), colour, consistency or density, inclusions, odour, staining, presence of artefacts, moisture content, etc.;
- filed measurements results;
- depth of excavation/drilling;
- excavation/drilling refusal;
- depth water inflow and/or groundwater level, if encountered, and comments regarding water if required; and
- any other relevant field observations.

5.6 QA documentation

A COC is to be completed for all samples to be analysed (including physical test parameters such as particle size analysis, etc.), and for all samples to be sent to the laboratories. Samples not to be analysed should be described as "Hold".

The COC is to detail the following information:
- laboratory reference numbers, if available (including quotes);
- site identification;
- the samplers' initials;
- nature of the sample;
- collection time and date;
- analyses to be performed;
- sample preservation method;
- any relevant comments, e.g. level of contamination expected;
- level of quality control required; and
- dispatch information and signature.

5.7 QC samples

QC sampling is project-specific and may vary based on the DQOs. In general, the following should be collected as a minimum:

Quality control sample	Frequency
Field duplicates	≥ 10% or 1 if < 10 samples
Inter-laboratory duplicates	≥ 5% or 1 if < 20 samples
Rinsate samples	≥ 1/field batch
Trip blanks	≥ 1/field batch (volatiles)
Trip spikes	≥ 1/field batch (volatiles)

Trip spikes and trip blanks are laboratory prepared and should be organised through the laboratory prior to conducting the field work. Trip spikes and trip blanks should be held for as little time as possible prior to the field work and should be refrigerated prior to the field work. After sample collection, trip spikes and trip blanks are to be handled as a primary sample and should also be included on the COC.

PFAS-specific QC

The PFAS NEMP (2.0) describes that "quality control samples should be collected at a higher frequency than would normally be applied in the investigation of other contaminants".

To provide greater confidence in the reproducibility of results, blind replicates, split samples and rinsate blanks should be collected at a rate of at least one for every ten primary samples.

Rinsate blanks should be collected wherever uncertainty may arise regarding the potential for contamination, or where there is doubt about whether materials are PFAS-free. Field and trip blanks should be collected to verify the integrity of sampling and decontamination procedures. Laboratories will generally supply on request certified PFAS-free water for rinsates and blanks.

Appendix F

Data usability

F.1: Data usability summary assessment, May 2023

This data usability (DU) summary assessment addresses the soil investigation conducted as part of the Stage 1 DSI field work in May 2023. All site work was completed in accordance with standard Easterly Point sampling protocols, including a quality assurance/quality control (QA/QC) program, standard operating procedures, and a set of data quality indicators (DQIs).

A data usability assessment was performed for the soil data collected by Easterly Point, as summarised in the following tables:
- Table F1.1, field QC samples summary;
- Table F1.2, summary of field QA/QC; and
- Table F1.3, summary of laboratory QA/QC.

Table F1.1: Soil field QC samples summary

	Total samples	Field duplicates [1]	Inter-lab duplicates [1]	Trip spike	Trip blank	Rinsate
BTEXN	6	0	0	0	0	0
TRHs C6 – C10	6	0	0	0	0	0
TRHs >C10 – C40	6	0	0	-	-	0
Metals[2]	31	0	0	-	-	0
PAHs	6	0	0	-	-	0
Phenols	6	0	0	-	-	-
OCPs	6	0	0	-	-	-
PCBs	6	0	0	-	-	-
OPPs	6	0	0	-	-	-

Notes:
1. Shows number of duplicate samples collected and the percentage of total samples analysed.
2. Arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc.
   – = not applicable, e.g. trip spike/blank analysed for volatile compounds only.

Table F1.2: Summary of field QA/QC

Parameter	Complies	Comments [1]
Precision		
Standard operating procedures (SOPs) appropriate and complied with	Yes	All sampling was conducted under Easterly Point's standard operating procedures.
Field duplicates	No	≥ 5%. RPD[2] criteria < 30% – 50%. Field duplicates were not collected.
Inter-laboratory duplicates	No	≥ 5%. RPD[2] criteria < 30% – 50%. Inter-laboratory duplicates were not collected.

Parameter	Complies	Comments [1]
Accuracy		
Matrix spikes samples appropriate	Partial	≥ 1/media type. Matrix spike analysis was carried out on a combination of anonymous and site samples.
Representativeness		
Sample collection - preservation	Yes	Samples were collected directly into laboratory supplied jars with no headspace. All samples were placed immediately into eskies containing ice.
Sample collection - sample splitting	N/A	No sample splitting was conducted for field samples.
Field equipment calibrated	Yes	PID calibration certification was provided (see attached).
Decontamination procedures	Yes	Hand tools were used at some locations where soil was dense, and were decontaminated between locations. Where collected from the excavator bucket, samples were collected from the centre of the bucket.
Rinsate samples	No	Required ≥ 1/field batch, < LORs. No rinsate samples were collected.
Trip blanks	No	≥ 1/field batch (volatiles), < LORs. No trip blanks were collected.
Trip spikes	No	≥ 1/field batch (volatiles), 70 - 130%, (recovery) or ≤ 30 - 50% (RPDs). No trip spikes were collected.
Comparability		
Consistent sampling staff	Yes	All field work was conducted by Marc Salmon and Andre Torre of Easterly Point.
Consistent weather/field conditions	Yes	No extreme weather conditions occurred during the investigation which would be expected to impact on soil field conditions.
Completeness		
Sample logs and field data	Yes	-
Chain of Custody	Yes	-

Notes:
1. For QC samples, specified frequency and acceptance criteria shown.
2. RPD = relative percentage difference.

Table F1.3: Summary of laboratory QA/QC

Parameter	Complies	Notes [1]
Precision		
Laboratory duplicates	Yes	≥ 10%, laboratory specified. Laboratory duplicate samples were analysed at an appropriate frequency and all results reported within the acceptance criteria.
Accuracy		
Surrogate spikes	Yes	Organics by GC, 70% - 130%. Surrogates spike samples recoveries were acceptable.
Matrix spikes analysis appropriate	Yes	≥ 70% - 130%. All matrix spike recoveries were within the laboratory specified global acceptance criteria.
Laboratory control samples (LCSs)	Yes	≥ 1/lab batch, 70% - 130%. All LCS recoveries were within the laboratory specified global acceptance criteria.
Representativeness		
Sample condition	Yes	-
Holding times	Yes	-
Laboratory blanks	Yes	≥ 1/lab batch, < LORs.
Comparability		
NATA accredited laboratory	Yes	Eurofins is NATA accredited (No. 1261, Site No. 20794).
NEPM methods or similar	Yes	Eurofins describes that their in-house laboratory methods are referenced from NEPC and USEPA.
Limits of reporting (LORs) consistent and appropriate	Yes	-
Completeness		
Sample receipt	Yes	-
Laboratory Reports	Yes	-

Notes:
1. For QC samples, acceptance criteria shown. Acceptance criteria can vary based on analyte, statistical data and laboratory specific methods. Laboratory specified relates to detected concentrations based on LORs, e.g. result < 10 x LOR = no limit, 10 – 20 x LOR = 0 - 50%, > 20 x LOR = 0 - 20%. See laboratory reports for specific details.

Precision

Field duplicate and inter-laboratory duplicate samples were not collected as part of the Stage 1 DSI. As part of the Stage 2 DSI, Stage 1 locations where resampled and field and interlaboratory duplicates were collected to address the QC samples overlooked in Stage 1.

Laboratory duplicate samples were analysed with no RPD exceedances reported.

Accuracy

The accuracy of the analysis is confirmed by matrix spike and LCS recoveries within the acceptance criteria. However, some matrix spike analysis were carried out on anonymous samples which, although allowed under the terms of NATA accreditation, is not consistent with the ASC NEPM requirement of one matrix spike per material type.

Representativeness

Samples were collected following correct decontamination procedures, directly into laboratory supplied jars with no headspace and placed immediately into eskies containing ice. Rinsate samples, trip blanks, and trip spikes were not collected as part of the Stage 1 DSI.

Samples were all received and extracted within the required holding times for analysis.

Comparability

In regard to comparability, the data is considered to be acceptable, with consistent sampling staff, use of NATA accredited laboratories, all LORs were appropriately below the relevant criteria, and weather and field conditions were consistent and therefore did not affect comparability.

Completeness

Field QC samples were not collected as part of the Stage 1 DSI, and according field QC is considered to be incomplete. This was addressed as part of the Stage 2 DSI.

Laboratory and field documentation is considered to be complete.

Summary

In summary, the data is considered to be of an acceptable quality and to be suitable to support the results of the investigation, when the additional field QC is assessed (see August data usability report).

Data usability assessment checklist, May 2023

Complete Table 1 and include project and investigation information, and list all relevant laboratory reports. Complete Table 2 as one table per laboratory report, i.e. can be multiple tables based on number of discrete laboratory reports, (2.1, 2.2, 2.3, etc.). When final completed after review, add electronic initials.

In completing tables, if not relevant to specific laboratory report, analyte, or media, etc., include "N/A" (not applicable).

Table 1: Data usability requirements

Project no.:	23034.1	Date:	18/10/23
Project name:	Momentum, Johnston Street, Casino		
Project stage:	Stage 1 DSI		
Conducted by (initials):	SM	Reviewed by (initials):	MS 
Field work date:	2 May 2023	Sample media:	Soil and building material.
Laboratory reports	Analytes	Notes, QC samples, discussion, etc.	
Table 2.1 Eurofins 988809-S	8-metals, BTEXN, TRHs, PAHs, OCPs, OPPs, PCBs, phenols.	No field QC samples were collected.	
Table 2.2 Eurofins 988809-AID	Asbestos fibre identification (AS 4964)	No field or laboratory QC samples.	

Table 2.1: QA information and QC tests

Eurofins 988809-S	
Sample receipt (COC provided and appropriate?):	Yes.
Sample condition (lab reports confirm suitable condition?):	Yes.
Sample collection and preservation (confirm from relevant lab reports?):	Yes. Notes inappropriate sampling containers, which pertains to the asbestos in soils not being in separate asbestos bags.
Rinsate samples, trip blanks, trip spikes collected?	None collected.
Field duplicates and inter-laboratory duplicates?	None collected.
Laboratory reports (provided, full and complete?):	Yes.
Holding times (lab reports confirm suitable holding times?):	Yes.
Limits of reporting (LORs) consistent and appropriate?	Yes.
NATA accredited laboratory?	Yes.
NEPM methods or similar?	Yes. ASC NEPM and USEPA.
Laboratory duplicates	Yes, although some were on anonymous samples.
Surrogate spikes	Yes.
Matrix spikes analysis appropriate	75 – 125% metals; 70 – 130% BTEX, TRHs, and PAHs; 30 – 130% phenols. Yes, although some were on anonymous samples.
Laboratory control samples (LCSs)	80 – 120% metals; 70 - 130% BTEX, TRHs, and PAHs; 25 – 140% phenols. Yes.
Laboratory blanks	Yes.

Table 2.2: QA information and QC tests

Eurofins 988809-AID	
Sample receipt (COC provided and appropriate?):	Yes.
Sample condition (lab reports confirm suitable condition?):	Yes.
Sample collection and preservation (confirm from relevant lab reports?):	Inappropriate sampling containers, which pertains to the asbestos in soils not being in separate asbestos bags.
Rinsate samples, trip blanks, trip spikes collected?	None collected.
Field duplicates and inter-laboratory duplicates?	None collected.
Laboratory reports (provided, full and complete?):	Yes.
Holding times (lab reports confirm suitable holding times?):	Yes.
Limits of reporting (LORs) consistent and appropriate?	Yes.
NATA accredited laboratory?	Yes.
NEPM methods or similar?	Yes, Australian Standard.
Laboratory duplicates	N/A
Surrogate spikes	N/A
Matrix spikes analysis appropriate	N/A
Laboratory control samples (LCSs)	N/A
Laboratory blanks	N/A

F.2: Data usability summary assessment, August 2023

This data usability (DU) summary assessment addresses the soil investigation conducted as part of the Stage 2 DSI field work in August 2023. All site work was completed in accordance with standard Easterly Point sampling protocols, including a quality assurance/quality control (QA/QC) program, standard operating procedures, and a set of data quality indicators (DQIs).

A data usability assessment was performed for the soil data collected by Easterly Point, as summarised in the following tables:
- Table F2.1, field QC samples summary;
- Table F2.2, summary of field QA/QC; and
- Table F2.3, summary of laboratory QA/QC.

Table F2.1: Soil field QC samples summary

	Total samples	Field duplicates [1]	Inter-lab duplicates [1]	Trip spike	Trip blank	Rinsate
BTEXN	8	2 (25%)	2 (25%)	1	1	1
TRHs C6 – C10	8	2 (25%)	2 (25%)	1	1	1
TRHs >C10 – C40	8	2 (25%)	2 (25%)	-	-	1
Metals[2]	26	4 (15.5%)	4 (15.5%)	-	-	1
PAHs	8	2 (25%)	2 (25%)	-	-	1
Phenols	8	2 (25%)	2 (25%)	-	-	-
OCPs	8	2 (25%)	2 (25%)	-	-	-
PCBs	8	2 (25%)	2 (25%)	-	-	-
OPPs	8	2 (25%)	2 (25%)	-	-	-

Notes:
1. Shows number of duplicate samples collected and the percentage of total samples analysed.
2. Arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc.
   – = not applicable, e.g. trip spike/blank analysed for volatile compounds only.

Table F2.2: Summary of field QA/QC

Parameter	Complies	Comments [1]
Precision		
Standard operating procedures (SOPs) appropriate and complied with	Yes	All sampling was conducted under standard Easterly Point operating procedures, and project specific DQIs.
Field duplicates	Yes	≥ 5%. RPD[2] criteria < 30% – 50%. Two Stage 1 DSI locations were resampled, and field duplicate samples were collected to address the oversight as part of Stage 1. One arsenic RPD exceeded the acceptance criteria, but the results were < 10 mg/kg and this is not considered to be significant.

Parameter	Complies	Comments [1]
Inter-laboratory duplicates	Yes	≥ 5%. RPD[2] criteria < 30% – 50%. Two Stage 1 DSI locations were resampled, and inter-laboratory duplicate samples were collected to address the oversight as part of Stage 1. Three chromium RPD exceeded the acceptance criteria, but the results were low and not considered to relate to contamination; i.e. natural variation in the ambient background concentration.
Accuracy		
Matrix spikes samples appropriate	Partial	≥ 1/media type. Matrix spike analysis was carried out on a combination of anonymous and relevant samples.
Representativeness		
Sample collection - preservation	Yes	Samples were collected directly into laboratory supplied jars with no headspace. All samples were placed immediately into eskies containing ice.
Sample collection - sample splitting	Yes	Duplicate samples were split in the field by filling each container collectively (i.e. co-collected).
Field equipment calibrated	Yes	PID calibration certification was provided (see attached).
Decontamination procedures	Yes	Samples were collected directly from the surface, with a new pair of disposable gloves used for the collection of each sample. Hand tools were used and decontaminated.
Rinsate samples	Yes	Required ≥ 1/field batch, < LORs. One rinsate sample was collected with all results below the LORs.
Trip blanks	Yes	≥ 1/field batch (volatiles), < LORs. One trip blank sample was collected during the soil investigation with all results below the LORs.
Trip spikes	Yes	≥ 1/field batch (volatiles), 70 - 130%, (recovery) or ≤ 30 - 50% (RPDs). One trip spike sample was collected during the soil investigation with all recoveries in the acceptance criteria.
Comparability		
Consistent sampling staff	Yes	All field work was conducted by Marc Salmon and Andre Torre of Easterly Point.

Parameter	Complies	Comments [1]
Consistent weather/field conditions	Yes	No extreme weather conditions occurred during the investigation which would be expected to impact on soil field conditions.
Completeness		
Sample logs and field data	Yes	-
Chain of Custody	Yes	-

Notes:
1. For QC samples, specified frequency and acceptance criteria shown.
2. RPD = relative percentage difference.

Table F2.3: Summary of laboratory QA/QC

Parameter	Complies	Notes [1]
Precision		
Laboratory duplicates	Yes	≥ 10%, laboratory specified. Laboratory duplicate samples were analysed at an appropriate frequency, with all results reported within the acceptance criteria.
Accuracy		
Surrogate spikes	Yes	Organics by GC, 70% - 130%. All surrogates spike samples recoveries were within the laboratory specified global acceptance criteria.
Matrix spikes analysis appropriate	Yes	≥ 70% - 130%. All matrix spike recoveries were within the laboratory specified global acceptance criteria.
Laboratory control samples (LCSs)	Yes	≥ 1/lab batch, 70% - 130%. All LCS recoveries were within the laboratory specified global acceptance criteria.
Representativeness		
Sample condition	Yes	-
Holding times	Yes	-
Laboratory blanks	Yes	≥ 1/lab batch, < LORs.
Comparability		
NATA accredited laboratory	Yes	Both primary laboratory Eurofins and secondary laboratory ALS are NATA accredited (1261 and 825).

Parameter	Complies	Notes [1]
NEPM methods or similar	Yes	Eurofins and ALS describe their in-house laboratory methods are referenced from NEPC, ASTM and modified USEPA/APHA documents.
Limits of reporting (LORs) consistent and appropriate	Yes	-
Completeness		
Sample receipt	Yes	-
Laboratory Reports	Yes	-

Notes:
1. For QC samples, acceptance criteria shown. Acceptance criteria can vary based on analyte, statistical data and laboratory specific methods. Laboratory specified relates to detected concentrations based on LORs, e.g. result < 10 x LOR = no limit, 10 – 20 x LOR = 0 - 50%, > 20 x LOR = 0 - 20%. See laboratory reports for specific details.

Precision

Field duplicate and inter-laboratory duplicate samples were collected at a rate that satisfies the acceptance criteria, such that the earlier omission is considered to have been corrected. Minor RPD exceedances were noted, but were not considered to be significant.

Laboratory duplicate samples were also analysed with no RPD exceedances reported.

Accuracy

The accuracy of the analysis is confirmed by matrix spike, surrogate spike and LCS recoveries within the acceptance criteria. However, it is noted that some matrix spike analysis were carried out on anonymous samples.

Representativeness

No outliers have been reported for QC samples collected to assist in the qualification of representativeness, including rinsate blanks, trip spikes, and trip blanks. Primary and secondary laboratory samples were all received and extracted within the required holding times for later analysis.

Comparability

In regard to comparability, the data is considered to be acceptable, with consistent sampling staff, NATA accredited laboratory used, all LORs below the relevant criteria, and weather and field conditions were consistent and therefore did not affect comparability.

Completeness

Laboratory and field documentation is considered to be complete.

Summary

In summary, the data is considered to be of an acceptable quality and to be suitable to support the results of the investigation, including the Stage 1 and the Stage 2 components of the DSI.

Data usability assessment checklist, August 2023

Complete Table 1 and include project and investigation information, and list all relevant laboratory reports. Complete Table 2 as one table per laboratory report, i.e. can be multiple tables based on number of discrete laboratory reports, (2.1, 2.2, 2.3, etc.). When final completed after review, add electronic initials.

In completing tables, if not relevant to specific laboratory report, analyte, or media, etc., include "N/A" (not applicable).

Table 1: Data usability requirements

Project no.:	23034.2	Date:	18/10/23
Project name:	Momentum, Johnston Street, Casino		
Project stage:	Stage 2 DSI. QC dup. + trip. omitted from Stage 1 also included.		
Conducted by (initials):	SM	Reviewed by (initials):	MS
Field work date:	2 August 2023	Sample media:	Soil, building materials, water for RB.

Laboratory reports	Analytes	Notes, QC samples, discussion, etc.
Table 2.1 Eurofins 1014903-S	8-metals, TRHs, BTEXN, PAHs, OCPs, OPPs, PCBs, phenols.	Dup./trip. for Stage 2; make up dup./trip. for stage 1; and Trip spike and trip blank.
Table 2.2 Eurofins 1014903-W	8-metals, TRHs, BTEXN, PAHs, OCPs, OPPs, PCBs, phenols.	Rinse blank only.
Table 2.3 Eurofins 1014903-AID	Asbestos fibre identification (AS 4964)	No QC.
Table 2.4 ALS EB2324484	8-metals, TRHs, BTEXN, PAHs, OCPs, OPPs, PCBs, phenols, asbestos id.	Interlaboratory duplicates.

Table 2.1: QA information and QC tests

Eurofins 1014903-S	
Sample receipt (COC provided and appropriate?):	Yes.
Sample condition (lab reports confirm suitable condition?):	Yes.
Sample collection and preservation (confirm from relevant lab reports?):	Yes.
Rinsate samples, trip blanks, trip spikes collected?	Yes, see Table F.1.
Field duplicates and inter-laboratory duplicates?	Yes, see Tables F.2 to Table F.5.
Laboratory reports (provided, full and complete?):	Yes.
Holding times (lab reports confirm suitable holding times?):	Yes.
Limits of reporting (LORs) consistent and appropriate?	Yes.
NATA accredited laboratory?	Yes.
NEPM methods or similar?	Yes. ASC NEPM and USEPA.
Laboratory duplicates	Yes, although some were on anonymous samples.
Surrogate spikes	Yes.
Matrix spikes analysis appropriate	75 – 125% metals; 70 – 130% BTEX, TRHs, and PAHs; 30 – 130% phenols. Yes, although some were on anonymous samples.
Laboratory control samples (LCSs)	80 – 120% metals; 70 - 130% BTEX, TRHs, and PAHs; 25 – 140% phenols. Yes.
Laboratory blanks	Yes.

Table 2.2: QA information and QC tests

Eurofins 1014903-W	
Sample receipt (COC provided and appropriate?):	Yes.
Sample condition (lab reports confirm suitable condition?):	Yes.
Sample collection and preservation (confirm from relevant lab reports?):	Yes.
Rinsate samples, trip blanks, trip spikes collected?	No; rinsate blank.
Field duplicates and inter-laboratory duplicates?	No; rinsate blank.
Laboratory reports (provided, full and complete?):	Yes.
Holding times (lab reports confirm suitable holding times?):	Yes.
Limits of reporting (LORs) consistent and appropriate?	Yes.
NATA accredited laboratory?	Yes.
NEPM methods or similar?	Yes. ASC NEPM and USEPA.
Laboratory duplicates	Yes, although some were on anonymous samples.
Surrogate spikes	Yes.
Matrix spikes analysis appropriate	75 – 125% metals; 70 – 130% BTEX, TRHs, and PAHs; 30 – 130% phenols. Yes, although some were on anonymous samples.
Laboratory control samples (LCSs)	80 – 120% metals; 70 - 130% BTEX, TRHs, and PAHs; 25 – 140% phenols. Yes.
Laboratory blanks	Yes.

Table 2.3: QA information and QC tests

Eurofins 1014903-AID	
Sample receipt (COC provided and appropriate?):	Yes.
Sample condition (lab reports confirm suitable condition?):	Yes.
Sample collection and preservation (confirm from relevant lab reports?):	Yes.
Rinsate samples, trip blanks, trip spikes collected?	None collected.
Field duplicates and inter-laboratory duplicates?	None collected.
Laboratory reports (provided, full and complete?):	Yes.
Holding times (lab reports confirm suitable holding times?):	Yes.
Limits of reporting (LORs) consistent and appropriate?	Yes.
NATA accredited laboratory?	Yes.
NEPM methods or similar?	Yes, Australian Standard.
Laboratory duplicates	N/A
Surrogate spikes	N/A
Matrix spikes analysis appropriate	N/A
Laboratory control samples (LCSs)	N/A
Laboratory blanks	N/A

Table 2.4: QA information and QC tests

ALS EB2324484	
Sample receipt (COC provided and appropriate?):	Yes.
Sample condition (lab reports confirm suitable condition?):	Yes.
Sample collection and preservation (confirm from relevant lab reports?):	Yes.
Rinsate samples, trip blanks, trip spikes collected?	No, interlaboratory duplicates.
Field duplicates and inter-laboratory duplicates?	No, interlaboratory duplicates. See Table F.2 to F.5.
Laboratory reports (provided, full and complete?):	Yes.
Holding times (lab reports confirm suitable holding times?):	Yes.
Limits of reporting (LORs) consistent and appropriate?	Yes.
NATA accredited laboratory?	Yes.
NEPM methods or similar?	Yes.
Laboratory duplicates	Yes. Some anonymous.
Surrogate spikes	Yes. Control limits shown on Page 8 of 8.
Matrix spikes analysis appropriate	Yes. Some anonymous.
Laboratory control samples (LCSs)	Yes.
Laboratory blanks	Yes.

Table F.1: Field quality control samples

Analyte	Rinsate	Trip Blank	Trip Spike	Rinsate	Trip Blank	Trip Spike
	RB water	TB solid	TS solid	**Sample no.**	**Sample no.**	**Sample no.**
Units	mg/L	mg/kg	%	mg/L	mg/kg	%
Metals						
Arsenic	<0.001	-	-			
Cadmium	<0.0002	-	-			
Chromium	<0.001	-	-			
Copper	<0.001	-	-			
Lead	<0.001	-	-			
Mercury	<0.0001	-	-			
Nickel	<0.001	-	-			
Zinc	<0.005	-	-			
Petroleum compounds						
Benzene	<0.001	<0.1	130			
Toluene	<0.001	<0.1	130			
Ethylbenzene	<0.001	<0.1	130			
Total xylenes	<0.003	<0.3	130			
Naphthalene	<0.01	<0.5	120			
TRHs C6 - C10 fraction	<0.02	<20	120			
F1 TRHs >C6 - C10 less BTEX	-	-	-			
TRHs >C10 - C16 fraction	<0.05	-	-			
F2 TRHs >C10 - C16 less N	-	-	-			
F3 TRHs >C16 - C34 fraction	<0.1	-	-			
F4 TRHs >C34 - C40 fraction	<0.1	-	-			
Polycyclic aromatic hydrocarbons (PAHs)						
Naphthalene	<0.001	-	-			
Acenaphthylene	<0.001	-	-			
Acenaphthene	<0.001	-	-			
Fluorene	<0.001	-	-			
Phenanthrene	<0.001	-	-			
Anthracene	<0.001	-	-			
Fluoranthene	<0.001	-	-			
Pyrene	<0.001	-	-			
Benz(a)anthracene	<0.001	-	-			
Chrysene	<0.001	-	-			
Benzo(b, j+k)fluoranthene	<0.001	-	-			
Benzo(a)pyrene	<0.001	-	-			
Indeno(1.2.3.cd)pyrene	<0.001	-	-			
Dibenz(a.h)anthracene	<0.001	-	-			
Benzo(g.h.i)perylene	<0.001	-	-			

See table notes at end.

Table F.2: Duplicate sample results, TP07

Analyte	LOR	Primary	Field duplicate	RPD	Interlab duplicate	RPD
		TP07A	TP07B	-	TP07C	-
Units	-	mg/kg	mg/kg	%	mg/kg	%
Metals						
Arsenic	2, 5	nd	nd	-	nd	-
Cadmium	0.5, 1	nd	nd	-	nd	-
Chromium	5, 2	35	32	9	19	**59**
Copper	5	15	14	7	14	7
Lead	5	13	11	17	10	26
Mercury	0.1	nd	nd	-	nd	-
Nickel	5, 2	24	22	9	17	34
Zinc	5	53	52	2	45	16

See table notes at end.

Table F.3: Duplicate sample results, TP12

Analyte	LOR	Primary	Field duplicate	RPD	Interlab duplicate	RPD
		TP12A	TP12B	-	TB12C	-
Units	-	mg/kg	mg/kg	%	mg/kg	%
Metals						
Arsenic	2, 5	2.7	2.1	25	nd	-
Cadmium	0.5, 1	nd	nd	-	nd	-
Chromium	5, 2	37	37	0	18	**69**
Copper	5	18	17	6	16	12
Lead	5	13	16	21	12	8
Mercury	0.1	nd	nd	-	nd	-
Nickel	5, 2	41	26	45	25	48
Zinc	5	45	47	4	38	17
Polycyclic aromatic hydrocarbons (PAHs)						
Naphthalene	0.5	nd	nd	-	nd	-
Acenaphthylene	0.5	nd	nd	-	nd	-
Acenaphthene	0.5	nd	nd	-	nd	-
Fluorene	0.5	nd	nd	-	nd	-
Phenanthrene	0.5	nd	nd	-	nd	-
Anthracene	0.5	nd	nd	-	nd	-
Fluoranthene	0.5	nd	nd	-	1.2	-
Pyrene	0.5	nd	nd	-	1.1	-
Benz(a)anthracene	0.5	nd	nd	-	0.5	-
Chrysene	0.5	nd	nd	-	nd	-
Benzo(b, j+k)fluoranthene	0.5	nd	nd	-	0.8	-
Benzo(a)pyrene	0.5	nd	nd	-	0.5	-
Indeno(1.2.3.cd)pyrene	0.5	nd	nd	-	nd	-
Dibenz(a.h)anthracene	0.5	nd	nd	-	nd	-
Benzo(g.h.i)perylene	0.5	nd	nd	-	nd	-

See table notes at end.

Table F.4: Duplicate sample results, SS16

Analyte	LOR	Primary	Field duplicate	RPD	Interlab duplicate	RPD
		SS16A	SS16B	-	SS16C	-
Units	-	mg/kg	mg/kg	%	mg/kg	%
Metals						
Arsenic	2, 5	nd	2.1	-	nd	-
Cadmium	0.5, 1	nd	nd	-	nd	-
Chromium	5, 2	26	31	18	19	31
Copper	5	14	14	0	14	0
Lead	5	10	12	18	10	0
Mercury	0.1	nd	nd	-	nd	-
Nickel	5, 2	18	21	15	17	6
Zinc	5	63	66	5	71	12

See table notes at end.

Table F.5: Duplicate sample results, SS23

Analyte	LOR	Primary	Field duplicate	RPD	Interlab duplicate	RPD
		SS23A	SS23B	-	SS23C	-
Units	-	mg/kg	mg/kg	%	mg/kg	%
Metals						
Arsenic	2, 5	7.8	3.6	**74**	nd	-
Cadmium	0.5, 1	nd	nd	-	nd	-
Chromium	5, 2	34	41	19	19	**57**
Copper	5	16	20	22	13	21
Lead	5	24	29	19	20	18
Mercury	0.1	nd	nd	-	nd	-
Nickel	5, 2	21	25	17	19	10
Zinc	5	79	93	16	65	19
Petroleum compounds						
Benzene	0.1, 0.2	nd	nd	-	nd	-
Toluene	0.1, 0.5	nd	nd	-	nd	-
Ethylbenzene	0.1, 0.5	nd	nd	-	nd	-
Total xylenes	(0.1)	nd	nd	-	nd	-
Naphthalene	0.5, 1	nd	nd	-	nd	-
TRHs C6 - C10 fraction	20, 10	nd	nd	-	nd	-
F1 TRHs >C6 - C10 less BTEX	-	nd	nd	-	nd	-
TRHs >C10 - C16 fraction	50	nd	nd	-	nd	-
F2 TRHs >C10 - C16 less N	-	nd	nd	-	nd	-
F3 TRHs >C16 - C34 fraction	100	nd	nd	-	nd	-
F4 TRHs >C34 - C40 fraction	100	nd	nd	-	nd	-
Polycyclic aromatic hydrocarbons (PAHs)						
Naphthalene	0.5	nd	nd	-	nd	-
Acenaphthylene	0.5	nd	nd	-	nd	-
Acenaphthene	0.5	nd	nd	-	nd	-
Fluorene	0.5	nd	nd	-	nd	-
Phenanthrene	0.5	nd	nd	-	nd	-
Anthracene	0.5	nd	nd	-	nd	-
Fluoranthene	0.5	0.6	0.6	0	nd	-
Pyrene	0.5	0.6	0.6	0	nd	-
Benz(a)anthracene	0.5	nd	nd	-	nd	-
Chrysene	0.5	nd	nd	-	nd	-
Benzo(b, j+k)fluoranthene	0.5	nd	nd	-	nd	-
Benzo(a)pyrene	0.5	nd	nd	-	nd	-
Indeno(1.2.3.cd)pyrene	0.5	nd	nd	-	nd	-
Dibenz(a.h)anthracene	0.5	nd	nd	-	nd	-
Benzo(g.h.i)perylene	0.5	nd	nd	-	nd	-

See table notes at end.

QC table notes

General:

LOR = limits of reporting. < X = raised or specific LOR. (X) LOR for multiple analytes within a category.

X, Y different LORs by different laboratories. nd = non detect at LOR.

- = not analysed, no criteria, not relevant. Bold value / bolded criteria = value exceeds criteria.

RPD = relative percentage difference. Calculated as the difference between two measurements over the mean of the two measurements.

Analytes:

BTEXN = benzene, toluene, ethylbenzene, xylenes and naphthalene.

TRHs = total recoverable hydrocarbons.

F1 TRHs C6 - C10 fraction = TRHs C6 - C10 fraction less benzene, toluene, ethyl benzene, and xylenes.

F2 TRHs >C10 - C16 = TRHs >C10 - C16 less naphthalene.

PAHs = polycyclic aromatic hydrocarbons.

PCBs = polychlorinated biphenyls.

OCPs = organochlorine pesticides.

OPPs = organophosphorus pesticides.

Acceptance criteria:

ASC NEPM (2013) specifies that the RPDs should be between ≤ 30% and 50%.

Rinse blanks and trip blanks should be non detect for the analytes tested.

Trip spikes should have recoveries between 70% and 130%.

Specific notes:

Penols, OCPs, OPPs, and PCBs were non detect in samples and duplicates at appropriate LORs.

PRECISE ENVIRONMENTAL

PID CALIBRATION CERTIFICATE

Model **ProCheck Tiger**

Serial No. **T-107574**

Item	Test	Pass	Comments
Battery	Charge status	✓	
	Recharging	✓	
Keypad	Operation	✓	
Display	Intensity	✓	
	Operation	✓	
Filter	Condition	✓	
	Seal	✓	
Pump	Operation	✓	
	Flow	✓	
Alarms	Operation	✓	Settings: Low 50 ppm, High 100 ppm
Software	Current	✓	UPDATED TO V1.09
Data logger	Operation	✓	
	Capacity	✓	

CALIBRATION

Calibration gas **Iso-butylene**

Gas concentration **100 ppm**

Gas bottle No. **959501**

Gas bottle expiry **September 2023**

Instrument reading	99.5
Calibrated by	SEAN GARDINER
Signature	
Calibration date	3/4/2023.

ECO Environmental | Environment monitoring solutions

EQUIP9ENT INFORMATION / CALIBRATION CERTIFICATE

Instrument: .MRPID-9B

Serial Number: 592-911614

Equipment Check	Enclosed	Comment
MiniRAE PID Pump	✔	
Protective Boot	✔	
Charger	✔	
Rae Software	✔	
USB Download Cable	✔	
Instrument Manual	✔	
Water Trap Filter (x2)	✔	
Carry Case	✔	
2 x Humidity Filters & 1x Tube Adaptor	✔	

Sensor Calibration Details	Pass	Comment
Lamp 10.6eV – Fresh Air Cal		
Lamp 10.6eV – Isobutylene Gas 100ppm	✔	Lot 344 /Cyl WO249617-1

Alarm Limits	
Alarm – Audible/ Visual	✔
Alarm – Low 50ppm	✔
Alarm – High 100ppm	✔

Inspection Details	
Inspection for faults, corrosion, damage	✔
Delete all previously logged data	✔
Correction factor set to 1.00	✔
Peak has been reset	✔

This is to certify that where possible, this instrument has been calibrated in accordance with the manufacturer's calibration procedure.
ECO Standard Rental Terms and Conditions apply to all equipment calibrations

Regards

Jake Bain

Equipment Specialist
ECO Environmental Pty Ltd

21-Jul-2021

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Packing Slip

Docket No.: 12691

Docket Date: 28/07/2023

Customer PO: CC 28/7

ECO Environmental Holdings Pty Ltd
ABN: 96 624 453 998
4/15 Holt St
Pinkenba QLD 4008
Phone: 07 3135-9600
Email: brisbane@ecoenvironmental.com.au
Website: http://ecoenvironmental.com.au/

To:
Andre Torre
Easterly Point Environmental Pty Ltd
1/64 Kingsley Street
Byron Bay NSW 2481

Sent From:
4/15 Holt St
Pinkenba QLD 4008
Phone: 07 3135-9600

Date From: Wednesday, 2 August 2023 12:00 AM

Date To: Wednesday, 2 August 2023 11:59 PM

Code	Description	Qty Ordered	Sent	B/O
.MRPID-9B	MiniRAE 3000 PID - Rental	1	1	
Rental	Agreed Rental Period:2/8/23	1		
Return	To ensure there are no additional fees, all rental items must be returned to	1		
DEL-3	Delivery Service: TNT Regional	1		
EFT 2%	Credit Card Surcharge 2%	1		

Comments:

Packed By: [signature]

Signature: [signature] **Date/Time:** 31/7.

Appendix G

Geological logs

Easterly Point

ENVIRONMENTAL TESTPIT TP01

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits - excavator
TOTAL DEPTH 0.7 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0.1	Sample 0 - 0.1	< 1 ppm		CL	NATURAL: Grass, over dark brown black loamy silty clay with some fine roots, over dark brown light medium clay, faint orange and brown mottles (<5%), moderately to strongly structured.	No odours, staining, or artefacts.
0.2	Sample 0.2 - 0.3					
0.3				CH	NATURAL: Increasing clay content with depth, dark brown grey medium to heavy clay, less structured, with smooth face.	No odours, staining, or artefacts.
0.4						
0.5						
0.6						
0.7						
0.8						
0.9						
1						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						

Easterly Point

ENVIRONMENTAL TESTPIT TP02

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 0.7 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0	Sample 0 - 0.1	< 1 ppm		CL	NATURAL: Grass, over dark brown black loamy silty clay with some fine roots, over dark brown light medium clay, faint orange and brown mottles (<5%), moderately to strongly structured	No odours, staining, or artefacts.
0.1						
0.2	Sample 0.2 - 0.3					
0.3					NATURAL: Increasing clay content with depth, brown reddish brown medium to heavy clay, less structured, with smooth face.	No odours, staining, or artefacts.
0.4				CH		
0.5				SW	NATURAL (?): Narrow variable band of tan medium grained sand.	No odours, staining, or artefacts.
0.6				CH	NATURAL: Increasing clay content with depth, brown reddish brown medium to heavy clay, less structured, with smooth face.	No odours, staining, or artefacts.
0.7						
0.8						
0.9						
1						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						

Plate 1: Test pit 01

Plate 2: Test pit 02

Easterly Point

ENVIRONMENTAL TESTPIT TP03

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 0.7 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0 – 0.4	Sample 0 - 0.1 Sample 0.2 - 0.3	< 1 ppm		CL	NATURAL: Grass, over dark brown black loamy silty clay with some fine roots, over dark brown light medium clay, faint orange and brown mottles (<5%), moderately to strongly structured, some tree roots.	No odours, staining, or artefacts.
0.4 – 0.6	Sample 0.4 - 0.6			SW	NATURAL: Narrow variable band of tan medium grained sand.	No odours, staining, or artefacts.
0.6 – 0.7				CH	Increasing clay content with depth, brown black medium to heavy clay, less structured, with smooth face.	No odours, staining, or artefacts.

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9

Disclaimer This log is intended for environmental not geotechnical purposes.

Easterly Point

ENVIRONMENTAL TESTPIT TP04

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 1.1 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0	Sample 0 - 0.1	< 1 ppm		CL	NATURAL: Grass, over dark brown black loamy silty clay with some fine roots, over dark brown light medium clay, faint orange and brown mottles (<5%), moderately to strongly structured.	No odour or staining, some artefacts, including piece of metal angle (~ 6 cm) and fragment of house brick.
0.1						
0.2	Sample 0.2 - 0.3					
0.3						
0.4				CH	NATURAL: Increasing clay content with depth, brown reddish brown medium to heavy clay, less structured, with smooth face. Layer of basalt gravel and cobbles at ~ 0.6 m - 0.9 m. Brownish black medium to heavy clay ~ 1.0 m - 1.1 m.	No odours, staining, or artefacts.
0.5						
0.6						
0.7						
0.8						
0.9						
1						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						

Plate 3: Test pit 03

Plate 4: Test pit 04

Easterly Point

ENVIRONMENTAL TESTPIT TP05

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 0.9 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0 – 0.1	Sample 0 - 0.1	< 1 ppm		CL	REWORKED NATURAL (?): Grass, over brown loamy silty clay with some fine roots and trace of basalt and sandstone gravel. Dark brown grey light medium clay, faint orange and brown mottles (<10%), moderately to strongly structured, with some basalt gravel and fragments of charcoal.	No odours or staining, some artefacts, including metal ring, piece of crockery, and piece of asphalt.
0.2 – 0.3	Sample 0.2 - 0.3					
0.4 – 0.5	Sample 0.5 - 0.6			CL	FILL: Tan brown clay, some red and white mottles, with basalt gravel and weak sandstone and basalt cobbles.	No odours, staining, or artefacts.
0.6 – 0.9				CH	NATURAL: Brownish black medium to heavy clay.	No odours, staining, or artefacts.
1 – 1.9						

Disclaimer This log is intended for environmental not geotechnical purposes.

Easterly Point

ENVIRONMENTAL TESTPIT TP06

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 0.9 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0	Sample 0 - 0.1	< 1 ppm		CL	NATURAL: Grass, over brown loamy silty clay with some fine roots. Dark brown grey light medium clay, faint orange and brown mottles (<5%), moderately to strongly structured. Basalt gravel and cobbles lenses, with some tan medium grained sand 0.4 - 0.6 m.	No odours, staining, or artefacts.
0.1						
0.2	Sample 0.2 - 0.3					
0.3						
0.4						
0.5						
0.6				CH	Brownish black medium to heavy clay.	No odours, staining, or artefacts.
0.7						
0.8						
0.9						
1						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						

Plate 5: Test pit 05

Plate 6: Test pit 06

Easterly Point

ENVIRONMENTAL TESTPIT TP07

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 1.2 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0 – 0.1	Sample 0 - 0.1	< 1 ppm		CL	REWORKED NATURAL(?): Grass, over dark brown black loamy silty clay with some fine roots. Increasingly, dark brown grey light medium clay, faint orange and brown mottles (<5%), moderately to strongly structured.	No odours, staining, or artefacts.
0.2 – 0.3	Sample 0.2 - 0.3					
0.4 – 0.7	Sample 0.7 - 0.75 TP07-A1			CL	FILL: Dark tan clay. Sparse and inconsistent inclusions of asbestos containing materials (ACMs) in cement tiles(?), pieces of plastic, fragments of shell, fragments of bone, clay pipe fragments, asphalt pieces.	No odours or staining,
0.8 – 0.9	Sample 0.8 - 0.9			CL	FILL: Light tan and white, red and orange mottled clay, with gravel and cobbles of weak red and brown sandstone.	No odours, staining, or artefacts.
1 – 1.1				CH	NATURAL: Dark brown black medium to heavy clay, less structured, with smooth face.	No odours, staining, or artefacts.
1.2 – 1.9						

Disclaimer This log is intended for environmental not geotechnical purposes.

Easterly Point

ENVIRONMENTAL TESTPIT TP08

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 1.2 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0	Sample 0 - 0.1	< 1 ppm		CL	NATURAL (REWORKED?): Grass, over light brown sandy silty clay with some fine roots.	No odours, staining, or artefacts.
0.1						
0.2	Sample 0.2 - 0.3					
0.3				CL	NATURAL (REWORKED?): Chocolate brown light clay.	
0.4						
0.5						
0.6				CL	FILL: White yellow orange mottle clay, with brown and red sandstone gravel and cobbles.	No odours, staining, or artefacts.
0.7	Sample 0.6 - 0.8					
0.8						
0.9				CH	NATURAL: Dark brown grey black light medium clay.	No odours, staining, or artefacts.
1						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						

Plate 7: Test pit 07

Plate 8: Test pit 08

Easterly Point

ENVIRONMENTAL TESTPIT TP09

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 1.2 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0 – 0.1	Sample 0 - 0.1	< 1 ppm		CL	NATURAL: Grass, over dark brown loamy clay with some fine roots, some basalt gravel and asphalt pieces. Dark brown light medium clay, faint orange and brown mottles (<5%), moderately to strongly structured, some basalt gravel.	No odours, staining, or artefacts.
0.2 – 0.3	Sample 0.2 - 0.3					
0.4 – 0.5						
0.6 – 1.2				CH	NATURAL: Dark brown grey black light medium clay, moist at base.	No odours, staining, or artefacts.
1.3 – 1.9						

Disclaimer This log is intended for environmental not geotechnical purposes.

Easterly Point

ENVIRONMENTAL TESTPIT TP10

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 1 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0	Sample 0 - 0.1	< 1 ppm		CL	REWORKED NATURAL (?): Grass, over dark brown loamy clay with some fine roots. Dark brown light medium clay, sandstone gravel and cobbles (80 cm - 130 cm). North wall, light tan clay, with orange and tan sandstone gravel and cobbles, from 0.3 m.	No odours, staining, or artefacts.
0.2	Sample 0.2 - 0.3					
0.4						
0.6						
0.8				CH	REWORKED NATURAL (?): Dark brown light medium clay, moderately to strongly structured. North wall, light tan clay, with orange and tan sandstone gravel and cobbles.	No odours, staining, or artefacts.
1						
1.2						
1.4						
1.6						
1.8						
2						
2.2						
2.4						
2.6						
2.8						

Plate 9: Test pit 09

Plate 10: Test pit 10

Easterly Point

ENVIRONMENTAL TESTPIT TP11

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 0.85 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0	Sample 0 - 0.1	< 1 ppm		CL	REWORKED NATURAL(?): Grass, over dark brown loamy clay with some fine roots. Dark brown light medium clay, faint orange and brown mottles, moderately to strongly structured, with basalt and ironstone gravel. Artefacts, including concrete lid (0.5 m x 1 m), small sandstone block, fragment of clay pipe, sandstone gravel.	No odours or staining.
0.1						
0.2	Sample 0.2 - 0.3					
0.3						
0.4				CH	NATURAL: Increasing clay, with basalt gravel and small cobbles (0.6 - 0.85 m).	No odours, staining, or artefacts.
0.5						
0.6						
0.7						
0.8						
0.9						
1						
1.1						
1.2						
1.3						
1.4						
1.5						
1.6						
1.7						
1.8						
1.9						

Easterly Point

ENVIRONMENTAL TESTPIT TP12

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 1 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes.

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0	Sample 0 - 0.1	< 1 ppm		CL	REWORKED NATURAL: Grass, over dark brown loamy clay with some fine roots, some basalt gravel and rounded quarts gravel. Light brown sand lens in west wall (0.1 - 0.3 m). Dark brown light medium clay, faint orange and brown mottles, moderately to strongly structured, some yellow sandstone cobbles and fragments of crockery 0.3 m, and basalt cobbles 0.4 - 0.6 m.	No odours or staining.
0.2	Sample 0.2 - 0.3					
0.4						
0.6						
0.8				CH	NATURAL: Dark brown grey black light medium clay.	No odours, staining, or artefacts.
1						
1.2						
1.4						
1.6						
1.8						
2						
2.2						
2.4						
2.6						
2.8						

Plate 11: Test pit 11

Plate 12: Test pit 12

Easterly Point

ENVIRONMENTAL TESTPIT TP13

PROJECT NUMBER 23034.1
PROJECT NAME Momentum, Casino
CLIENT Momentum Collective
ADDRESS 146-152 Johnston Street, Casino, NSW

DRILLING DATE 02/05/2023
DRILLING COMPANY Sarjaro
DRILLER Chris McSkimming
DRILLING METHOD Test pits – excavator
TOTAL DEPTH 2.2 m

COORDINATES
COORD SYS
SURFACE ELEVATION ~ 20 m AHD
LOGGED BY Andre Torre
CHECKED BY Marc Salmon

COMMENTS: Objectives to determine depth of natural, and any fill material or wastes. Adjacent service station, fuel impacts?

Depth (m)	Samples	PID	Graphic Log	USCS	Material Description	Additional Observations
0	Sample 0 - 0.1	< 1 ppm		CL	REWORKED NATURAL: Grass, over dark brown loamy clay with some fine roots, basalt gravel.	No odour, staining, or artefacts.
0.2	Sample 0.2 - 0.3			CL	FILL: Tan clay with white and orange mottles, orange and red sandstone gravel and cobbles, house brick, fragment of cobble size asphalt at base.	No odours or staining.
0.4						
0.6				CH	Dark brown grey black light medium clay.	Adjacent petrol station diesel tank: no petroleum staining or odours.
0.8						
1						
1.2						
1.4						
1.6						
1.8						
2						
2.2		< 1 ppm				
2.4						
2.6						
2.8						

Disclaimer This log is intended for environmental not geotechnical purposes.

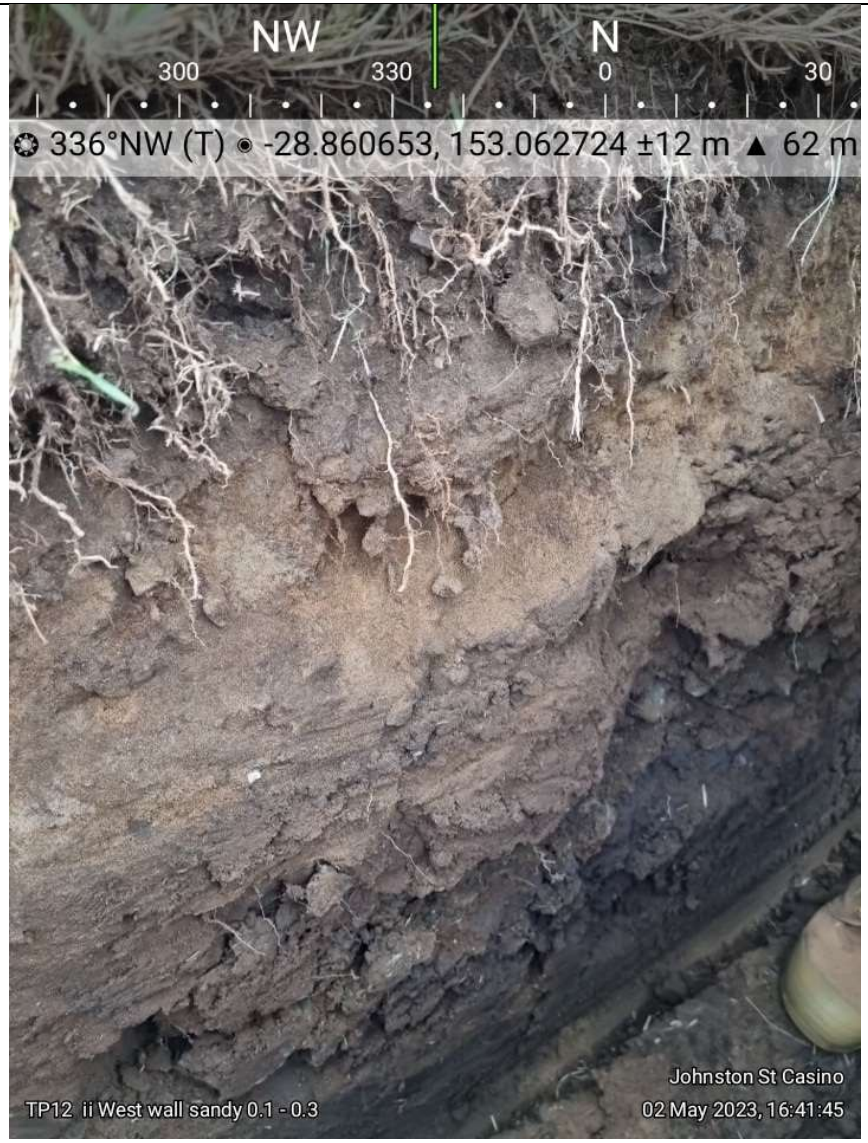

Plate 13: Test pit 12, west wall

Plate 14: Test pit 13

Detailed Site Investigation, surficial soil logs, August 2023

Test pit	Sample depth (m)	Description	(ppm)
SS14A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, few orange mottles. No odours, staining, or artefacts.	PID < 1
SS15A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching. No odours, staining, or artefacts.	PID < 1
SS16A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching. No odours, staining, or artefacts.	PID < 1
SS17A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching. No odours or staining; artefacts including orange sandstone piece ~ 120 mm, some basalt gravel-medium coarse, small cobble, broken crockery, and fragments of plastic bag.	PID < 1
SS18A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, trace medium-coarse gravel, small cobble. No odours, staining, or artefacts.	PID < 1
SS19A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some basalt gravel. Trace coarse gravel, concrete with blue metal. No odours, staining, or artefacts.	PID < 1
SS20A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some orange mottles, with trace medium basalt gravel. No odours, staining, or artefacts.	PID < 1
SS21A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, with trace medium basalt gravel. No odours, staining, or artefacts.	PID < 1
SS22A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching. No odours, staining, or artefacts.	PID < 1
SS23A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some coarse basalt gravel. No odours, staining, or artefacts.	PID < 1
SS24A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some coarse basalt gravel. No odours, staining or artefacts.	PID < 1
SS25A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some coarse basalt gravel. No odours, staining, or artefacts.	PID < 1
SS26A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some coarse medium basalt gravel, rounded gravel. No odours, staining, or artefacts.	PID < 1
SS27A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, trace coarse gravel sized fragment brick. No odours, staining, or artefacts.	PID < 1

Test pit	Sample depth (m)	Description	(ppm)
SS28A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching. No odours, staining, or artefacts.	PID < 1
SS29A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching. No odours, staining, or artefacts.	PID < 1
SS30A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching. No odours, staining, or artefacts.	PID < 1
SS31A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching. No odours or staining; artefacts including a small piece of plastic <20 mm.	PID < 1
SS32A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching. No odours, staining, or artefacts.	PID < 1
SS33A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some coarse sandstone gravel. No odours, staining, or artefacts.	PID < 1
SS34A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some coarse basalt gravel. No odours, staining, or artefacts.	PID < 1
SS35A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some coarse basalt gravel. No odours, staining or artefacts.	PID < 1
SS36A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some coarse basalt gravel. No odours, staining, or artefacts.	PID < 1
SS37A	0 - 0.075	Grass, over dark brown silty clay with some fine roots, self-mulching, some coarse basalt gravel. No odours, staining, or artefacts.	PID < 1

Plate 15: Surface sample SS24 location, typical across site

Plate 16: Minor artefacts in SS17 location

Appendix H

Laboratory reports

Easterly Point Environmental Pty Ltd
1/64 Kingsley Street
Byron Bay
NSW 2481

Attention: **Marc Salmon**

Report **988809-S**
Project name MOMENTUM JOHNSON ST CASINO NSW
Project ID 23034
Received Date May 09, 2023

Client Sample ID			**TP01_0-0.1**	**TP01_0.2-0.3**	**TP02_0-0.1**	**TP02_0.2-0.3**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B23-My0029523**	**B23-My0029524**	**B23-My0029525**	**B23-My0029526**
Date Sampled			**May 02, 2023**	**May 02, 2023**	**May 02, 2023**	**May 02, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	2.6	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	31	31	35	42
Copper	5	mg/kg	14	11	14	15
Lead	5	mg/kg	6.4	< 5	10.0	5.9
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	21	28	25	35
Zinc	5	mg/kg	53	56	76	70
Sample Properties						
% Moisture	1	%	15	11	16	12

Client Sample ID			**TP03_0-0.1**	**TP03_0.2-0.3**	**TP03_0.4-0.6**	**TP04_0-0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B23-My0029527**	**B23-My0029528**	**B23-My0029529**	**B23-My0029530**
Date Sampled			**May 02, 2023**	**May 02, 2023**	**May 02, 2023**	**May 02, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	2.4
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	37	53	< 5	41
Copper	5	mg/kg	14	19	< 5	21
Lead	5	mg/kg	12	9.4	< 5	24
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	28	38	< 5	33
Zinc	5	mg/kg	92	68	5.8	87
Sample Properties						
% Moisture	1	%	21	20	4.6	18
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	-
TRH C10-C14	20	mg/kg	-	-	< 20	-
TRH C15-C28	50	mg/kg	-	-	< 50	-
TRH C29-C36	50	mg/kg	-	-	< 50	-
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	-

Client Sample ID			TP03_0-0.1	TP03_0.2-0.3	TP03_0.4-0.6	TP04_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029527	B23-My0029528	B23-My0029529	B23-My0029530
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	-
Toluene	0.1	mg/kg	-	-	< 0.1	-
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	-
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	-
o-Xylene	0.1	mg/kg	-	-	< 0.1	-
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	-	-	70	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	-
TRH C6-C10	20	mg/kg	-	-	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	-
Acenaphthene	0.5	mg/kg	-	-	< 0.5	-
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	-
Anthracene	0.5	mg/kg	-	-	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Chrysene	0.5	mg/kg	-	-	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	-
Fluoranthene	0.5	mg/kg	-	-	< 0.5	-
Fluorene	0.5	mg/kg	-	-	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	-
Naphthalene	0.5	mg/kg	-	-	< 0.5	-
Phenanthrene	0.5	mg/kg	-	-	< 0.5	-
Pyrene	0.5	mg/kg	-	-	< 0.5	-
Total PAH*	0.5	mg/kg	-	-	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	-	-	113	-
p-Terphenyl-d14 (surr.)	1	%	-	-	108	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	-
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	-
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	-
a-HCH	0.05	mg/kg	-	-	< 0.05	-
Aldrin	0.05	mg/kg	-	-	< 0.05	-
b-HCH	0.05	mg/kg	-	-	< 0.05	-
d-HCH	0.05	mg/kg	-	-	< 0.05	-
Dieldrin	0.05	mg/kg	-	-	< 0.05	-
Endosulfan I	0.05	mg/kg	-	-	< 0.05	-
Endosulfan II	0.05	mg/kg	-	-	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	-
Endrin	0.05	mg/kg	-	-	< 0.05	-

Client Sample ID			TP03_0-0.1	TP03_0.2-0.3	TP03_0.4-0.6	TP04_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029527	B23-My0029528	B23-My0029529	B23-My0029530
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	-
Endrin ketone	0.05	mg/kg	-	-	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	-	-	< 0.05	-
Heptachlor	0.05	mg/kg	-	-	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	-
Methoxychlor	0.05	mg/kg	-	-	< 0.05	-
Toxaphene	0.5	mg/kg	-	-	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	-	54	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	65	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2	-
Bolstar	0.2	mg/kg	-	-	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2	-
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2	-
Coumaphos	2	mg/kg	-	-	< 2	-
Demeton-S	0.2	mg/kg	-	-	< 0.2	-
Demeton-O	0.2	mg/kg	-	-	< 0.2	-
Diazinon	0.2	mg/kg	-	-	< 0.2	-
Dichlorvos	0.2	mg/kg	-	-	< 0.2	-
Dimethoate	0.2	mg/kg	-	-	< 0.2	-
Disulfoton	0.2	mg/kg	-	-	< 0.2	-
EPN	0.2	mg/kg	-	-	< 0.2	-
Ethion	0.2	mg/kg	-	-	< 0.2	-
Ethoprop	0.2	mg/kg	-	-	< 0.2	-
Ethyl parathion	0.2	mg/kg	-	-	< 0.2	-
Fenitrothion	0.2	mg/kg	-	-	< 0.2	-
Fensulfothion	0.2	mg/kg	-	-	< 0.2	-
Fenthion	0.2	mg/kg	-	-	< 0.2	-
Malathion	0.2	mg/kg	-	-	< 0.2	-
Merphos	0.2	mg/kg	-	-	< 0.2	-
Methyl parathion	0.2	mg/kg	-	-	< 0.2	-
Mevinphos	0.2	mg/kg	-	-	< 0.2	-
Monocrotophos	2	mg/kg	-	-	< 2	-
Naled	0.2	mg/kg	-	-	< 0.2	-
Omethoate	2	mg/kg	-	-	< 2	-
Phorate	0.2	mg/kg	-	-	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	-
Pyrazophos	0.2	mg/kg	-	-	< 0.2	-
Ronnel	0.2	mg/kg	-	-	< 0.2	-
Terbufos	0.2	mg/kg	-	-	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	-
Tokuthion	0.2	mg/kg	-	-	< 0.2	-
Trichloronate	0.2	mg/kg	-	-	< 0.2	-
Triphenylphosphate (surr.)	1	%	-	-	59	-

Client Sample ID			TP03_0-0.1	TP03_0.2-0.3	TP03_0.4-0.6	TP04_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029527	B23-My0029528	B23-My0029529	B23-My0029530
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	-
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	-
Total PCB*	0.1	mg/kg	-	-	< 0.1	-
Dibutylchlorendate (surr.)	1	%	-	-	54	-
Tetrachloro-m-xylene (surr.)	1	%	-	-	65	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	-
Pentachlorophenol	1	mg/kg	-	-	< 1	-
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	-
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	-
2-Nitrophenol	1.0	mg/kg	-	-	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	-
Total cresols*	0.5	mg/kg	-	-	< 0.5	-
4-Nitrophenol	5	mg/kg	-	-	< 5	-
Dinoseb	20	mg/kg	-	-	< 20	-
Phenol	0.5	mg/kg	-	-	< 0.5	-
Phenol-d6 (surr.)	1	%	-	-	95	-
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	< 50	-
TRH >C16-C34	100	mg/kg	-	-	< 100	-
TRH >C34-C40	100	mg/kg	-	-	< 100	-
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	-

Client Sample ID			TP04_0.2-0.3	TP05_0-0.1	TP05_0.2-0.3	TP05_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029531	B23-My0029532	B23-My0029533	B23-My0029534
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	3.5	8.5	88	3.9
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	52	61	95	16
Copper	5	mg/kg	23	27	83	30
Lead	5	mg/kg	22	13	23	7.2
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	46	46	24	52
Zinc	5	mg/kg	82	99	84	120
Sample Properties						
% Moisture	1	%	17	18	16	14
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	-	< 50
BTEX						
Benzene	0.1	mg/kg	-	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	-	85
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	-	< 50
TRH C6-C10	20	mg/kg	-	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			TP04_0.2-0.3	TP05_0-0.1	TP05_0.2-0.3	TP05_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029531	B23-My0029532	B23-My0029533	B23-My0029534
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Pyrene	0.5	mg/kg	-	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	-	115
p-Terphenyl-d14 (surr.)	1	%	-	-	-	108
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	-	< 0.05
a-HCH	0.05	mg/kg	-	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	-	< 0.05
b-HCH	0.05	mg/kg	-	-	-	< 0.05
d-HCH	0.05	mg/kg	-	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	-	< 0.05
Toxaphene	0.5	mg/kg	-	-	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	54
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	61
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	-	< 0.2
Bolstar	0.2	mg/kg	-	-	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	-	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	-	< 0.2
Coumaphos	2	mg/kg	-	-	-	< 2
Demeton-S	0.2	mg/kg	-	-	-	< 0.2
Demeton-O	0.2	mg/kg	-	-	-	< 0.2
Diazinon	0.2	mg/kg	-	-	-	< 0.2
Dichlorvos	0.2	mg/kg	-	-	-	< 0.2
Dimethoate	0.2	mg/kg	-	-	-	< 0.2
Disulfoton	0.2	mg/kg	-	-	-	< 0.2
EPN	0.2	mg/kg	-	-	-	< 0.2
Ethion	0.2	mg/kg	-	-	-	< 0.2
Ethoprop	0.2	mg/kg	-	-	-	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	-	< 0.2

Client Sample ID			TP04_0.2-0.3	TP05_0-0.1	TP05_0.2-0.3	TP05_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029531	B23-My0029532	B23-My0029533	B23-My0029534
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Fenitrothion	0.2	mg/kg	-	-	-	< 0.2
Fensulfothion	0.2	mg/kg	-	-	-	< 0.2
Fenthion	0.2	mg/kg	-	-	-	< 0.2
Malathion	0.2	mg/kg	-	-	-	< 0.2
Merphos	0.2	mg/kg	-	-	-	< 0.2
Methyl parathion	0.2	mg/kg	-	-	-	< 0.2
Mevinphos	0.2	mg/kg	-	-	-	< 0.2
Monocrotophos	2	mg/kg	-	-	-	< 2
Naled	0.2	mg/kg	-	-	-	< 0.2
Omethoate	2	mg/kg	-	-	-	< 2
Phorate	0.2	mg/kg	-	-	-	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	-	< 0.2
Pyrazophos	0.2	mg/kg	-	-	-	< 0.2
Ronnel	0.2	mg/kg	-	-	-	< 0.2
Terbufos	0.2	mg/kg	-	-	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	-	< 0.2
Tokuthion	0.2	mg/kg	-	-	-	< 0.2
Trichloronate	0.2	mg/kg	-	-	-	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	-	57
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	-	54
Tetrachloro-m-xylene (surr.)	1	%	-	-	-	61
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	-	< 1
Pentachlorophenol	1	mg/kg	-	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	-	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	-	< 5
2-Nitrophenol	1.0	mg/kg	-	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	-	< 0.4
Total cresols*	0.5	mg/kg	-	-	-	< 0.5

Client Sample ID			TP04_0.2-0.3	TP05_0-0.1	TP05_0.2-0.3	TP05_0.5-0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029531	B23-My0029532	B23-My0029533	B23-My0029534
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
4-Nitrophenol	5	mg/kg	-	-	-	< 5
Dinoseb	20	mg/kg	-	-	-	< 20
Phenol	0.5	mg/kg	-	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	-	97
Total Non-Halogenated Phenol*	20	mg/kg	-	-	-	< 20
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	-	< 100

Client Sample ID			TP06_0-0.1	TP06_0.2-0.3	TP07_0-0.1	TP07_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029535	B23-My0029536	B23-My0029537	B23-My0029538
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	2.2	2.8
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	38	60	32	43
Copper	5	mg/kg	16	20	18	21
Lead	5	mg/kg	7.4	8.3	11	86
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	30	46	21	36
Zinc	5	mg/kg	73	91	63	120
Sample Properties						
% Moisture	1	%	14	16	22	18

Client Sample ID			TP07_0.7-0.75	TP07_0.8-0.93	TP08_0-0.1	TP08_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029539	B23-My0029540	B23-My0029541	B23-My0029542
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	48	12	20	24
Copper	5	mg/kg	21	< 5	9.3	12
Lead	5	mg/kg	29	8.7	18	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	31	< 5	13	19
Zinc	5	mg/kg	100	5.9	64	52
Sample Properties						
% Moisture	1	%	17	10	14	11

Client Sample ID			TP07_0.7-0.75	TP07_0.8-0.93	TP08_0-0.1	TP08_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029539	B23-My0029540	B23-My0029541	B23-My0029542
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	74	88	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	114	119	-	-
p-Terphenyl-d14 (surr.)	1	%	109	117	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-

Client Sample ID			TP07_0.7-0.75	TP07_0.8-0.93	TP08_0-0.1	TP08_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029539	B23-My0029540	B23-My0029541	B23-My0029542
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
b-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
d-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	55	54	-	-
Tetrachloro-m-xylene (surr.)	1	%	65	58	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Coumaphos	2	mg/kg	< 2	< 2	-	-
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	-
EPN	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Monocrotophos	2	mg/kg	< 2	< 2	-	-
Naled	0.2	mg/kg	< 0.2	< 0.2	-	-
Omethoate	2	mg/kg	< 2	< 2	-	-
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	-

Client Sample ID			TP07_0.7-0.75	TP07_0.8-0.93	TP08_0-0.1	TP08_0.2-0.3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029539	B23-My0029540	B23-My0029541	B23-My0029542
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	-
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	-
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	54	54	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	-
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	55	54	-	-
Tetrachloro-m-xylene (surr.)	1	%	65	58	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	-
Pentachlorophenol	1	mg/kg	< 1	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Nitrophenol	1.0	mg/kg	< 1	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	-
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Nitrophenol	5	mg/kg	< 5	< 5	-	-
Dinoseb	20	mg/kg	< 20	< 20	-	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenol-d6 (surr.)	1	%	96	99	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-

Client Sample ID			TP08_0.6-0.8	TP09_0-0.1	TP09_0.2-0.3	TP10_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029543	B23-My0029544	B23-My0029545	B23-My0029546
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	5.4
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	11	48	52	39
Copper	5	mg/kg	< 5	19	20	20
Lead	5	mg/kg	8.5	13	8.2	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	39	41	35
Zinc	5	mg/kg	7.9	90	83	78
Sample Properties						
% Moisture	1	%	11	16	17	24
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	< 50	-	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	82	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			TP08_0.6-0.8	TP09_0-0.1	TP09_0.2-0.3	TP10_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029543	B23-My0029544	B23-My0029545	B23-My0029546
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	112	-	-	-
p-Terphenyl-d14 (surr.)	1	%	103	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-HCH	0.05	mg/kg	< 0.05	-	-	-
d-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	0.5	mg/kg	< 0.5	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	54	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	62	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-

Client Sample ID			TP08_0.6-0.8	TP09_0-0.1	TP09_0.2-0.3	TP10_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029543	B23-My0029544	B23-My0029545	B23-My0029546
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	55	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	54	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	62	-	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Nitrophenol	1.0	mg/kg	< 1	-	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Total cresols*	0.5	mg/kg	< 0.5	-	-	-

Client Sample ID			TP08_0.6-0.8	TP09_0-0.1	TP09_0.2-0.3	TP10_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029543	B23-My0029544	B23-My0029545	B23-My0029546
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	97	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	< 100	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	-	-	-

Client Sample ID			TP10_0.2-0.3	TP11_0-0.1	TP11_0.2-0.3	TP12_0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-My0029547	B23-My0029548	B23-My0029549	B23-My0029550
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	2.3	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	18	42	41	13
Copper	5	mg/kg	11	21	21	9.9
Lead	5	mg/kg	14	8.7	8.5	24
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	29	50	11
Zinc	5	mg/kg	46	77	65	52
Sample Properties						
% Moisture	1	%	17	19	20	18

Client Sample ID			TP12_0.2-0.3	TP13_0-0.1	TP13_0.2-0.3
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			B23-My0029551	B23-My0029552	B23-My0029553
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit			
Heavy Metals					
Arsenic	2	mg/kg	< 2	< 2	6.2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	36	16	8.2
Copper	5	mg/kg	18	8.0	7.6
Lead	5	mg/kg	29	26	30
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	27	12	< 5
Zinc	5	mg/kg	74	54	43
Sample Properties					
% Moisture	1	%	15	13	12

Client Sample ID			TP12_0.2-0.3	TP13_0-0.1	TP13_0.2-0.3
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			B23-My0029551	B23-My0029552	B23-My0029553
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	-	-	< 20
TRH C10-C14	20	mg/kg	-	-	< 20
TRH C15-C28	50	mg/kg	-	-	< 50
TRH C29-C36	50	mg/kg	-	-	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50
BTEX					
Benzene	0.1	mg/kg	-	-	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50
TRH C6-C10	20	mg/kg	-	-	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20
Polycyclic Aromatic Hydrocarbons					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2
Acenaphthene	0.5	mg/kg	-	-	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	< 0.5
Anthracene	0.5	mg/kg	-	-	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5
Chrysene	0.5	mg/kg	-	-	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5
Fluoranthene	0.5	mg/kg	-	-	< 0.5
Fluorene	0.5	mg/kg	-	-	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5
Naphthalene	0.5	mg/kg	-	-	< 0.5
Phenanthrene	0.5	mg/kg	-	-	< 0.5
Pyrene	0.5	mg/kg	-	-	< 0.5
Total PAH*	0.5	mg/kg	-	-	< 0.5
2-Fluorobiphenyl (surr.)	1	%	-	-	112
p-Terphenyl-d14 (surr.)	1	%	-	-	103
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	< 0.05
a-HCH	0.05	mg/kg	-	-	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05

Client Sample ID			TP12_0.2-0.3	TP13_0-0.1	TP13_0.2-0.3
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			B23-My0029551	B23-My0029552	B23-My0029553
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
b-HCH	0.05	mg/kg	-	-	< 0.05
d-HCH	0.05	mg/kg	-	-	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	-	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05
Toxaphene	0.5	mg/kg	-	-	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	51
Tetrachloro-m-xylene (surr.)	1	%	-	-	62
Organophosphorus Pesticides					
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2
Bolstar	0.2	mg/kg	-	-	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2
Coumaphos	2	mg/kg	-	-	< 2
Demeton-S	0.2	mg/kg	-	-	< 0.2
Demeton-O	0.2	mg/kg	-	-	< 0.2
Diazinon	0.2	mg/kg	-	-	< 0.2
Dichlorvos	0.2	mg/kg	-	-	< 0.2
Dimethoate	0.2	mg/kg	-	-	< 0.2
Disulfoton	0.2	mg/kg	-	-	< 0.2
EPN	0.2	mg/kg	-	-	< 0.2
Ethion	0.2	mg/kg	-	-	< 0.2
Ethoprop	0.2	mg/kg	-	-	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	< 0.2
Fenitrothion	0.2	mg/kg	-	-	< 0.2
Fensulfothion	0.2	mg/kg	-	-	< 0.2
Fenthion	0.2	mg/kg	-	-	< 0.2
Malathion	0.2	mg/kg	-	-	< 0.2
Merphos	0.2	mg/kg	-	-	< 0.2
Methyl parathion	0.2	mg/kg	-	-	< 0.2
Mevinphos	0.2	mg/kg	-	-	< 0.2
Monocrotophos	2	mg/kg	-	-	< 2
Naled	0.2	mg/kg	-	-	< 0.2
Omethoate	2	mg/kg	-	-	< 2
Phorate	0.2	mg/kg	-	-	< 0.2

Client Sample ID			TP12_0.2-0.3	TP13_0-0.1	TP13_0.2-0.3
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			B23-My0029551	B23-My0029552	B23-My0029553
Date Sampled			May 02, 2023	May 02, 2023	May 02, 2023
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2
Pyrazophos	0.2	mg/kg	-	-	< 0.2
Ronnel	0.2	mg/kg	-	-	< 0.2
Terbufos	0.2	mg/kg	-	-	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2
Tokuthion	0.2	mg/kg	-	-	< 0.2
Trichloronate	0.2	mg/kg	-	-	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	51
Polychlorinated Biphenyls					
Aroclor-1016	0.1	mg/kg	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	51
Tetrachloro-m-xylene (surr.)	1	%	-	-	62
Phenols (Halogenated)					
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1
Pentachlorophenol	1	mg/kg	-	-	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	< 1
Phenols (non-Halogenated)					
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5
2-Nitrophenol	1.0	mg/kg	-	-	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4
Total cresols*	0.5	mg/kg	-	-	< 0.5
4-Nitrophenol	5	mg/kg	-	-	< 5
Dinoseb	20	mg/kg	-	-	< 20
Phenol	0.5	mg/kg	-	-	< 0.5
Phenol-d6 (surr.)	1	%	-	-	94
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
TRH >C10-C16	50	mg/kg	-	-	< 50
TRH >C16-C34	100	mg/kg	-	-	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B7A			
Metals M8	Brisbane	May 12, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Brisbane	May 12, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Brisbane	May 12, 2023	14 Days
- Method: USEPA SW846 8260			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Brisbane	May 12, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Brisbane	May 12, 2023	14 Days
- Method: USEPA M 8270 (LTM-ORG-2130 PAH & Phenols in Soil & Water by GC-MS)			
Phenols (Halogenated)	Brisbane	May 12, 2023	14 Days
- Method: USEPA M 8270 (LTM-ORG-2130 PAH & Phenols in Soil & Water by GC-MS)			
Phenols (non-Halogenated)	Brisbane	May 12, 2023	14 Days
- Method: USEPA M 8270 (LTM-ORG-2130 PAH & Phenols in Soil & Water by GC-MS)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Brisbane	May 12, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
% Moisture	Brisbane	May 12, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			
Eurofins Suite B15			
Organochlorine Pesticides	Melbourne	May 16, 2023	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	May 16, 2023	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	May 16, 2023	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			

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Company Name: Easterly Point Environmental Pty Ltd
Address: 1/64 Kingsley Street
Byron Bay
NSW 2481

Project Name: MOMENTUM JOHNSON ST CASINO NSW
Project ID: 23034

Order No.:
Report #: 988809
Phone: 02 6685 6681
Fax:

Received: May 9, 2023 9:15 AM
Due: May 16, 2023
Priority: 5 Day
Contact Name: Marc Salmon

Eurofins Analytical Services Manager : Peter Brand

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A
Melbourne Laboratory - NATA # 1261 Site # 1254									X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794								X		X	X
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	TP01_0-0.1	May 02, 2023		Soil	B23-My0029523			X		X	
2	TP01_0.2-0.3	May 02, 2023		Soil	B23-My0029524			X		X	
3	TP02_0-0.1	May 02, 2023		Soil	B23-My0029525			X		X	
4	TP02_0.2-0.3	May 02, 2023		Soil	B23-My0029526			X		X	
5	TP03_0-0.1	May 02, 2023		Soil	B23-My0029527			X		X	
6	TP03_0.2-0.3	May 02, 2023		Soil	B23-My0029528			X		X	
7	TP03_0.4-0.6	May 02, 2023		Soil	B23-My0029529	X			X	X	X
8	TP04_0-0.1	May 02, 2023		Soil	B23-My0029530			X		X	
9	TP04_0.2-0.3	May 02, 2023		Soil	B23-My0029531			X		X	
10	TP05_0-0.1	May 02, 2023		Soil	B23-My0029532			X		X	
11	TP05_0.2-0.3	May 02, 2023		Soil	B23-My0029533			X		X	

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Project ID: 23034

Order No.:
Report #: 988809
Phone: 02 6685 6681
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Eurofins Analytical Services Manager : Peter Brand

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Melbourne Laboratory - NATA # 1261 Site # 1254									X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794								X		X	X
12	TP05_0.5-0.6	May 02, 2023		Soil	B23-My0029534	X			X	X	X
13	TP06_0-0.1	May 02, 2023		Soil	B23-My0029535			X		X	
14	TP06_0.2-0.3	May 02, 2023		Soil	B23-My0029536			X		X	
15	TP07_0-0.1	May 02, 2023		Soil	B23-My0029537			X		X	
16	TP07_0.2-0.3	May 02, 2023		Soil	B23-My0029538			X		X	
17	TP07_0.7-0.75	May 02, 2023		Soil	B23-My0029539	X			X	X	X
18	TP07_0.8-0.93	May 02, 2023		Soil	B23-My0029540	X			X	X	X
19	TP08_0-0.1	May 02, 2023		Soil	B23-My0029541			X		X	
20	TP08_0.2-0.3	May 02, 2023		Soil	B23-My0029542			X		X	
21	TP08_0.6-0.8	May 02, 2023		Soil	B23-My0029543	X			X	X	X
22	TP09_0-0.1	May 02, 2023		Soil	B23-My0029544			X		X	
23	TP09_0.2-0.3	May 02, 2023		Soil	B23-My0029545			X		X	
24	TP10_0-0.1	May 02, 2023		Soil	B23-My0029546			X		X	
25	TP10_0.2-0.3	May 02, 2023		Soil	B23-My0029547			X		X	

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Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A
Melbourne Laboratory - NATA # 1261 Site # 1254									X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794								X		X	X
26	TP11_0-0.1	May 02, 2023		Soil	B23-My0029548			X		X	
27	TP11_0.2-0.3	May 02, 2023		Soil	B23-My0029549			X		X	
28	TP12_0-0.1	May 02, 2023		Soil	B23-My0029550			X		X	
29	TP12_0.2-0.3	May 02, 2023		Soil	B23-My0029551			X		X	
30	TP13_0-0.1	May 02, 2023		Soil	B23-My0029552			X		X	
31	TP13_0.2-0.3	May 02, 2023		Soil	B23-My0029553	X			X	X	X
32	TP07 A1	May 02, 2023		Building Materials	B23-My0029554		X				
Test Counts						6	1	25	6	31	6

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Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram
mg/L: milligrams per litre
µg/L: micrograms per litre
ppm: parts per million
ppb: parts per billion
%: Percentage
org/100 mL: Organisms per 100 millilitres
NTU: Nephelometric Turbidity Units
MPN/100 mL: Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.5			0.5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	116			80-120	Pass	
Cadmium	%	107			80-120	Pass	
Chromium	%	97			80-120	Pass	
Copper	%	97			80-120	Pass	
Lead	%	118			80-120	Pass	
Mercury	%	110			80-120	Pass	
Nickel	%	99			80-120	Pass	
Zinc	%	97			80-120	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	100			70-130	Pass	
TRH C10-C14	%	102			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	88			70-130	Pass	
Toluene	%	98			70-130	Pass	
Ethylbenzene	%	107			70-130	Pass	
m&p-Xylenes	%	111			70-130	Pass	
Xylenes - Total*	%	110			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH C6-C10	%	100			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthylene	%	82			70-130	Pass	
Anthracene	%	92			70-130	Pass	
Benz(a)anthracene	%	81			70-130	Pass	
Benzo(a)pyrene	%	94			70-130	Pass	
Benzo(b&j)fluoranthene	%	89			70-130	Pass	
Benzo(g.h.i)perylene	%	85			70-130	Pass	
Benzo(k)fluoranthene	%	90			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chrysene	%	85			70-130	Pass	
Dibenz(a.h)anthracene	%	98			70-130	Pass	
Fluoranthene	%	84			70-130	Pass	
Fluorene	%	94			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	76			70-130	Pass	
Naphthalene	%	94			70-130	Pass	
Phenanthrene	%	90			70-130	Pass	
Pyrene	%	85			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	94			25-140	Pass	
2.4-Dichlorophenol	%	106			25-140	Pass	
2.4.5-Trichlorophenol	%	85			25-140	Pass	
2.6-Dichlorophenol	%	89			25-140	Pass	
4-Chloro-3-methylphenol	%	92			25-140	Pass	
Pentachlorophenol	%	93			25-140	Pass	
Tetrachlorophenols - Total	%	110			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2.4-Dimethylphenol	%	114			25-140	Pass	
2.4-Dinitrophenol	%	74			25-140	Pass	
2-Methylphenol (o-Cresol)	%	101			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	100			25-140	Pass	
4-Nitrophenol	%	126			25-140	Pass	
Dinoseb	%	119			25-140	Pass	
Phenol	%	99			25-140	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	101			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B23-My0029528	CP	%	92			75-125	Pass	
Cadmium	B23-My0029528	CP	%	106			75-125	Pass	
Chromium	B23-My0029528	CP	%	124			75-125	Pass	
Copper	B23-My0029528	CP	%	109			75-125	Pass	
Lead	B23-My0029528	CP	%	104			75-125	Pass	
Mercury	B23-My0029528	CP	%	108			75-125	Pass	
Nickel	B23-My0029528	CP	%	120			75-125	Pass	
Zinc	B23-My0029528	CP	%	76			75-125	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	B23-My0030343	NCP	%	111			70-130	Pass	
Acenaphthylene	B23-My0038690	NCP	%	96			70-130	Pass	
Anthracene	B23-My0038690	NCP	%	101			70-130	Pass	
Benz(a)anthracene	B23-My0038690	NCP	%	89			70-130	Pass	
Benzo(a)pyrene	B23-My0038690	NCP	%	90			70-130	Pass	
Benzo(b&j)fluoranthene	B23-My0038690	NCP	%	99			70-130	Pass	
Benzo(g.h.i)perylene	B23-My0038690	NCP	%	92			70-130	Pass	
Benzo(k)fluoranthene	B23-My0038690	NCP	%	101			70-130	Pass	
Chrysene	B23-My0038690	NCP	%	91			70-130	Pass	
Dibenz(a.h)anthracene	B23-My0038690	NCP	%	112			70-130	Pass	
Fluoranthene	B23-My0038690	NCP	%	96			70-130	Pass	
Fluorene	B23-My0038690	NCP	%	107			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Indeno(1.2.3-cd)pyrene	B23-My0038690	NCP	%	86			70-130	Pass	
Naphthalene	B23-My0038690	NCP	%	103			70-130	Pass	
Phenanthrene	B23-My0038690	NCP	%	100			70-130	Pass	
Pyrene	B23-My0038690	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	B23-My0030343	NCP	%	103			30-130	Pass	
2.4-Dichlorophenol	B23-My0030343	NCP	%	128			30-130	Pass	
2.4.5-Trichlorophenol	B23-My0030343	NCP	%	92			30-130	Pass	
2.6-Dichlorophenol	B23-My0030343	NCP	%	107			30-130	Pass	
4-Chloro-3-methylphenol	B23-My0030343	NCP	%	101			30-130	Pass	
Pentachlorophenol	B23-My0030343	NCP	%	124			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	B23-My0030351	NCP	%	128			30-130	Pass	
2.4-Dimethylphenol	B23-My0030343	NCP	%	128			30-130	Pass	
2-Methylphenol (o-Cresol)	B23-My0030343	NCP	%	106			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	B23-My0030343	NCP	%	103			30-130	Pass	
Dinoseb	B23-My0030343	NCP	%	122			30-130	Pass	
Phenol	B23-My0030343	NCP	%	94			30-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Cadmium	B23-My0029533	CP	%	103			75-125	Pass	
Chromium	B23-My0029533	CP	%	76			75-125	Pass	
Copper	B23-My0029533	CP	%	80			75-125	Pass	
Lead	B23-My0029533	CP	%	110			75-125	Pass	
Mercury	B23-My0029533	CP	%	108			75-125	Pass	
Nickel	B23-My0029533	CP	%	95			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	B23-My0029540	CP	%	93			70-130	Pass	
TRH C10-C14	B23-My0029540	CP	%	95			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	B23-My0029540	CP	%	86			70-130	Pass	
Toluene	B23-My0029540	CP	%	99			70-130	Pass	
Ethylbenzene	B23-My0029540	CP	%	103			70-130	Pass	
m&p-Xylenes	B23-My0029540	CP	%	108			70-130	Pass	
o-Xylene	B23-My0029540	CP	%	109			70-130	Pass	
Xylenes - Total*	B23-My0029540	CP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	B23-My0029540	CP	%	94			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	B23-My0029540	CP	%	93			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B23-My0029545	CP	%	81			75-125	Pass	
Cadmium	B23-My0029545	CP	%	95			75-125	Pass	
Chromium	B23-My0029545	CP	%	88			75-125	Pass	
Copper	B23-My0029545	CP	%	88			75-125	Pass	
Lead	B23-My0029545	CP	%	91			75-125	Pass	
Mercury	B23-My0029545	CP	%	100			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel	B23-My0029545	CP	%	88			75-125	Pass	
Zinc	B23-My0029545	CP	%	80			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	B23-My0027682	NCP	%	12	12	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	B23-My0029524	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cadmium	B23-My0029524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chromium	B23-My0029524	CP	mg/kg	31	34	9.4	30%	Pass	
Copper	B23-My0029524	CP	mg/kg	11	12	3.6	30%	Pass	
Lead	B23-My0029524	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Mercury	B23-My0029524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	B23-My0029524	CP	mg/kg	28	29	2.3	30%	Pass	
Zinc	B23-My0029524	CP	mg/kg	56	58	3.9	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	B23-My0038688	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	B23-My0030352	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	B23-My0030352	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	B23-My0030352	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	B23-My0030352	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	B23-My0030352	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	B23-My0030352	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	B23-My0030352	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	B23-My0030352	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	B23-My0030352	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	B23-My0030352	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	B23-My0030352	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	B23-My0030352	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	B23-My0030352	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	B23-My0030352	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	B23-My0030352	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	B23-My0030352	NCP	mg/kg	< 5	< 5	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
Dinoseb	B23-My0030352	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	B23-My0030352	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	B23-My0029530	CP	mg/kg	2.4	2.4	2.7	30%	Pass	
Cadmium	B23-My0029530	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chromium	B23-My0029530	CP	mg/kg	41	40	<1	30%	Pass	
Copper	B23-My0029530	CP	mg/kg	21	22	3.6	30%	Pass	
Lead	B23-My0029530	CP	mg/kg	24	23	3.5	30%	Pass	
Mercury	B23-My0029530	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	B23-My0029530	CP	mg/kg	33	32	2.4	30%	Pass	
Zinc	B23-My0029530	CP	mg/kg	87	91	3.7	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	B23-My0029543	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	B23-My0029543	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	B23-My0029543	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	B23-My0029543	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	B23-My0029543	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	B23-My0029543	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	B23-My0029543	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	B23-My0029543	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	B23-My0029543	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	B23-My0029543	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	B23-My0029543	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	B23-My0029543	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	B23-My0029543	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	B23-My0029543	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	B23-My0029543	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	B23-My0029546	CP	mg/kg	5.4	4.2	26	30%	Pass	
Chromium	B23-My0029546	CP	mg/kg	39	38	3.3	30%	Pass	
Copper	B23-My0029546	CP	mg/kg	20	23	15	30%	Pass	
Lead	B23-My0029546	CP	mg/kg	16	15	5.7	30%	Pass	
Mercury	B23-My0029546	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	B23-My0029546	CP	mg/kg	35	30	17	30%	Pass	
Zinc	B23-My0029546	CP	mg/kg	78	75	4.4	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	No
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Alana Wadsworth	Analytical Services Manager
Jonathon Angell	Senior Analyst-Metal
Jonathon Angell	Senior Analyst-Organic
Jonathon Angell	Senior Analyst-Sample Properties
Jonathon Angell	Senior Analyst-Volatile
Mele Singh	Senior Analyst-Organic
Sayeed Abu	Senior Analyst-Asbestos

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Certificate of Analysis

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Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
NATA is a signatory to the ILAC Mutual Recognition Arrangement for the mutual recognition of the equivalence of testing, medical testing, calibration, inspection, proficiency testing scheme providers and reference materials producers reports and certificates.

Easterly Point Environmental Pty Ltd
1/64 Kingsley Street
Byron Bay
NSW 2481

Attention:	Marc Salmon
Report	988809-AID
Project Name	MOMENTUM JOHNSON ST CASINO NSW
Project ID	23034
Received Date	May 09, 2023
Date Reported	May 26, 2023

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name MOMENTUM JOHNSON ST CASINO NSW
Project ID 23034
Date Sampled May 02, 2023
Report 988809-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP03_0.4-0.6	23-My0029529	May 02, 2023	Approximate Sample 12g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP05_0.5-0.6	23-My0029534	May 02, 2023	Approximate Sample 11g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP07_0.7-0.75	23-My0029539	May 02, 2023	Approximate Sample 10g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP07_0.8-0.93	23-My0029540	May 02, 2023	Approximate Sample 14g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP08_0.6-0.8	23-My0029543	May 02, 2023	Approximate Sample 17g Sample consisted of: Brown coarse-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP13_0.2-0.3	23-My0029553	May 02, 2023	Approximate Sample 15g Sample consisted of: Brown fine-grained clayey soil, bitumen and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP07 A1	23-My0029554	May 02, 2023	Approximate Sample 390g / 50x105x12mm Sample consisted of: Grey fibre cement material	Chrysotile asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	May 12, 2023	Indefinite
Asbestos - LTM-ASB-8020	Sydney	May 12, 2023	Indefinite

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Company Name: Easterly Point Environmental Pty Ltd
Address: 1/64 Kingsley Street
Byron Bay
NSW 2481

Project Name: MOMENTUM JOHNSON ST CASINO NSW
Project ID: 23034

Order No.:
Report #: 988809
Phone: 02 6685 6681
Fax:

Received: May 9, 2023 9:15 AM
Due: May 16, 2023
Priority: 5 Day
Contact Name: Marc Salmon

Eurofins Analytical Services Manager : Peter Brand

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A
Melbourne Laboratory - NATA # 1261 Site # 1254									X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794								X		X	X
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	TP01_0-0.1	May 02, 2023		Soil	B23-My0029523			X		X	
2	TP01_0.2-0.3	May 02, 2023		Soil	B23-My0029524			X		X	
3	TP02_0-0.1	May 02, 2023		Soil	B23-My0029525			X		X	
4	TP02_0.2-0.3	May 02, 2023		Soil	B23-My0029526			X		X	
5	TP03_0-0.1	May 02, 2023		Soil	B23-My0029527			X		X	
6	TP03_0.2-0.3	May 02, 2023		Soil	B23-My0029528			X		X	
7	TP03_0.4-0.6	May 02, 2023		Soil	B23-My0029529	X			X	X	X
8	TP04_0-0.1	May 02, 2023		Soil	B23-My0029530			X		X	
9	TP04_0.2-0.3	May 02, 2023		Soil	B23-My0029531			X		X	
10	TP05_0-0.1	May 02, 2023		Soil	B23-My0029532			X		X	
11	TP05_0.2-0.3	May 02, 2023		Soil	B23-My0029533			X		X	

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Melbourne Laboratory - NATA # 1261 Site # 1254									X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794								X		X	X
12	TP05_0.5-0.6	May 02, 2023		Soil	B23-My0029534	X			X	X	X
13	TP06_0-0.1	May 02, 2023		Soil	B23-My0029535			X		X	
14	TP06_0.2-0.3	May 02, 2023		Soil	B23-My0029536			X		X	
15	TP07_0-0.1	May 02, 2023		Soil	B23-My0029537			X		X	
16	TP07_0.2-0.3	May 02, 2023		Soil	B23-My0029538			X		X	
17	TP07_0.7-0.75	May 02, 2023		Soil	B23-My0029539	X			X	X	X
18	TP07_0.8-0.93	May 02, 2023		Soil	B23-My0029540	X			X	X	X
19	TP08_0-0.1	May 02, 2023		Soil	B23-My0029541			X		X	
20	TP08_0.2-0.3	May 02, 2023		Soil	B23-My0029542			X		X	
21	TP08_0.6-0.8	May 02, 2023		Soil	B23-My0029543	X			X	X	X
22	TP09_0-0.1	May 02, 2023		Soil	B23-My0029544			X		X	
23	TP09_0.2-0.3	May 02, 2023		Soil	B23-My0029545			X		X	
24	TP10_0-0.1	May 02, 2023		Soil	B23-My0029546			X		X	
25	TP10_0.2-0.3	May 02, 2023		Soil	B23-My0029547			X		X	

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Melbourne Laboratory - NATA # 1261 Site # 1254									X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794								X		X	X
26	TP11_0-0.1	May 02, 2023		Soil	B23-My0029548			X		X	
27	TP11_0.2-0.3	May 02, 2023		Soil	B23-My0029549			X		X	
28	TP12_0-0.1	May 02, 2023		Soil	B23-My0029550			X		X	
29	TP12_0.2-0.3	May 02, 2023		Soil	B23-My0029551			X		X	
30	TP13_0-0.1	May 02, 2023		Soil	B23-My0029552			X		X	
31	TP13_0.2-0.3	May 02, 2023		Soil	B23-My0029553	X			X	X	X
32	TP07 A1	May 02, 2023		Building Materials	B23-My0029554		X				
Test Counts						6	1	25	6	31	6

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w)**.
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

The samples received were not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid sub-sampling procedures were applied so as to ensure that the sub-samples to be analysed accurately represented the samples received.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	No
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Bennel Jiri	Senior Analyst-Asbestos

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Brisbane Laboratory - NATA # 1261 Site # 20794								X		X	X
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
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2	TP01_0.2-0.3	May 02, 2023		Soil	B23-My0029524			X		X	
3	TP02_0-0.1	May 02, 2023		Soil	B23-My0029525			X		X	
4	TP02_0.2-0.3	May 02, 2023		Soil	B23-My0029526			X		X	
5	TP03_0-0.1	May 02, 2023		Soil	B23-My0029527			X		X	
6	TP03_0.2-0.3	May 02, 2023		Soil	B23-My0029528			X		X	
7	TP03_0.4-0.6	May 02, 2023		Soil	B23-My0029529	X			X	X	X
8	TP04_0-0.1	May 02, 2023		Soil	B23-My0029530			X		X	
9	TP04_0.2-0.3	May 02, 2023		Soil	B23-My0029531			X		X	
10	TP05_0-0.1	May 02, 2023		Soil	B23-My0029532			X		X	
11	TP05_0.2-0.3	May 02, 2023		Soil	B23-My0029533			X		X	

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne
6 Monterey Road
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VIC 3175
Tel: +61 3 8564 5000
NATA# 1261 Site# 1254

Geelong
19/8 Lewalan Street
Grovedale
VIC 3216
Tel: +61 3 8564 5000
NATA# 1261 Site# 25403

Sydney
179 Magowar Road
Girraween
NSW 2145
Tel: +61 2 9900 8400
NATA# 1261 Site# 18217

Canberra
Unit 1,2 Dacre Street
Mitchell
ACT 2911
Tel: +61 2 6113 8091
NATA# 1261 Site# 25466

Brisbane
1/21 Smallwood Place
Murarrie
QLD 4172
Tel: +61 7 3902 4600
NATA# 1261 Site# 20794

Newcastle
1/2 Frost Drive
Mayfield West NSW 2304
Tel: +61 2 4968 8448
NATA# 1261
Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland
35 O'Rorke Road
Penrose,
Auckland 1061
Tel: +64 9 526 45 51
IANZ# 1327

Christchurch
43 Detroit Drive
Rolleston,
Christchurch 7675
Tel: 0800 856 450
IANZ# 1290

Company Name: Easterly Point Environmental Pty Ltd
Address: 1/64 Kingsley Street
Byron Bay
NSW 2481

Project Name: MOMENTUM JOHNSON ST CASINO NSW
Project ID: 23034

Order No.:
Report #: 988809
Phone: 02 6685 6681
Fax:

Received: May 9, 2023 9:15 AM
Due: May 16, 2023
Priority: 5 Day
Contact Name: Marc Salmon

Eurofins Analytical Services Manager : Peter Brand

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A
Melbourne Laboratory - NATA # 1261 Site # 1254									X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794								X		X	X
12	TP05_0.5-0.6	May 02, 2023		Soil	B23-My0029534	X			X	X	X
13	TP06_0-0.1	May 02, 2023		Soil	B23-My0029535			X		X	
14	TP06_0.2-0.3	May 02, 2023		Soil	B23-My0029536			X		X	
15	TP07_0-0.1	May 02, 2023		Soil	B23-My0029537			X		X	
16	TP07_0.2-0.3	May 02, 2023		Soil	B23-My0029538			X		X	
17	TP07_0.7-0.75	May 02, 2023		Soil	B23-My0029539	X			X	X	X
18	TP07_0.8-0.93	May 02, 2023		Soil	B23-My0029540	X			X	X	X
19	TP08_0-0.1	May 02, 2023		Soil	B23-My0029541			X		X	
20	TP08_0.2-0.3	May 02, 2023		Soil	B23-My0029542			X		X	
21	TP08_0.6-0.8	May 02, 2023		Soil	B23-My0029543	X			X	X	X
22	TP09_0-0.1	May 02, 2023		Soil	B23-My0029544			X		X	
23	TP09_0.2-0.3	May 02, 2023		Soil	B23-My0029545			X		X	
24	TP10_0-0.1	May 02, 2023		Soil	B23-My0029546			X		X	
25	TP10_0.2-0.3	May 02, 2023		Soil	B23-My0029547			X		X	

eurofins

web: www.eurofins.com.au
email: EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd
ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West NSW 2304
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	Tel: +61 2 4968 8448
Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	NATA# 1261
NATA# 1261 Site# 1254	NATA# 1261 Site# 25403	NATA# 1261 Site# 18217	NATA# 1261 Site# 25466	NATA# 1261 Site# 20794	Site# 25079 & 25289

Eurofins ARL Pty Ltd
ABN: 91 05 0159 898

Perth
46-48 Banksia Road
Welshpool
WA 6106
Tel: +61 8 6253 4444
NATA# 2377 Site# 2370

Eurofins Environment Testing NZ Ltd
NZBN: 9429046024954

Auckland	Christchurch
35 O'Rorke Road	43 Detroit Drive
Penrose,	Rolleston,
Auckland 1061	Christchurch 7675
Tel: +64 9 526 45 51	Tel: 0800 856 450
IANZ# 1327	IANZ# 1290

Company Name: Easterly Point Environmental Pty Ltd
Address: 1/64 Kingsley Street
Byron Bay
NSW 2481

Project Name: MOMENTUM JOHNSON ST CASINO NSW
Project ID: 23034

Order No.:
Report #: 988809
Phone: 02 6685 6681
Fax:

Received: May 9, 2023 9:15 AM
Due: May 16, 2023
Priority: 5 Day
Contact Name: Marc Salmon

Eurofins Analytical Services Manager : Peter Brand

Sample Detail						Asbestos - AS4964	Asbestos Absence /Presence	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A
Melbourne Laboratory - NATA # 1261 Site # 1254									X		
Sydney Laboratory - NATA # 1261 Site # 18217						X	X				
Brisbane Laboratory - NATA # 1261 Site # 20794								X		X	X
26	TP11_0-0.1	May 02, 2023		Soil	B23-My0029548			X		X	
27	TP11_0.2-0.3	May 02, 2023		Soil	B23-My0029549			X		X	
28	TP12_0-0.1	May 02, 2023		Soil	B23-My0029550			X		X	
29	TP12_0.2-0.3	May 02, 2023		Soil	B23-My0029551			X		X	
30	TP13_0-0.1	May 02, 2023		Soil	B23-My0029552			X		X	
31	TP13_0.2-0.3	May 02, 2023		Soil	B23-My0029553	X			X	X	X
32	TP07 A1	May 02, 2023		Building Materials	B23-My0029554		X				
Test Counts						6	1	25	6	31	6

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

- [ ] Sydney Laboratory — Unit F3 Bld F 16 Mars Road Lane Cove West NSW 2066 — 02 9900 8400 — EnviroSampleNSW@eurofins.com
- [x] Brisbane Laboratory — Unit 1 21 Smallwood Place Murarrie QLD 4172 — 07 3902 4600 — EnviroSampleQLD@eurofins.com
- [ ] Perth Laboratory — Unit 2 91 Leach Highway Kewdale WA 6105 — 08 9251 9600 — EnviroSampleWA@eurofins.com
- [ ] Melbourne Laboratory — 2 Kingston Town Close Oakleigh VIC 3166 — 03 8564 5000 — EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481
Contact Name	Marc Salmon
Phone №	M. 0419 985 090 T.02 6685 6681
Special Directions	
Purchase Order	Please analyse a duplicate from TP03 0.2 - 0.3 and TP03 0.4 - 0.6
Quote ID №	
Project №	23034 COC 1 of 4
Project Name	Momentum, Johnston St, Casino NSW
Project Manager	Marc Salmon
EDD Format (ESdat, EQuIS etc)	Excel
Sampler(s)	MSalmon, Atorre
Handed over by	
Email for Invoice	office@easterlypoint.com
Email for Results	marc@easterlypoint.com, andre@easterlypoint.com

Analyses: Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers: Change container type & size if necessary

Required Turnaround Time (TAT): Default will be 5 days if not ticked. ♦Surcharge will apply
- [ ] Overnight (reporting by 9am)♦
- [ ] Same day♦
- [ ] 1 day♦
- [ ] 2 days♦
- [ ] 3 days♦
- [x] 5 days (Standard)
- [ ] Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 - OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	Asbestos Identification in Building Material	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	TP01 0 - 0.1	2/05/23	S	X											1		
2	TP01 0.2 - 0.3	2/5/23	S	X											1		
3	TP02 0 - 0.1	2/5/23	S	X											1		
4	TP02 0.2 - 0.3	2/5/23	S	X											1		
5	TP03 0 - 0.1	2/5/23	S	X											1		
6	TP03 0.2 - 0.3	2/5/23	S	X											1		
7	TP03 0.4 - 0.6	2/5/23	S		X	X	X								1		
8	TP04 0 - 0.1	2/5/23	S	X											1		
9	TP04 0.2 - 0.3	2/5/23	S	X											1		
10																	988809
	Total Counts			8	1	1	1								9		

Date/Time: 9/5/23 9.15am
Chilled: Yes / No
Temp: 10.6 − 1.5
Corrected Final Temp: 9.1

Method of Shipment	[x] Courier (# Toll) [ ] Hand Delivered [ ] Postal	Name: MARC SALMON	Signature: [signature]	Date: 8/5/23 Time:
Eurofins | mgt Laboratory Use Only	Received By:	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature / Date / Time	Temperature
	Received By:	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature / Date / Time	Report №

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☑ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481
Contact Name	Marc Salmon
Phone №	M. 0419 985 090 T.02 6685 6681
Special Directions	Please organise a interlaboratory duplicate from TP05 0.5 - 0.6 and TP07 0 - 0.1
Purchase Order	
Quote ID №	
Project №	23034 COC 2 of 4
Project Name	Momentum, Johnston St, Casino NSW
Project Manager	Marc Salmon
EDD Format (ESdat, EQuIS etc)	Excel
Sampler(s)	MSalmon, Atorre
Handed over by	
Email for Invoice	office@easterlypoint.com
Email for Results	marc@easterlypoint.com, andre@easterlypoint.com

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers — Change container type & size if necessary.

Required Turnaround Time (TAT) — Default will be 5 days if not ticked. ♦Surcharge will apply

- ☐ Overnight (reporting by 9am)♦
- ☐ Same day♦
- ☐ 1 day♦
- ☐ 2 days♦
- ☐ 3 days♦
- ☑ 5 days (Standard)
- ☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 – OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	Asbestos Identification in Building Material	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	TP05 0 - 0.1	2/05/23	S	X											1		
2	TP05 0.2 - 0.3	2/5/23	S	X											1		
3	TP05 0.5 - 0.6	2/5/23	S		X	X	X								1		
4	TP06 0 - 0.1	2/5/23	S	X											1		
5	TP06 0.2 - 0.3	2/5/23	S	X											1		
6	TP07 0 - 0.1	2/5/23	S	X											1		
7	TP07 0.2 - 0.3	2/5/23	S	X											1		
8	TP07 0.7 - 0.75	2/5/23	S		X	X	X								1		
9	TP07 0.8 - 0.93	2/5/23	S		X	X	X								1		
10																	
	Total Counts			6	3	3	3								9		

Method of Shipment: ☑ Courier (# Toll) ☐ Hand Delivered ☐ Postal — Name: SALMON — Signature: [illegible] — Date: 8/05/23 — Time:

Eurofins | mgt Laboratory Use Only					
Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature
Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory — Unit F3 Bld F 16 Mars Road Lane Cove West NSW 2066 — 02 9900 8400 — EnviroSampleNSW@eurofins.com

☑ Brisbane Laboratory — Unit 1 21 Smallwood Place Murarrie QLD 4172 — 07 3902 4600 — EnviroSampleQLD@eurofins.com

☐ Perth Laboratory — Unit 2 91 Leach Highway Kewdale WA 6105 — 08 9251 9600 — EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory — 2 Kingston Town Close Oakleigh VIC 3166 — 03 8564 5000 — EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481
Contact Name	Marc Salmon
Phone №	M. 0419 985 090 T.02 6685 6681
Special Directions	
Purchase Order	
Quote ID №	
Project №	23034 COC 3 of 4
Project Name	Momentum, Johnston St, Casino NSW
Project Manager	Marc Salmon
EDD Format (ESdat, EQuIS etc)	Excel
Sampler(s)	MSalmon, Atorre
Handed over by	
Email for Invoice	office@easterlypoint.com
Email for Results	marc@easterlypoint.com, andre@easterlypoint.com

Analyses: Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers: Change container type & size if necessary.

Required Turnaround Time (TAT): Default will be 5 days if not ticked. ♦Surcharge will apply

- ☐ Overnight (reporting by 9am)♦
- ☐ Same day♦
- ☐ 1 day♦
- ☐ 2 days♦
- ☐ 3 days♦
- ☑ 5 days (Standard)
- ☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 – OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	Asbestos Identification in Building Material	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	TP08 0 - 0.1	2/05/23	S	X											1		
2	TP08 0.2 - 0.3	2/5/23	S	X											1		
3	TP08 0.6 - 0.8	2/5/23	S		X	X	X								1		
4	TP09 0 - 0.1	2/5/23	S	X											1		
5	TP09 0.2 - 0.3	2/5/23	S	X											1		
6	TP010 0 - 0.1	2/5/23	S	X											1		
7	TP10 0.2 - 0.3	2/5/23	S	X											1		
8	TP11 0 - 0.1	2/5/23	S	X											1		
9	TP11 0.2 - 0.3	2/5/23	S	X											1		
10																	
	Total Counts			8	1	1	1								9		

Method of Shipment	☑ Courier (# Toll) ☐ Hand Delivered ☐ Postal	Name: Salmon	Signature: [signature]	Date: 3/05/23	Time	
Eurofins | mgt Laboratory Use Only	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☑ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
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08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental	Project №	23034 COC 4 of 4	Project Manager	Marc Salmon
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481	Project Name	Momentum, Johnston St, Casino NSW	EDD Format (ESdat, EQuIS etc)	Excel
Contact Name	Marc Salmon	Sampler(s)	MSalmon, ATorre	Handed over by	
Phone №	M. 0419 985 090 T.02 6685 6681	Email for Invoice	office@easterlypoint.com	Email for Results	marc@easterlypoint.com, andre@easterlypoint.com
Special Directions					
Purchase Order					
Quote ID №					

Analyses: Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers: Change container type & size if necessary

Required Turnaround Time (TAT): Default will be 5 days if not ticked. ♦Surcharge will apply
☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☑ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 – OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	Asbestos Identification in Building Material	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	TP12 0 - 0.1	2/05/23	S	X											1		
2	TP12 0.2 - 0.3	2/5/23	S	X											1		
3	TP13 0 - 0.1	2/5/23	S	X											1		
4	TP13 0.2 - 0.3	2/5/23	S		X	X	X								1		
5	TP07 A1	2/5/23	S					X								1	Building product bagged
6																	
7																	
8																	
9																	
10																	
	Total Counts			3	1	1	1	1							4	1	

Method of Shipment: ☑ Courier (# 101) ☐ Hand Delivered ☐ Postal Name: SALMON Signature: [signature] Date: 8/05/ Time:

Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №	

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Easterly Point Environmental Pty Ltd
1/64 Kingsley Street
Byron Bay
NSW 2481

Attention: **Marc Salmon**

Report **1014903-S**
Project name MOMENTUM JOHNSTON ST CASINO NSW
Project ID 23034.2
Received Date Aug 08, 2023

Client Sample ID			**SS14A**	**SS15A**	**SS16A**	**SS16B**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B23-Au0020974**	**B23-Au0020975**	**B23-Au0020976**	**B23-Au0020977**
Date Sampled			**Aug 02, 2023**	**Aug 02, 2023**	**Aug 02, 2023**	**Aug 02, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	4.9	2.4	< 2	2.1
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	23	26	26	31
Copper	5	mg/kg	14	16	14	14
Lead	5	mg/kg	5.7	10	10	12
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.0	14	18	21
Zinc	5	mg/kg	54	69	63	66
Sample Properties						
% Moisture	1	%	15	17	20	22

Client Sample ID			**SS17A**	**SS18A**	**SS19A**	**SS20A**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**B23-Au0020978**	**B23-Au0020979**	**B23-Au0020980**	**B23-Au0020981**
Date Sampled			**Aug 02, 2023**	**Aug 02, 2023**	**Aug 02, 2023**	**Aug 02, 2023**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	4.4	2.2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	35	28	24	27
Copper	5	mg/kg	23	13	11	13
Lead	5	mg/kg	34	10	14	29
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	25	20	18	19
Zinc	5	mg/kg	92	74	58	66
Sample Properties						
% Moisture	1	%	21	21	19	24
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	54	-	-	-
TRH C29-C36	50	mg/kg	110	-	-	-
TRH C10-C36 (Total)	50	mg/kg	164	-	-	-

Client Sample ID			SS17A	SS18A	SS19A	SS20A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020978	B23-Au0020979	B23-Au0020980	B23-Au0020981
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	101	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	86	-	-	-
p-Terphenyl-d14 (surr.)	1	%	84	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-HCH	0.05	mg/kg	< 0.05	-	-	-
d-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-

Client Sample ID			SS17A	SS18A	SS19A	SS20A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020978	B23-Au0020979	B23-Au0020980	B23-Au0020981
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	0.5	mg/kg	< 0.5	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	93	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	81	-	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	87	-	-	-

Client Sample ID			SS17A	SS18A	SS19A	SS20A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020978	B23-Au0020979	B23-Au0020980	B23-Au0020981
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	93	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	81	-	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Nitrophenol	1.0	mg/kg	< 1	-	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Total cresols*	0.5	mg/kg	< 0.5	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	114	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	160	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	160	-	-	-

Client Sample ID			SS21A	SS22A	SS23A	SS23B
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020982	B23-Au0020983	B23-Au0020984	B23-Au0020985
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	3.5	7.8	3.6
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	34	23	34	41
Copper	5	mg/kg	11	12	16	20
Lead	5	mg/kg	7.7	6.7	24	29
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	24	20	21	25
Zinc	5	mg/kg	54	58	79	93
Sample Properties						
% Moisture	1	%	14	16	20	21
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	-	< 20	< 20
TRH C10-C14	20	mg/kg	-	-	< 20	< 20
TRH C15-C28	50	mg/kg	-	-	< 50	< 50
TRH C29-C36	50	mg/kg	-	-	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	-	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	-	-	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	-	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	-	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	-	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	-	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	-	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	-	92	88
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	-	< 0.5	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	-	< 50	< 50
TRH C6-C10	20	mg/kg	-	-	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	< 20	< 20
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	-	-	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	-	-	1.2	1.2
Acenaphthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	-	-	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	-	-	< 0.5	< 0.5
Chrysene	0.5	mg/kg	-	-	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	-	-	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	-	-	0.6	0.6
Fluorene	0.5	mg/kg	-	-	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	-	-	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	-	-	< 0.5	< 0.5

Client Sample ID			SS21A	SS22A	SS23A	SS23B
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020982	B23-Au0020983	B23-Au0020984	B23-Au0020985
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Pyrene	0.5	mg/kg	-	-	0.6	0.6
Total PAH*	0.5	mg/kg	-	-	1.2	1.2
2-Fluorobiphenyl (surr.)	1	%	-	-	108	127
p-Terphenyl-d14 (surr.)	1	%	-	-	100	123
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	-	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	-	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	-	< 0.05	< 0.05
a-HCH	0.05	mg/kg	-	-	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
b-HCH	0.05	mg/kg	-	-	< 0.05	< 0.05
d-HCH	0.05	mg/kg	-	-	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	-	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	-	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	-	< 0.05	< 0.05
g-HCH (Lindane)	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	-	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	-	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	-	< 0.05	< 0.05
Toxaphene	0.5	mg/kg	-	-	< 0.5	< 0.5
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	-	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	80	88
Tetrachloro-m-xylene (surr.)	1	%	-	-	90	110
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	-	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	-	< 2	< 2
Demeton-S	0.2	mg/kg	-	-	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	-	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	-	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	-	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	-	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	-	< 0.2	< 0.2
EPN	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	-	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2

Client Sample ID			SS21A	SS22A	SS23A	SS23B
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020982	B23-Au0020983	B23-Au0020984	B23-Au0020985
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Fenitrothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	-	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	-	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	-	< 2	< 2
Naled	0.2	mg/kg	-	-	< 0.2	< 0.2
Omethoate	2	mg/kg	-	-	< 2	< 2
Phorate	0.2	mg/kg	-	-	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	-	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	-	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	-	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	-	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	-	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	-	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	-	79	86
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	-	-	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	80	88
Tetrachloro-m-xylene (surr.)	1	%	-	-	90	110
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4.5-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.4.6-Trichlorophenol	1	mg/kg	-	-	< 1	< 1
2.6-Dichlorophenol	0.5	mg/kg	-	-	< 0.5	< 0.5
4-Chloro-3-methylphenol	1	mg/kg	-	-	< 1	< 1
Pentachlorophenol	1	mg/kg	-	-	< 1	< 1
Tetrachlorophenols - Total	10	mg/kg	-	-	< 10	< 10
Total Halogenated Phenol*	1	mg/kg	-	-	< 1	< 1
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	-	-	< 20	< 20
2-Methyl-4.6-dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Nitrophenol	1.0	mg/kg	-	-	< 1	< 1
2.4-Dimethylphenol	0.5	mg/kg	-	-	< 0.5	< 0.5
2.4-Dinitrophenol	5	mg/kg	-	-	< 5	< 5
2-Methylphenol (o-Cresol)	0.2	mg/kg	-	-	< 0.2	< 0.2
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	-	-	< 0.4	< 0.4
Total cresols*	0.5	mg/kg	-	-	< 0.5	< 0.5

Client Sample ID			SS21A	SS22A	SS23A	SS23B
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020982	B23-Au0020983	B23-Au0020984	B23-Au0020985
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
4-Nitrophenol	5	mg/kg	-	-	< 5	< 5
Dinoseb	20	mg/kg	-	-	< 20	< 20
Phenol	0.5	mg/kg	-	-	< 0.5	< 0.5
Phenol-d6 (surr.)	1	%	-	-	126	77
Total Non-Halogenated Phenol*	20	mg/kg	-	-	< 20	< 20
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	-	-	< 50	< 50
TRH >C16-C34	100	mg/kg	-	-	< 100	< 100
TRH >C34-C40	100	mg/kg	-	-	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	-	< 100	< 100

Client Sample ID			SS24A	SS25A	SS26A	SS27A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020986	B23-Au0020987	B23-Au0020988	B23-Au0020989
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	6.3	3.1	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	37	36	22	22
Copper	5	mg/kg	17	14	9.3	17
Lead	5	mg/kg	20	17	11	160
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	21	25	15	11
Zinc	5	mg/kg	67	87	46	450
Sample Properties						
% Moisture	1	%	19	18	20	16

Client Sample ID			SS28A	SS29A	SS30A	SS31A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020990	B23-Au0020991	B23-Au0020992	B23-Au0020993
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	< 2	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	22	22	21	32
Copper	5	mg/kg	9.5	8.3	8.6	17
Lead	5	mg/kg	24	5.5	9.8	22
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	14	13	25
Zinc	5	mg/kg	71	38	35	65
Sample Properties						
% Moisture	1	%	18	17	16	16

Client Sample ID			SS32A	SS33A	SS34A	SS35A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020994	B23-Au0020995	B23-Au0020996	B23-Au0020997
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	3.8	< 2	2.1	5.1
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	32	19	20	33
Copper	5	mg/kg	15	13	14	15
Lead	5	mg/kg	17	12	34	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	20	11	14	26
Zinc	5	mg/kg	84	40	120	61
Sample Properties						
% Moisture	1	%	24	15	16	23
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	-
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	-
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	-
TRH C29-C36	50	mg/kg	130	100	110	-
TRH C10-C36 (Total)	50	mg/kg	130	100	110	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	88	87	93	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	-
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	1.0	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			SS32A	SS33A	SS34A	SS35A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020994	B23-Au0020995	B23-Au0020996	B23-Au0020997
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Pyrene	0.5	mg/kg	< 0.5	< 0.5	0.9	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	1.9	-
2-Fluorobiphenyl (surr.)	1	%	70	73	77	-
p-Terphenyl-d14 (surr.)	1	%	77	74	71	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
a-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
b-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
d-HCH	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	130	113	80	-
Tetrachloro-m-xylene (surr.)	1	%	62	60	74	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Coumaphos	2	mg/kg	< 2	< 2	< 2	-
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-

Client Sample ID			SS32A	SS33A	SS34A	SS35A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020994	B23-Au0020995	B23-Au0020996	B23-Au0020997
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Monocrotophos	2	mg/kg	< 2	< 2	< 2	-
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Omethoate	2	mg/kg	< 2	< 2	< 2	-
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
Triphenylphosphate (surr.)	1	%	123	112	126	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Dibutylchlorendate (surr.)	1	%	130	113	80	-
Tetrachloro-m-xylene (surr.)	1	%	62	60	74	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	< 1	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	< 1	-
Pentachlorophenol	1	mg/kg	< 1	< 1	< 1	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	< 10	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	< 1	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	< 20	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2-Nitrophenol	1.0	mg/kg	< 1	< 1	< 1	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	< 5	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	< 0.4	-
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-

Client Sample ID			SS32A	SS33A	SS34A	SS35A
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020994	B23-Au0020995	B23-Au0020996	B23-Au0020997
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Phenols (non-Halogenated)						
4-Nitrophenol	5	mg/kg	< 5	< 5	< 5	-
Dinoseb	20	mg/kg	< 20	< 20	< 20	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Phenol-d6 (surr.)	1	%	65	80	72	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	< 20	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	-
TRH >C16-C34	100	mg/kg	140	100	110	-
TRH >C34-C40	100	mg/kg	< 100	100	130	-
TRH >C10-C40 (total)*	100	mg/kg	140	200	240	-

Client Sample ID			SS36A	SS37A	TP07RA	TP07RB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020998	B23-Au0020999	B23-Au0021000	B23-Au0021001
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	2.0	< 2	< 2	< 2
Cadmium	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	5	mg/kg	15	13	35	32
Copper	5	mg/kg	7.8	8.2	15	14
Lead	5	mg/kg	13	69	13	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	8.1	7.3	24	22
Zinc	5	mg/kg	44	63	53	52
Sample Properties						
% Moisture	1	%	16	13	7.1	7.2
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	-	-	-
TRH C10-C14	20	mg/kg	< 20	-	-	-
TRH C15-C28	50	mg/kg	< 50	-	-	-
TRH C29-C36	50	mg/kg	120	-	-	-
TRH C10-C36 (Total)	50	mg/kg	120	-	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	-	-	-
Toluene	0.1	mg/kg	< 0.1	-	-	-
Ethylbenzene	0.1	mg/kg	< 0.1	-	-	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-	-	-
o-Xylene	0.1	mg/kg	< 0.1	-	-	-
Xylenes - Total*	0.3	mg/kg	< 0.3	-	-	-
4-Bromofluorobenzene (surr.)	1	%	88	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	-	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	-	-	-
TRH C6-C10	20	mg/kg	< 20	-	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	-	-	-

Client Sample ID			SS36A	SS37A	TP07RA	TP07RB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020998	B23-Au0020999	B23-Au0021000	B23-Au0021001
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-	-	-
Acenaphthene	0.5	mg/kg	< 0.5	-	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	-	-	-
Anthracene	0.5	mg/kg	< 0.5	-	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	-	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	-	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Chrysene	0.5	mg/kg	< 0.5	-	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	-	-	-
Fluoranthene	0.5	mg/kg	< 0.5	-	-	-
Fluorene	0.5	mg/kg	< 0.5	-	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-	-	-
Naphthalene	0.5	mg/kg	< 0.5	-	-	-
Phenanthrene	0.5	mg/kg	< 0.5	-	-	-
Pyrene	0.5	mg/kg	< 0.5	-	-	-
Total PAH*	0.5	mg/kg	< 0.5	-	-	-
2-Fluorobiphenyl (surr.)	1	%	70	-	-	-
p-Terphenyl-d14 (surr.)	1	%	75	-	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	-	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	-	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	-	-	-
a-HCH	0.05	mg/kg	< 0.05	-	-	-
Aldrin	0.05	mg/kg	< 0.05	-	-	-
b-HCH	0.05	mg/kg	< 0.05	-	-	-
d-HCH	0.05	mg/kg	< 0.05	-	-	-
Dieldrin	0.05	mg/kg	< 0.05	-	-	-
Endosulfan I	0.05	mg/kg	< 0.05	-	-	-
Endosulfan II	0.05	mg/kg	< 0.05	-	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-	-	-
Endrin	0.05	mg/kg	< 0.05	-	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-	-	-
Endrin ketone	0.05	mg/kg	< 0.05	-	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	-	-	-
Heptachlor	0.05	mg/kg	< 0.05	-	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-	-	-
Methoxychlor	0.05	mg/kg	< 0.05	-	-	-
Toxaphene	0.5	mg/kg	< 0.5	-	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	-	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	-	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	125	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	63	-	-	-

Client Sample ID			SS36A	SS37A	TP07RA	TP07RB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020998	B23-Au0020999	B23-Au0021000	B23-Au0021001
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Bolstar	0.2	mg/kg	< 0.2	-	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	-	-	-
Coumaphos	2	mg/kg	< 2	-	-	-
Demeton-S	0.2	mg/kg	< 0.2	-	-	-
Demeton-O	0.2	mg/kg	< 0.2	-	-	-
Diazinon	0.2	mg/kg	< 0.2	-	-	-
Dichlorvos	0.2	mg/kg	< 0.2	-	-	-
Dimethoate	0.2	mg/kg	< 0.2	-	-	-
Disulfoton	0.2	mg/kg	< 0.2	-	-	-
EPN	0.2	mg/kg	< 0.2	-	-	-
Ethion	0.2	mg/kg	< 0.2	-	-	-
Ethoprop	0.2	mg/kg	< 0.2	-	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	-	-	-
Fenitrothion	0.2	mg/kg	< 0.2	-	-	-
Fensulfothion	0.2	mg/kg	< 0.2	-	-	-
Fenthion	0.2	mg/kg	< 0.2	-	-	-
Malathion	0.2	mg/kg	< 0.2	-	-	-
Merphos	0.2	mg/kg	< 0.2	-	-	-
Methyl parathion	0.2	mg/kg	< 0.2	-	-	-
Mevinphos	0.2	mg/kg	< 0.2	-	-	-
Monocrotophos	2	mg/kg	< 2	-	-	-
Naled	0.2	mg/kg	< 0.2	-	-	-
Omethoate	2	mg/kg	< 2	-	-	-
Phorate	0.2	mg/kg	< 0.2	-	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	-	-	-
Pyrazophos	0.2	mg/kg	< 0.2	-	-	-
Ronnel	0.2	mg/kg	< 0.2	-	-	-
Terbufos	0.2	mg/kg	< 0.2	-	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	-	-	-
Tokuthion	0.2	mg/kg	< 0.2	-	-	-
Trichloronate	0.2	mg/kg	< 0.2	-	-	-
Triphenylphosphate (surr.)	1	%	115	-	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	-	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	-	-	-
Total PCB*	0.1	mg/kg	< 0.1	-	-	-
Dibutylchlorendate (surr.)	1	%	125	-	-	-
Tetrachloro-m-xylene (surr.)	1	%	63	-	-	-

Client Sample ID			SS36A	SS37A	TP07RA	TP07RB
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			B23-Au0020998	B23-Au0020999	B23-Au0021000	B23-Au0021001
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	-	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	-	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	-	-	-
Pentachlorophenol	1	mg/kg	< 1	-	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	-	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	-	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	-	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	-	-	-
2-Nitrophenol	1.0	mg/kg	< 1	-	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	-	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	-	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	-	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	-	-	-
Total cresols*	0.5	mg/kg	< 0.5	-	-	-
4-Nitrophenol	5	mg/kg	< 5	-	-	-
Dinoseb	20	mg/kg	< 20	-	-	-
Phenol	0.5	mg/kg	< 0.5	-	-	-
Phenol-d6 (surr.)	1	%	68	-	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	-	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	-	-	-
TRH >C16-C34	100	mg/kg	130	-	-	-
TRH >C34-C40	100	mg/kg	< 100	-	-	-
TRH >C10-C40 (total)*	100	mg/kg	130	-	-	-

Client Sample ID			TP12RA	TP12RB	TS	TB
Sample Matrix			Soil	Soil	Trip Spike (solid)	Trip Blank (solid)
Eurofins Sample No.			B23-Au0021002	B23-Au0021003	B23-Au0021005	B23-Au0021006
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	2.7	2.1	-	-
Cadmium	0.5	mg/kg	< 0.5	< 0.5	-	-
Chromium	5	mg/kg	37	37	-	-
Copper	5	mg/kg	18	17	-	-
Lead	5	mg/kg	13	16	-	-
Mercury	0.1	mg/kg	< 0.1	< 0.1	-	-
Nickel	5	mg/kg	41	26	-	-
Zinc	5	mg/kg	45	47	-	-
Sample Properties						
% Moisture	1	%	18	20	-	-

Client Sample ID			TP12RA	TP12RB	TS	TB
Sample Matrix			Soil	Soil	Trip Spike (solid)	Trip Blank (solid)
Eurofins Sample No.			B23-Au0021002	B23-Au0021003	B23-Au0021005	B23-Au0021006
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	-	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	-	-
TRH C15-C28	50	mg/kg	< 50	< 50	-	-
TRH C29-C36	50	mg/kg	< 50	< 50	-	-
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	-	-
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	-	< 0.3
4-Bromofluorobenzene (surr.)	1	%	92	86	-	100
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	-	-
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	-	-
TRH C6-C10	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	-	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	105	83	-	-
p-Terphenyl-d14 (surr.)	1	%	104	79	-	-
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	-	-
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	-	-
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	-	-
a-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Aldrin	0.05	mg/kg	< 0.05	< 0.05	-	-

Client Sample ID			TP12RA	TP12RB	TS	TB
Sample Matrix			Soil	Soil	Trip Spike (solid)	Trip Blank (solid)
Eurofins Sample No.			B23-Au0021002	B23-Au0021003	B23-Au0021005	B23-Au0021006
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
b-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
d-HCH	0.05	mg/kg	< 0.05	< 0.05	-	-
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	-	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	-	-
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	-	-
g-HCH (Lindane)	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	-	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	-	-
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	-	-
Toxaphene	0.5	mg/kg	< 0.5	< 0.5	-	-
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	-	-
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	150	112	-	-
Tetrachloro-m-xylene (surr.)	1	%	89	65	-	-
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Bolstar	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	-	-
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Coumaphos	2	mg/kg	< 2	< 2	-	-
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	-	-
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	-	-
Diazinon	0.2	mg/kg	< 0.2	< 0.2	-	-
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	-	-
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	-	-
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	-	-
EPN	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethion	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	-	-
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	-	-
Fenthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Malathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Merphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	-	-
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Monocrotophos	2	mg/kg	< 2	< 2	-	-
Naled	0.2	mg/kg	< 0.2	< 0.2	-	-
Omethoate	2	mg/kg	< 2	< 2	-	-

Client Sample ID			TP12RA	TP12RB	TS	TB
Sample Matrix			Soil	Soil	Trip Spike (solid)	Trip Blank (solid)
Eurofins Sample No.			B23-Au0021002	B23-Au0021003	B23-Au0021005	B23-Au0021006
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Phorate	0.2	mg/kg	< 0.2	< 0.2	-	-
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	-	-
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	-	-
Ronnel	0.2	mg/kg	< 0.2	< 0.2	-	-
Terbufos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	-	-
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	-	-
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	-	-
Triphenylphosphate (surr.)	1	%	148	116	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	-	-
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	-	-
Dibutylchlorendate (surr.)	1	%	150	112	-	-
Tetrachloro-m-xylene (surr.)	1	%	89	65	-	-
Phenols (Halogenated)						
2-Chlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4.5-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.4.6-Trichlorophenol	1	mg/kg	< 1	< 1	-	-
2.6-Dichlorophenol	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Chloro-3-methylphenol	1	mg/kg	< 1	< 1	-	-
Pentachlorophenol	1	mg/kg	< 1	< 1	-	-
Tetrachlorophenols - Total	10	mg/kg	< 10	< 10	-	-
Total Halogenated Phenol*	1	mg/kg	< 1	< 1	-	-
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	20	mg/kg	< 20	< 20	-	-
2-Methyl-4.6-dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Nitrophenol	1.0	mg/kg	< 1	< 1	-	-
2.4-Dimethylphenol	0.5	mg/kg	< 0.5	< 0.5	-	-
2.4-Dinitrophenol	5	mg/kg	< 5	< 5	-	-
2-Methylphenol (o-Cresol)	0.2	mg/kg	< 0.2	< 0.2	-	-
3&4-Methylphenol (m&p-Cresol)	0.4	mg/kg	< 0.4	< 0.4	-	-
Total cresols*	0.5	mg/kg	< 0.5	< 0.5	-	-
4-Nitrophenol	5	mg/kg	< 5	< 5	-	-
Dinoseb	20	mg/kg	< 20	< 20	-	-
Phenol	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenol-d6 (surr.)	1	%	120	95	-	-
Total Non-Halogenated Phenol*	20	mg/kg	< 20	< 20	-	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16	50	mg/kg	< 50	< 50	-	-
TRH >C16-C34	100	mg/kg	< 100	< 100	-	-
TRH >C34-C40	100	mg/kg	< 100	< 100	-	-
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	-	-

Client Sample ID			TP12RA	TP12RB	TS	TB
Sample Matrix			Soil	Soil	Trip Spike (solid)	Trip Blank (solid)
Eurofins Sample No.			B23-Au0021002	B23-Au0021003	B23-Au0021005	B23-Au0021006
Date Sampled			Aug 02, 2023	Aug 02, 2023	Aug 02, 2023	Aug 02, 2023
Test/Reference	LOR	Unit				
Naphthalene	1	%	-	-	120	-
TRH C6-C10	1	%	-	-	120	-
TRH C6-C9	1	%	-	-	120	-
Naphthalene[N02]	0.5	mg/kg	-	-	-	< 0.5
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	-	-	< 20
BTEX						
Benzene	1	%	-	-	130	-
Ethylbenzene	1	%	-	-	130	-
m&p-Xylenes	1	%	-	-	130	-
o-Xylene	1	%	-	-	130	-
Toluene	1	%	-	-	130	-
Xylenes - Total	1	%	-	-	130	-
4-Bromofluorobenzene (surr.)	1	%	-	-	74	-
Total Recoverable Hydrocarbons						
TRH C6-C10	20	mg/kg	-	-	-	< 20

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins Suite B7A			
Metals M8	Brisbane	Aug 11, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Aug 11, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Brisbane	Aug 10, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 11, 2023	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Melbourne	Aug 11, 2023	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
- Method: USEPA M 8270 (LTM-ORG-2130 PAH & Phenols in Soil & Water by GC-MS)			
Phenols (non-Halogenated)	Melbourne	Aug 11, 2023	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Aug 11, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
% Moisture	Brisbane	Aug 08, 2023	14 Days
- Method: LTM-GEN-7080 Moisture			
BTEX	Brisbane	Aug 10, 2023	14 Days
- Method: USEPA SW846 8260			
Naphthalene	Brisbane	Aug 10, 2023	14 Days
- Method: USEPA 8260B - MGT 350A Volatile Organics by GCMS			
Total Recoverable Hydrocarbons	Brisbane	Aug 10, 2023	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B15			
Organochlorine Pesticides	Melbourne	Aug 11, 2023	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Aug 11, 2023	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	Aug 11, 2023	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			

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Eurofins Environment Testing Australia Pty Ltd
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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West NSW 2304
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	Tel: +61 2 4968 8448
Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	NATA# 1261
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	

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IANZ# 1327	IANZ# 1290	IANZ# 1402

Company Name: Easterly Point Environmental Pty Ltd
Address: 1/64 Kingsley Street
Byron Bay
NSW 2481

Project Name: MOMENTUM JOHNSTON ST CASINO NSW
Project ID: 23034.2

Order No.:
Report #: 1014903
Phone: 02 6685 6681
Fax:

Received: Aug 8, 2023 11:45 AM
Due: Aug 15, 2023
Priority: 5 Day
Contact Name: Marc Salmon

Eurofins Analytical Services Manager : Alana Wadsworth

Sample Detail						Asbestos - WA guidelines	HOLD	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254									X		X		
Sydney Laboratory - NATA # 1261 Site # 18217						X							
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X		X	X	X	X
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	SS14A	Aug 02, 2023		Soil	B23-Au0020974			X		X			
2	SS15A	Aug 02, 2023		Soil	B23-Au0020975			X		X			
3	SS16A	Aug 02, 2023		Soil	B23-Au0020976			X		X			
4	SS16B	Aug 02, 2023		Soil	B23-Au0020977			X		X			
5	SS17A	Aug 02, 2023		Soil	B23-Au0020978	X			X	X	X		
6	SS18A	Aug 02, 2023		Soil	B23-Au0020979			X		X			
7	SS19A	Aug 02, 2023		Soil	B23-Au0020980			X		X			
8	SS20A	Aug 02, 2023		Soil	B23-Au0020981			X		X			
9	SS21A	Aug 02, 2023		Soil	B23-Au0020982			X		X			
10	SS22A	Aug 02, 2023		Soil	B23-Au0020983			X		X			
11	SS23A	Aug 02, 2023		Soil	B23-Au0020984	X			X	X	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	

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Melbourne Laboratory - NATA # 1261 Site # 1254									X		X		
Sydney Laboratory - NATA # 1261 Site # 18217						X							
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X		X	X	X	X
12	SS23B	Aug 02, 2023		Soil	B23-Au0020985	X			X	X	X		
13	SS24A	Aug 02, 2023		Soil	B23-Au0020986			X		X			
14	SS25A	Aug 02, 2023		Soil	B23-Au0020987			X		X			
15	SS26A	Aug 02, 2023		Soil	B23-Au0020988			X		X			
16	SS27A	Aug 02, 2023		Soil	B23-Au0020989			X		X			
17	SS28A	Aug 02, 2023		Soil	B23-Au0020990			X		X			
18	SS29A	Aug 02, 2023		Soil	B23-Au0020991			X		X			
19	SS30A	Aug 02, 2023		Soil	B23-Au0020992			X		X			
20	SS31A	Aug 02, 2023		Soil	B23-Au0020993			X		X			
21	SS32A	Aug 02, 2023		Soil	B23-Au0020994	X			X	X	X		
22	SS33A	Aug 02, 2023		Soil	B23-Au0020995	X			X	X	X		
23	SS34A	Aug 02, 2023		Soil	B23-Au0020996	X			X	X	X		
24	SS35A	Aug 02, 2023		Soil	B23-Au0020997			X		X			
25	SS36A	Aug 02, 2023		Soil	B23-Au0020998	X			X	X	X		

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Melbourne Laboratory - NATA # 1261 Site # 1254									X		X		
Sydney Laboratory - NATA # 1261 Site # 18217						X							
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X		X	X	X	X
26	SS37A	Aug 02, 2023		Soil	B23-Au0020999			X		X			
27	TP07RA	Aug 02, 2023		Soil	B23-Au0021000			X		X			
28	TP07RB	Aug 02, 2023		Soil	B23-Au0021001			X		X			
29	TP12RA	Aug 02, 2023		Soil	B23-Au0021002	X			X	X	X		
30	TP12RB	Aug 02, 2023		Soil	B23-Au0021003	X			X	X	X		
31	RB	Aug 02, 2023		Water	B23-Au0021004				X		X		
32	TS	Aug 02, 2023		Trip Spike (solid)	B23-Au0021005								X
33	TB	Aug 02, 2023		Trip Blank (solid)	B23-Au0021006							X	
34	SS17B	Aug 02, 2023		Soil	B23-Au0021007		X						
35	SS17C	Aug 02, 2023		Soil	B23-Au0021008		X						
Test Counts						9	2	21	10	30	10	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**µg/L:** micrograms per litre
ppm: parts per million	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit		

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR: RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.5			0.5	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
a-HCH	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-HCH	mg/kg	< 0.05			0.05	Pass	
d-HCH	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-HCH (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
2.4.5-Trichlorophenol	mg/kg	< 1			1	Pass	
2.4.6-Trichlorophenol	mg/kg	< 1			1	Pass	
2.6-Dichlorophenol	mg/kg	< 0.5			0.5	Pass	
4-Chloro-3-methylphenol	mg/kg	< 1			1	Pass	
Pentachlorophenol	mg/kg	< 1			1	Pass	
Tetrachlorophenols - Total	mg/kg	< 10			10	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/kg	< 20			20	Pass	
2-Methyl-4.6-dinitrophenol	mg/kg	< 5			5	Pass	
2-Nitrophenol	mg/kg	< 1			1.0	Pass	
2.4-Dimethylphenol	mg/kg	< 0.5			0.5	Pass	
2.4-Dinitrophenol	mg/kg	< 5			5	Pass	
2-Methylphenol (o-Cresol)	mg/kg	< 0.2			0.2	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/kg	< 0.4			0.4	Pass	
4-Nitrophenol	mg/kg	< 5			5	Pass	
Dinoseb	mg/kg	< 20			20	Pass	
Phenol	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	106			80-120	Pass	
Cadmium	%	106			80-120	Pass	
Chromium	%	109			80-120	Pass	
Copper	%	110			80-120	Pass	
Lead	%	110			80-120	Pass	
Mercury	%	100			80-120	Pass	
Nickel	%	93			80-120	Pass	
Zinc	%	91			80-120	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	120			70-130	Pass	
TRH C10-C14	%	72			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	105			70-130	Pass	
Toluene	%	109			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ethylbenzene	%	113			70-130	Pass	
m&p-Xylenes	%	104			70-130	Pass	
Xylenes - Total*	%	104			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH C6-C10	%	114			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	122			70-130	Pass	
Acenaphthylene	%	111			70-130	Pass	
Anthracene	%	86			70-130	Pass	
Benz(a)anthracene	%	94			70-130	Pass	
Benzo(a)pyrene	%	77			70-130	Pass	
Benzo(b&j)fluoranthene	%	106			70-130	Pass	
Benzo(g.h.i)perylene	%	88			70-130	Pass	
Benzo(k)fluoranthene	%	89			70-130	Pass	
Chrysene	%	99			70-130	Pass	
Dibenz(a.h)anthracene	%	77			70-130	Pass	
Fluoranthene	%	86			70-130	Pass	
Fluorene	%	93			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	84			70-130	Pass	
Naphthalene	%	102			70-130	Pass	
Phenanthrene	%	99			70-130	Pass	
Pyrene	%	92			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	112			70-130	Pass	
4.4'-DDD	%	103			70-130	Pass	
4.4'-DDE	%	96			70-130	Pass	
4.4'-DDT	%	79			70-130	Pass	
a-HCH	%	88			70-130	Pass	
Aldrin	%	92			70-130	Pass	
b-HCH	%	104			70-130	Pass	
d-HCH	%	90			70-130	Pass	
Dieldrin	%	76			70-130	Pass	
Endosulfan I	%	101			70-130	Pass	
Endosulfan II	%	104			70-130	Pass	
Endosulfan sulphate	%	89			70-130	Pass	
Endrin	%	81			70-130	Pass	
Endrin aldehyde	%	87			70-130	Pass	
Endrin ketone	%	91			70-130	Pass	
g-HCH (Lindane)	%	94			70-130	Pass	
Heptachlor	%	98			70-130	Pass	
Heptachlor epoxide	%	106			70-130	Pass	
Hexachlorobenzene	%	97			70-130	Pass	
Methoxychlor	%	100			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	112			70-130	Pass	
Dimethoate	%	79			70-130	Pass	
Ethion	%	80			70-130	Pass	
Fenitrothion	%	72			70-130	Pass	
Methyl parathion	%	71			70-130	Pass	
Mevinphos	%	118			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	94			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	105			25-140	Pass	
2.4-Dichlorophenol	%	81			25-140	Pass	
2.4.5-Trichlorophenol	%	57			25-140	Pass	
2.4.6-Trichlorophenol	%	90			25-140	Pass	
2.6-Dichlorophenol	%	75			25-140	Pass	
4-Chloro-3-methylphenol	%	88			25-140	Pass	
Pentachlorophenol	%	60			25-140	Pass	
Tetrachlorophenols - Total	%	69			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	36			25-140	Pass	
2-Methyl-4.6-dinitrophenol	%	32			25-140	Pass	
2-Nitrophenol	%	83			25-140	Pass	
2.4-Dimethylphenol	%	82			25-140	Pass	
2.4-Dinitrophenol	%	53			25-140	Pass	
2-Methylphenol (o-Cresol)	%	96			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	107			25-140	Pass	
4-Nitrophenol	%	52			25-140	Pass	
Dinoseb	%	42			25-140	Pass	
Phenol	%	126			25-140	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	73			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B23-Au0020974	CP	%	90			75-125	Pass	
Cadmium	B23-Au0020974	CP	%	97			75-125	Pass	
Chromium	B23-Au0020974	CP	%	119			75-125	Pass	
Copper	B23-Au0020974	CP	%	104			75-125	Pass	
Lead	B23-Au0020974	CP	%	98			75-125	Pass	
Mercury	B23-Au0020974	CP	%	98			75-125	Pass	
Nickel	B23-Au0020974	CP	%	96			75-125	Pass	
Zinc	B23-Au0020974	CP	%	106			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M23-Au0024700	NCP	%	101			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M23-Au0006183	NCP	%	87			70-130	Pass	
Acenaphthylene	M23-Au0006183	NCP	%	115			70-130	Pass	
Anthracene	M23-Au0006183	NCP	%	107			70-130	Pass	
Benz(a)anthracene	M23-Au0006183	NCP	%	73			70-130	Pass	
Benzo(a)pyrene	M23-Au0006183	NCP	%	105			70-130	Pass	
Benzo(b&j)fluoranthene	M23-Au0006183	NCP	%	84			70-130	Pass	
Benzo(g.h.i)perylene	M23-Au0006183	NCP	%	86			70-130	Pass	
Benzo(k)fluoranthene	M23-Au0006183	NCP	%	106			70-130	Pass	
Chrysene	M23-Au0006183	NCP	%	75			70-130	Pass	
Dibenz(a.h)anthracene	M23-Au0006183	NCP	%	88			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fluoranthene	M23-Au0006183	NCP	%	84			70-130	Pass	
Fluorene	M23-Au0006183	NCP	%	70			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M23-Au0006183	NCP	%	93			70-130	Pass	
Naphthalene	M23-Au0006183	NCP	%	73			70-130	Pass	
Phenanthrene	M23-Au0006183	NCP	%	76			70-130	Pass	
Pyrene	M23-Au0006183	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M23-Au0017093	NCP	%	76			70-130	Pass	
Dimethoate	M23-Au0017093	NCP	%	73			70-130	Pass	
Ethion	M23-Au0017093	NCP	%	89			70-130	Pass	
Fenitrothion	M23-Au0017093	NCP	%	89			70-130	Pass	
Methyl parathion	M23-Au0017093	NCP	%	71			70-130	Pass	
Mevinphos	M23-Au0017093	NCP	%	85			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	M23-Au0006183	NCP	%	73			30-130	Pass	
2.4-Dichlorophenol	M23-Au0006183	NCP	%	69			30-130	Pass	
2.4.5-Trichlorophenol	M23-Au0006183	NCP	%	60			30-130	Pass	
2.4.6-Trichlorophenol	M23-Au0006183	NCP	%	70			30-130	Pass	
2.6-Dichlorophenol	M23-Au0006183	NCP	%	66			30-130	Pass	
4-Chloro-3-methylphenol	M23-Au0006183	NCP	%	63			30-130	Pass	
Pentachlorophenol	M23-Au0006183	NCP	%	85			30-130	Pass	
Tetrachlorophenols - Total	M23-Au0006183	NCP	%	61			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	M23-Au0006183	NCP	%	90			30-130	Pass	
2-Methyl-4.6-dinitrophenol	M23-Au0006183	NCP	%	56			30-130	Pass	
2-Nitrophenol	M23-Au0006183	NCP	%	66			30-130	Pass	
2.4-Dimethylphenol	M23-Au0006183	NCP	%	75			30-130	Pass	
2.4-Dinitrophenol	M23-Au0006183	NCP	%	42			30-130	Pass	
2-Methylphenol (o-Cresol)	M23-Au0006183	NCP	%	65			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	M23-Au0006183	NCP	%	72			30-130	Pass	
4-Nitrophenol	M23-Au0006183	NCP	%	61			30-130	Pass	
Dinoseb	M23-Au0006183	NCP	%	83			30-130	Pass	
Phenol	M23-Au0006183	NCP	%	79			30-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M23-Au0024700	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	M23-Au0030926	NCP	%	84			70-130	Pass	
Aroclor-1260	M23-Au0030926	NCP	%	103			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	B23-Au0020994	CP	%	95			70-130	Pass	
4.4'-DDD	B23-Au0020994	CP	%	105			70-130	Pass	
4.4'-DDE	B23-Au0020994	CP	%	100			70-130	Pass	
4.4'-DDT	B23-Au0020994	CP	%	90			70-130	Pass	
a-HCH	B23-Au0020994	CP	%	84			70-130	Pass	
Aldrin	B23-Au0020994	CP	%	90			70-130	Pass	
b-HCH	B23-Au0020994	CP	%	97			70-130	Pass	
d-HCH	B23-Au0020994	CP	%	97			70-130	Pass	
Dieldrin	B23-Au0020994	CP	%	108			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan I	B23-Au0020994	CP	%	101			70-130	Pass	
Endosulfan II	B23-Au0020994	CP	%	99			70-130	Pass	
Endosulfan sulphate	B23-Au0020994	CP	%	110			70-130	Pass	
Endrin	B23-Au0020994	CP	%	90			70-130	Pass	
Endrin aldehyde	B23-Au0020994	CP	%	105			70-130	Pass	
Endrin ketone	B23-Au0020994	CP	%	111			70-130	Pass	
g-HCH (Lindane)	B23-Au0020994	CP	%	83			70-130	Pass	
Heptachlor	B23-Au0020994	CP	%	117			70-130	Pass	
Heptachlor epoxide	B23-Au0020994	CP	%	112			70-130	Pass	
Hexachlorobenzene	B23-Au0020994	CP	%	88			70-130	Pass	
Methoxychlor	B23-Au0020994	CP	%	77			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B23-Au0020995	CP	%	86			75-125	Pass	
Cadmium	B23-Au0020995	CP	%	95			75-125	Pass	
Chromium	B23-Au0020995	CP	%	81			75-125	Pass	
Copper	B23-Au0020995	CP	%	79			75-125	Pass	
Lead	B23-Au0020995	CP	%	84			75-125	Pass	
Mercury	B23-Au0020995	CP	%	80			75-125	Pass	
Nickel	B23-Au0020995	CP	%	77			75-125	Pass	
Zinc	B23-Au0020995	CP	%	86			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Cadmium	B23-Au0021001	CP	%	75			75-125	Pass	
Chromium	B23-Au0021001	CP	%	81			75-125	Pass	
Lead	B23-Au0021001	CP	%	76			75-125	Pass	
Mercury	B23-Au0021001	CP	%	79			75-125	Pass	
Nickel	B23-Au0021001	CP	%	79			75-125	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B23-Au0021003	CP	%	98			75-125	Pass	
Cadmium	B23-Au0021003	CP	%	111			75-125	Pass	
Chromium	B23-Au0021003	CP	%	116			75-125	Pass	
Copper	B23-Au0021003	CP	%	112			75-125	Pass	
Lead	B23-Au0021003	CP	%	108			75-125	Pass	
Mercury	B23-Au0021003	CP	%	118			75-125	Pass	
Nickel	B23-Au0021003	CP	%	94			75-125	Pass	
Zinc	B23-Au0021003	CP	%	109			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	B23-Au0021003	CP	%	101			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	B23-Au0021003	CP	%	93			70-130	Pass	
Toluene	B23-Au0021003	CP	%	95			70-130	Pass	
Ethylbenzene	B23-Au0021003	CP	%	98			70-130	Pass	
m&p-Xylenes	B23-Au0021003	CP	%	92			70-130	Pass	
o-Xylene	B23-Au0021003	CP	%	90			70-130	Pass	
Xylenes - Total*	B23-Au0021003	CP	%	91			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	B23-Au0021003	CP	%	96			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	B23-Au0020975	CP	mg/kg	2.4	2.5	3.4	30%	Pass	
Copper	B23-Au0020975	CP	mg/kg	16	21	25	30%	Pass	
Lead	B23-Au0020975	CP	mg/kg	10	9.8	6.5	30%	Pass	
Mercury	B23-Au0020975	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	B23-Au0020975	CP	mg/kg	14	18	19	30%	Pass	
Zinc	B23-Au0020975	CP	mg/kg	69	66	5.3	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	B23-Au0020978	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	B23-Au0020978	CP	mg/kg	54	66	19	30%	Pass	
TRH C29-C36	B23-Au0020978	CP	mg/kg	110	130	24	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	B23-Au0020978	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	B23-Au0020978	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	B23-Au0020978	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	B23-Au0020978	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	B23-Au0020978	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	B23-Au0020978	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	B23-Au0020978	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	B23-Au0020978	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	B23-Au0020978	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	B23-Au0020978	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	B23-Au0020978	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	B23-Au0020978	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	B23-Au0020978	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	B23-Au0020978	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	B23-Au0020978	CP	mg/kg	< 1	< 1	<1	30%	Pass	
4-Chloro-3-methylphenol	B23-Au0020978	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	B23-Au0020978	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	B23-Au0020978	CP	mg/kg	< 10	< 10	<1	30%	Pass	

Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	B23-Au0020978	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	B23-Au0020978	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	B23-Au0020978	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	B23-Au0020978	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	B23-Au0020978	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	B23-Au0020978	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	B23-Au0020978	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	B23-Au0020978	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	B23-Au0020978	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	B23-Au0020978	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	B23-Au0020978	CP	mg/kg	160	190	20	30%	Pass	
TRH >C34-C40	B23-Au0020978	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	B23-Au0020982	CP	%	14	14	3.3	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	B23-Au0020984	CP	%	20	21	2.9	30%	Pass	
Duplicate									
Sample Properties				Result 1	Result 2	RPD			
% Moisture	B23-Au0020994	CP	%	24	23	2.4	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	B23-Au0020995	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	B23-Au0020995	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	B23-Au0020995	CP	mg/kg	100	110	9.6	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	B23-Au0020995	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	B23-Au0020995	CP	mg/kg	100	110	8.0	30%	Pass	
TRH >C34-C40	B23-Au0020995	CP	mg/kg	100	120	14	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	B23-Au0020996	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	B23-Au0020996	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	B23-Au0020996	CP	mg/kg	1.0	1.0	8.4	30%	Pass	
Fluorene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	

Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Phenanthrene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	B23-Au0020996	CP	mg/kg	0.9	0.9	5.3	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	B23-Au0020996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-HCH	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-HCH	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-HCH	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-HCH (Lindane)	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	B23-Au0020996	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	B23-Au0020996	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	B23-Au0020996	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	B23-Au0020996	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Pirimiphos-methyl	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	B23-Au0020996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1221	B23-Au0020996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	B23-Au0020996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1242	B23-Au0020996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1248	B23-Au0020996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1254	B23-Au0020996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1260	B23-Au0020996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Total PCB*	B23-Au0020996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dichlorophenol	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4.5-Trichlorophenol	B23-Au0020996	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4.6-Trichlorophenol	B23-Au0020996	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.6-Dichlorophenol	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
4-Chloro-3-methylphenol	B23-Au0020996	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Pentachlorophenol	B23-Au0020996	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Tetrachlorophenols - Total	B23-Au0020996	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	B23-Au0020996	CP	mg/kg	< 20	< 20	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	B23-Au0020996	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Nitrophenol	B23-Au0020996	CP	mg/kg	< 1	< 1	<1	30%	Pass	
2.4-Dimethylphenol	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
2.4-Dinitrophenol	B23-Au0020996	CP	mg/kg	< 5	< 5	<1	30%	Pass	
2-Methylphenol (o-Cresol)	B23-Au0020996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	B23-Au0020996	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
4-Nitrophenol	B23-Au0020996	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Dinoseb	B23-Au0020996	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Phenol	B23-Au0020996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	B23-Au0020996	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	B23-Au0020996	CP	mg/kg	110	150	28	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	B23-Au0020998	CP	mg/kg	2.0	2.5	23	30%	Pass	
Cadmium	B23-Au0020998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chromium	B23-Au0020998	CP	mg/kg	15	17	16	30%	Pass	
Copper	B23-Au0020998	CP	mg/kg	7.8	8.8	12	30%	Pass	
Lead	B23-Au0020998	CP	mg/kg	13	15	8.8	30%	Pass	
Nickel	B23-Au0020998	CP	mg/kg	8.1	9.0	12	30%	Pass	
Zinc	B23-Au0020998	CP	mg/kg	44	50	12	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	B23-Au0020998	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	B23-Au0020998	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	B23-Au0020998	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	B23-Au0020998	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	B23-Au0020998	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	B23-Au0020998	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	B23-Au0020998	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	B23-Au0020998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	B23-Au0020998	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised by:

Alana Wadsworth	Analytical Services Manager
Chamath JHM Annakkage	Senior Analyst-Asbestos
Joseph Edouard	Senior Analyst-Organic
Jonathon Angell	Senior Analyst-Organic
Edward Lee	Senior Analyst-Organic
Angelique Lang-Frey	Senior Analyst-Metal
Jonathon Angell	Senior Analyst-Volatile
Jonathon Angell	Senior Analyst-Sample Properties
Jonathon Angell	Senior Analyst-Metal

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Easterly Point Environmental Pty Ltd
1/64 Kingsley Street
Byron Bay
NSW 2481

Attention:	Marc Salmon
Report	1014903-AID
Project Name	MOMENTUM JOHNSTON ST CASINO NSW
Project ID	23034.2
Received Date	Aug 08, 2023
Date Reported	Aug 21, 2023

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name MOMENTUM JOHNSTON ST CASINO NSW
Project ID 23034.2
Date Sampled Aug 02, 2023
Report 1014903-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
SS17A	23-Au0020978	Aug 02, 2023	Approximate Sample 100g Sample consisted of: Brown fine-grained clayey sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS23A	23-Au0020984	Aug 02, 2023	Approximate Sample 171g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS23B	23-Au0020985	Aug 02, 2023	Approximate Sample 149g Sample consisted of: Brown fine-grained clayey sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS32A	23-Au0020994	Aug 02, 2023	Approximate Sample 145g Sample consisted of: Brown fine-grained clayey sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS33A	23-Au0020995	Aug 02, 2023	Approximate Sample 179g Sample consisted of: Brown fine-grained clayey sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS34A	23-Au0020996	Aug 02, 2023	Approximate Sample 221g Sample consisted of: Brown fine-grained clayey sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SS36A	23-Au0020998	Aug 02, 2023	Approximate Sample 202g Sample consisted of: Brown fine-grained clayey sandy soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP12RA	23-Au0021002	Aug 02, 2023	Approximate Sample 157g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP12RB	23-Au0021003	Aug 02, 2023	Approximate Sample 145g Sample consisted of: Brown fine-grained clayey sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Aug 15, 2023	Indefinite

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Eurofins Environment Testing Australia Pty Ltd
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Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
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Dandenong South	Grovedale	Girraween	Mitchell	Murarrie	Mayfield West NSW 2304
VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	Tel: +61 2 4968 8448
Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	NATA# 1261
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	

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IANZ# 1327	IANZ# 1290	IANZ# 1402

Company Name: Easterly Point Environmental Pty Ltd
Address: 1/64 Kingsley Street
Byron Bay
NSW 2481

Order No.:
Report #: 1014903
Phone: 02 6685 6681
Fax:

Received: Aug 8, 2023 11:45 AM
Due: Aug 15, 2023
Priority: 5 Day
Contact Name: Marc Salmon

Project Name: MOMENTUM JOHNSTON ST CASINO NSW
Project ID: 23034.2

Eurofins Analytical Services Manager : Alana Wadsworth

Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254									X		X		
Sydney Laboratory - NATA # 1261 Site # 18217						X							
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X		X	X	X	X
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	SS14A	Aug 02, 2023		Soil	B23-Au0020974			X		X			
2	SS15A	Aug 02, 2023		Soil	B23-Au0020975			X		X			
3	SS16A	Aug 02, 2023		Soil	B23-Au0020976			X		X			
4	SS16B	Aug 02, 2023		Soil	B23-Au0020977			X		X			
5	SS17A	Aug 02, 2023		Soil	B23-Au0020978	X			X	X	X		
6	SS18A	Aug 02, 2023		Soil	B23-Au0020979			X		X			
7	SS19A	Aug 02, 2023		Soil	B23-Au0020980			X		X			
8	SS20A	Aug 02, 2023		Soil	B23-Au0020981			X		X			
9	SS21A	Aug 02, 2023		Soil	B23-Au0020982			X		X			
10	SS22A	Aug 02, 2023		Soil	B23-Au0020983			X		X			
11	SS23A	Aug 02, 2023		Soil	B23-Au0020984	X			X	X	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
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Address: 1/64 Kingsley Street
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NSW 2481

Project Name: MOMENTUM JOHNSTON ST CASINO NSW
Project ID: 23034.2

Order No.:
Report #: 1014903
Phone: 02 6685 6681
Fax:

Received: Aug 8, 2023 11:45 AM
Due: Aug 15, 2023
Priority: 5 Day
Contact Name: Marc Salmon

Eurofins Analytical Services Manager : Alana Wadsworth

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Melbourne Laboratory - NATA # 1261 Site # 1254									X		X		
Sydney Laboratory - NATA # 1261 Site # 18217						X							
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X		X	X	X	X
12	SS23B	Aug 02, 2023		Soil	B23-Au0020985	X			X	X	X		
13	SS24A	Aug 02, 2023		Soil	B23-Au0020986			X		X			
14	SS25A	Aug 02, 2023		Soil	B23-Au0020987			X		X			
15	SS26A	Aug 02, 2023		Soil	B23-Au0020988			X		X			
16	SS27A	Aug 02, 2023		Soil	B23-Au0020989			X		X			
17	SS28A	Aug 02, 2023		Soil	B23-Au0020990			X		X			
18	SS29A	Aug 02, 2023		Soil	B23-Au0020991			X		X			
19	SS30A	Aug 02, 2023		Soil	B23-Au0020992			X		X			
20	SS31A	Aug 02, 2023		Soil	B23-Au0020993			X		X			
21	SS32A	Aug 02, 2023		Soil	B23-Au0020994	X			X	X	X		
22	SS33A	Aug 02, 2023		Soil	B23-Au0020995	X			X	X	X		
23	SS34A	Aug 02, 2023		Soil	B23-Au0020996	X			X	X	X		
24	SS35A	Aug 02, 2023		Soil	B23-Au0020997			X		X			
25	SS36A	Aug 02, 2023		Soil	B23-Au0020998	X			X	X	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
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Sample Detail						Asbestos - AS4964	HOLD	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254									X		X		
Sydney Laboratory - NATA # 1261 Site # 18217						X							
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X		X	X	X	X
26	SS37A	Aug 02, 2023		Soil	B23-Au0020999			X		X			
27	TP07RA	Aug 02, 2023		Soil	B23-Au0021000			X		X			
28	TP07RB	Aug 02, 2023		Soil	B23-Au0021001			X		X			
29	TP12RA	Aug 02, 2023		Soil	B23-Au0021002	X			X	X	X		
30	TP12RB	Aug 02, 2023		Soil	B23-Au0021003	X			X	X	X		
31	RB	Aug 02, 2023		Water	B23-Au0021004				X		X		
32	TS	Aug 02, 2023		Trip Spike (solid)	B23-Au0021005								X
33	TB	Aug 02, 2023		Trip Blank (solid)	B23-Au0021006							X	
34	SS17B	Aug 02, 2023		Soil	B23-Au0021007		X						
35	SS17C	Aug 02, 2023		Soil	B23-Au0021008		X						
Test Counts						9	2	21	10	30	10	1	1

Internal Quality Control Review and Glossary General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with the colour **blue** indicates data provided by customer that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to the most recent version of the 'Sample Preservation and Container Guide' for holding times (QS3001).
If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w:	Percentage weight-for-weight basis, e.g. of asbestos in asbestos-containing finds in soil samples (**% w/w**)
F/fld	Airborne fibre filter loading as Fibres (**N**) per Fields counted (**n**)
F/mL	Airborne fibre reported concentration as Fibres per millilitre of air drawn over the sampler membrane (**C**)
g, kg	Mass, e.g. of whole sample (**M**) or asbestos-containing find within the sample (**m**)
g/kg	Concentration in grams per kilogram
L, mL	Volume, e.g. of air as measured in AFM (**V** = **r** x **t**)
L/min	Airborne fibre sampling Flowrate as litres per minute of air drawn over the sampler membrane (**r**)
min	Time (**t**), e.g. of air sample collection period

Calculations

Airborne Fibre Concentration: $C = \left(\frac{A}{a}\right) \times \left(\frac{N}{n}\right) \times \left(\frac{1}{r}\right) \times \left(\frac{1}{t}\right) = K \times \left(\frac{N}{n}\right) \times \left(\frac{1}{V}\right)$

Asbestos Content (as asbestos): $\%\, w/w = \frac{(m \times P_A)}{M}$

Weighted Average (of asbestos): $\%_{WA} = \sum \frac{(m \times P_A)_x}{x}$

Terms

%asbestos	Estimated percentage of asbestos in a given matrix. May be derived from knowledge or experience of the material, informed by HSG264 *Appendix 2*, else assumed to be 15% in accordance with WA DOH *Appendix 2* (**P_A**).
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded (non-friable) condition. For the purposes of the NEPM and WA DOH, ACM corresponds to material larger than 7 mm x 7 mm.
AF	Asbestos Fines. Asbestos contamination within a soil sample, as defined by WA DOH. Includes loose fibre bundles and small pieces of friable and non-friable material such as asbestos cement fragments mixed with soil. Considered under the NEPM as equivalent to “non-bonded / friable”.
AFM	Airborne Fibre Monitoring, e.g. by the MFM.
Amosite	Amosite Asbestos Detected. Amosite may also refer to Fibrous Grunerite or Brown Asbestos. Identified in accordance with AS 4964-2004.
AS	Australian Standard.
Asbestos Content (as asbestos)	Total % w/w asbestos content in asbestos-containing finds in a soil sample (**% w/w)**.
Chrysotile	Chrysotile Asbestos Detected. Chrysotile may also refer to Fibrous Serpentine or White Asbestos. Identified in accordance with AS 4964-2004.
COC	Chain of Custody.
Crocidolite	Crocidolite Asbestos Detected. Crocidolite may also refer to Fibrous Riebeckite or Blue Asbestos. Identified in accordance with AS 4964-2004.
Dry	Sample is dried by heating prior to analysis.
DS	Dispersion Staining. Technique required for Unequivocal Identification of asbestos fibres by PLM.
FA	Fibrous Asbestos. Asbestos containing material that is wholly or in part friable, including materials with higher asbestos content with a propensity to become friable with handling, and any material that was previously non-friable and in a severely degraded condition. For the purposes of the NEPM and WA DOH, FA generally corresponds to material larger than 7 mm x 7 mm, although FA may be more difficult to visibly distinguish and may be assessed as AF.
Fibre Count	Total of all fibres (whether asbestos or not) meeting the counting criteria set out in the NOHSC:3003
Fibre ID	Fibre Identification. Unequivocal identification of asbestos fibres according to AS 4964-2004. Includes Chrysotile, Amosite (Grunerite) or Crocidolite asbestos.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
HSG248	UK HSE HSG248, *Asbestos: The Analysts Guide*, 2nd Edition (2021).
HSG264	UK HSE HSG264, *Asbestos: The Survey Guide* (2012).
ISO (also ISO/IEC)	International Organization for Standardization / International Electrotechnical Commission.
K Factor	Microscope constant (**K**) as derived from the effective filter area of the given AFM membrane used for collecting the sample (**A**) and the projected eyepiece graticule area of the specific microscope used for the analysis (**a**).
LOR	Limit of Reporting.
MFM (also NOHSC:3003)	Membrane Filter Method. As described by the Australian Government National Occupational Health and Safety Commission, *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres*, 2nd Edition [NOHSC:3003(2005)].
NEPM (also ASC NEPM)	National Environment Protection (Assessment of Site Contamination) Measure, (2013, as amended).
Organic	Organic Fibres Detected. Organic may refer to Natural or Man-Made Polymeric Fibres. Identified in accordance with AS 4964-2004.
PCM	Phase Contrast Microscopy. As used for Fibre Counting according to the MFM.
PLM	Polarised Light Microscopy. As used for Fibre Identification and Trace Analysis according to AS 4964-2004.
Sampling	Unless otherwise stated Eurofins are not responsible for sampling equipment or the sampling process.
SMF	Synthetic Mineral Fibre Detected. SMF may also refer to Man Made Vitreous Fibres. Identified in accordance with AS 4964-2004.
SRA	Sample Receipt Advice.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres (particularly asbestos) in a given sample matrix.
UK HSE HSG	United Kingdom, Health and Safety Executive, Health and Safety Guidance, publication.
UMF	Unidentified Mineral Fibre Detected. Fibrous minerals that are detected but have not been unequivocally identified by PLM with DS according the AS 4964-2004. May include (but not limited to) Actinolite, Anthophyllite or Tremolite asbestos.
WA DOH	Reference document for the NEPM. Government of Western Australia, *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* (updated 2021), including Appendix Four: *Laboratory analysis*
Weighted Average	Combined average % w/w asbestos content of all asbestos-containing finds in the given aliquot or total soil sample (**$\%_{WA}$**).

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Asbestos Counter/Identifier:

Sayeed Abu	Senior Analyst-Asbestos

Authorised by:

Chamath JHM Annakkage	Senior Analyst-Asbestos

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Easterly Point Environmental Pty Ltd
1/64 Kingsley Street
Byron Bay
NSW 2481

Attention: **Marc Salmon**

Report **1014903-W**
Project name MOMENTUM JOHNSTON ST CASINO NSW
Project ID 23034.2
Received Date Aug 08, 2023

Client Sample ID			**RB**
Sample Matrix			**Water**
Eurofins Sample No.			**B23-Au0021004**
Date Sampled			**Aug 02, 2023**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	83
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02
Polycyclic Aromatic Hydrocarbons			
Acenaphthene	0.001	mg/L	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001
Anthracene	0.001	mg/L	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001
Chrysene	0.001	mg/L	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001
Fluoranthene	0.001	mg/L	< 0.001
Fluorene	0.001	mg/L	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001
Naphthalene	0.001	mg/L	< 0.001
Phenanthrene	0.001	mg/L	< 0.001
Pyrene	0.001	mg/L	< 0.001

Client Sample ID			RB
Sample Matrix			Water
Eurofins Sample No.			B23-Au0021004
Date Sampled			Aug 02, 2023
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Total PAH*	0.001	mg/L	< 0.001
2-Fluorobiphenyl (surr.)	1	%	64
p-Terphenyl-d14 (surr.)	1	%	66
Organochlorine Pesticides			
Chlordanes - Total	0.002	mg/L	< 0.002
4.4'-DDD	0.0002	mg/L	< 0.0002
4.4'-DDE	0.0002	mg/L	< 0.0002
4.4'-DDT	0.0002	mg/L	< 0.0002
a-HCH	0.0002	mg/L	< 0.0002
Aldrin	0.0002	mg/L	< 0.0002
b-HCH	0.0002	mg/L	< 0.0002
d-HCH	0.0002	mg/L	< 0.0002
Dieldrin	0.0002	mg/L	< 0.0002
Endosulfan I	0.0002	mg/L	< 0.0002
Endosulfan II	0.0002	mg/L	< 0.0002
Endosulfan sulphate	0.0002	mg/L	< 0.0002
Endrin	0.0002	mg/L	< 0.0002
Endrin aldehyde	0.0002	mg/L	< 0.0002
Endrin ketone	0.0002	mg/L	< 0.0002
g-HCH (Lindane)	0.0002	mg/L	< 0.0002
Heptachlor	0.0002	mg/L	< 0.0002
Heptachlor epoxide	0.0002	mg/L	< 0.0002
Hexachlorobenzene	0.0002	mg/L	< 0.0002
Methoxychlor	0.0002	mg/L	< 0.0002
Toxaphene	0.005	mg/L	< 0.005
Aldrin and Dieldrin (Total)*	0.0002	mg/L	< 0.0002
DDT + DDE + DDD (Total)*	0.0002	mg/L	< 0.0002
Vic EPA IWRG 621 OCP (Total)*	0.002	mg/L	< 0.002
Vic EPA IWRG 621 Other OCP (Total)*	0.002	mg/L	< 0.002
Dibutylchlorendate (surr.)	1	%	56
Tetrachloro-m-xylene (surr.)	1	%	65
Organophosphorus Pesticides			
Azinphos-methyl	0.002	mg/L	< 0.002
Bolstar	0.002	mg/L	< 0.002
Chlorfenvinphos	0.02	mg/L	< 0.02
Chlorpyrifos	0.002	mg/L	< 0.002
Chlorpyrifos-methyl	0.002	mg/L	< 0.002
Coumaphos	0.02	mg/L	< 0.02
Demeton-S	0.002	mg/L	< 0.002
Demeton-O	0.002	mg/L	< 0.002
Diazinon	0.002	mg/L	< 0.002
Dichlorvos	0.002	mg/L	< 0.002
Dimethoate	0.002	mg/L	< 0.002
Disulfoton	0.002	mg/L	< 0.002
EPN	0.002	mg/L	< 0.002
Ethion	0.002	mg/L	< 0.002
Ethoprop	0.002	mg/L	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002
Fenitrothion	0.002	mg/L	< 0.002

Client Sample ID			RB
Sample Matrix			Water
Eurofins Sample No.			B23-Au0021004
Date Sampled			Aug 02, 2023
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Fensulfothion	0.002	mg/L	< 0.002
Fenthion	0.002	mg/L	< 0.002
Malathion	0.002	mg/L	< 0.002
Merphos	0.002	mg/L	< 0.002
Methyl parathion	0.002	mg/L	< 0.002
Mevinphos	0.002	mg/L	< 0.002
Monocrotophos	0.002	mg/L	< 0.002
Naled	0.002	mg/L	< 0.002
Omethoate	0.02	mg/L	< 0.02
Phorate	0.002	mg/L	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02
Pyrazophos	0.002	mg/L	< 0.002
Ronnel	0.002	mg/L	< 0.002
Terbufos	0.002	mg/L	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002
Tokuthion	0.002	mg/L	< 0.002
Trichloronate	0.002	mg/L	< 0.002
Triphenylphosphate (surr.)	1	%	76
Polychlorinated Biphenyls			
Aroclor-1016	0.005	mg/L	< 0.005
Aroclor-1221	0.005	mg/L	< 0.005
Aroclor-1232	0.005	mg/L	< 0.005
Aroclor-1242	0.005	mg/L	< 0.005
Aroclor-1248	0.005	mg/L	< 0.005
Aroclor-1254	0.005	mg/L	< 0.005
Aroclor-1260	0.005	mg/L	< 0.005
Total PCB*	0.005	mg/L	< 0.005
Dibutylchlorendate (surr.)	1	%	56
Tetrachloro-m-xylene (surr.)	1	%	65
Phenols (Halogenated)			
2-Chlorophenol	0.003	mg/L	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01
Phenols (non-Halogenated)			
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03
2-Nitrophenol	0.01	mg/L	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006
Total cresols*	0.01	mg/L	< 0.01
4-Nitrophenol	0.03	mg/L	< 0.03

Client Sample ID			RB
Sample Matrix			Water
Eurofins Sample No.			B23-Au0021004
Date Sampled			Aug 02, 2023
Test/Reference	LOR	Unit	
Phenols (non-Halogenated)			
Dinoseb	0.1	mg/L	< 0.1
Phenol	0.003	mg/L	< 0.003
Phenol-d6 (surr.)	1	%	57
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	0.005	mg/L	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction is reported.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Brisbane	Aug 11, 2023	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Brisbane	Aug 11, 2023	14 Days
- Method: USEPA SW846 8260			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Brisbane	Aug 11, 2023	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins Suite B7A			
Polycyclic Aromatic Hydrocarbons	Melbourne	Aug 10, 2023	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Melbourne	Aug 10, 2023	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Aug 10, 2023	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Aug 10, 2023	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Brisbane	Aug 08, 2023	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins Suite B15			
Organochlorine Pesticides	Melbourne	Aug 10, 2023	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Aug 10, 2023	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8270)			
Polychlorinated Biphenyls	Melbourne	Aug 10, 2023	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			

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Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	NATA# 1261
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	

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IANZ# 1327	IANZ# 1290	IANZ# 1402

Company Name: Easterly Point Environmental Pty Ltd
Address: 1/64 Kingsley Street
Byron Bay
NSW 2481

Order No.:
Report #: 1014903
Phone: 02 6685 6681
Fax:

Received: Aug 8, 2023 11:45 AM
Due: Aug 15, 2023
Priority: 5 Day
Contact Name: Marc Salmon

Project Name: MOMENTUM JOHNSTON ST CASINO NSW
Project ID: 23034.2

Eurofins Analytical Services Manager : Alana Wadsworth

Sample Detail						Asbestos - WA guidelines	HOLD	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254									X		X		
Sydney Laboratory - NATA # 1261 Site # 18217						X							
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X		X	X	X	X
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	SS14A	Aug 02, 2023		Soil	B23-Au0020974			X		X			
2	SS15A	Aug 02, 2023		Soil	B23-Au0020975			X		X			
3	SS16A	Aug 02, 2023		Soil	B23-Au0020976			X		X			
4	SS16B	Aug 02, 2023		Soil	B23-Au0020977			X		X			
5	SS17A	Aug 02, 2023		Soil	B23-Au0020978	X			X	X	X		
6	SS18A	Aug 02, 2023		Soil	B23-Au0020979			X		X			
7	SS19A	Aug 02, 2023		Soil	B23-Au0020980			X		X			
8	SS20A	Aug 02, 2023		Soil	B23-Au0020981			X		X			
9	SS21A	Aug 02, 2023		Soil	B23-Au0020982			X		X			
10	SS22A	Aug 02, 2023		Soil	B23-Au0020983			X		X			
11	SS23A	Aug 02, 2023		Soil	B23-Au0020984	X			X	X	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	

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Byron Bay
NSW 2481

Project Name: MOMENTUM JOHNSTON ST CASINO NSW
Project ID: 23034.2

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Phone: 02 6685 6681
Fax:

Received: Aug 8, 2023 11:45 AM
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Priority: 5 Day
Contact Name: Marc Salmon

Eurofins Analytical Services Manager : Alana Wadsworth

Sample Detail						Asbestos - WA guidelines	HOLD	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254									X		X		
Sydney Laboratory - NATA # 1261 Site # 18217						X							
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X		X	X	X	X
12	SS23B	Aug 02, 2023		Soil	B23-Au0020985	X			X	X	X		
13	SS24A	Aug 02, 2023		Soil	B23-Au0020986			X		X			
14	SS25A	Aug 02, 2023		Soil	B23-Au0020987			X		X			
15	SS26A	Aug 02, 2023		Soil	B23-Au0020988			X		X			
16	SS27A	Aug 02, 2023		Soil	B23-Au0020989			X		X			
17	SS28A	Aug 02, 2023		Soil	B23-Au0020990			X		X			
18	SS29A	Aug 02, 2023		Soil	B23-Au0020991			X		X			
19	SS30A	Aug 02, 2023		Soil	B23-Au0020992			X		X			
20	SS31A	Aug 02, 2023		Soil	B23-Au0020993			X		X			
21	SS32A	Aug 02, 2023		Soil	B23-Au0020994	X			X	X	X		
22	SS33A	Aug 02, 2023		Soil	B23-Au0020995	X			X	X	X		
23	SS34A	Aug 02, 2023		Soil	B23-Au0020996	X			X	X	X		
24	SS35A	Aug 02, 2023		Soil	B23-Au0020997			X		X			
25	SS36A	Aug 02, 2023		Soil	B23-Au0020998	X			X	X	X		

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NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
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Sample Detail						Asbestos - WA guidelines	HOLD	Metals M8	Eurofins Suite B15	Moisture Set	Eurofins Suite B7A	BTEXN and Volatile TRH	BTEXN and Volatile TRH
Melbourne Laboratory - NATA # 1261 Site # 1254									X		X		
Sydney Laboratory - NATA # 1261 Site # 18217						X							
Brisbane Laboratory - NATA # 1261 Site # 20794							X	X		X	X	X	X
26	SS37A	Aug 02, 2023		Soil	B23-Au0020999			X		X			
27	TP07RA	Aug 02, 2023		Soil	B23-Au0021000			X		X			
28	TP07RB	Aug 02, 2023		Soil	B23-Au0021001			X		X			
29	TP12RA	Aug 02, 2023		Soil	B23-Au0021002	X			X	X	X		
30	TP12RB	Aug 02, 2023		Soil	B23-Au0021003	X			X	X	X		
31	RB	Aug 02, 2023		Water	B23-Au0021004				X		X		
32	TS	Aug 02, 2023		Trip Spike (solid)	B23-Au0021005								X
33	TB	Aug 02, 2023		Trip Blank (solid)	B23-Au0021006							X	
34	SS17B	Aug 02, 2023		Soil	B23-Au0021007		X						
35	SS17C	Aug 02, 2023		Soil	B23-Au0021008		X						
Test Counts						9	2	21	10	30	10	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

Units

mg/kg: milligrams per kilogram	**mg/L:** milligrams per litre	**µg/L:** micrograms per litre
ppm: parts per million	**ppb:** parts per billion	**%:** Percentage
org/100 mL: Organisms per 100 millilitres	**NTU:** Nephelometric Turbidity Units	**MPN/100 mL:** Most Probable Number of organisms per 100 millilitres
CFU: Colony forming unit		

Terms

APHA	American Public Health Association
COC	Chain of Custody
CP	Client Parent - QC was performed on samples pertaining to this report
CRM	Certified Reference Material (ISO17034) - reported as percent recovery.
Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
LOR	Limit of Reporting.
LCS	Laboratory Control Sample - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
SRA	Sample Receipt Advice
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
TBTO	Tributyltin oxide (*bis*-tributyltin oxide) - individual tributyltin compounds cannot be identified separately in the environment however free tributyltin was measured and its values were converted stoichiometrically into tributyltin oxide for comparison with regulatory limits.
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	Toxic Equivalency Quotient or Total Equivalence
QSM	US Department of Defense Quality Systems Manual Version 5.4
US EPA	United States Environmental Protection Agency
WA DWER	Sum of PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC - Acceptance Criteria

The acceptance criteria should be used as a guide only and may be different when site specific Sampling Analysis and Quality Plan (SAQP) have been implemented

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR: No Limit

Results between 10-20 times the LOR: RPD must lie between 0-50%

Results >20 times the LOR: RPD must lie between 0-30%

NOTE: pH duplicates are reported as a range not as RPD

Surrogate Recoveries: Recoveries must lie between 20-130% for Speciated Phenols & 50-150% for PFAS. SVOCs recoveries 20 – 150%

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.4 where no positive PFAS results have been reported have been reviewed and no data was affected.

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore, laboratory analysis is unlikely to be completed within holding time.Analysis will begin as soon as possible after sample receipt.
4. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of recovery the term "INT" appears against that analyte.
5. For Matrix Spikes and LCS results a dash "-" in the report means that the specific analyte was not added to the QC sample.
6. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.002			0.002	Pass	
4.4'-DDD	mg/L	< 0.0002			0.0002	Pass	
4.4'-DDE	mg/L	< 0.0002			0.0002	Pass	
4.4'-DDT	mg/L	< 0.0002			0.0002	Pass	
a-HCH	mg/L	< 0.0002			0.0002	Pass	
Aldrin	mg/L	< 0.0002			0.0002	Pass	
b-HCH	mg/L	< 0.0002			0.0002	Pass	
d-HCH	mg/L	< 0.0002			0.0002	Pass	
Dieldrin	mg/L	< 0.0002			0.0002	Pass	
Endosulfan I	mg/L	< 0.0002			0.0002	Pass	
Endosulfan II	mg/L	< 0.0002			0.0002	Pass	
Endosulfan sulphate	mg/L	< 0.0002			0.0002	Pass	
Endrin	mg/L	< 0.0002			0.0002	Pass	
Endrin aldehyde	mg/L	< 0.0002			0.0002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin ketone	mg/L	< 0.0002			0.0002	Pass	
g-HCH (Lindane)	mg/L	< 0.0002			0.0002	Pass	
Heptachlor	mg/L	< 0.0002			0.0002	Pass	
Heptachlor epoxide	mg/L	< 0.0002			0.0002	Pass	
Hexachlorobenzene	mg/L	< 0.0002			0.0002	Pass	
Methoxychlor	mg/L	< 0.0002			0.0002	Pass	
Toxaphene	mg/L	< 0.005			0.005	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.002			0.002	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.02			0.02	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/L	< 0.005			0.005	Pass	
Aroclor-1221	mg/L	< 0.005			0.005	Pass	
Aroclor-1232	mg/L	< 0.005			0.005	Pass	
Aroclor-1242	mg/L	< 0.005			0.005	Pass	
Aroclor-1248	mg/L	< 0.005			0.005	Pass	
Aroclor-1254	mg/L	< 0.005			0.005	Pass	
Aroclor-1260	mg/L	< 0.005			0.005	Pass	
Total PCB*	mg/L	< 0.005			0.005	Pass	
Method Blank							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	96			70-130	Pass	
TRH C10-C14	%	73			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	98			70-130	Pass	
Toluene	%	106			70-130	Pass	
Ethylbenzene	%	123			70-130	Pass	
m&p-Xylenes	%	117			70-130	Pass	
Xylenes - Total*	%	115			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH C6-C10	%	118			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	103			70-130	Pass	
Acenaphthylene	%	100			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Anthracene	%	112			70-130	Pass	
Benz(a)anthracene	%	97			70-130	Pass	
Benzo(a)pyrene	%	104			70-130	Pass	
Benzo(b&j)fluoranthene	%	122			70-130	Pass	
Benzo(g.h.i)perylene	%	100			70-130	Pass	
Benzo(k)fluoranthene	%	127			70-130	Pass	
Chrysene	%	95			70-130	Pass	
Dibenz(a.h)anthracene	%	105			70-130	Pass	
Fluoranthene	%	95			70-130	Pass	
Fluorene	%	111			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	101			70-130	Pass	
Naphthalene	%	93			70-130	Pass	
Phenanthrene	%	112			70-130	Pass	
Pyrene	%	100			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	105			70-130	Pass	
4.4'-DDD	%	98			70-130	Pass	
4.4'-DDE	%	100			70-130	Pass	
4.4'-DDT	%	100			70-130	Pass	
a-HCH	%	103			70-130	Pass	
Aldrin	%	105			70-130	Pass	
b-HCH	%	114			70-130	Pass	
d-HCH	%	98			70-130	Pass	
Dieldrin	%	87			70-130	Pass	
Endosulfan I	%	110			70-130	Pass	
Endosulfan II	%	98			70-130	Pass	
Endosulfan sulphate	%	91			70-130	Pass	
Endrin	%	101			70-130	Pass	
Endrin aldehyde	%	90			70-130	Pass	
Endrin ketone	%	120			70-130	Pass	
g-HCH (Lindane)	%	105			70-130	Pass	
Heptachlor	%	91			70-130	Pass	
Heptachlor epoxide	%	101			70-130	Pass	
Hexachlorobenzene	%	89			70-130	Pass	
Methoxychlor	%	121			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	95			70-130	Pass	
Dimethoate	%	78			70-130	Pass	
Ethion	%	129			70-130	Pass	
Fenitrothion	%	91			70-130	Pass	
Mevinphos	%	94			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	120			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	128			25-140	Pass	
2.4-Dichlorophenol	%	92			25-140	Pass	
2.4.5-Trichlorophenol	%	99			25-140	Pass	
2.4.6-Trichlorophenol	%	90			25-140	Pass	
2.6-Dichlorophenol	%	80			25-140	Pass	
4-Chloro-3-methylphenol	%	71			25-140	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol	%	72			25-140	Pass	
Tetrachlorophenols - Total	%	74			25-140	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2.4-Dimethylphenol	%	32			25-140	Pass	
2.4-Dinitrophenol	%	95			25-140	Pass	
2-Methylphenol (o-Cresol)	%	70			25-140	Pass	
3&4-Methylphenol (m&p-Cresol)	%	74			25-140	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	74			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	99			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	101			80-120	Pass	
Copper	%	102			80-120	Pass	
Lead	%	101			80-120	Pass	
Mercury	%	107			80-120	Pass	
Nickel	%	103			80-120	Pass	
Zinc	%	95			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	B23-Au0021004	CP	%	83			70-130	Pass	
TRH C10-C14	M23-Au0037683	NCP	%	98			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	B23-Au0021004	CP	%	88			70-130	Pass	
Toluene	B23-Au0021004	CP	%	92			70-130	Pass	
Ethylbenzene	B23-Au0021004	CP	%	95			70-130	Pass	
m&p-Xylenes	B23-Au0021004	CP	%	90			70-130	Pass	
o-Xylene	B23-Au0021004	CP	%	90			70-130	Pass	
Xylenes - Total*	B23-Au0021004	CP	%	90			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH C6-C10	B23-Au0021004	CP	%	82			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	B23-Au0021004	CP	%	83			70-130	Pass	
Acenaphthylene	B23-Au0021004	CP	%	77			70-130	Pass	
Anthracene	B23-Au0021004	CP	%	88			70-130	Pass	
Benz(a)anthracene	B23-Au0021004	CP	%	72			70-130	Pass	
Benzo(a)pyrene	B23-Au0021004	CP	%	78			70-130	Pass	
Benzo(b&j)fluoranthene	B23-Au0021004	CP	%	88			70-130	Pass	
Benzo(g.h.i)perylene	B23-Au0021004	CP	%	85			70-130	Pass	
Benzo(k)fluoranthene	B23-Au0021004	CP	%	94			70-130	Pass	
Chrysene	B23-Au0021004	CP	%	90			70-130	Pass	
Dibenz(a.h)anthracene	B23-Au0021004	CP	%	90			70-130	Pass	
Fluoranthene	B23-Au0021004	CP	%	103			70-130	Pass	
Fluorene	B23-Au0021004	CP	%	96			70-130	Pass	
Indeno(1.2.3-cd)pyrene	B23-Au0021004	CP	%	84			70-130	Pass	
Naphthalene	B23-Au0021004	CP	%	90			70-130	Pass	
Phenanthrene	B23-Au0021004	CP	%	83			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pyrene	B23-Au0021004	CP	%	103			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	B23-Au0021004	CP	%	91			70-130	Pass	
4.4'-DDD	B23-Au0021004	CP	%	95			70-130	Pass	
4.4'-DDE	B23-Au0021004	CP	%	104			70-130	Pass	
4.4'-DDT	B23-Au0021004	CP	%	107			70-130	Pass	
a-HCH	B23-Au0021004	CP	%	96			70-130	Pass	
Aldrin	B23-Au0021004	CP	%	84			70-130	Pass	
b-HCH	B23-Au0021004	CP	%	110			70-130	Pass	
d-HCH	B23-Au0021004	CP	%	100			70-130	Pass	
Dieldrin	B23-Au0021004	CP	%	89			70-130	Pass	
Endosulfan I	B23-Au0021004	CP	%	113			70-130	Pass	
Endosulfan II	B23-Au0021004	CP	%	100			70-130	Pass	
Endosulfan sulphate	B23-Au0021004	CP	%	92			70-130	Pass	
Endrin	B23-Au0021004	CP	%	100			70-130	Pass	
Endrin aldehyde	B23-Au0021004	CP	%	86			70-130	Pass	
Endrin ketone	B23-Au0021004	CP	%	121			70-130	Pass	
g-HCH (Lindane)	B23-Au0021004	CP	%	101			70-130	Pass	
Heptachlor	B23-Au0021004	CP	%	89			70-130	Pass	
Heptachlor epoxide	B23-Au0021004	CP	%	89			70-130	Pass	
Hexachlorobenzene	B23-Au0021004	CP	%	81			70-130	Pass	
Methoxychlor	B23-Au0021004	CP	%	116			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	B23-Au0021004	CP	%	93			70-130	Pass	
Dimethoate	B23-Au0021004	CP	%	93			70-130	Pass	
Ethion	B23-Au0021004	CP	%	112			70-130	Pass	
Fenitrothion	B23-Au0021004	CP	%	87			70-130	Pass	
Methyl parathion	B23-Au0021004	CP	%	89			70-130	Pass	
Mevinphos	B23-Au0021004	CP	%	94			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1016	B23-Au0028862	NCP	%	94			70-130	Pass	
Aroclor-1260	B23-Au0028862	NCP	%	99			70-130	Pass	
Spike - % Recovery									
Phenols (Halogenated)				Result 1					
2-Chlorophenol	B23-Au0021004	CP	%	43			30-130	Pass	
2.4-Dichlorophenol	B23-Au0021004	CP	%	43			30-130	Pass	
2.4.5-Trichlorophenol	B23-Au0021004	CP	%	48			30-130	Pass	
2.4.6-Trichlorophenol	B23-Au0021004	CP	%	43			30-130	Pass	
2.6-Dichlorophenol	B23-Au0021004	CP	%	40			30-130	Pass	
4-Chloro-3-methylphenol	B23-Au0021004	CP	%	46			30-130	Pass	
Pentachlorophenol	B23-Au0021004	CP	%	55			30-130	Pass	
Tetrachlorophenols - Total	B23-Au0021004	CP	%	35			30-130	Pass	
Spike - % Recovery									
Phenols (non-Halogenated)				Result 1					
2-Cyclohexyl-4.6-dinitrophenol	B23-Au0021004	CP	%	45			30-130	Pass	
2-Methyl-4.6-dinitrophenol	B23-Au0021004	CP	%	46			30-130	Pass	
2-Nitrophenol	B23-Au0021004	CP	%	44			30-130	Pass	
2.4-Dimethylphenol	B23-Au0028862	NCP	%	42			30-130	Pass	
2.4-Dinitrophenol	B23-Au0021004	CP	%	50			30-130	Pass	
2-Methylphenol (o-Cresol)	B23-Au0021004	CP	%	31			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	B23-Au0021004	CP	%	42			30-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4-Nitrophenol	B23-Au0021004	CP	%	38			30-130	Pass	
Dinoseb	B23-Au0021004	CP	%	45			30-130	Pass	
Phenol	B23-Au0021004	CP	%	40			30-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M23-Au0037683	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B23-Au0021012	NCP	%	96			75-125	Pass	
Cadmium	B23-Au0021012	NCP	%	95			75-125	Pass	
Chromium	B23-Au0021012	NCP	%	95			75-125	Pass	
Copper	B23-Au0021012	NCP	%	94			75-125	Pass	
Lead	B23-Au0021012	NCP	%	93			75-125	Pass	
Mercury	B23-Au0021012	NCP	%	102			75-125	Pass	
Nickel	B23-Au0021012	NCP	%	85			75-125	Pass	
Zinc	B23-Au0021012	NCP	%	87			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	B23-Au0020940	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M23-Au0031670	NCP	mg/L	0.09	0.07	23	30%	Pass	
TRH C15-C28	M23-Au0031670	NCP	mg/L	0.1	0.1	15	30%	Pass	
TRH C29-C36	M23-Au0031670	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	B23-Au0020940	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	B23-Au0020940	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	B23-Au0020940	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	B23-Au0020940	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	B23-Au0020940	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	B23-Au0020940	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	B23-Au0020940	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	B23-Au0020940	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Acenaphthylene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Anthracene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benz(a)anthracene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(a)pyrene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(b&j)fluoranthene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(g.h.i)perylene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Benzo(k)fluoranthene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chrysene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibenz(a.h)anthracene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluoranthene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Fluorene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Naphthalene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Phenanthrene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Pyrene	M23-Au0027553	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
4.4'-DDD	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
4.4'-DDE	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
4.4'-DDT	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
a-HCH	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Aldrin	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
b-HCH	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
d-HCH	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Dieldrin	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endosulfan I	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endosulfan II	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endosulfan sulphate	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endrin	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endrin aldehyde	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Endrin ketone	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
g-HCH (Lindane)	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Heptachlor	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Heptachlor epoxide	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Hexachlorobenzene	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Methoxychlor	B23-Au0024431	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass
Toxaphene	B23-Au0024431	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Bolstar	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Chlorfenvinphos	B23-Au0024431	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Chlorpyrifos	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Chlorpyrifos-methyl	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Coumaphos	B23-Au0024431	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Demeton-S	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Demeton-O	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Diazinon	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Dichlorvos	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Dimethoate	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Disulfoton	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
EPN	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Ethion	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Ethoprop	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Ethyl parathion	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Fenitrothion	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Fensulfothion	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Fenthion	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Malathion	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Merphos	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Methyl parathion	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Mevinphos	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Monocrotophos	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Naled	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Omethoate	B23-Au0024431	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Phorate	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Pirimiphos-methyl	B23-Au0024431	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass
Pyrazophos	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Ronnel	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass
Terbufos	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Tetrachlorvinphos	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tokuthion	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	B23-Au0024431	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	B23-Au0024431	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1221	B23-Au0024431	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1232	B23-Au0024431	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1242	B23-Au0024431	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1248	B23-Au0024431	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1254	B23-Au0024431	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Aroclor-1260	B23-Au0024431	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Total PCB*	B23-Au0024431	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Duplicate									
Phenols (Halogenated)				Result 1	Result 2	RPD			
2-Chlorophenol	M23-Au0027553	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dichlorophenol	M23-Au0027553	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4.5-Trichlorophenol	M23-Au0027553	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4.6-Trichlorophenol	M23-Au0027553	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.6-Dichlorophenol	M23-Au0027553	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
4-Chloro-3-methylphenol	M23-Au0027553	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Pentachlorophenol	M23-Au0027553	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
Tetrachlorophenols - Total	M23-Au0027553	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Duplicate									
Phenols (non-Halogenated)				Result 1	Result 2	RPD			
2-Cyclohexyl-4.6-dinitrophenol	M23-Au0027553	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
2-Methyl-4.6-dinitrophenol	M23-Au0027553	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Nitrophenol	M23-Au0027553	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
2.4-Dimethylphenol	M23-Au0027553	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
2.4-Dinitrophenol	M23-Au0027553	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
2-Methylphenol (o-Cresol)	M23-Au0027553	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
3&4-Methylphenol (m&p-Cresol)	M23-Au0027553	NCP	mg/L	< 0.006	< 0.006	<1	30%	Pass	
4-Nitrophenol	M23-Au0027553	NCP	mg/L	< 0.03	< 0.03	<1	30%	Pass	
Dinoseb	M23-Au0027553	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Phenol	M23-Au0027553	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M23-Au0031670	NCP	mg/L	0.09	0.07	22	30%	Pass	
TRH >C16-C34	M23-Au0031670	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40	M23-Au0031670	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	B23-Au0021011	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	B23-Au0021011	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	B23-Au0021011	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	B23-Au0021011	NCP	mg/L	0.050	0.047	7.2	30%	Pass	
Lead	B23-Au0021011	NCP	mg/L	0.004	0.004	11	30%	Pass	
Mercury	B23-Au0021011	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	B23-Au0021011	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	B23-Au0021011	NCP	mg/L	0.030	0.016	60	30%	Fail	Q15

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised by:

Alana Wadsworth	Analytical Services Manager
Edward Lee	Senior Analyst-Organic
Jonathon Angell	Senior Analyst-Metal
Jonathon Angell	Senior Analyst-Volatile

Glenn Jackson
Managing Director

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

eurofins | Environment Testing

www.eurofins.com.au EnviroSales@eurofins.com

Eurofins Environment Testing Australia Pty Ltd

ABN: 50 005 085 521

Melbourne	Geelong	Sydney	Canberra	Brisbane	Newcastle
6 Monterey Road	19/8 Lewalan Street	179 Magowar Road	Unit 1,2 Dacre Street	1/21 Smallwood Place	1/2 Frost Drive
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VIC 3175	VIC 3216	NSW 2145	ACT 2911	QLD 4172	Tel: +61 2 4968 8448
Tel: +61 3 8564 5000	Tel: +61 3 8564 5000	Tel: +61 2 9900 8400	Tel: +61 2 6113 8091	Tel: +61 7 3902 4600	NATA# 1261
NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	NATA# 1261	Site# 25079 & 25289
Site# 1254	Site# 25403	Site# 18217	Site# 25466	Site# 20794	

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Eurofins Environment Testing NZ Ltd

NZBN: 9429046024954

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Penrose,	Rolleston,	Gate Pa,
Auckland 1061	Christchurch 7675	Tauranga 3112
Tel: +64 9 526 4551	Tel: +64 3 343 5201	Tel: +64 9 525 0568
IANZ# 1327	IANZ# 1290	IANZ# 1402

Sample Receipt Advice

Company name:	Easterly Point Environmental Pty Ltd
Contact name:	Marc Salmon
Project name:	MOMENTUM JOHNSTON ST CASINO NSW
Project ID:	23034.2
Turnaround time:	5 Day
Date/Time received	Aug 8, 2023 11:45 AM
Eurofins reference	1014903

Sample Information

✓	A detailed list of analytes logged into our LIMS, is included in the attached summary table.
✓	All samples have been received as described on the above COC.
✓	COC has been completed correctly.
✓	Attempt to chill was evident.
✓	Appropriately preserved sample containers have been used.
✓	All samples were received in good condition.
✓	Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
✓	Appropriate sample containers have been used.
✓	Sample containers for volatile analysis received with zero headspace.
✗	Split sample sent to requested external lab.
✗	Some samples have been subcontracted.
N/A	Custody Seals intact (if used).

Notes

Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Alana Wadsworth on phone : 0499 810 009 or by email: AlanaWadsworth@eurofins.com

Results will be delivered electronically via email to Marc Salmon - marc@easterlypoint.com.

Note: A copy of these results will also be delivered to the general Easterly Point Environmental Pty Ltd email address.

Global Leader - Results you can trust

1014703

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☑ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
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08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental	Project №	23034.2 COC 1 of 4	Project Manager	Marc Salmon	Sampler(s)	MSalmon, ATorre
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481	Project Name	Momentum, Johnston St, Casino NSW	EDD Format (ESdat, EQuIS etc)	Excel	Handed over by	
Contact Name	Marc Salmon					Email for Invoice	office@easterlypoint.com
Phone №	M. 0419 985 090 T.02 6685 6681					Email for Results	marc@easterlypoint.com, andre@easterlypoint.com
Special Directions							
Purchase Order							
Quote ID №							

Analyses (Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing)

Containers (Change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked) ♦Surcharge will apply
☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☑ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 - OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	ON HOLD	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	SS14A	2/08/23	S	X											1		
2	SS15A	2/8/23	S	X											1		
3	SS16A	2/8/23	S	X											1		
4	SS16B	2/8/23	S	X											1		Please send to secondary laboratory ALS for analysis
5	SS16C	2/8/23	S	X											1	1	
6	SS17A	2/8/23	S		X	X	X								1	1	
7	SS17B	2/8/23	S					X							1	1	Date/Time: 6/8/23 11:45am
8	SS17C	2/8/23	S					X							1		Temp: 7.2 / 7.5
9	SS18A	2/8/23	S	X											1		Correction: -0.2 Final Temp: DF
10	SS19A	2/8/23	S	X											1		
	Total Counts			7	1	1	1	2							10	3	

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Signature	Date / Time / Temperature
Eurofins | mgt Laboratory Use Only	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request

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- ☐ Sydney Laboratory — Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066 — 02 9900 8400 EnviroSampleNSW@eurofins.com
- ☑ Brisbane Laboratory — Unit 1 21 Smallwood Place Murarrie QLD 4172 — 07 3902 4600 EnviroSampleQLD@eurofins.com
- ☐ Perth Laboratory — Unit 2 91 Leach Highway Kewdale WA 6105 — 08 9251 9600 EnviroSampleWA@eurofins.com
- ☐ Melbourne Laboratory — 2 Kingston Town Close Oakleigh VIC 3166 — 03 8564 5000 EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental	Project №	23034.2 COC 2 of 4	Project Manager	Marc Salmon
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481	Project Name	Momentum, Johnston St, Casino NSW	EDD Format	Excel
Contact Name	Marc Salmon			Sampler(s)	MSalmon, ATorre
Phone №	M. 0419 985 090 T.02 6685 6681			Handed over by	
Special Directions				Email for Invoice	office@easterlypoint.com
Purchase Order				Email for Results	marc@easterlypoint.com, andre@easterlypoint.com
Quote ID №					

Analyses (Where metals are requested, please specify "Total" or "Filtered"; SUITE code must be used to attract SUITE pricing)

Containers (Change container type & size if necessary)

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 – OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	ON HOLD	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	SS20A	2/08/23	S	X											1		
2	SS21A	2/8/23	S	X											1		
3	SS22A	2/8/23	S	X											1		
4	SS23A	2/8/23	S		X	X	X								1	1	
5	SS23B	2/8/23	S		X	X	X								1	1	
6	SS23C	2/8/23	S		X	X	X								1	1	Please send to secondary laboratory ALS for analysis
7	SS24A	2/8/23	S	X											1		
8	SS25A	2/8/23	S	X											1		
9	SS26A	2/8/23	S	X											1		
10	SS27A	2/8/23	S	X											1		
	Total Counts			7	3	3	3								10	3	

Required Turnaround Time (TAT) — Default will be 5 days if not ticked
♦Surcharge will apply
- ☐ Overnight (reporting by 9am)♦
- ☐ Same day♦ ☐ 1 day♦
- ☐ 2 days♦ ☐ 3 days♦
- ☑ 5 days (Standard)
- ☐ Other( )

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Signature	Date	Time
Eurofins | mgt Laboratory Use Only	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature	
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №	

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Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481
Contact Name	Marc Salmon
Phone №	M. 0419 985 090 T.02 6685 6681
Special Directions	
Purchase Order	
Quote ID №	

Project №	23034.2 COC 3 of 4
Project Name	Momentum, Johnston St, Casino NSW
Project Manager	Marc Salmon
EDD Format (ESdat, EQuIS etc)	Excel
Sampler(s)	MSalmon, ATorre
Handed over by	
Email for Invoice	office@easterlypoint.com
Email for Results	marc@easterlypoint.com, andre@easterlypoint.com

Analyses: Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers: Change container type & size if necessary

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 – OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	ON HOLD	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	SS28A	2/08/23	S	X											1		
2	SS29A	2/8/23	S	X											1		
3	SS30A	2/8/23	S	X											1		
4	SS31A	2/8/23	S	X											1		
5	SS32A	2/8/23	S		X	X	X								1	1	
6	SS33A	2/8/23	S		X	X	X								1	1	
7	SS34A	2/8/23	S		X	X	X								1	1	
8	SS35A	2/8/23	S	X											1		
9	SS36A	2/8/23	S		X	X	X								1	1	
10	SS37A	2/8/23	S	X											1		
	Total Counts			6	4	4	4								10	4	

Required Turnaround Time (TAT)
Default will be 5 days if not ticked.
♦Surcharge will apply
☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☑ 5 days (Standard)
☐ Other( )

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Signature	Date	Time
Eurofins | mgt Laboratory Use Only	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature	
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №	

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

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☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental	Project №	23034.2 COC 4 of 4
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481	Project Name	Momentum, Johnston St, Casino NSW
Contact Name	Marc Salmon	Project Manager	Marc Salmon
Phone №	M. 0419 985 090 T.02 6685 6681	EDD Format (Excel, EQuIS etc.)	Excel
Special Directions		Sampler(s)	MSalmon, ATorre
Purchase Order		Handed over by	
Quote ID №		Email for Invoice	office@easterlypoint.com
		Email for Results	marc@easterlypoint.com, andre@easterlypoint.com

Analyses (Where metals are requested, please specify "Total" or "Filtered". SUITE codes must be listed to ensure correct testing)

Containers (Change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked)

♦ Surcharge will apply
☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☑ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 – OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	ON HOLD	TRHs C6-C10/BTEXN	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	TP07RA	2/08/23	S	X												1		
2	TP07RB	2/8/23	S	X												1		
3	TP07RC	2/8/23	S	X												1		Please send to secondary laboratory for analysis
4	TP12RA	2/8/23	S		X	X	X									1	1	
5	TP12RB	2/8/23	S		X	X	X									1	1	
6	TP12RC	2/8/23	S		X	X	X									1	1	Please send to secondary laboratory for analysis
7	RB	2/8/23	W		X	X						1	1	2				
8	TS	2/8/23	S						X					1				
9	TB	2/8/23	S						X					2				
10																		
	Total Counts			3	4	4	3		2			1	1	5		6	3	

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name		Signature		Date		Time	
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Report №	

CERTIFICATE OF ANALYSIS

Work Order	: **EB2324484**	Page	: 1 of 8
Client	: **EASTERLY POINT ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MR MARC SALMON	Contact	: Customer Services EB
Address	: PO BOX 2363 BYRON BAY NSW, AUSTRALIA 2481	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: +61 02 6685 6681	Telephone	: +61-7-3243 7222
Project	: 23034.2 Momentum, Johnston St, Casino NSW	Date Samples Received	: 09-Aug-2023 15:45
Order number	: ----	Date Analysis Commenced	: 10-Aug-2023
C-O-C number	: ----	Issue Date	: 17-Aug-2023 17:34
Sampler	: ATorre, MSalmon		
Site	: ----		
Quote number	: EN/333		
No. of samples received	: 4		
No. of samples analysed	: 4		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

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
- Descriptive 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*
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD
MINNIE TRAN	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Morgan Lennox	Senior Organic Chemist	Brisbane Organics, Stafford, QLD

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.
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EA200 Legend
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.
- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS16C	SS23C	TP07RC	TP12RC	----
			Sampling date / time	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	----
Compound	CAS Number	LOR	Unit	EB2324484-001	EB2324484-002	EB2324484-003	EB2324484-004	--------
				Result	Result	Result	Result	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**22.4**	**19.2**	**7.4**	**19.1**	**----**
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	**----**	**No**	**----**	**No**	**----**
Asbestos (Trace)	1332-21-4	-	-	**----**	**No**	**----**	**No**	**----**
Asbestos Type	1332-21-4	-	--	**----**	**-**	**----**	**-**	**----**
Synthetic Mineral Fibre	----	-	--	**----**	**No**	**----**	**No**	**----**
Organic Fibre	----	-	--	**----**	**Yes**	**----**	**Yes**	**----**
Sample weight (dry)	----	0.01	g	**----**	**161**	**----**	**170**	**----**
APPROVED IDENTIFIER:	----	-	--	**----**	**M. TRAN**	**----**	**M. TRAN**	**----**
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	**----**
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	**----**
Chromium	7440-47-3	2	mg/kg	**19**	**19**	**19**	**18**	**----**
Copper	7440-50-8	5	mg/kg	**14**	**13**	**14**	**16**	**----**
Lead	7439-92-1	5	mg/kg	**10**	**20**	**10**	**12**	**----**
Nickel	7440-02-0	2	mg/kg	**17**	**19**	**17**	**25**	**----**
Zinc	7440-66-6	5	mg/kg	**71**	**65**	**45**	**38**	**----**
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	**----**
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	**----**	<0.1	**----**	<0.1	**----**
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
beta-BHC	319-85-7	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
gamma-BHC	58-89-9	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
delta-BHC	319-86-8	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
Heptachlor	76-44-8	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
Aldrin	309-00-2	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
Heptachlor epoxide	1024-57-3	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
^ Total Chlordane (sum)	----	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
trans-Chlordane	5103-74-2	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
alpha-Endosulfan	959-98-8	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**
cis-Chlordane	5103-71-9	0.05	mg/kg	**----**	<0.05	**----**	<0.05	**----**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS16C	SS23C	TP07RC	TP12RC	----
			Sampling date / time	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	----
Compound	CAS Number	LOR	Unit	EB2324484-001	EB2324484-002	EB2324484-003	EB2324484-004	--------
				Result	Result	Result	Result	----
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin	72-20-8	0.05	mg/kg	----	<0.05	----	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	----	<0.05	----	<0.05	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	----	<0.05	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	----	<0.05	----	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg	----	<0.2	----	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	----	<0.2	----	<0.2	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg	----	<0.05	----	<0.05	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg	----	<0.05	----	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	----	<0.05	----	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	----	<0.05	----	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	----	<0.2	----	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	----	<0.05	----	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	----	<0.2	----	<0.2	----
Malathion	121-75-5	0.05	mg/kg	----	<0.05	----	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Parathion	56-38-2	0.2	mg/kg	----	<0.2	----	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	----	<0.05	----	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	----	<0.05	----	<0.05	----
Ethion	563-12-2	0.05	mg/kg	----	<0.05	----	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	----	<0.05	----	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	----	<0.05	----	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS16C	SS23C	TP07RC	TP12RC	----
			Sampling date / time	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	----
Compound	CAS Number	LOR	Unit	EB2324484-001	EB2324484-002	EB2324484-003	EB2324484-004	--------
				Result	Result	Result	Result	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg	----	<0.5	----	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg	----	<0.5	----	<0.5	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	----	<1	----	<1	----
2-Nitrophenol	88-75-5	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg	----	<0.5	----	<0.5	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	----	<0.5	----	<0.5	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	----	<0.5	----	<0.5	----
Pentachlorophenol	87-86-5	2	mg/kg	----	<2	----	<2	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	<0.5	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	<0.5	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	<0.5	----	**1.2**	----
Pyrene	129-00-0	0.5	mg/kg	----	<0.5	----	**1.1**	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	<0.5	----	**0.5**	----
Chrysene	218-01-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	----	<0.5	----	**0.8**	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	----	<0.5	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	<0.5	----	**0.5**	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	<0.5	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	<0.5	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	<0.5	----	**4.1**	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	<0.5	----	**0.6**	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	**0.6**	----	**0.9**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	**1.2**	----	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS16C	SS23C	TP07RC	TP12RC	----
			Sampling date / time	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	----
Compound	CAS Number	LOR	Unit	EB2324484-001	EB2324484-002	EB2324484-003	EB2324484-004	--------
				Result	Result	Result	Result	----
EP080/071: Total Petroleum Hydrocarbons - Continued								
C6 - C9 Fraction	----	10	mg/kg	----	<10	----	<10	----
C10 - C14 Fraction	----	50	mg/kg	----	<50	----	<50	----
C15 - C28 Fraction	----	100	mg/kg	----	<100	----	<100	----
C29 - C36 Fraction	----	100	mg/kg	----	<100	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	----	<50	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	----	<10	----	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	----	<10	----	<10	----
>C10 - C16 Fraction	----	50	mg/kg	----	<50	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg	----	<100	----	<100	----
>C34 - C40 Fraction	----	100	mg/kg	----	<100	----	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	----	<50	----	<50	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	----	<50	----	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	<0.2	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	----	<0.5	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	<0.5	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	<0.5	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	<0.5	----	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	----	<0.2	----	<0.2	----
^ Total Xylenes	----	0.5	mg/kg	----	<0.5	----	<0.5	----
Naphthalene	91-20-3	1	mg/kg	----	<1	----	<1	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	**78.6**	----	**76.9**	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	----	**97.2**	----	**79.1**	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	----	**105**	----	**81.0**	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	----	**94.7**	----	**92.7**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	----	**96.8**	----	**98.6**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	----	**69.4**	----	**61.1**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SS16C	SS23C	TP07RC	TP12RC	----
				Sampling date / time	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	02-Aug-2023 00:00	----
Compound	CAS Number	LOR	Unit		EB2324484-001	EB2324484-002	EB2324484-003	EB2324484-004	--------
					Result	Result	Result	Result	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**----**	**102**	**----**	**90.2**	**----**
Anthracene-d10	1719-06-8	0.5	%		**----**	**86.0**	**----**	**96.6**	**----**
4-Terphenyl-d14	1718-51-0	0.5	%		**----**	**87.4**	**----**	**99.3**	**----**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**----**	**87.7**	**----**	**96.3**	**----**
Toluene-D8	2037-26-5	0.2	%		**----**	**84.2**	**----**	**94.6**	**----**
4-Bromofluorobenzene	460-00-4	0.2	%		**----**	**90.8**	**----**	**99.1**	**----**

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	SS23C - 02-Aug-2023 00:00	Grey clay like soil with rock and organic matter.
EA200: Description	TP12RC - 02-Aug-2023 00:00	Grey clay like soil with rock and organic matter.

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	16	134
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	10	138
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	23	134
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	35	154
2-Chlorophenol-D4	93951-73-6	42	153
2.4.6-Tribromophenol	118-79-6	26	157
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	34	156
Anthracene-d10	1719-06-8	37	153
4-Terphenyl-d14	1718-51-0	42	172
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	53	134
Toluene-D8	2037-26-5	60	131
4-Bromofluorobenzene	460-00-4	59	127

Inter-Laboratory Testing

Analysis conducted by ALS Melbourne, NATA accreditation no. 825, site no. 13778 (Chemistry).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

QUALITY CONTROL REPORT

Work Order	: **EB2324484**	Page	: 1 of 10
Client	: **EASTERLY POINT ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MR MARC SALMON	Contact	: Customer Services EB
Address	: PO BOX 2363 BYRON BAY NSW, AUSTRALIA 2481	Address	: 2 Byth Street Stafford QLD Australia 4053
Telephone	: +61 02 6685 6681	Telephone	: +61-7-3243 7222
Project	: 23034.2 Momentum, Johnston St, Casino NSW	Date Samples Received	: 09-Aug-2023
Order number	: ----	Date Analysis Commenced	: 10-Aug-2023
C-O-C number	: ----	Issue Date	: 17-Aug-2023
Sampler	: ATorre, MSalmon		
Site	: ----		
Quote number	: EN/333		
No. of samples received	: 4		
No. of samples analysed	: 4		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

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*
Kim McCabe	Senior Inorganic Chemist	Brisbane Inorganics, Stafford, QLD
MINNIE TRAN	Approved Asbestos Identifier	Melbourne Asbestos, Springvale, VIC
Morgan Lennox	Senior Organic Chemist	Brisbane Organics, Stafford, QLD

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: 5225925)									
EB2323819-001	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	30	30	0.0	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	16	16	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	14	14	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	54	54	0.0	0% - 50%
		EG005T: Lead	7439-92-1	5	mg/kg	15	16	0.0	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	130	128	1.1	0% - 20%
EA055: Moisture Content (Dried @ 105-110°C) (QC Lot: 5225934)									
EB2323819-001	Anonymous	EA055: Moisture Content	----	0.1	%	21.3	21.8	2.4	0% - 20%
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 5225924)									
EB2323819-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 5225918)									
EB2323819-001	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 5225916)									
EB2323819-001	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: Total Chlordane (sum)	----	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: 5225916) - continued									
EB2323819-001	Anonymous	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: Endosulfan (sum)	115-29-7	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: Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Sum of Aldrin + Dieldrin	309-00-2/60-57-1	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
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 5225916)									
EB2323819-001	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	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 5225919)									
EB2324483-001	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

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)A: Phenolic Compounds (QC Lot: 5225919) - continued									
EB2324483-001	Anonymous	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: 5225919)									
EB2324483-001	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	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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): Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5225920)									
EB2324483-001	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
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 5225922)									
EB2323819-001	Anonymous	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5225920)									
EB2324483-001	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
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	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 (%)*
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QC Lot: 5225922)									
EB2323819-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 5225922)									
EB2323819-001	Anonymous	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	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		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

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**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Acceptable Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5225925)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	84.392 mg/kg	101	84.0	123
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
EG005T: Chromium	7440-47-3	2	mg/kg	<2	15 mg/kg	89.3	83.0	125
EG005T: Copper	7440-50-8	5	mg/kg	<5	39.8567 mg/kg	106	86.0	122
EG005T: Lead	7439-92-1	5	mg/kg	<5	49.1279 mg/kg	106	84.0	119
EG005T: Nickel	7440-02-0	2	mg/kg	<2	13 mg/kg	83.0	81.5	118
EG005T: Zinc	7440-66-6	5	mg/kg	<5	167.7014 mg/kg	83.5	80.0	120
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5225924)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	0.10895 mg/kg	80.3	70.0	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5225918)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	107	71.6	155
EP068A: Organochlorine Pesticides (OC) (QCLot: 5225916)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	83.2	72.8	127
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	79.8	71.0	127
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	80.8	67.5	126
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	72.7	127
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	81.1	70.6	122
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.8	64.8	127
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	80.6	72.4	122
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	77.4	67.4	125
EP068: Total Chlordane (sum)	----	0.05	mg/kg	<0.05	----	----	----	----
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	77.3	65.6	124
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	84.2	70.4	122
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	77.6	65.6	125
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	80.4	69.1	124
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	85.8	72.4	125
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.6	63.2	127
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	69.7	120
EP068: Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	87.4	61.2	124

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP068A: Organochlorine Pesticides (OC) (QCLot: 5225916) - continued								
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	78.5	55.5	125
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	80.0	57.1	117
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	86.2	51.9	125
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	78.3	46.5	122
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	81.7	34.0	130
EP068: Sum of DDD + DDE + DDT	72-54-8/72-5 5-9/50-2	0.05	mg/kg	<0.05	----	----	----	----
EP068: Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5225916)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	87.0	55.8	126
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.2	45.9	136
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	91.7	20.0	147
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	44.1	125
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	87.0	70.3	125
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	63.2	124
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	74.9	44.2	129
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	94.6	52.3	133
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	88.1	62.9	126
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	69.2	123
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	64.1	37.6	138
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	86.8	59.6	131
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.6	46.4	144
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	83.1	56.8	128
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	74.4	24.4	135
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	86.7	55.9	123
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	80.5	45.0	138
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.6	41.6	141
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	70.2	20.0	145
EP075(SIM)A: Phenolic Compounds (QCLot: 5225919)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	1.5 mg/kg	85.1	78.0	134
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	1.5 mg/kg	89.9	78.0	132
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	1.5 mg/kg	85.5	78.0	132
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	3 mg/kg	90.3	77.2	135
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	1.5 mg/kg	87.3	42.9	156

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP075(SIM)A: Phenolic Compounds (QCLot: 5225919) - continued								
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	1.5 mg/kg	87.8	70.3	141
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	1.5 mg/kg	87.0	69.9	135
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	1.5 mg/kg	# 69.9	72.9	136
EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	1.5 mg/kg	72.8	53.3	138
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	1.5 mg/kg	69.6	50.9	140
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	1.5 mg/kg	68.6	45.5	140
EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	3 mg/kg	59.8	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5225919)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	1.5 mg/kg	76.0	72.6	133
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	1.5 mg/kg	69.7	63.2	144
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	1.5 mg/kg	84.8	66.0	132
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	1.5 mg/kg	87.4	76.2	134
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	1.5 mg/kg	86.7	71.8	137
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	1.5 mg/kg	84.0	77.1	143
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	1.5 mg/kg	79.7	74.1	140
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	1.5 mg/kg	79.5	72.0	139
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	1.5 mg/kg	69.6	58.0	145
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	1.5 mg/kg	76.2	63.0	147
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	1.5 mg/kg	81.4	70.5	142
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	1.5 mg/kg	78.2	75.5	138
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	1.5 mg/kg	74.0	68.5	140
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	1.5 mg/kg	65.8	58.4	143
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	1.5 mg/kg	62.6	52.1	149
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	1.5 mg/kg	72.9	64.6	140
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5225920)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	378 mg/kg	95.1	79.4	125
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	407 mg/kg	94.6	78.8	122
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5225922)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	18 mg/kg	103	64.0	120
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5225920)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	502 mg/kg	94.7	81.0	132
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	268 mg/kg	95.5	67.2	130

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report: Result	Laboratory Control Spike (LCS) Report: Spike Concentration	Spike Recovery (%): LCS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5225920) - continued								
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5225922)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	22.5 mg/kg	104	58.1	124
EP080: BTEXN (QCLot: 5225922)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	94.2	68.0	107
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	91.7	69.0	108
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	96.0	68.0	109
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	96.7	70.0	114
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	101	74.0	116
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	103	74.0	109

Matrix Spike (MS) Report

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**

Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report: Spike Concentration	SpikeRecovery(%): MS	Acceptable Limits (%): Low	Acceptable Limits (%): High
EG005(ED093)T: Total Metals by ICP-AES (QCLot: 5225925)							
EB2323819-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	101	70.0	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	88.0	70.0	130
		EG005T: Chromium	7440-47-3	50 mg/kg	93.2	70.0	130
		EG005T: Copper	7440-50-8	250 mg/kg	101	70.0	130
		EG005T: Lead	7439-92-1	250 mg/kg	87.8	70.0	130
		EG005T: Nickel	7440-02-0	50 mg/kg	88.0	70.0	130
		EG005T: Zinc	7440-66-6	250 mg/kg	86.0	70.0	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 5225924)							
EB2323819-002	Anonymous	EG035T: Mercury	7439-97-6	0.5 mg/kg	90.0	70.0	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 5225918)							
EB2323819-002	Anonymous	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	94.2	70.0	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 5225916)							
EB2323819-002	Anonymous	EP068: gamma-BHC	58-89-9	0.5 mg/kg	84.5	70.0	136
		EP068: Heptachlor	76-44-8	0.5 mg/kg	97.0	65.0	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	79.2	70.0	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	93.6	67.0	129
		EP068: Endrin	72-20-8	0.5 mg/kg	97.1	60.0	137

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Acceptable Limits (%)	
Laboratory sample ID	Sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP068A: Organochlorine Pesticides (OC) (QCLot: 5225916) - continued							
EB2323819-002	Anonymous	EP068: 4.4`-DDT	50-29-3	0.5 mg/kg	77.8	70.0	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 5225916)							
EB2323819-002	Anonymous	EP068: Diazinon	333-41-5	0.5 mg/kg	77.0	70.0	131
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	93.5	70.0	130
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	83.9	70.0	130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	91.2	70.0	130
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	94.3	70.0	134
EP075(SIM)A: Phenolic Compounds (QCLot: 5225919)							
EB2324246-002	Anonymous	EP075(SIM): Phenol	108-95-2	1.5 mg/kg	89.7	70.0	130
		EP075(SIM): 2-Chlorophenol	95-57-8	1.5 mg/kg	89.5	70.0	130
		EP075(SIM): 2-Nitrophenol	88-75-5	1.5 mg/kg	80.5	42.9	156
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	1.5 mg/kg	77.3	53.3	138
		EP075(SIM): Pentachlorophenol	87-86-5	3 mg/kg	62.2	20.0	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 5225919)							
EB2324246-002	Anonymous	EP075(SIM): Acenaphthene	83-32-9	1.5 mg/kg	83.3	66.0	132
		EP075(SIM): Pyrene	129-00-0	1.5 mg/kg	77.3	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5225920)							
EB2324484-002	SS23C	EP071: C10 - C14 Fraction	----	379 mg/kg	83.3	70.0	130
		EP071: C15 - C28 Fraction	----	407 mg/kg	83.8	70.0	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 5225922)							
EB2323819-002	Anonymous	EP080: C6 - C9 Fraction	----	8 mg/kg	83.6	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5225920)							
EB2324484-002	SS23C	EP071: >C10 - C16 Fraction	----	502 mg/kg	83.3	70.0	130
		EP071: >C16 - C34 Fraction	----	268 mg/kg	82.9	70.0	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions (QCLot: 5225922)							
EB2323819-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	8 mg/kg	84.8	70.0	130
EP080: BTEXN (QCLot: 5225922)							
EB2323819-002	Anonymous	EP080: Benzene	71-43-2	2 mg/kg	91.1	70.0	130
		EP080: Toluene	108-88-3	2 mg/kg	89.2	70.0	130

QA/QC Compliance Assessment to assist with Quality Review

Work Order	: **EB2324484**	Page	: 1 of 6
Client	: **EASTERLY POINT ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MR MARC SALMON	Telephone	: +61-7-3243 7222
Project	: 23034.2 Momentum, Johnston St, Casino NSW	Date Samples Received	: 09-Aug-2023
Site	: ----	Issue Date	: 17-Aug-2023
Sampler	: ATorre, MSalmon	No. of samples received	: 4
Order number	: ----	No. of samples analysed	: 4

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 Matrix Spike outliers occur.**
- **Laboratory Control outliers exist - please see following pages for full details.**
- **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.**

Outliers : Quality Control Samples

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP075(SIM)A: Phenolic Compounds	QC-5225919-002	----	**2.6-Dichlorophenol**	87-65-0	69.9 %	72.9-136%	**Recovery less than lower control limit**

Analysis Holding Time Compliance

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.

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times (referencing USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

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.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content (Dried @ 105-110°C)							
Soil Glass Jar - Unpreserved (EA055) SS16C, SS23C, TP07RC, TP12RC	**02-Aug-2023**	**----**	----	**----**	**10-Aug-2023**	16-Aug-2023	✓
EA200: AS 4964 - 2004 Identification of Asbestos in Soils							
Snap Lock Bag - Friable Asbestos/PSD Bag (EA200) SS23C, TP12RC	**02-Aug-2023**	**----**	----	**----**	**11-Aug-2023**	29-Jan-2024	✓
EG005(ED093)T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T) SS16C, SS23C, TP07RC, TP12RC	**02-Aug-2023**	**11-Aug-2023**	29-Jan-2024	✓	**14-Aug-2023**	29-Jan-2024	✓
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T) SS16C, SS23C, TP07RC, TP12RC	**02-Aug-2023**	**11-Aug-2023**	30-Aug-2023	✓	**14-Aug-2023**	30-Aug-2023	✓
EP066: Polychlorinated Biphenyls (PCB)							
Soil Glass Jar - Unpreserved (EP066) SS23C, TP12RC	**02-Aug-2023**	**11-Aug-2023**	16-Aug-2023	✓	**12-Aug-2023**	20-Sep-2023	✓
EP068A: Organochlorine Pesticides (OC)							
Soil Glass Jar - Unpreserved (EP068) SS23C, TP12RC	**02-Aug-2023**	**11-Aug-2023**	16-Aug-2023	✓	**11-Aug-2023**	20-Sep-2023	✓
EP068B: Organophosphorus Pesticides (OP)							
Soil Glass Jar - Unpreserved (EP068) SS23C, TP12RC	**02-Aug-2023**	**11-Aug-2023**	16-Aug-2023	✓	**11-Aug-2023**	20-Sep-2023	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM)) SS23C	**02-Aug-2023**	**11-Aug-2023**	16-Aug-2023	✓	**14-Aug-2023**	20-Sep-2023	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) TP12RC	**02-Aug-2023**	**11-Aug-2023**	16-Aug-2023	✓	**15-Aug-2023**	20-Sep-2023	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM)) SS23C	**02-Aug-2023**	**11-Aug-2023**	16-Aug-2023	✓	**14-Aug-2023**	20-Sep-2023	✓
Soil Glass Jar - Unpreserved (EP075(SIM)) TP12RC	**02-Aug-2023**	**11-Aug-2023**	16-Aug-2023	✓	**15-Aug-2023**	20-Sep-2023	✓
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080) SS23C, TP12RC	**02-Aug-2023**	**10-Aug-2023**	16-Aug-2023	✓	**11-Aug-2023**	16-Aug-2023	✓
Soil Glass Jar - Unpreserved (EP071) SS23C, TP12RC	**02-Aug-2023**	**11-Aug-2023**	16-Aug-2023	✓	**13-Aug-2023**	20-Sep-2023	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions							
Soil Glass Jar - Unpreserved (EP080) SS23C, TP12RC	**02-Aug-2023**	**10-Aug-2023**	16-Aug-2023	✓	**11-Aug-2023**	16-Aug-2023	✓
Soil Glass Jar - Unpreserved (EP071) SS23C, TP12RC	**02-Aug-2023**	**11-Aug-2023**	16-Aug-2023	✓	**13-Aug-2023**	20-Sep-2023	✓
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080) SS23C, TP12RC	**02-Aug-2023**	**10-Aug-2023**	16-Aug-2023	✓	**11-Aug-2023**	16-Aug-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	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
PAH/Phenols (SIM)	EP075(SIM)	1	6	**16.67**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	4	**25.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	10	**10.00**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**10.00**	✓	NEPM 2013 B3 & ALS QC Standard
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	6	**16.67**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Pesticides by GCMS	EP068	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Polychlorinated Biphenyls (PCB)	EP066	1	4	**25.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Mercury by FIMS	EG035T	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
Total Metals by ICP-AES	EG005T	1	10	**10.00**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH - Semivolatile Fraction	EP071	1	3	**33.33**	**5.00**	✓	NEPM 2013 B3 & ALS QC Standard
TRH Volatiles/BTEX	EP080	1	8	**12.50**	**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).
Asbestos Identification in Soils	EA200	SOIL	AS 4964 Method for the qualitative identification of asbestos in bulk samples Analysis by Polarised Light Microscopy including dispersion staining
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 (SnCl2) (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 SnCl2 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.

Preparation Methods	Method	Matrix	Method Descriptions
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.

Preparation Methods	*Method*	*Matrix*	*Method Descriptions*
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.

SAMPLE RECEIPT NOTIFICATION (SRN)

Work Order	: **EB2324484**		
Client	: **EASTERLY POINT ENVIRONMENTAL PTY LTD**	Laboratory	: Environmental Division Brisbane
Contact	: MR MARC SALMON	Contact	: Customer Services EB
Address	: PO BOX 2363 BYRON BAY NSW, AUSTRALIA 2481	Address	: 2 Byth Street Stafford QLD Australia 4053
E-mail	: marc@easterlypoint.com	E-mail	: ALSEnviro.Brisbane@alsglobal.com
Telephone	: +61 02 6685 6681	Telephone	: +61-7-3243 7222
Facsimile	: ----	Facsimile	: +61-7-3243 7218
Project	: 23034.2 Momentum, Johnston St, Casino NSW	Page	: 1 of 2
Order number	: ----	Quote number	: EB2017EASPOI0001 (EN/333)
C-O-C number	: ----	QC Level	: NEPM 2013 B3 & ALS QC Standard
Site	: ----		
Sampler	: ATorre, MSalmon		

Dates

Date Samples Received	: 09-Aug-2023 15:45	Issue Date	: 09-Aug-2023
Client Requested Due Date	: 18-Aug-2023	Scheduled Reporting Date	: **18-Aug-2023**

Delivery Details

Mode of Delivery	: Carrier	Security Seal	: Intact.
No. of coolers/boxes	: 1	Temperature	: 9.3°C - Ice Bricks present
Receipt Detail	: MEDIUM HARD ESKY	No. of samples received / analysed	: 4 / 4

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
- Discounted Package Prices apply only when specific ALS Group Codes ('W', 'S', 'NT' suites) are referenced on COCs.
- **Asbestos analysis will be conducted by ALS Environmental, Melbourne, NATA accreditation No. 825, Site No. 13778.**
- Please direct any turn around / technical queries to the laboratory contact designated above.
- Sample Disposal - Aqueous (3 weeks), Solid (2 months ± 1 week) from receipt of samples.
- Analysis will be conducted by ALS Environmental, Brisbane, NATA accreditation no. 825, Site No. 818 (Micro site no. 18958).
- **Breaches in recommended extraction / analysis holding times (if any) are displayed overleaf in the Proactive Holding Time Report table.**
- 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.
- **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 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 - EA200 Asbestos Identification in Soils -	SOIL - S-02 8 Metals (incl. Digestion)	SOIL - S-13 OC/OP/PCB	SOIL - S-27 TRH/BTEXN/PAH/Phenols/8Metals
EB2324484-001	02-Aug-2023 00:00	SS16C	✓		✓		
EB2324484-002	02-Aug-2023 00:00	SS23C	✓	✓		✓	✓
EB2324484-003	02-Aug-2023 00:00	TP07RC	✓		✓		
EB2324484-004	02-Aug-2023 00:00	TP12RC	✓	✓		✓	✓

Proactive Holding Time Report

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

Requested Deliverables

ANDRE

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

MARC SALMON

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

RESULTS ADDRESS

- A4 - AU Tax Invoice (INV)	Email	office@easterlypoint.com

Inter-Laboratory Testing

Analysis conducted by ALS Melbourne, NATA accreditation no. 825, site no. 13778 (Chemistry).

(SOIL) EA200: AS 4964 - 2004 Identification of Asbestos in Soils

1014703

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☑ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental	Project №	23034.2 COC 1 of 4	Project Manager	Marc Salmon
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481	Project Name	Momentum, Johnston St, Casino NSW	EDD Format (ESdat, EQuIS etc)	Excel
Contact Name	Marc Salmon			Sampler(s)	MSalmon, ATorre
Phone №	M. 0419 985 090 T.02 6685 6681			Handed over by	
Special Directions				Email for Invoice	office@easterlypoint.com
Purchase Order				Email for Results	marc@easterlypoint.com, andre@easterlypoint.com
Quote ID №					

Analyses: Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers: Change container type & size if necessary.

Required Turnaround Time (TAT): Default will be 5 days if not ticked. ♦Surcharge will apply
☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☑ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 - OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	ON HOLD	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	SS14A	2/08/23	S	X											1		
2	SS15A	2/8/23	S	X											1		
3	SS16A	2/8/23	S	X											1		
4	SS16B	2/8/23	S	X											1		
5	SS16C	2/8/23	S	X											1		Please send to secondary laboratory ALS for analysis
6	SS17A	2/8/23	S		X	X	X								1	1	
7	SS17B	2/8/23	S					X							1	1	
8	SS17C	2/8/23	S					X							1	1	
9	SS18A	2/8/23	S	X											1		
10	SS19A	2/8/23	S	X											1		
	Total Counts			7	1	1	1	2							10	3	

Date/Time: 6/8/23 11:45am
Temp: 7.7 / 7.5
Correction: 02
Final Temp: DF

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Signature	Date	Time
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature	Date	Time	Report №

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

- ☐ Sydney Laboratory — Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066 — 02 9900 8400 — EnviroSampleNSW@eurofins.com
- ☑ Brisbane Laboratory — Unit 1 21 Smallwood Place Murarrie QLD 4172 — 07 3902 4600 — EnviroSampleQLD@eurofins.com
- ☐ Perth Laboratory — Unit 2 91 Leach Highway Kewdale WA 6105 — 08 9251 9600 — EnviroSampleWA@eurofins.com
- ☐ Melbourne Laboratory — 2 Kingston Town Close Oakleigh VIC 3166 — 03 8564 5000 — EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481
Contact Name	Marc Salmon
Phone №	M. 0419 985 090 T.02 6685 6681
Special Directions	
Purchase Order	
Quote ID №	
Project №	23034.2 COC 2 of 4
Project Name	Momentum, Johnston St, Casino NSW
Project Manager	Marc Salmon
EDD Format	Excel
Sampler(s)	MSalmon, ATorre
Handed over by	
Email for Invoice	office@easterlypoint.com
Email for Results	marc@easterlypoint.com, andre@easterlypoint.com

Required Turnaround Time (TAT) Default will be 5 days if not ticked

♦Surcharge will apply

- ☐ Overnight (reporting by 9am)♦
- ☐ Same day♦ ☐ 1 day♦
- ☐ 2 days♦ ☐ 3 days♦
- ☑ 5 days (Standard)
- ☐ Other( )

Analyses: Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing

Containers: Change container type & size if necessary

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 – OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	ON HOLD	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	SS20A	2/08/23	S	X											1		
2	SS21A	2/8/23	S	X											1		
3	SS22A	2/8/23	S	X											1		
4	SS23A	2/8/23	S		X	X	X								1	1	
5	SS23B	2/8/23	S		X	X	X								1	1	
6	SS23C	2/8/23	S		X	X	X								1	1	Please send to secondary laboratory ALS for analysis
7	SS24A	2/8/23	S	X											1		
8	SS25A	2/8/23	S	X											1		
9	SS26A	2/8/23	S	X											1		
10	SS27A	2/8/23	S	X											1		
	Total Counts			7	3	3	3								10	3	

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name	Signature	Date	Time
Eurofins | mgt Laboratory Use Only	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Temperature
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Report №

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CHAIN OF CUSTODY RECORD

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Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental	Project №	23034.2 COC 3 of 4	Project Manager	Marc Salmon
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481	Project Name	Momentum, Johnston St, Casino NSW	EDD Format (ESdat, EQuIS etc)	Excel
Contact Name	Marc Salmon			Sampler(s)	MSalmon, ATorre
Phone №	M. 0419 985 090 T.02 6685 6681			Handed over by	
Special Directions				Email for Invoice	office@easterlypoint.com
Purchase Order				Email for Results	marc@easterlypoint.com, andre@easterlypoint.com
Quote ID №					

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing.

Containers — Change container type & size if necessary

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 – OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	ON HOLD	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	SS28A	2/08/23	S	X											1		
2	SS29A	2/8/23	S	X											1		
3	SS30A	2/8/23	S	X											1		
4	SS31A	2/8/23	S	X											1		
5	SS32A	2/8/23	S		X	X	X								1	1	
6	SS33A	2/8/23	S		X	X	X								1	1	
7	SS34A	2/8/23	S		X	X	X								1	1	
8	SS35A	2/8/23	S	X											1		
9	SS36A	2/8/23	S		X	X	X								1	1	
10	SS37A	2/8/23	S	X											1		
	Total Counts			6	4	4	4								10	4	

Required Turnaround Time (TAT) — Default will be 5 days if not ticked. ♦Surcharge will apply

☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☑ 5 days (Standard)
☐ Other( )

Method of Shipment: ☑ Courier (#) ☐ Hand Delivered ☐ Postal Name Signature Date Time

Eurofins | mgt Laboratory Use Only						
Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Temperature
Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Report №

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld.F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☑ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
2 Kingston Town Close Oakleigh VIC 3166
03 8564 5000 EnviroSampleVic@eurofins.com

Company	Easterly Point Environmental	Project №	23034.2 COC 4 of 4
Address	Unit 1, 64 Kingsley Street Byron Bay NSW 2481	Project Name	Momentum, Johnston St, Casino NSW
Contact Name	Marc Salmon	Project Manager	Marc Salmon
Phone №	M. 0419 985 090 T.02 6685 6681	EDD Format (Excel, EQuIS etc.)	Excel
Special Directions		Sampler(s)	MSalmon, ATorre
Purchase Order		Handed over by	
Quote ID №		Email for Invoice	office@easterlypoint.com
		Email for Results	marc@easterlypoint.com, andre@easterlypoint.com

Analyses (Where metals are requested, please specify "Total" or "Filtered". SUITE codes must be listed to ensure correct testing)

Containers (Change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked)

♦ Surcharge will apply
☐ Overnight (reporting by 9am)♦
☐ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☑ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix Solid (S) Water (W)	M8 (8-metals)	B7A - TRH/BTEXN/PAH/Phenols/8 metals	B15 – OC/OP/PCB	Asbestos Identification in Soil (AS 4964)	ON HOLD	TRHs C6-C10/BTEXN	500mL Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL VOA vial	500mL PFAS Bottle	Jar (Glass or HDPE)	Other (Asbestos AS4964, WA Guidelines)	Sample Comments / Dangerous Goods Hazard Warning
1	TP07RA	2/08/23	S	X												1		
2	TP07RB	2/8/23	S	X												1		
3	TP07RC	2/8/23	S	X												1		Please send to secondary laboratory for analysis
4	TP12RA	2/8/23	S		X	X	X									1	1	
5	TP12RB	2/8/23	S		X	X	X									1	1	
6	TP12RC	2/8/23	S		X	X	X									1	1	Please send to secondary laboratory for analysis
7	RB	2/8/23	W		X	X						1	1	2				
8	TS	2/8/23	S						X					1				
9	TB	2/8/23	S						X					2				
10																		
	Total Counts			3	4	4	3		2			1	1	5		6	3	

Method of Shipment	☑ Courier (#)	☐ Hand Delivered	☐ Postal	Name		Signature		Date		Time	
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Temperature	
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date		Time		Report №	