REVISED REMEDIAL ACTION PLAN

Proposed Poultry Production Farm
Rushes Creek Road, Rushes Creek, NSW

Prepared for:

ProTen Tamworth Pty Ltd
PO Box 1746
North Sydney, NSW 2060

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with ProTen Tamworth Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.30237.00000-R01-v2.1	22 April 2021	Jason Roesler	James Elliot	Hugh Selby
610.30237.00000-R01-v2.0	12 April 2021	Jason Roesler	James Elliot	Hugh Selby

EXECUTIVE SUMMARY

SLR Consulting Pty Ltd (SLR) was engaged by ProTen Tamworth Pty Limited (ProTen) to review and revise the Remedial Action Plan (RAP) previously approved for the proposed poultry production farm located at Rushes Creek Road, Rushes Creek, NSW (the site). The proposed remedial area within the site is currently vacant and is located beside an old abandoned sheep holding shed. The remedial area covers approximately 700 m^2, occupying a small portion of Lot 165 of Deposited Plan (DP) 752169.

Development on the site is proposed to include four individual poultry farms, eight new residential houses, and various other support/servicing infrastructure items. This development was granted Development Consent SSD 7704 by the Department of Planning Industry and Environment (DPIE) (as delegate for the Minister) on 16 April 2020.

This revised RAP has been developed based upon data acquired and recommendations made in SLR's Detailed Site Investigation (DSI) prepared for the site which identified arsenic contamination above applicable human health screening/investigation levels adjacent to a former sheep dip, along with further consideration and consultation with the Environment Protection Authority (EPA) regarding an alternative preferred remediation approach to what was originally proposed and approved.

The primary remedial goal for this site is to remediate the identified arsenic impacted soil to a level that does not present an unacceptable human health exposure risk and to render the site suitable for the proposed land use. Therefore, the key objectives of the revised RAP are to effectively remediate arsenic impacted soil to HIL-A (ie. standard residential with garden/accessible soil) and to ensure remedial works will generally comply with the NSW EPA 2017 *Guidelines for the NSW Site Auditor Scheme*.

Following a review of feasible remedial options for the site and the agreement with the client, the alternative preferred remedial strategy is to cap and contain the arsenic contaminated soil.

Based on a statistical analysis of analytical results from the DSI (SLR 2019), it is estimated that an area of approximately 700m^2 will require capping to attain the remedial objective.

Based on the information available in the contamination assessment reports, SLR considers that soils on the site can be made suitable for the proposed land use, subject to implementation of the measures outlined in this revised RAP.

CONTENTS

CONTENTS

CONTENTS

CONTENTS

DOCUMENT REFERENCES

TABLES

APPENDICES

1 Introduction

SLR Consulting Pty Ltd (SLR) was engaged by ProTen Tamworth Pty Limited (ProTen) to review and revise the Remedial Action Plan (RAP) previously approved for soil impacted by arsenic near a former sheep dip at the proposed poultry production farm located at Rushes Creek Road, Rushes Creek, NSW (the site). The Rushes creek Poultry Production Farm was granted Development Consent SSD 7704 by the Department of Planning Industry and Environment (DPIE) (as delegate for the Minister) on 16 April 2020.

The site is bounded by Rushes Creek Road to the east and Ski Gardens Road to the north. The site locality and site layout have been identified in **Figure 1** and **Figure 2** in **Appendix A** respectively. Photographs of the area and material assessed have been presented in **Appendix B**.

2 Background

SLR understands the following with respect to the proposed development approved under SSD 7704:

- The development site is comprised of 14 registered freehold lots (or part lots) and one section of unformed Council public road
- Development on the site is proposed to include:
  - Four individual poultry farms, each comprising between 10 and 18 poultry sheds (total of 54 poultry sheds) and associated support/servicing infrastructure
  - Various other support/servicing infrastructure items.

Environmental assessments were undertaken to support the proposed development, with a preliminary site investigation (PSI) and a detailed site investigation (DSI) undertaken by SLR in 2018 and 2019 respectively.

2.1 Previous Investigations

2.1.1 Preliminary Site Investigation

The PSI undertaken by SLR titled '*Stage 1 Preliminary Site Investigation Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek*' dated July 2018 (SLR 2018) concluded that:

- An area of environmental concern (AEC) was identified for the site (former sheep dip)
- Further investigation works are required.

Following exhibition of the Environmental Impact Statement (EIS), the Department of Planning, Industry and Environment (now DPIE) and the Environment Protection Authority (EPA) requested that a DSI be undertaken to assess the identified AEC prior to determination of the Development Application (DA).

2.1.2 Detailed Site Investigation

The DSI undertaken by SLR titled '*Detailed Site Investigation Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek NSW*' dated February 2019 (SLR 2019) concluded the following

- Analytical results indicate that arsenic in soil, likely to be associated with the former sheep dip, is elevated above the relevant soil health investigation level (HIL) for standard residential with garden/accessible soil (HIL-A) guideline value in the National Environmental Protection Council's *National Environmental Protection (Assessment of Site Contamination) Measure*, as amended in 2013 (NEPM 2013)
- Soil sampling undertaken as part of the DSI has delineated the arsenic contamination to the north and south of the sheep dip, with low concentrations still exceeding the HIL-A guideline extending beyond the limit of the assessment to the east (assessment limited by the site shed) and to the west (with concentrations not expected to extend more than 10 metres west given the reducing concentrations from the source)
- Based on the guidance provided in NEPM 2013, SLR considers that the arsenic in soils contamination at the site presents an unacceptable risk to present and future site users, particularly during the proposed site redevelopment. Therefore, the arsenic identified in soils at the site is considered to warrant remedial action.

A groundwater assessment was not undertaken as part of the DSI due to the limited leaching potential of the identified arsenic (confirmed with toxicity characteristic leaching procedure analysis), the observed reduction in arsenic concentrations in soil with depth, and the anticipated depth of groundwater.

2.1.3 Remedial Action Plan

A RAP titled *Remedial Action Plan Proposed Poultry Production Farm Rushes Creek Road, Rushes Creek, NSW* (SLR 2019) was prepared and approved as part of the development consent for the poultry farm. The remedial strategy detailed in the 2019 RAP was to excavate the arsenic contaminated soil and dispose of this material off-site at a facility licensed to receive the waste.

It has since been identified that the landfill at Kemps Creek on the western fringes of Sydney is the only landfill licensed in NSW to take the contaminated soil. Contractor pricing for the transport and disposal of the arsenic contaminated soil at Kemps Creek is not feasible. As such, an alternative remediation approach is now proposed in this revised RAP.

3 Objectives

This revised RAP has been developed to:

- Propose an alternative preferred remediation approach for the arsenic impacted soils to what was detailed and approved in the 2019 RAP, and
- Guide the management of the arsenic impacted soil in the area of the former sheep dip a manner that mitigates potential human health risks that may arise from the proposed poultry farm development.

The revised RAP has been prepared to ensure the remediation is undertaken in accordance with applicable legislation, codes of practice and guidelines, and ensure that the site is considered suitable for the proposed use.

Specifically, the key remediation objectives are as follows:

- To effectively remediate arsenic in soil contamination present at the site, allowing the site to be utilised for its proposed land use

- To ensure remedial works are undertaken in a manner that:
  - Is safe, with remediation works to be protective of human health and the environment
  - Prevents potential cross contamination with the implementation of appropriate controls
  - Adheres to applicable legislative requirements, including but not exclusively, the contaminated land planning guidelines and any guidelines in force under the *Contaminated Land Management Act* 1997
- To ensure that remediation documentation is kept to a standard that will generally comply with the NSW EPA *Contaminated Land Guidelines: Consultants Reporting on Contaminated Land* (2020)

4 Scope of Works

SLR undertook the following scope of work to address the project objectives:

- Review of available contamination related information pertaining to the remedial area
- Appraisal of applicable remediation options, in consideration of factors such as, but not limited to, costs, timing, and impact on proposed development work and the potential impact on the value of the development
- Identification of the preferred alternative remediation option
- Consideration of the steps and processes to be followed, to successfully implement the preferred alternative remediation option
- Identification of the validation requirements for the preferred alternative remediation option, to demonstrate that the remediation works have been conducted satisfactorily
- Preparation of this revised RAP.

5 Consultation

The following consultation activities have been undertaken by ProTen:

- **EPA** - the possibility of an alternative remediation approach comprising containment of the arsenic impacted soils on-site either in-situ or in a containment cell was raised with the EPA (Armidale office) in March 2021. The EPA verbally indicated that it would be happy to consider a revised RAP with on-site containment instead of off-site disposal. The EPA also indicated that there shouldn't be any reason that remediation works should hold up commencing construction given the arsenic impacted soil is not within the development disturbance footprint and is not considered high-risk.
- **DPIE** - the possibility of an alternative remediation approach comprising containment of the arsenic impacted soils on-site either in-situ or in a containment cell was raised with DPIE in March 2021. This engagement also queried the need for a modification to the development consent in relation to a revised RAP, with DPIE recommending ProTen to seek a modification to amend the previously approved 2019 RAP.

- **EPA** and **Council** - a copy of this revised RAP was forwarded via email to the Armidale EPA office and Tamworth Regional Council on 23 April 2021 for review and comment ahead of submitting the development modification application to DPIE.

6 Site Identification

The site locality and proposed remedial area have been identified in **Figure 1** and **Figure 2**, in **Appendix A** respectively.

The larger development site comprises the following land parcels:

- Lot 1 in DP 44215
- Part Lot 1 in DP 1108119
- Lot 1 in DP 1132298
- Lots 26, 85, 86, 101, 118, 165, 166 and 171 in DP 752169
- Part Lot 143 in DP 752189
- Lot 1 in DP 1132078
- Lot 1 in DP 1141148
- A section of unformed Council public road traversing through Lot 171 DP 752169.

The development site is irregular in shape and occupies an area of approximately 1,016 hectares. The remedial area is an unsealed area of the site at and adjacent to the former sheep dip, located beside an old abandoned sheep holding shed. The remedial area covers approximately 700 m^2, occupying a small portion of Lot 165 of Deposited Plan (DP) 752169.

6.1 Regional Geology

The NSW Government *Manilla 1: 100,000 Geological Sheet 9036*, First edition, 2013, indicates that the site is likely to be underlain primarily by Upper Devonian Mandowa Mudstone, comprising thinly bedded laminated and massive mudstone with subordinate, thin siltstone and fine-grained sandstone beds.

6.2 Site Lithology

The generalised lithology encountered at the site during the DSI (SLR 2019) can be described as:

- Topsoil: Dark brown loam topsoil was generally encountered from surface to approximately 0.1m in depth. The topsoil was generally described to be soft, dry, with low plasticity, and with vegetation present at the surface
- Silty Clay: From depths of 0.1m to 0.7m, silty clay soil was present and can be generally described as brown to reddish brown, soft, dry, with low plasticity, with presence of angular to sub-angular shale (10-30mm) at lower depths (0.5-0.7m)

- Shale: From depths of 0.6m to 1.3m is the presence of angular to sub-angular shale (20-50mm). It is noted that excavator refusal was typically encountered at depths of 0.9m to 1.3m due to very stiff shale.

Details of the lithology encountered during the DSI (SLR 2019) have been presented in logs and included in **Appendix C**.

6.3 Hydrogeology

The nearest significant surface water features to the remedial area are:

- Rushes Creek, located approximately 614m to the east
- Namoi River, located approximately 3.7km to the west and 2.3km to the north
- Lake Keepit, located approximately 3.1km to the west (dam full supply level).

A search of the NSW Government's online groundwater works database as part of the DSI (SLR 2019) identified five registered groundwater bores within 1000m of the former sheep dip location. The groundwater bore search information has been summarised in the table below.

Table 6-1 Groundwater bores within 1000m of the proposed remediation area

Approximate distance from site	Direction from site	Borehole Number	Latitude / Longitude	Authorised/Intended Purpose	Final Depth	Salinity	Standing Water Level
95m	SE	GW967889	-30.814734 150.598204	Stock, Domestic	67m	-	14m
175m	E	GW011498	-30.813981 150.599741	Not Known	24.4m	-	-
700m	NW	GW967028	-30.809817 150.592187	Stock	55m	-	17.3m
790m	NE	GW009093	-30.81037 150.605018	Not Known	8.5m	Brackish	-
790m	NE	GW038206	-30.81037 150.605018	Not Known	12.8m	-	-

Groundwater was not assessed during previous investigations due to the limited leaching potential of the identified arsenic (confirmed with Toxicity Characteristic Leaching Procedure analysis), the observed reduction in concentration within a shallow depth, the clay rich soils and the anticipated depth of groundwater. Further discussion on why the arsenic impacted soils do not pose a risk to groundwater are provided in **Section 7.3**.

6.4 Topography

A review of the overall development site's topography conducted using Google Earth topographical data suggests that the site is relatively flat, ranging between around 325 m Australian Height Datum (AHD) and 410m AHD, with typical grades of 2% (2m in every 100m). The proposed remediation area has an elevation of approximately 373-374m AHD.

6.5 Acid Sulfate Soils

A review of the Australia Soil Resource Information System (ASRIS) indicated that there was no known occurrence of acid sulfate soils at or within the immediate vicinity of the proposed remediation area.

7 Revised Remedial Action Plan

7.1 Remedial Goal

The primary remedial goal for this site is to reduce the risk posed to human and environmental receptors in the proposed development from the identified arsenic impacted soil.

Given the proposed development includes residential housing (considered to be low density), the criteria applied to the remediation would be the National Environmental Protection Council's *National Environmental Protection (Assessment of Site Contamination) Measure*, as amended in 2013 (NEPM 2013) 'Schedule B1 – *Guideline on Investigation Levels for Soil and Groundwater*'. The NEPM 2013 guidelines provide a framework for the use of investigation and screening levels based on human health and ecological risks.

The soil health investigation levels (HILs) detailed in the NEPM (2013) are scientifically based, generic assessment criteria designed to be used in the initial screening of data for assessment of potential risks to human health from chronic exposure to contaminants. The following HILs are referenced in the NEPM (2013) guidelines:

- HIL-A includes standard residential with garden/accessible soil
- HIL-B includes residential with minimal opportunities for soil access, includes dwellings with fully and permanently paved yard space such as high-rise buildings and flats
- HIL-C includes developed open space such as parks, playground, playing fields (e.g. ovals), secondary schools and footpaths and
- HIL-D includes commercial/industrial premises such as shops, offices, factories and industrial sites.

In consideration of the site's proposed land use, the remedial action criteria (RAC) has been selected based upon a residential (HIL-A) land use, which is considered to be the most conservative approach.

Soils exceeding the adopted RAC will require to be remediated and/or managed.

7.2 Extent of Remediation Required

Remedial works are required for the arsenic impacted soil material within the vicinity of the former sheep dip.

The lateral extent of elevated arsenic detected during the DSI (SLR 2019) has been presented in the following of **Appendix A**:

- **Figure 3** (upper portion of the remedial area 0.1-0.2 metres below ground level [mbgl]),
- **Figure 4** (intermediate portion of the remedial area 0.6-0.8 mbgl) and;
- **Figure 5** (deep portion of the remedial area 0.9-1.3 mbgl) with the extent presented based on exceedance of the adopted HIL-A guideline value of 100 mg/kg.

The maximum depth of elevated arsenic contamination detected during the DSI (SLR 2019) was at 1.2 mbgl, which was the depth of practical refusal (on weathered shale) with the small excavator utilised. Noting that concentrations of arsenic decreased with depth.

The extent of shallow arsenic contamination may also extend beneath the former sheep holding shed located immediately to the east of the former sheep dip site.

7.3 Risk to Underlying Groundwater

The nearest groundwater extraction bore is located approximately 95m southeast of the remediation area. The bore which was drilled to approximately 65 mbgl, had a water bearing zone logged at 14mbgl, however, no extraction from this depth was noted.

Bore drill logs for the site indicate the presence of weathered regolith (saprolite) recorded as clay lithology. This layer, where logged, is between 0.5 and 3 m thick approximately 2 m below the surface layer restricting downward migration of water into the groundwater system, immediately above competent basement rocks.

Numerous groundwater bore installations are proposed as part of the site development for extraction purposes. It is noted that the nearest purposed groundwater bore is approximately 800m north-west of the site, having an approximate constructed depth of approximately 180mbgl with uppermost 50m containing cement grout to prevent overlying aquifer intrusion.

The closest downgradient surface water body is 3.1 km to the west of the site and is unlikely to impacted by contamination contained on-site.

Mobilisation of the arsenic contamination is considered to be low, as analysis results included in the DSI indicated low leachability of the arsenic impacted soils. Arsenic leachability analysis indicated a mean of 0.57 mg/L and a maximum value of 4.80 mg/L, which is lower than the NSW EPA 2014 General Solid Waste TCLP1 (leached) criteria (5.0mg/L).

Additionally, SLR referred to the US EPA (EPA 2009) regulatory threshold for the toxicity characteristic of leachable arsenic of 5.00 mg/L. The leachability of arsenic is below 5.00 mg/L (as measured by the toxicity characteristic leaching procedure [TCLP]), which is a common treatment goal for soil and waste in accordance with Resource Conservation and Recovery Act (RCRA, 1976).

Given the low leachability of the arsenic impacted soil, the depth to groundwater, the distance to the nearest surface water body, the risk to groundwater from the arsenic impacted soil is considered to be low.

7.4 Remedial Options

A number of remedial options were considered for the arsenic contaminated soils at the site. In consideration of the proposed land use and fiscal viability, the remedial options outlined in the following options are considered appropriate to remediate the site.

7.4.1 Excavation and Off-Site Disposal

Off-site disposal to an appropriately licensed landfill facility was originally proposed and approved as part of the 2019 RAP to remediate the site. It has since been identified that the landfill at Kemps Creek on the western fringes of Sydney is the only landfill licensed in NSW to take the contaminated soil. Based on contractor pricing for the transport and disposal of the arsenic contaminated soil at Kemps Creek, this option is now the least fiscally viable due to the sites' remote location and the distance to Kemps Creek. The waste hierarchy, which underpins the objectives of the Waste Avoidance and Resource Recovery Act 2001, also promotes the diversion of waste from landfill disposal, therefore making disposal to landfill less preferable.

7.4.2 On-Site Management – Cap and Contain

Arsenic contaminated soil identified at the site could be managed using a cap and contain methodology, with the construction of a suitable barrier to reduce the likelihood of exposure of potential receptors to the underlying arsenic impacted soil. To achieve this remedial option, an adequately sized containment cap would need to be constructed at the site. Ongoing management of the cap, via an Environmental Management Plan (EMP), would be required.

The containment cap would provide a barrier between the impacted soil and site users. The cap would include a low permeability cover layer to reduce surface water infiltration, thus minimising the potential for arsenic to leach from the soils, providing additional protection to groundwater. However, given the low risk to groundwater (refer **Section 7.3**), groundwater protection is not the driver for remediation.

The onsite management option would include the creation of an exclusion perimeter with appropriate signage to further reduce the likelihood of exposure of potential receptors.

Additionally, mechanisms to prevent development and disturbance in the future would be required, such as identification/registration of the area on the following:

- The site's Section 10.7 council planning certificate
- Certificate of title
- Planning authority tools such as Council's GIS
- Dial Before You Dig and
- Other relevant planning/environmental databases.

A cap and contain methodology is considered to be the preferred remedial option based on human and ecological health risk potential, fiscal viability and the long-term site use.

7.5 Remedial Strategy

Based on the discussions with the client, consultation with the EPA, the risks posed to potential receptors including humans at the site and groundwater, and in consideration of the proposed development, the preferred alternative remedial strategy is on-site containment of arsenic contaminated soil.

8 Remedial Sequence of Works

8.1 Preparatory Works

8.1.1 Approvals and Notifications

The remediation of soil impacted with arsenic is considered Category 2 remediation works.

As outlined in the *State Environment Planning Policy No 55 – Remediation of Land*, where Category 2 remediation work is proposed to be carried out on any land, notice of the proposed work must be issued to the council for the local government area in which the land is situated.

The notice must be given at least 30 days before the commencement of the work and must include the following:

- be in writing, and provide the name, address and telephone number of the person who has the duty of ensuring that the notice is given
- briefly describe the remediation work
- show why the person considers that the work is Category 2 remediation work
- specify, by reference to its property description and street address (if any), the land on which the work is to be carried out
- provide a map of the location of the land and
- provide estimates of the dates for the commencement and completion of the work.

A notice of completion of remediation work on any land must be given to the council for the local government area in which the land is situated within 30 days after the completion of the work. A validation report, detailing the works undertaken will also be issued to the council within 30 days of completion of remediation work. Details to be included in the validation report have been outlined in **Section 8**.

8.1.2 Site Establishment

The remediation contractor will mobilise plant and equipment appropriate to the nature and extent of the project.

Site establishment will include the setup of remediation works zones with appropriate fencing, barriers and signage to delineate the zone from other work areas and set up and implementation of the environmental controls specified in this RAP.

8.1.3 Underground and Overhead Services

All services on the site will be required to be identified prior to remediation works and terminated or re-directed if required.

8.1.4 Demolition and Removal of Sheep Holding Shed

The demolition and removal of the existing sheep holding shed within the remedial area indicated on **Figure 6** in **Appendix A** is required to enable delineation of contamination within the shed area to determine extent of capping.

8.1.5 Delineation of Capping

The extent of the remedial area will be guided by laboratory analysis of delineation samples subsequent to demolition and removal of the sheep holding sheep. Samples are to be collected from near surface (0.0-0.1 mbgl) extending from west from TP15 (2 samples) and east from TP 17 (3 samples) as indicated in **Figure 6** in **Appendix A**. The remediation capping will be extended as required until the selected validation criteria are satisfied.

8.1.6 Site Surveying

Site survey is required to be conducted prior to the commencement of capping works to establish the base level and to mark out the extents of the cap. The base level survey would be used to determine the elevations and extents of each layer for use by the contractor.

Survey would also be required upon completion of each capping layer to validate the capping layers have achieved the desired thickness, grade and extent. The survey would need to show thickness of each layer perpendicular to the slope and take readings at a maximum of 10 m centres.

8.2 Remedial Works

A summary of the layers and stages included in the cap is provided in the following.

8.2.1 Vegetation removal

Prior to the placement of any material for the cap, vegetation in the remedial area needs to be removed to the extent practical without disturbing the impacted soil. This will include:

- mowing the area as close to ground level as possible and
- covering area with weed matting.

8.2.2 Capping Construction

The remedial area should be capped in accordance with **Figure 7** of **Appendix A**. Layers of the capping are summarised in **Table 8-1** and outlined in the sections below. The cap should be a minimum of 5 % grade to enable surface water runoff, and a maximum of 20% grade to reduce the likelihood of erosion.

Table 8-1 Remedial Area Capping Summary (from bottom to top)

Capping Layer No.	Description
Layer 1 – Earthen Cover Layer	Typically, a clay rich layer of cover soil and minimum of 0.30 m thick. This layer thickness is proposed to be increased in thickness to achieve final design grades.
Layer 2 – Low Permeability Compacted Clay	Typically, onsite silty clays without boulders and minimum of 0.30 m thick.
Layer 3 - Upper Subsoil	Typically, a sandy clay sub-base minimum 0.50 m thick
Layer 4 – Topsoil Layer	Typically, 0.20 m thick
Total	**1.30 m thick (min)**

8.2.2.1 Earth Cover Layer Construction

The earth cover layer will be placed over the weed mat and thickened as required to achieve final cap grades. It will act as a working platform for construction of the low permeability clay layer. The layer should include site won clay rich soils, with no material greater than 150 mm, and not more than 20% of the material having dimensions greater than 40 mm.

The layer shall be compacted in maximum 200 mm (compacted) layer thickness.

8.2.2.2 Low Permeability Compacted Clay Cover Layer Construction

The low permeability compacted clay layer will be placed over the earth cover layer to and will act to reduce surface water infiltration into the remedial area. The layer should include site won clay rich soils, capable of achieving a permeability of 1 $x10^{-8}$ or lower. The clay should be free of material greater than 40 mm. The layer should be a minimum of 0.3 m thickness.

The layer shall be compacted in maximum 200 mm (compacted) layer thickness. The soil should be moisture conditioned during placement to make it workable into a uniform layer. The lower layer shall be scarified prior to placement of the overlying layer to assist in developing a uniform clay layer. The layer shall be compacted using a vibrating pad foot roller or similar, , and each layer scarified prior to placement of the overlying layers.

The clay layers shall be covered soon after placement to ensure they do not dry out and crack.

8.2.2.3 Upper Subsoil Layer

The upper subsoil layer will be placed over the low permeability compacted clay layer. It will act as a protection layer over the compacted clay and provide additional thickness between receptors and the arsenic impacted soil. The layer should be a sandy clay or silt, with no material greater than 150 mm.

The layer shall be compacted in maximum 200 mm (compacted) layer thickness.

8.2.2.4 Topsoil layer Placement

The topsoil layer will be placed over the upper subsoil layer. It will accommodate shallow rooted vegetation. It could be a compost layer (in accordance with AS 4454), and must be free of material greater than 150 mm. It should be capable of supporting vegetation. The topsoil layer shall be a minimum of 0.2 m thick and be loosely placed and not compacted.

8.2.3 Vegetation Establishment

The entire topsoil layer shall be vegetated with grasses. Vegetation should not include species with roots that could penetrate the upper subsoil layer. Where possible, the grasses should be native and be similar to existing grasses at the Site.

8.2.4 Perimeter Fencing and Signage

The remedial area shall be secured with perimeter fencing and associated signage to be constructed to be:

- Vermin proof

- Outside of the remedial area
- Include signage identifying arsenic impacted soil and that no excavation can occur, and contact details of relevant authorities and parties should access be required.

The remedial area will require access for maintenance and mowing and should include a locked gate that can accommodate mowing equipment and plant that may be required for maintenance works in the future (if required).

8.3 Registration/Identification of Area

Given the presence of arsenic impacted soil, all efforts must be made to activate mechanisms that will prevent disturbance of the area. These include identification/registration of the area on the following:

- The site's Section 10.7 council planning certificate
- Certificate of title
- Planning authority tools such as Council's GIS
- Dial Before You Dig
- NSW EPA contaminated land register and
- Other relevant planning/environmental databases.

8.4 Imported Soil Material

Capping soil material can be virgin excavated natural material (VENM) sourced from within the site or from an off-site source. Imported VENM from an off-site source is to be accompanied by a certificate prepared by a suitably qualified consultant verifying that the material is VENM. The VENM certificate should be reviewed and approved by a suitably qualified environmental consultant and the VENM material should be inspected by a suitably qualified environmental consultant prior to placement.

8.5 Environmental Management Plan

An EMP will be required for the remedial area, and will be prepared at the completion of the remediation and validation work. It will include the validation report as an attachment and will document the necessary management requirements for the remedial area and associated responsible parties.

8.6 Unexpected Finds Protocol

The assessments to date have not indicated the presence of significant soil contamination that would preclude the proposed remedial activities and methodology. However, it is possible that, yet unidentified contamination is present within the fill material/subsurface of the site.

Potentially hazardous substances could include, but are not limited to:

- Underground storage tanks
- Buried containers and drums
- Phase separated hydrocarbons

- Asbestos containing materials
- Powders and other suspicious buried material and
- Evidence of contamination including significant staining, odours and discolouration.

SLR has prepared a detailed Unexpected Finds Procedure for inclusion in the Construction Environmental Management Plan (CEMP) for the poultry farm development in accordance with condition B50 of Development Consent SSD 7704. In summary, in the event that any material suspected of containing potentially hazardous substances is found during remediation works, the following steps will be followed:

1. The environmental consultant and relevant authorities will be consulted immediately for assessment and advice.
2. The area of concern will be cordoned off.
3. Appropriate environmental management measures will be implemented until the assessment is completed and further advice is received from the consultant.
4. The environmental consultant will undertake any necessary assessment and provide advice on a strategy to manage the identified unexpected contamination.
5. The RAP may require revision depending on the findings and proposed management strategy.

8.7 Remediation Contingency Plan

Based on potential uncertainties associated with soil remediation works of this nature, the situations and contingencies presented in **Table 8-2** will be considered during remediation works.

Table 8-2 Remediation Contingency Measures

Situation	Contingency Measure	Potential for Occurrence
Encountering yet unidentified contamination	The identified contamination (the nature and extent) will be assessed by a qualified and experienced environmental consultant, such that it can be appropriately remediated	Low potential to encounter yet unidentified contamination
Volumes of contaminated material being significantly greater than anticipated	Extension of capped area	Low potential to occur based on the delineation data from DSI (SLR 2019)

9 Validation

9.1 Validation Criteria

9.1.1 Health Screening Levels – Arsenic

To ensure that remaining soil following remedial works is considered suitable for the proposed development, reference will primarily be made to the NEPM 2013 HIL-A guideline as outlined in **Section 6.1**.

Soils exceeding the adopted RAC will require to be included in the remedial area.

9.1.2 Aesthetics

The NEPM (2013) requires that aesthetic quality of accessible soils be considered even if testing suggests that the concentrations of contaminants of concern are within acceptable limits.

No specific numerical guidelines have been assigned for aesthetics. However, NEPM (2013) indicates that professional judgement with regard to quantity, type and distribution of foreign material and/or odours in relation to the specific land use and its sensitivity will be employed.

The following circumstances are considered likely to trigger further aesthetic assessment:

- Highly malodorous soils (e.g. strong residual petroleum hydrocarbon odours, hydrogen sulphide in soil or extracted groundwater, organo-sulfur compounds)
- Discoloured chemical deposits or soil staining with chemical waste other than of a very minor nature
- Large monolithic deposits of otherwise low risk material, e.g. gypsum as powder or plasterboard, cement kiln dust
- Presence of putrescible refuse including material that may generate hazardous levels of methane and
- Soils containing residue from animal burial.
- Asbestos containing materials

In arriving at a balanced assessment, the presence of small quantities of non-hazardous inert material and low odour residue (for example, weak petroleum hydrocarbon odours) that will decrease over time, should not be a cause of concern or limit the use of a site in most circumstances. Similarly, sites with large quantities of well-covered known inert materials that present no health hazards such as brick fragments and cement wastes (for example, broken cement blocks) are usually of low concern for both non-sensitive and sensitive land uses.

Given the results from the DSI, it is considered unlikely that soil will require additional remediation based on aesthetic observations.

9.2 Construction Quality Assurance

Independent verification of construction by a suitably experience person is required throughout remedial activities. This should include:

- Survey (or other method) of each layer to demonstrate layer thickness, elevation and grade at maximum of 10m centres
- Preconstruction permeability testing of clay material for sue in the low permeability compacted clay layer
- Particle size distribution testing of each soil layer prior to construction
- Contamination testing of any imported soil
- Photographs of each layer following construction
- Inspection of the surface prior to placement of earth cover layer, during construction of low permeability clay layer, and following vegetation establishment
- Review of survey data for each layer to confirm layer thickness

- Review of clay testing results
- Preparation of construction validation report detailing all elements of construction, and detailing any variations to the design

9.3 Validation Reporting

Following the completion of all remediation activities, a validation report will be prepared in accordance with NSW EPA 2020, '*Contaminated Land Guidelines: Consultants Reporting on Contaminated Land*'.

The validation report will include the following:

- Executive summary
- Scope of work
- Site identification
- Summary of site history
- Summary of site condition and surrounding environment
- Summary of geology and hydrogeology
- Construction validation report detailing all elements of construction, and detailing any variations to the design
- Information on remediation works, including site activities, waste documentation correlation and validation
- Results of field and laboratory work
- Field and laboratory quality assurance/control information and evaluation
- Site validation discussion
- Ongoing site monitoring requirements (if any) and
- Conclusions and recommendations.

10 Data Quality Objectives

Data quality objectives (DQO) have been developed using the seven step processes described in NSW EPA 2017, *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme* (*3rd edition*).

10.1 Step 1 – State the Problem

Elevated concentrations of arsenic in shallow soils require remediation and validation to confirm the suitability of the remediation area for the proposed land use.

10.2 Step 2 – Identify the Decision

The decisions that need to be made during this project include:

- Is the field and laboratory analytical data suitable for assessing the quality of the media being assessed

- Does residual soil contamination remaining on site following remediation present an unacceptable exposure human health exposure risk for the proposed land use scenario.

10.3 Step 3 – Identify Inputs to the Decision

The primary inputs to assessing the above include:

- The site history
- Location, distribution and intervals of sampling at the site
- Data collected during previous assessments, including field measurements, field observations and laboratory analysis results
- Outcomes of the assessment of the quality of collected data
- Site inspections and observations during remediation.

Validation criteria will be adopted from NEPM (2013) as outlined in **Section 8**.

10.4 Step 4 – Define the Study Boundaries

The lateral extent of the soil requiring remediation has been defined in **Figure 6** in **Appendix A**. The vertical boundaries are the depth of arsenic impacted soils. The temporal boundaries include the results of the previous sampling and the remediation works.

10.5 Step 5 – Develop a Decision Rule

The decision rules for the project will be as follows:

- If the site inspections confirm that the capping layer has been installed as per the RAP, then the site will be considered suitable for the proposed land use.
    - Note if there is insufficient information to confirm the nature of the capping layer installed, further assessments may be required to confirm the suitability of the site for the proposed land use.
- Where laboratory analysis is required:
    - If the results of the laboratory analytical data and QAQC samples are acceptable, the data will be considered suitable for the purposes of the project. Data will be assessed for completeness, comparability, representativeness, precision and accuracy
    - If the results of the laboratory analytical data are below the RAC, then the level of contamination in the media assessed will be considered an acceptable exposure risk
    - If the results of laboratory analytical data exceed the RAC, then the level of contamination in the media assessed may require further assessment, management or remediation.

10.6 Step 6 – Specify Acceptable Limits on Decision Errors

There are two types of error:

- Deciding that contamination on the site is an acceptable risk for the proposed land use when it is not and
- Deciding that contamination on the site is not an acceptable risk for the proposed land use when it is.

Confidence in the reliability of assessment methods (e.g. field observations, laboratory analysis and data review) will be based on appropriate levels of qualification and/or experience in the personnel undertaking the relevant task.

10.7 Step 7 – Optimise the Design for Obtaining Data

10.7.1 Photographic Records

Photographs will be taken of the remediation activities and the finished capping.

10.7.2 Location Records

Each sampling location will be recorded using a handheld GPS unit with the depth of each sample to be recorded.

10.7.3 Sample Identification, Storage and Transport Procedures

Samples will be identified using unique sample identifiers and sample depths.

Samples will be placed in laboratory prepared containers and zip lock bags, as appropriate. The sample containers will then be placed directly into an insulated container with ice, for transportation to the NATA accredited analytical laboratory with the chain of custody (COC) form recording the following information:

- Project job number
- Date of sampling
- Sample identifier
- Sample matrix and container type
- Preservation methods used
- Analysis requirements for each sample
- Turnaround times required for analysis and
- Names and signatures of sender and receiving laboratory.

A copy of the COC will be kept in the job file. Samples will be transported to the laboratory with sufficient time to perform analysis within the applicable holding period.

10.8 Quality Assurance / Quality Control

10.8.1 Intra-laboratory Duplicates

Intra-laboratory field duplicates will be collected on an average frequency of one sample per twenty samples collected (5%), with a minimum of one per batch. The analytical results of the two split samples will be compared to assess the precision of the sampling protocol and provide an indication of variability in the sample source. The relative percentage difference (RPD) acceptance limits are as follows:

- No limit analytical results <10 times laboratory limit of reporting (LOR)
- 50% analytical results 10-20 times LOR
- 30% analytical results >20 times LOR

Any RPD exceedances are to be assessed to determine whether the project DQO's can still be addressed.

10.8.2 Inter-Laboratory Duplicates

Inter-laboratory field duplicates will be collected on an average frequency of one sample per twenty samples collected (5%) with a minimum of one per batch. The analytical results of the two split samples are to be compared to assess the precision of the sampling protocol and provide an indication of variability in the sample source. The RPD acceptance limits are as follows:

- No limit analytical results <10 times LOR
- 50% analytical results 10-20 times LOR
- 30% analytical results >20 times LOR

Any RPD exceedances are to be assessed to determine whether the project DQO's can still be addressed.

10.8.3 Laboratory Data Quality Indicators

The laboratory data quality will be assessed by checking the following:

- Laboratory methods used are NATA accredited
- Laboratory limits of reporting are less than adopted RAC
- Samples are extracted and analysed within holding times and
- Results of method blanks, surrogate, lab control sample, spike recoveries RPDs between primary and duplicate laboratory samples.

Where results of laboratory quality control samples exceed the relevant adopted control limit, the laboratory will be requested to assess the significance of the exceedance on the quality of the laboratory analytical data for the relevant batch. Based on the significance of the control limit exceedance, the data will be assessed against the project DQO's.

10.8.4 Decontamination Procedures

Non-disposable sampling equipment will be decontaminated before and between sampling locations to reduce the potential for cross contamination to occur between samples. Decontamination will include the following procedure:

- Washing non-disposable sampling equipment in a solution of phosphate free detergent (e.g. Decon 90) and potable water; and
- Rinsing with distilled water.

11 Site Management

11.1 Register of Contacts

A register of contacts for the remedial works is presented in **Table 11-1**.

Table 11-1 Register of Contacts

Project Role	Person Assigned	Company	Contact Details
Environmental Consultant implementing RAP	Jason Roesler	SLR Consulting Pty Ltd	+61 2 9427 8100 jroesler@slrconsulting.com
Project Site Manager	TBA	TBA	TBA
Remediation Contractor	TBA	TBA	TBA
Independent Construction Quality Assurance Officer	TBA	TBA	TBA
Environmental Regulator	TBA	NSW EPA	131 555 info@environment.nsw.gov.au
Planning Authority	Sally Munk	DPIE	9274 6431 sally.munk@planning.nsw.gov.au

11.2 Hours of Operation

The remediation works will be conducted between the hours of 7:00am to 6:00pm Monday to Friday and 8:00am to 1:00pm on Saturdays.

No work will be conducted on Sundays, public holidays or outside the hours specified above without approval from the appropriate regulatory authorities.

11.3 Site Signage and Contact Numbers

A sign displaying the contact details at which the remediation contractor may be contacted outside working hours (and site facilitator if different to the remediation contractor) will be displayed on the nominated remedial areas adjacent access to the areas. The signs will be displayed throughout the duration of the remediation works.

11.4 Site Security

The nominated remedial area will be secured with appropriate fencing to prevent unauthorised access.

11.5 Soil and Water Management

11.5.1 Site Access

Vehicle access to the remedial area will be stabilised to prevent tracking of sediment onto roads and footpaths. Soil, earth, mud or similar materials will be removed from the roadway by shovelling or a means other than washing, that isn't anticipated to generate dust, on a daily basis or as required.

Trucks will be unloaded within the remediation area.

Soil and sediment will be washed off vehicle/plant tyres and tracks, prior to vehicles/plant leaving the remediation area. This soil and sediment will be scraped / swept up and or disposed of depending on its contamination status.

A site-specific sediment and erosion control plan will be prepared and maintained by the remediation contractor. Erosion and sediment control measures will be maintained in a functional condition. Sediment laden stormwater runoff will be controlled using measures outlined in Landcom 2004, '*Managing Urban Stormwater - Soils and Construction*' (the Blue Book).

11.5.2 Stockpiles

It is not envisaged that stockpiling will be required. However, should stockpiling be undertaken as part of the remedial works, stockpiles of soil or other materials:

- Will be stored in a secure area
- Will be covered. Covering of the stockpiles will be undertaken by the contractor, subject to site conditions, expected inclement weather and duration the stockpile is expected to remain on site and
- Will be placed on a level area as a low elongated mound

11.5.3 Groundwater and Surface Water

Given the distance between the remediation area and closest surface water body, it is considered highly unlikely that any surface water from the remedial actions will discharge into a surface water receptor. There is also no reticulated stormwater or sewer infrastructure to receive surface water from the remedial area.

Given the likely depth of groundwater and underlaying clay, it is considered highly unlikely that groundwater will be impacted by the proposed remedial works.

11.6 Noise and Vibration

Noise levels from the site during the project will not exceed the limits indicated in AS2436-2010.

No 'offensive noise' as defined under the *Protection of the Environment Operations Act 1997* will be created during remediation works/activities.

11.7 Air Quality

11.7.1 Dust

Dust may be generated during demolition, transport and placement activities. To prevent excessive dust generation on site and emissions beyond the site boundary, if applicable, consideration will be given to implementing following procedures:

- Securely covering all loads entering or exiting the site. All trucks carrying soil to the site must be covered securely
- Use of water sprays across the site to suppress dust
- Keeping worked surfaces moist, where practical and deemed necessary
- Wetting down of placed fill material during spreading (if required)

- Minimising soil disturbance works during windy days and
- Maintaining stabilised site access/egress points for vehicles.

11.7.2 Odours

Given the findings of previous site assessments, generation of significant odours during the remediation works is considered to be highly unlikely.

11.8 Transport Vehicles

Haulage routes for trucks transporting soil, materials, equipment or machinery to and from the remedial area will be selected by the remediation contractor and will be meet the following objectives:

- Compliance with all traffic road rules
- Minimisation of noise, vibration and odour to adjacent premises
- Utilisation of State roads and minimisation of use of local roads.

The remediation contractor will ensure that all site vehicles:

- Carrying imported soil to the site must be securely covered
- Conduct deliveries of soil, materials, equipment or machinery during the hours of remediation work identified in **Section 11.2**
- Exit the site in a forward direction
- Do not track soil, mud or sediment onto the road.

11.9 Importation of Fill

Any soil to be imported to the site will under-go a visual inspection and validation through soil sampling. If material is to be imported to the site it is recommended that the material be certified as VENM. Imported VENM material with appropriate certification will be sampled at a rate of one sample per 100 m^3 and one sample per 25 m^3 of imported material that does not have appropriate certification for a general suite of contaminants of potential concern being TRH, BTEX, PAH, OCP/OPP, metals and asbestos (presence/absence).

11.10 Occupational Health and Safety

11.10.1 Hazard Identification and Risk Assessment

Each party working within the remediation area will prepare a project specific safe work method statement (SWMS) or job safety analysis (JSA), which will include:

- Identification of hazards associated with work tasks
- A risk assessment undertaken against each hazard identified
- Identification of control measures to mitigate or eliminate risks associated with the hazards identified.

11.10.2 Personnel Decontamination

Personnel working at the site are required to be decontaminated prior to leaving the remediation works zone. Decontamination will include:

- Cleaning down of boots
- Removal and discarding of all disposable personal protection equipment (PPE) items including the coveralls and masks
- Washing of hands.

11.10.3 Personal Protective Equipment

The minimum PPE required to be worn by persons entering the site during remediation works will comprise of the following:

- Hard hats
- Steel cap boots
- Hi-vis vest.

11.11 Emergency Preparedness

An emergency muster point will be established at the egress point of the site, to assemble workers in the event of an emergency. This muster point will be communicated to all workers during the project induction process.

Fire extinguishers and spill control kits will be available on site.

A register of contacts to be utilised in the event of an emergency is presented in **Table 11-2**.

Table 11-2 Emergency Response Contacts

Project Role	Person Assigned	Company	Contact Details
Emergency Services	-	Fire / Police / Ambulance	000
OH&S Regulatory Authority	-	SafeWork NSW	13 10 50
Environmental Regulatory Authority	-	NSW EPA Environment Line	131 500
Project Site Manager	TBA	TBA	TBA
Remediation Contractor	TBA	TBA	TBA
Environmental Consultant	TBA	TBA	TBA

11.12 Community Relations

Given the remote location of the remediation area, it is highly unlikely that the remediation will impact on adjoining neighbours. However, in-line with the commitments made in the EIS, the surrounding residents will be notified of the remediation works at least two days prior to the commencement via a letter drop. The letter will provide an overview of planned remediation activities, advise expected works duration and hours, and advise relevant site contacts.

Communication and complaints received for the remediation works will be reported to the Project Manager. All communications and complaints will be assessed and an appropriate response, corrective and/or preventative action implemented (as necessary).

A communication and complaints register will be operated on site to ensure that concerns of local residences and businesses are recorded and addressed.

12 Conclusion

SLR considers that soils on the site can be made suitable for the proposed development, subject to:

- Implementation of the measures outlined in this revised RAP
- Preparation of a site validation report
- Development of an EMP for the ongoing management of the remedial area.

13 Limitations

This RAP is for the exclusive use of ProTen Tamworth Pty Limited. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR Consulting.

This report has been prepared based on the scope of services (see below). SLR Consulting cannot be held responsible to the Client and/or others for any matters outside the agreed scope of services. Other parties should not rely upon this report and should make their own enquiries and obtain independent advice in relation to such matters.

This report has been prepared by SLR Consulting with reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with the Client. Information reported herein is based on the interpretation of data collected (data, surveys, analyses, designs, plans and other information), which has been accepted in good faith as being accurate and valid.

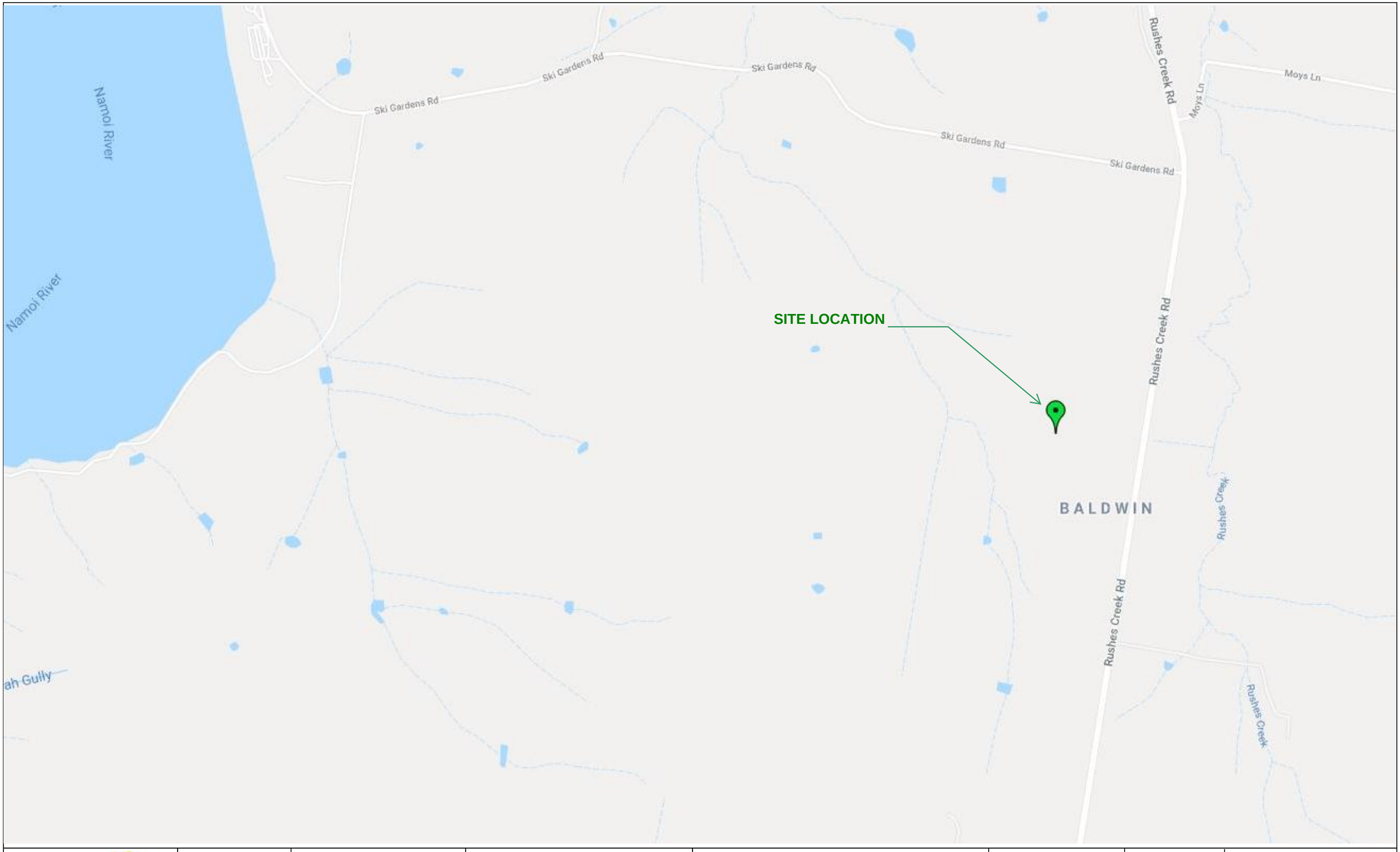
It should be noted that many investigations are based upon an assessment of potentially contaminating processes which may have occurred historically on the site. This assessment is based upon historical records associated with the site. Such records may be inaccurate, absent or contradictory. In addition documents may exist which are not readily available for public viewing.

Except where it has been stated in this report, SLR Consulting has not verified the accuracy or completeness of the data relied upon. Statements, opinions, facts, information, conclusions and/or recommendations made in this report ("conclusions") are based in whole or part on the data obtained, those conclusions are contingent upon the accuracy and completeness of the data. SLR Consulting cannot be held liable should any data, information or condition be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to SLR Consulting leading to incorrect conclusions.

Should the report be reviewed for any reason, the report must be reviewed in its entirety and in conjunction with the associated Scope of Services. It should be understood that where a report has been developed for a specific purpose, for example a due diligence report for a property vendor, it may not be suitable for other purposes such as satisfying the needs of a purchaser or assessing contamination risks for classifying the site. The report should not be applied for any purpose other than that originally specified at the time the report was issued.

Report logs, figures, laboratory data, drawings, etc. are generated for this report by SLR consultants (unless otherwise stated) based on their individual interpretation of the site conditions at the time the site visit was undertaken. Although SLR consultants undergo training to achieve a standard of field reporting, individual interpretation still varies slightly. Information should not under any circumstances be redrawn for inclusion in other documents or separated from this report in any way.

APPENDIX A



SLR	202 Submarine School, Sub Base Platypus, North Sydney, NSW, 2060	T: +61 2 9428 8100 sydney@slrconsulting.com www.slrconsulting.com	**Ref**: 610.30237.00000 Proposed Poultry Production Complex Rushes Creek Road, Rushes Creek, NSW	**Figure 1** Site Locality	April 2021	N Prepared: JR 09/04/2021 Checked: JE 09/04/2021

SLR	2 Lincoln Street, Lane Cove, NSW 2066 Australia	T: +61 2 9428 8100 sydney@slrconsulting.com www.slrconsulting.com	**Remedial Action Plan** Ref: 610.18456.00000	**Proposed Poultry Production Complex** **Rushes Creek Road, Rushes Creek, NSW**	February 2019	N	**Figure 2** **Site Layout**

Arsenic concentrations (mg/kg) at depth 0.1 metres to 0.2 metres

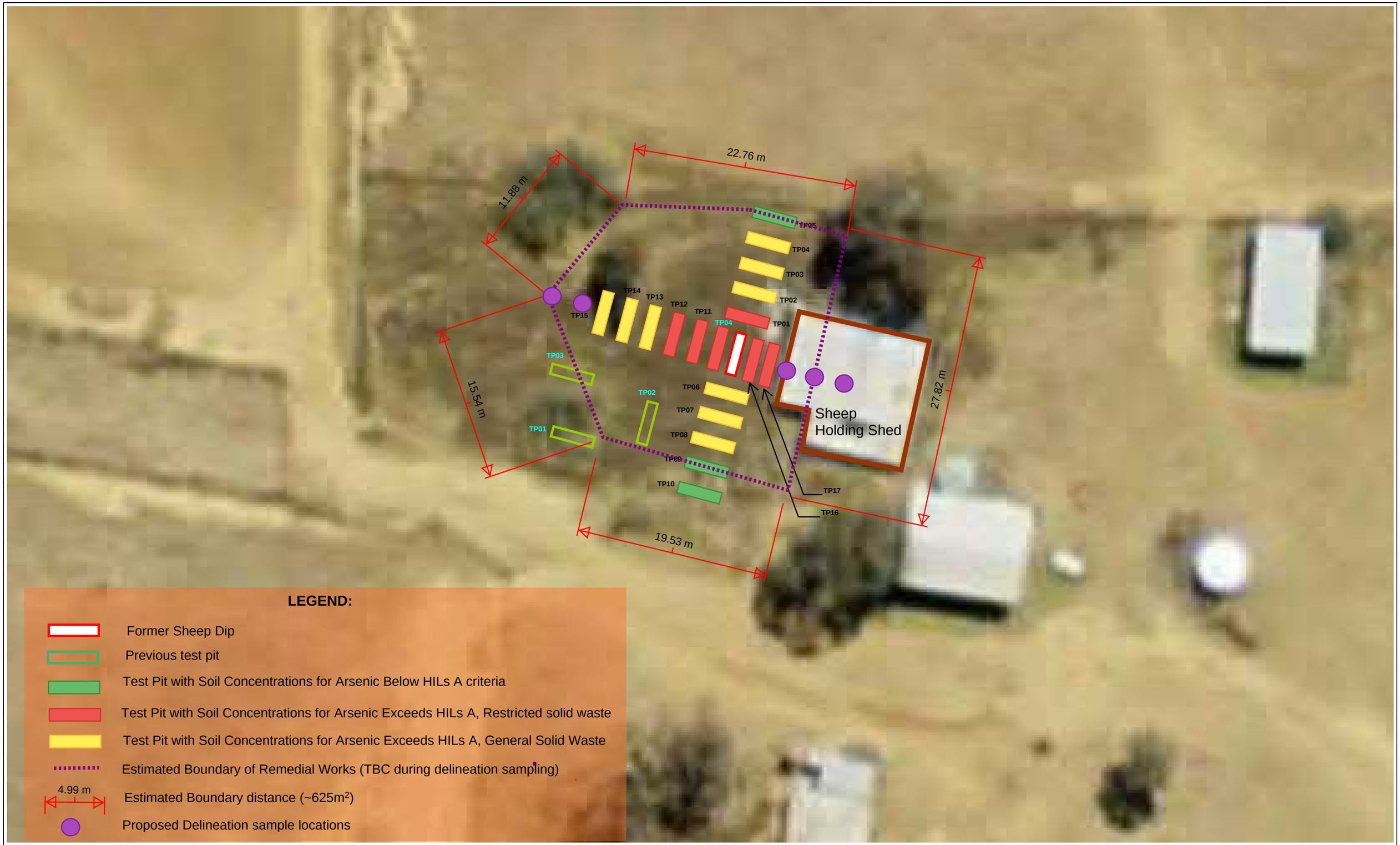
SLR	2 Lincoln Street, Lane Cove, NSW 2066 Australia	T: +61 2 9428 8100 sydney@slrconsulting.com www.slrconsulting.com	**Remedial Action Plan** Ref: 610.18456.00100	**Proposed Poultry Production Complex** **Rushes Creek Road, Rushes Creek, NSW**	February 2019	N	**Figure 3 Site Contamination Delineation (0.1-0.2 metres)**

Arsenic concentrations (mg/kg) at depth 0.6 metres to 0.8 metres

SLR	2 Lincoln Street, Lane Cove, NSW 2066 Australia	T: +61 2 9428 8100 sydney@slrconsulting.com www.slrconsulting.com	**Remedial Action Plan** Ref: 610.18456.00100	**Proposed Poultry Production Complex** **Rushes Creek Road, Rushes Creek, NSW**	February 2019	N	**Figure 4 Site Contamination Delineation (0.6-0.8 metres)**

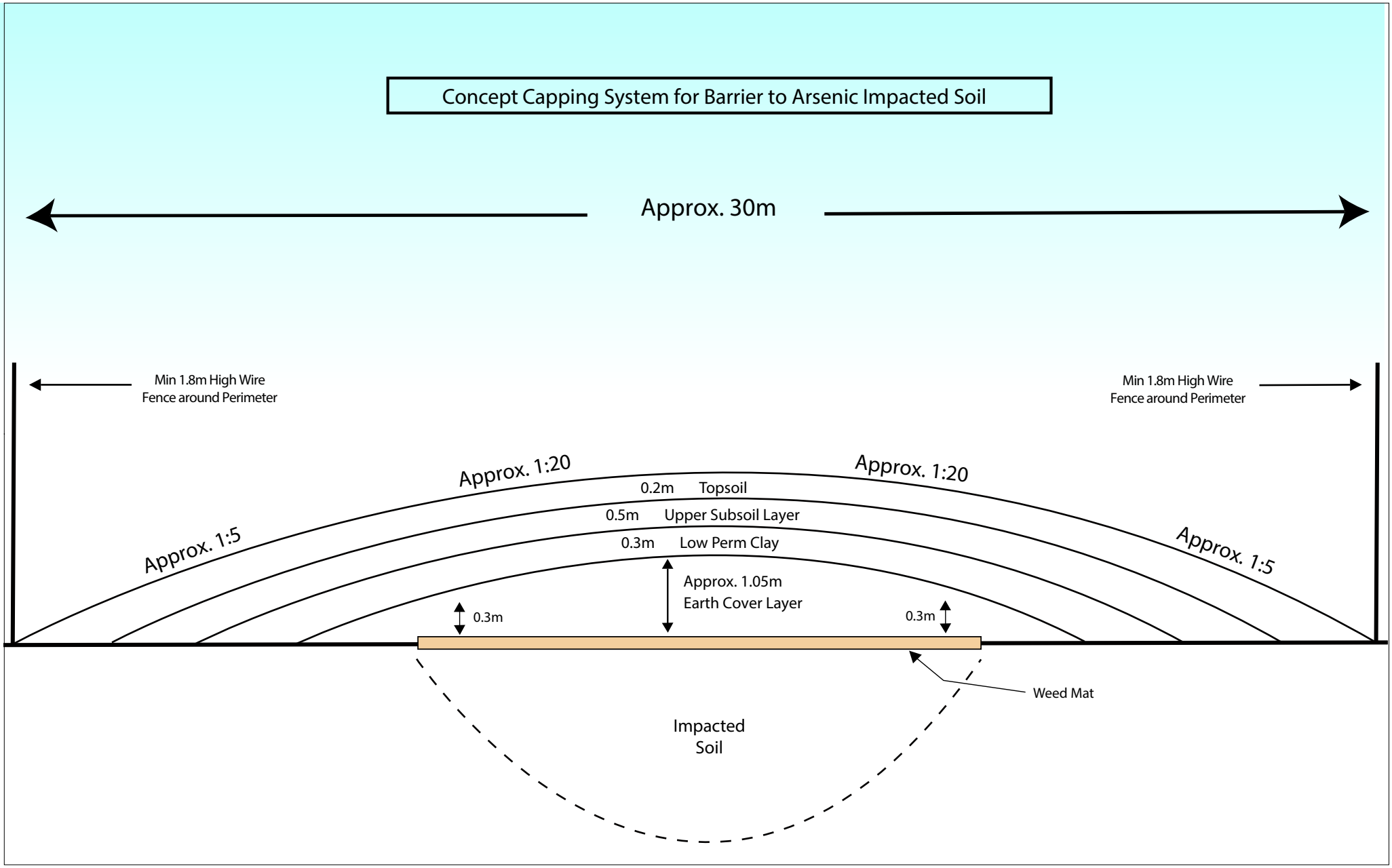
Arsenic concentrations (mg/kg) at depth 0.9 metres to 1.3 metres

SLR	2 Lincoln Street, Lane Cove, NSW 2066 Australia	T: +61 2 9428 8100 sydney@slrconsulting.com www.slrconsulting.com	**Remedial Action Plan** Ref: 610.18456.00100	**Proposed Poultry Production Complex** **Rushes Creek Road, Rushes Creek, NSW**	February 2019	N	**Figure 5 Site Contamination Delineation (0.9-1.3 metres)**



SLR	202 Submarine School, Sub Base Platypus, North Sydney, NSW, 2060	T: +61 2 9428 8100 sydney@slrconsulting.com www.slrconsulting.com	**Ref**: 610.30237.00000 Proposed Poultry Production Complex Rushes Creek Road, Rushes Creek, NSW	**Figure 6** Site Locality Capping Extent	April 2021	N	Prepared: JR 09/04/2021 Checked: JE 09/04/2021

Concept Capping System for Barrier to Arsenic Impacted Soil



SLR	202 Submarine School, Sub Base Platypus, North Sydney, NSW, 2060	T: +61 2 9428 8100 sydney@slrconsulting.com www.slrconsulting.com	**Remedial Action Plan** Ref: 610.30237.00000	Proposed Poultry Production Complex Rushes Creek Road, Rushes Creek, NSW	09 April 2021	North	Figure 7 Concept Capping System for Barrier to Arsenic Impacted Soil

APPENDIX B

Site Photographs

Photograph 1 –View of sheep holding shed

Photograph 2 – View of potential sheep dip

Photograph 3 – View of potential sheep dip with reference to sheep holding shed

Photograph 4 – View of test-pit

Photograph 5 – Backfilling of test-pit

Photograph 6 – View of shed near the sheep holding shed

Notes:

610.18456.00000 Soil Contamination Assessment

Site:	RUSHES CREEK ROAD, RUSHES CREEK
Project:	REMEDIAL ACTION PLAN
Date:	FEBRUARY 2019
Drawing:	**OBSERVATION PHOTOGRAPHS** — **Appendix B**

Photograph 7 – View of sheep dip location beside sheep holding shed

Photograph 8 – View of sheep dip

Photograph 9 – Test-pit to the west of sheep dip with high Arsenic concentration

Photograph 10 – Excavator working on test-pit between sheep dip and sheep holding shed

Photograph 11 – Excavated soil from test-pit

Photograph 12 – View of location of former sheep dip beside sheep holding shed after backfilling

Notes:		SLR 610.18456.00000 Soil Contamination Assessment	Site:	RUSHES CREEK ROAD, RUSHES CREEK
			Project:	REMEDIAL ACTION PLAN
			Date:	FEBRUARY 2019
			Drawing:	**OBSERVATION PHOTOGRAPHS** — **Appendix B**

APPENDIX C

Detailed Site Investigation Test Pit Logs

ENVIRONMENTAL BOREHOLE / TESTPIT TP01 (round 1)

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 30/10/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.5m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
				TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
	TP01_0.2-0.4	Y		SILTY CLAY (0.10 - 0.40 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP01_0.5-0.6	Y		SILTY CLAY (0.40 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
1	TP01_1.3-1.5	Y		Shale: (0.60 - 1.50 mBGL) Angular to sub-angular shale (20-80mm)	
1.5				Termination Depth at: 1.5m Mechanical refusal on very shale bed	

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 30 Jan 2019

ENVIRONMENTAL BOREHOLE / TESTPIT TP02 (round 1)

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 30/10/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.0m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
				TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
	TP02_0.2-0.3	Y		SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
	TP02_0.4-0.5	Y		SILTY CLAY (0.30 - 0.50 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
0.5	TP02_0.9-1.0	Y		Shale: (0.50 - 1.0 mBGL) Angular to sub-angular shale (20-80mm)	
1				Termination Depth at: 1.0m Mechanical refusal on very stiff shale bed	

ENVIRONMENTAL BOREHOLE / TESTPIT TP03 (round 1)

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 30/10/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.0m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
				TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
	TP03_0.1-0.2	Y		SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
				SILTY CLAY (0.30 - 0.50 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (5-15mm)	
	TP03_0.4-0.5	Y			
0.5				Shale: (0.50 - 1.0 mBGL) Angular to sub-angular shale (20-50mm)	
	TP03_0.9-1.0	Y			
1				Termination Depth at: 1.0m Mechanical refusal on very stiff shale bed	

ENVIRONMENTAL BOREHOLE / TESTPIT TP04 (round 1)

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 30/10/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 0.20m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
				TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
	TP04_0.1-0.2	Y		SILTY CLAY (0.10 - 0.20 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5					
1					

Disclaimer This log is intended for environmental not geotechnical purposes.

produced by ESlog.ESdat.net on 30 Jan 2019

ENVIRONMENTAL BOREHOLE / TESTPIT TP01

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.3m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP01_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.40 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP01_0.7	Y		SILTY CLAY (0.40 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, bits of angular to sub-angular shale (5-15mm)	
				Shale: (0.60 - 1.20 mBGL) Angular to sub-angular shale (20-40mm)	
1	TP01_1.2	Y			
				Termination Depth at: 1.3m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP02

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.3m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP02_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.40 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP02_0.7	Y		SILTY CLAY (0.40 - 0.70 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
				Shale: (0.70 - 1.3 mBGL) Angular to sub-angular shale (20-40mm)	
1	TP02_1.2	Y			
				Termination Depth at: 1.3m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP03

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.2m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP03_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.40 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP03_0.6	Y		SILTY CLAY (0.40 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
				Shale: (0.60 - 1.2 mBGL) Angular to sub-angular shale (20-50mm)	
1	TP03_1.1	Y			
				Termination Depth at: 1.2m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP04

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.2m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP04_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.40 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP04_0.7	Y		SILTY CLAY (0.40 - 0.70 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
				Shale: (0.70 - 1.2 mBGL) Angular to sub-angular shale (20-50mm)	
1	TP04_1.1	Y			
				Termination Depth at: 1.2m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP05

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.2m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP05_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP05_0.6	Y		SILTY CLAY (0.30 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
				Shale: (0.60 - 1.2 mBGL) Angular to sub-angular shale (20-30mm)	
1	TP05_1.1	Y			
				Termination Depth at: 1.2m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP06

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.2m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP06_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP06_0.6	Y		SILTY CLAY (0.30 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (5-10mm)	
				Shale: (0.60 - 1.2 mBGL) Angular to sub-angular shale (15-30mm)	
1	TP06_1.1	Y			
				Termination Depth at: 1.2m Mechanical refusal on very stiff shale	

ENVIRONMENTAL BOREHOLE / TESTPIT TP07

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.2m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP07_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP07_0.6	Y		SILTY CLAY (0.30 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (5-15mm)	
				Shale: (0.60 - 1.2 mBGL) Angular to sub-angular shale (15-30mm)	
1	TP07_1.1	Y			
				Termination Depth at: 1.2m Mechanical refusal on very stiff shale	

ENVIRONMENTAL BOREHOLE / TESTPIT TP08

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.1m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP08_0.1	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
	TP08_0.5	Y		SILTY CLAY (0.30 - 0.50 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
0.5				Shale: (0.50 - 1.1 mBGL) Angular to sub-angular shale (20-30mm)	
1	TP08_1.0	Y			
				Termination Depth at: 1.1m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP09

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.0m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP09_0.1	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
	TP09_0.5	Y		SILTY CLAY (0.30 - 0.50 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
0.5				Shale: (0.50 - 1.0 mBGL) Angular to sub-angular shale (20-30mm)	
	TP09_0.9	Y			
1				Termination Depth at: 1.0m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP10

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 0.9m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP10_0.1	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
	TP10_0.4	Y		SILTY CLAY (0.30 - 0.40 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
0.5	TP10_0.8	Y		Shale: (0.40 - 0.90 mBGL) Angular to sub-angular shale (20-30mm)	
1				Termination Depth at: 0.90m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP11

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.2m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP11_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP11_0.6	Y		SILTY CLAY (0.30 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (5-15mm)	
				Shale: (0.60 - 1.2 mBGL) Angular to sub-angular shale (10-30mm)	
1	TP11_1.1	Y			
				Termination Depth at: 1.2m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP12

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.2m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP12_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP12_0.6	Y		SILTY CLAY (0.30 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-15mm)	
	TP12_1.1	Y		Shale: (0.60 - 1.2 mBGL) Angular to sub-angular shale (10-30mm)	
1				Termination Depth at: 1.2m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP13

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.1m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP13_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP13_0.6	Y		SILTY CLAY (0.30 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-15mm)	
				Shale: (0.60 - 1.1 mBGL) Angular to sub-angular shale (15-30mm)	
1	TP13_1.0	Y			
				Termination Depth at: 1.1m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP14

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.2m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP14_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.30 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP14_0.6	Y		SILTY CLAY (0.30 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-15mm)	
				Shale: (0.60 - 1.2 mBGL) Angular to sub-angular shale (15-30mm)	
1	TP14_1.1	Y			
				Termination Depth at: 1.2m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP15

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.3m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
				TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
	TP15_0.2	Y		SILTY CLAY (0.10 - 0.40 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP15_0.7	Y		SILTY CLAY (0.40 - 0.70 mBGL) Red/brown, stiff, dry, low plasticity, angular to sub-angular shale (10-20mm)	
				Shale: (0.70 - 1.3 mBGL) Angular to sub-angular shale (20-40mm)	
1	TP15_1.2	Y			
				Termination Depth at: 1.3m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP16

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.2m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP16_0.2	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.40 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP16_0.6	Y		SILTY CLAY (0.40 - 0.60 mBGL) Red/brown, stiff, dry, low plasticity, bits of angular to sub-angular shale (5-15mm)	
				Shale: (0.60 - 1.20 mBGL) Angular to sub-angular shale (20-40mm)	
1	TP16_1.1	Y			
				Termination Depth at: 1.2m Mechanical refusal on very stiff shale	

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ENVIRONMENTAL BOREHOLE / TESTPIT TP17

PROJECT NUMBER 610.18456.00000	**DRILLING DATE** 06/12/2018	**COORDINATES**
PROJECT NAME ProTen Tamworth DSI	**DRILLING COMPANY** TPE Earthmoving & Civil	**COORD SYS**
CLIENT ProTen	**DRILLER**	**SURFACE ELEVATION**
ADDRESS Rushes Creek Road, Rushes Creek NSW	**DRILLING METHOD** Excavator	**LOGGED BY** Junaidi Ibrahim
	TOTAL DEPTH 1.3m	**CHECKED BY** Lachlan McWha

COMMENTS

Depth (m)	Samples	Is Analysed?	Graphic Log	Material Description	Additional Observations
	TP17_0.1	Y		TOPSOIL: (0.00 - 0.10 mBGL) Dark brown, soft, dry, low plasticity, vegetation	
				SILTY CLAY (0.10 - 0.40 mBGL) Brown to red/brown, soft, dry, low plasticity	
0.5	TP17_0.8	Y		SILTY CLAY (0.40 - 0.80 mBGL) Red/brown, stiff, dry, low plasticity, bits of angular to sub-angular shale (5-15mm)	
				Shale: (0.80 - 1.30 mBGL) Angular to sub-angular shale (20-40mm)	
1	TP17_1.2	Y			
				Termination Depth at: 1.3m Mechanical refusal on very stiff shale	

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APPENDIX D

Laboratory Reports

Certificate of Analysis

SLR Consulting
2 Lincoln St
Lane Cove West
NSW 2066

Attention: **Junaidi Ibrahim**

Report **625300-S**
Project name DSI PROTEN TAMWORTH
Project ID 610.18456
Received Date Oct 31, 2018

Client Sample ID			**TP01_0.2-0.4**	**TP01_0.5-0.6**	**TP02_0.2-0.3**	**TP02_0.4-0.5**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S18-Oc38411**	**S18-Oc38412**	**S18-Oc38413**	**S18-Oc38414**
Date Sampled			**Oct 30, 2018**	**Oct 30, 2018**	**Oct 30, 2018**	**Oct 30, 2018**
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	119	111	123	111
Tetrachloro-m-xylene (surr.)	1	%	114	100	105	101
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP01_0.2-0.4	TP01_0.5-0.6	TP02_0.2-0.3	TP02_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-Oc38411	S18-Oc38412	S18-Oc38413	S18-Oc38414
Date Sampled			Oct 30, 2018	Oct 30, 2018	Oct 30, 2018	Oct 30, 2018
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	72	97	75	95
Triazines						
Ametryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simetryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Carbamate Pesticides						
Aldicarb	2	mg/kg	< 2	< 2	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2	< 2	< 2

Client Sample ID			TP01_0.2-0.4	TP01_0.5-0.6	TP02_0.2-0.3	TP02_0.4-0.5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-Oc38411	S18-Oc38412	S18-Oc38413	S18-Oc38414
Date Sampled			Oct 30, 2018	Oct 30, 2018	Oct 30, 2018	Oct 30, 2018
Test/Reference	LOR	Unit				
Synthetic Pyrethroids*						
Allethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Heavy Metals						
Arsenic	2	mg/kg	14	9.7	28	9.9
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	19	11	19	18
Copper	5	mg/kg	60	44	67	68
Lead	5	mg/kg	15	11	17	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	22	14	22	23
Zinc	5	mg/kg	80	70	91	100
% Moisture	1	%	18	7.4	16	12

Client Sample ID			TP02_0.9-1.0	TP03_0.1-0.2	TP03_0.4-0.5	TP03_0.9-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-Oc38415	S18-Oc38416	S18-Oc38417	S18-Oc38418
Date Sampled			Oct 30, 2018	Oct 30, 2018	Oct 30, 2018	Oct 30, 2018
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP02_0.9-1.0	TP03_0.1-0.2	TP03_0.4-0.5	TP03_0.9-1.0
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-Oc38415	S18-Oc38416	S18-Oc38417	S18-Oc38418
Date Sampled			Oct 30, 2018	Oct 30, 2018	Oct 30, 2018	Oct 30, 2018
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	90	125	115	135
Tetrachloro-m-xylene (surr.)	1	%	84	110	101	122
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	91	84	89	78
Triazines						
Ametryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP02_0.9-1.0	TP03_0.1-0.2	TP03_0.4-0.5	TP03_0.9-1.0
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S18-Oc38415**	**S18-Oc38416**	**S18-Oc38417**	**S18-Oc38418**
Date Sampled			**Oct 30, 2018**	**Oct 30, 2018**	**Oct 30, 2018**	**Oct 30, 2018**
Test/Reference	LOR	Unit				
Triazines						
Simetryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Carbamate Pesticides						
Aldicarb	2	mg/kg	< 2	< 2	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2	< 2	< 2
Synthetic Pyrethroids*						
Allethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Heavy Metals						
Arsenic	2	mg/kg	2.2	14	6.2	8.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	< 5	17	10	12
Copper	5	mg/kg	21	52	42	52
Lead	5	mg/kg	5.0	14	10	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.2	18	13	15
Zinc	5	mg/kg	35	70	68	81
% Moisture	1	%	5.6	16	10	7.8

Client Sample ID			TP04_0.1-0.2	QC1	TP01_1.3-1.5
Sample Matrix			**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S18-Oc38419**	**S18-Oc38420**	**S18-Oc38429**
Date Sampled			**Oct 30, 2018**	**Oct 30, 2018**	**Oct 30, 2018**
Test/Reference	LOR	Unit			
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-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-BHC	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

Client Sample ID			TP04_0.1-0.2	QC1	TP01_1.3-1.5
Sample Matrix			Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-Oc38419	S18-Oc38420	S18-Oc38429
Date Sampled			Oct 30, 2018	Oct 30, 2018	Oct 30, 2018
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
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-BHC (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	1	mg/kg	< 1	< 1	< 1
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	%	135	141	113
Tetrachloro-m-xylene (surr.)	1	%	117	129	103
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
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

Client Sample ID			TP04_0.1-0.2	QC1	TP01_1.3-1.5
Sample Matrix			Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-Oc38419	S18-Oc38420	S18-Oc38429
Date Sampled			Oct 30, 2018	Oct 30, 2018	Oct 30, 2018
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
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	%	94	82	80
Triazines					
Ametryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Simetryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Carbamate Pesticides					
Aldicarb	2	mg/kg	< 2	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2	< 2
Synthetic Pyrethroids*					
Allethrin*	2	mg/kg	< 2	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2	< 2
Heavy Metals					
Arsenic	2	mg/kg	2600	17	7.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	17	20	11
Copper	5	mg/kg	55	67	49
Lead	5	mg/kg	25	16	12
Mercury	0.1	mg/kg	0.2	< 0.1	< 0.1
Nickel	5	mg/kg	14	23	15
Zinc	5	mg/kg	270	96	80
% Moisture	1	%	18	16	5.7

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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 | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Nov 02, 2018	14 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Melbourne	Nov 02, 2018	14 Day
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Triazines	Melbourne	Nov 02, 2018	14 Day
- Method: LTM-ORG-2080			
Carbamate Pesticides	Melbourne	Nov 02, 2018	14 Day
- Method: LTM-ORG-2290 Carbamates in waters and soils by HPLC			
Synthetic Pyrethroids*	Melbourne	Nov 02, 2018	14 Day
- Method: LTM-ORG-2170 Synthetic Pyrethroids by HPLC-UV			
Metals M8	Melbourne	Nov 02, 2018	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Oct 31, 2018	14 Day
- Method: LTM-GEN-7080 Moisture			

ABN– 50 005 085 521
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Site # 1254 & 14271

Sydney
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NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: SLR Consulting (Sydney)
Address: 2 Lincoln St
Lane Cove West
NSW 2066

Project Name: DSI PROTEN TAMWORTH
Project ID: 610.18456

Order No.:
Report #: 625300
Phone: 02 9428 8100
Fax:

Received: Oct 31, 2018 9:45 AM
Due: Nov 7, 2018
Priority: 5 Day
Contact Name: Junaidi Ibrahim

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						HOLD	HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X						
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	TP01_0.2-0.4	Oct 30, 2018		Soil	S18-Oc38411			X	X	X	X	X	X
2	TP01_0.5-0.6	Oct 30, 2018		Soil	S18-Oc38412			X	X	X	X	X	X
3	TP02_0.2-0.3	Oct 30, 2018		Soil	S18-Oc38413			X	X	X	X	X	X
4	TP02_0.4-0.5	Oct 30, 2018		Soil	S18-Oc38414			X	X	X	X	X	X
5	TP02_0.9-1.0	Oct 30, 2018		Soil	S18-Oc38415			X	X	X	X	X	X
6	TP03_0.1-0.2	Oct 30, 2018		Soil	S18-Oc38416			X	X	X	X	X	X
7	TP03_0.4-0.5	Oct 30, 2018		Soil	S18-Oc38417			X	X	X	X	X	X
8	TP03_0.9-1.0	Oct 30, 2018		Soil	S18-Oc38418			X	X	X	X	X	X
9	TP04_0.1-0.2	Oct 30, 2018		Soil	S18-Oc38419			X	X	X	X	X	X

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Sample Detail						HOLD	HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X						
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
10	QC1	Oct 30, 2018		Soil	S18-Oc38420			X	X	X	X	X	X
11	R01	Oct 30, 2018		Water	S18-Oc38421			X	X	X	X	X	
12	TS	Oct 30, 2018		Water	S18-Oc38422	X							
13	TB	Oct 30, 2018		Water	S18-Oc38423	X							
14	TS	Oct 30, 2018		Soil	S18-Oc38424		X						
15	TB	Oct 30, 2018		Soil	S18-Oc38425		X						
16	LAB SPIKE	Oct 30, 2018		Soil	S18-Oc38426		X						
17	TP01_1.3-1.5	Oct 30, 2018		Soil	S18-Oc38429			X	X	X	X	X	X
Test Counts						5	5	12	12	12	12	12	11

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil 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. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
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	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	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-BHC (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	< 1			1	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Triazines							
Ametryn	mg/kg	< 0.2			0.2	Pass	
Atraton	mg/kg	< 0.2			0.2	Pass	
Atrazine	mg/kg	< 0.2			0.2	Pass	
Prometon	mg/kg	< 0.2			0.2	Pass	
Prometryn	mg/kg	< 0.2			0.2	Pass	
Propazine	mg/kg	< 0.2			0.2	Pass	
Simazine	mg/kg	< 0.2			0.2	Pass	
Simetryn	mg/kg	< 0.2			0.2	Pass	
Terbuthylazine	mg/kg	< 0.2			0.2	Pass	
Terbutryne	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Carbamate Pesticides							
Aldicarb	mg/kg	< 2			2	Pass	
Bendiocarb	mg/kg	< 2			2	Pass	
Carbaryl	mg/kg	< 2			2	Pass	
Carbofuran	mg/kg	< 2			2	Pass	
Methomyl	mg/kg	< 2			2	Pass	
Oxamyl	mg/kg	< 2			2	Pass	
Thiobencarb	mg/kg	< 2			2	Pass	
Method Blank							
Synthetic Pyrethroids*							
Allethrin*	mg/kg	< 2			2	Pass	
Cyfluthrin*	mg/kg	< 2			2	Pass	
Cypermethrin (total)*	mg/kg	< 2			2	Pass	
Fenvalerate*	mg/kg	< 2			2	Pass	
Permethrin	mg/kg	< 2			2	Pass	
Phenothrin*	mg/kg	< 2			2	Pass	
Resmethrin*	mg/kg	< 2			2	Pass	
Tetramethrin*	mg/kg	< 2			2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	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	
LCS - % Recovery							
Organochlorine Pesticides							
4.4'-DDD	%	119			70-130	Pass	
4.4'-DDE	%	117			70-130	Pass	
4.4'-DDT	%	129			70-130	Pass	
a-BHC	%	99			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	%	110			70-130	Pass	
b-BHC	%	98			70-130	Pass	
d-BHC	%	101			70-130	Pass	
Dieldrin	%	114			70-130	Pass	
Endosulfan I	%	111			70-130	Pass	
Endosulfan II	%	114			70-130	Pass	
Endosulfan sulphate	%	110			70-130	Pass	
Endrin	%	125			70-130	Pass	
Endrin aldehyde	%	115			70-130	Pass	
Endrin ketone	%	116			70-130	Pass	
g-BHC (Lindane)	%	98			70-130	Pass	
Heptachlor	%	111			70-130	Pass	
Heptachlor epoxide	%	105			70-130	Pass	
Hexachlorobenzene	%	94			70-130	Pass	
Methoxychlor	%	115			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	83			70-130	Pass	
Dimethoate	%	71			70-130	Pass	
Ethion	%	106			70-130	Pass	
Fenitrothion	%	94			70-130	Pass	
Methyl parathion	%	92			70-130	Pass	
Mevinphos	%	103			70-130	Pass	
LCS - % Recovery							
Triazines							
Prometryn	%	92			75-125	Pass	
LCS - % Recovery							
Carbamate Pesticides							
Aldicarb	%	117			70-130	Pass	
Bendiocarb	%	119			70-130	Pass	
Carbaryl	%	124			70-130	Pass	
Carbofuran	%	119			70-130	Pass	
Methomyl	%	114			70-130	Pass	
Oxamyl	%	144			70-130	Fail	
Thiobencarb	%	115			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	111			80-120	Pass	
Cadmium	%	112			80-120	Pass	
Chromium	%	110			80-120	Pass	
Copper	%	118			80-120	Pass	
Lead	%	119			80-120	Pass	
Mercury	%	113			75-125	Pass	
Nickel	%	117			80-120	Pass	
Zinc	%	114			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M18-No00361	NCP	%	103			70-130	Pass	
Dimethoate	M18-No00361	NCP	%	97			70-130	Pass	
Ethion	M18-No00361	NCP	%	101			70-130	Pass	
Fenitrothion	M18-No00361	NCP	%	83			70-130	Pass	
Methyl parathion	M18-No00361	NCP	%	73			70-130	Pass	
Mevinphos	M18-No00361	NCP	%	70			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Synthetic Pyrethroids*				Result 1					
Cyfluthrin*	M18-Oc20554	NCP	%	91			70-130	Pass	
Cypermethrin (total)*	M18-Oc20554	NCP	%	93			70-130	Pass	
Permethrin	M18-Oc20554	NCP	%	89			70-130	Pass	
Resmethrin*	M18-Oc20554	NCP	%	93			70-130	Pass	
Tetramethrin*	M18-Oc20554	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDD	S18-Oc38412	CP	%	108			70-130	Pass	
4.4'-DDE	S18-Oc38412	CP	%	107			70-130	Pass	
4.4'-DDT	S18-Oc38412	CP	%	122			70-130	Pass	
a-BHC	S18-Oc38412	CP	%	90			70-130	Pass	
Aldrin	S18-Oc38412	CP	%	97			70-130	Pass	
b-BHC	S18-Oc38412	CP	%	90			70-130	Pass	
d-BHC	S18-Oc38412	CP	%	95			70-130	Pass	
Dieldrin	S18-Oc38412	CP	%	104			70-130	Pass	
Endosulfan I	S18-Oc38412	CP	%	101			70-130	Pass	
Endosulfan II	S18-Oc38412	CP	%	105			70-130	Pass	
Endosulfan sulphate	S18-Oc38412	CP	%	102			70-130	Pass	
Endrin	S18-Oc38412	CP	%	127			70-130	Pass	
Endrin aldehyde	S18-Oc38412	CP	%	104			70-130	Pass	
Endrin ketone	S18-Oc38412	CP	%	107			70-130	Pass	
g-BHC (Lindane)	S18-Oc38412	CP	%	90			70-130	Pass	
Heptachlor	S18-Oc38412	CP	%	108			70-130	Pass	
Heptachlor epoxide	S18-Oc38412	CP	%	97			70-130	Pass	
Hexachlorobenzene	S18-Oc38412	CP	%	85			70-130	Pass	
Methoxychlor	S18-Oc38412	CP	%	113			70-130	Pass	
Spike - % Recovery									
Carbamate Pesticides				Result 1					
Aldicarb	S18-Oc38412	CP	%	174			70-130	Fail	Q08
Bendiocarb	S18-Oc38412	CP	%	107			70-130	Pass	
Carbaryl	S18-Oc38412	CP	%	108			70-130	Pass	
Carbofuran	S18-Oc38412	CP	%	107			70-130	Pass	
Methomyl	S18-Oc38412	CP	%	110			70-130	Pass	
Oxamyl	S18-Oc38412	CP	%	118			70-130	Pass	
Thiobencarb	S18-Oc38412	CP	%	113			70-130	Pass	
Spike - % Recovery									
Synthetic Pyrethroids*				Result 1					
Allethrin*	S18-Oc38412	CP	%	90			70-130	Pass	
Fenvalerate*	S18-Oc38412	CP	%	79			70-130	Pass	
Phenothrin*	S18-Oc38412	CP	%	88			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S18-Oc38412	CP	%	104			75-125	Pass	
Cadmium	S18-Oc38412	CP	%	106			75-125	Pass	
Chromium	S18-Oc38412	CP	%	105			75-125	Pass	
Copper	S18-Oc38412	CP	%	103			75-125	Pass	
Lead	S18-Oc38412	CP	%	106			75-125	Pass	
Mercury	S18-Oc38412	CP	%	113			70-130	Pass	
Nickel	S18-Oc38412	CP	%	106			75-125	Pass	
Zinc	S18-Oc38412	CP	%	97			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S18-Oc38411	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S18-Oc38411	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Toxaphene	S18-Oc38411	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Ronnel	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atraton	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atrazine	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometon	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometryn	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Propazine	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simazine	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simetryn	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbuthylazine	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbutryne	S18-Oc38411	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Carbamate Pesticides				Result 1	Result 2	RPD			
Aldicarb	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Bendiocarb	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Carbaryl	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Carbofuran	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Methomyl	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Oxamyl	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Thiobencarb	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Duplicate									
Synthetic Pyrethroids*				Result 1	Result 2	RPD			
Allethrin*	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cyfluthrin*	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cypermethrin (total)*	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Fenvalerate*	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Permethrin	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phenothrin*	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Resmethrin*	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Tetramethrin*	S18-Oc38411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S18-Oc38411	CP	mg/kg	14	13	7.0	30%	Pass	
Cadmium	S18-Oc38411	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S18-Oc38411	CP	mg/kg	19	17	7.0	30%	Pass	
Copper	S18-Oc38411	CP	mg/kg	60	54	11	30%	Pass	
Lead	S18-Oc38411	CP	mg/kg	15	13	12	30%	Pass	
Mercury	S18-Oc38411	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S18-Oc38411	CP	mg/kg	22	19	14	30%	Pass	
Zinc	S18-Oc38411	CP	mg/kg	80	73	10	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S18-Oc38411	CP	%	18	18	2.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S18-Oc38412	CP	mg/kg	9.7	10.0	3.0	30%	Pass	
Cadmium	S18-Oc38412	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S18-Oc38412	CP	mg/kg	11	11	2.0	30%	Pass	
Copper	S18-Oc38412	CP	mg/kg	44	45	2.0	30%	Pass	
Lead	S18-Oc38412	CP	mg/kg	11	11	<1	30%	Pass	
Mercury	S18-Oc38412	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S18-Oc38412	CP	mg/kg	14	14	1.0	30%	Pass	
Zinc	S18-Oc38412	CP	mg/kg	70	71	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	S18-Oc38429	CP	%	5.7	6.0	5.0	30%	Pass	

Comments

Sample Integrity

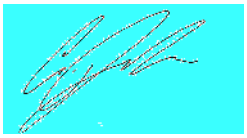
Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted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

Qualifier Codes/Comments

Code	Description
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference

Authorised By

Andrew Black	Analytical Services Manager
Chris Bennett	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson

National Operations Manager

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

SLR Consulting
2 Lincoln St
Lane Cove West
NSW 2066

Attention: **Junaidi Ibrahim**

Report **625300-W**
Project name DSI PROTEN TAMWORTH
Project ID 610.18456
Received Date Oct 31, 2018

Client Sample ID			**R01**
Sample Matrix			**Water**
Eurofins | mgt Sample No.			**S18-Oc38421**
Date Sampled			**Oct 30, 2018**
Test/Reference	LOR	Unit	
Organochlorine Pesticides			
Chlordanes - Total	0.001	mg/L	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001
Dieldrin	0.0001	mg/L	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001
Endrin	0.0001	mg/L	< 0.0001
Endrin aldehyde	0.0001	mg/L	< 0.0001
Endrin ketone	0.0001	mg/L	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001
Toxaphene	0.01	mg/L	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001
Dibutylchlorendate (surr.)	1	%	98
Tetrachloro-m-xylene (surr.)	1	%	62
Organophosphorus Pesticides			
Azinphos-methyl	0.002	mg/L	< 0.002
Bolstar	0.002	mg/L	< 0.002
Chlorfenvinphos	0.002	mg/L	< 0.002
Chlorpyrifos	0.02	mg/L	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	< 0.002
Coumaphos	0.02	mg/L	< 0.02
Demeton-S	0.02	mg/L	< 0.02

Client Sample ID			R01
Sample Matrix			Water
Eurofins | mgt Sample No.			S18-Oc38421
Date Sampled			Oct 30, 2018
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
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
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	0.002	mg/L	< 0.002
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	%	58
Triazines			
Ametryn	0.002	mg/L	< 0.002
Atraton	0.002	mg/L	< 0.002
Atrazine	0.002	mg/L	< 0.002
Prometon	0.002	mg/L	< 0.002
Prometryn	0.002	mg/L	< 0.002
Propazine	0.002	mg/L	< 0.002
Simazine	0.002	mg/L	< 0.002
Simetryn	0.002	mg/L	< 0.002
Terbuthylazine	0.002	mg/L	< 0.002
Terbutryne	0.002	mg/L	< 0.002
Carbamate Pesticides			
Aldicarb	0.01	mg/L	< 0.01
Bendiocarb	0.01	mg/L	< 0.1
Carbaryl	0.01	mg/L	< 0.01
Carbofuran	0.01	mg/L	< 0.1
Methomyl	0.01	mg/L	< 0.05
Oxamyl	0.01	mg/L	< 0.01
Thiobencarb	0.01	mg/L	< 0.01

Client Sample ID			R01
Sample Matrix			**Water**
Eurofins | mgt Sample No.			**S18-Oc38421**
Date Sampled			**Oct 30, 2018**
Test/Reference	LOR	Unit	
Synthetic Pyrethroids*			
Allethrin*	0.2	mg/L	< 0.2
Cyfluthrin*	0.2	mg/L	< 0.2
Cypermethrin (total)*	0.2	mg/L	< 0.2
Fenvalerate*	0.2	mg/L	< 0.2
Permethrin	0.2	mg/L	< 0.2
Phenothrin*	0.2	mg/L	< 0.2
Resmethrin*	0.2	mg/L	< 0.2
Tetramethrin*	0.2	mg/L	< 0.2
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 and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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 | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Nov 01, 2018	7 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Melbourne	Nov 01, 2018	7 Day
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Triazines	Melbourne	Nov 01, 2018	7 Day
- Method: LTM-ORG-2080			
Carbamate Pesticides	Melbourne	Nov 01, 2018	7 Day
- Method: LTM-ORG-2290 Carbamates in waters and soils by HPLC			
Synthetic Pyrethroids*	Melbourne	Nov 01, 2018	7 Day
- Method: LTM-ORG-2170 Synthetic Pyrethroids by HPLC-UV			
Metals M8	Melbourne	Nov 01, 2018	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

ABN– 50 005 085 521
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web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
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NATA # 1261
Site # 1254 & 14271

Sydney
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16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
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Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: SLR Consulting (Sydney)
Address: 2 Lincoln St
Lane Cove West
NSW 2066

Project Name: DSI PROTEN TAMWORTH
Project ID: 610.18456

Order No.:
Report #: 625300
Phone: 02 9428 8100
Fax:

Received: Oct 31, 2018 9:45 AM
Due: Nov 7, 2018
Priority: 5 Day
Contact Name: Junaidi Ibrahim

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						HOLD	HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X						
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	TP01_0.2-0.4	Oct 30, 2018		Soil	S18-Oc38411			X	X	X	X	X	X
2	TP01_0.5-0.6	Oct 30, 2018		Soil	S18-Oc38412			X	X	X	X	X	X
3	TP02_0.2-0.3	Oct 30, 2018		Soil	S18-Oc38413			X	X	X	X	X	X
4	TP02_0.4-0.5	Oct 30, 2018		Soil	S18-Oc38414			X	X	X	X	X	X
5	TP02_0.9-1.0	Oct 30, 2018		Soil	S18-Oc38415			X	X	X	X	X	X
6	TP03_0.1-0.2	Oct 30, 2018		Soil	S18-Oc38416			X	X	X	X	X	X
7	TP03_0.4-0.5	Oct 30, 2018		Soil	S18-Oc38417			X	X	X	X	X	X
8	TP03_0.9-1.0	Oct 30, 2018		Soil	S18-Oc38418			X	X	X	X	X	X
9	TP04_0.1-0.2	Oct 30, 2018		Soil	S18-Oc38419			X	X	X	X	X	X

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Project Name: DSI PROTEN TAMWORTH
Project ID: 610.18456

Order No.:
Report #: 625300
Phone: 02 9428 8100
Fax:

Received: Oct 31, 2018 9:45 AM
Due: Nov 7, 2018
Priority: 5 Day
Contact Name: Junaidi Ibrahim

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						HOLD	HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X		X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217							X						
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
10	QC1	Oct 30, 2018		Soil	S18-Oc38420			X	X	X	X	X	X
11	R01	Oct 30, 2018		Water	S18-Oc38421			X	X	X	X	X	
12	TS	Oct 30, 2018		Water	S18-Oc38422	X							
13	TB	Oct 30, 2018		Water	S18-Oc38423	X							
14	TS	Oct 30, 2018		Soil	S18-Oc38424		X						
15	TB	Oct 30, 2018		Soil	S18-Oc38425		X						
16	LAB SPIKE	Oct 30, 2018		Soil	S18-Oc38426		X						
17	TP01_1.3-1.5	Oct 30, 2018		Soil	S18-Oc38429			X	X	X	X	X	X
Test Counts						5	5	12	12	12	12	12	11

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil 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. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	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	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.02			0.02	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	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Triazines							
Ametryn	mg/L	< 0.002			0.002	Pass	
Atraton	mg/L	< 0.002			0.002	Pass	
Atrazine	mg/L	< 0.002			0.002	Pass	
Prometon	mg/L	< 0.002			0.002	Pass	
Prometryn	mg/L	< 0.002			0.002	Pass	
Propazine	mg/L	< 0.002			0.002	Pass	
Simazine	mg/L	< 0.002			0.002	Pass	
Simetryn	mg/L	< 0.002			0.002	Pass	
Terbuthylazine	mg/L	< 0.002			0.002	Pass	
Terbutryne	mg/L	< 0.002			0.002	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							
Organochlorine Pesticides							
Chlordanes - Total	%	102			70-130	Pass	
4.4'-DDD	%	99			70-130	Pass	
4.4'-DDE	%	126			70-130	Pass	
4.4'-DDT	%	89			70-130	Pass	
a-BHC	%	121			70-130	Pass	
Aldrin	%	104			70-130	Pass	
b-BHC	%	123			70-130	Pass	
d-BHC	%	114			70-130	Pass	
Dieldrin	%	119			70-130	Pass	
Endosulfan I	%	125			70-130	Pass	
Endosulfan II	%	124			70-130	Pass	
Endosulfan sulphate	%	92			70-130	Pass	
Endrin	%	115			70-130	Pass	
Endrin aldehyde	%	82			70-130	Pass	
Endrin ketone	%	115			70-130	Pass	
g-BHC (Lindane)	%	113			70-130	Pass	
Heptachlor	%	115			70-130	Pass	
Heptachlor epoxide	%	105			70-130	Pass	
Hexachlorobenzene	%	120			70-130	Pass	
Methoxychlor	%	71			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	84			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dimethoate			%	74			70-130	Pass	
Ethion			%	78			70-130	Pass	
Fenitrothion			%	72			70-130	Pass	
Methyl parathion			%	78			70-130	Pass	
Mevinphos			%	90			70-130	Pass	
LCS - % Recovery									
Triazines									
Prometryn			%	80			75-125	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	95			80-120	Pass	
Cadmium			%	95			80-120	Pass	
Chromium			%	92			80-120	Pass	
Copper			%	94			80-120	Pass	
Lead			%	92			80-120	Pass	
Mercury			%	89			75-125	Pass	
Nickel			%	94			80-120	Pass	
Zinc			%	98			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M18-Oc34276	NCP	%	80			70-130	Pass	
4.4'-DDD	M18-Oc34276	NCP	%	73			70-130	Pass	
4.4'-DDE	M18-Oc34276	NCP	%	90			70-130	Pass	
4.4'-DDT	M18-Oc34276	NCP	%	74			70-130	Pass	
a-BHC	M18-Oc34276	NCP	%	81			70-130	Pass	
Aldrin	M18-Oc34276	NCP	%	72			70-130	Pass	
b-BHC	M18-Oc34276	NCP	%	80			70-130	Pass	
d-BHC	M18-Oc34276	NCP	%	91			70-130	Pass	
Dieldrin	M18-Oc34276	NCP	%	92			70-130	Pass	
Endosulfan I	M18-Oc34276	NCP	%	93			70-130	Pass	
Endosulfan II	M18-Oc34276	NCP	%	98			70-130	Pass	
Endosulfan sulphate	M18-Oc33704	NCP	%	85			70-130	Pass	
Endrin	M18-Oc34276	NCP	%	81			70-130	Pass	
Endrin aldehyde	M18-Oc34276	NCP	%	71			70-130	Pass	
Endrin ketone	M18-Oc34276	NCP	%	86			70-130	Pass	
g-BHC (Lindane)	M18-Oc34276	NCP	%	95			70-130	Pass	
Heptachlor	M18-Oc34276	NCP	%	71			70-130	Pass	
Heptachlor epoxide	M18-Oc34276	NCP	%	82			70-130	Pass	
Hexachlorobenzene	M18-Oc34276	NCP	%	75			70-130	Pass	
Methoxychlor	M18-Oc33704	NCP	%	91			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M18-Oc37832	NCP	%	109			70-130	Pass	
Dimethoate	M18-Oc37832	NCP	%	79			70-130	Pass	
Ethion	M18-Oc37832	NCP	%	84			70-130	Pass	
Fenitrothion	M18-Oc37832	NCP	%	95			70-130	Pass	
Methyl parathion	M18-Oc37832	NCP	%	89			70-130	Pass	
Mevinphos	M18-Oc37832	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M18-Oc37667	NCP	%	98			75-125	Pass	
Cadmium	M18-Oc37667	NCP	%	98			75-125	Pass	
Chromium	M18-Oc37667	NCP	%	97			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper	M18-Oc37667	NCP	%	98			75-125	Pass	
Lead	M18-Oc37667	NCP	%	95			75-125	Pass	
Mercury	M18-Oc37667	NCP	%	93			70-130	Pass	
Nickel	M18-Oc37667	NCP	%	99			75-125	Pass	
Zinc	M18-Oc37667	NCP	%	101			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M18-Oc37831	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4.4'-DDD	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDE	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDT	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
a-BHC	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Aldrin	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
b-BHC	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
d-BHC	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Dieldrin	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan I	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan II	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan sulphate	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin aldehyde	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin ketone	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
g-BHC (Lindane)	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor epoxide	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Hexachlorobenzene	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Methoxychlor	M18-Oc37831	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Bolstar	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorfenvinphos	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorpyrifos	M18-Oc37831	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Chlorpyrifos-methyl	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Coumaphos	M18-Oc37831	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-S	M18-Oc37831	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-O	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Diazinon	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dichlorvos	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dimethoate	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Disulfoton	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
EPN	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethion	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethoprop	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethyl parathion	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenitrothion	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fensulfothion	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenthion	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Malathion	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Merphos	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methyl parathion	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Mevinphos	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Monocrotophos	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Naled	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Omethoate	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Phorate	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pirimiphos-methyl	M18-Oc37831	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Pyrazophos	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ronnel	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbufos	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tetrachlorvinphos	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tokuthion	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Atraton	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Atrazine	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Prometon	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Prometryn	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Propazine	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Simazine	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Simetryn	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbuthylazine	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbutryne	M18-Oc37831	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M18-Oc37667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M18-Oc37667	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M18-Oc37667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M18-Oc37667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M18-Oc37667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	M18-Oc37667	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M18-Oc37667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	M18-Oc37667	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	

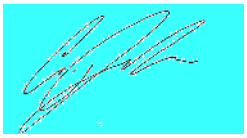
Comments

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

Authorised By

Andrew Black	Analytical Services Manager
Chris Bennett	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson
National Operations Manager

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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Accreditation Number 1261
Site Number 18217

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The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Junaidi Ibrahim**

Report **631838-S**
Project name PROTEN TAMWORTH SCA
Project ID 610.18456.00100
Received Date Dec 07, 2018

Client Sample ID			**TP01_0.1**	**TP01_0.7**	**TP01_1.2**	**TP16_0.2**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S18-De08338**	**S18-De08339**	**S18-De08340**	**S18-De08341**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	70	72	89	134
Tetrachloro-m-xylene (surr.)	1	%	110	116	66	77
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP01_0.1	TP01_0.7	TP01_1.2	TP16_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08338	S18-De08339	S18-De08340	S18-De08341
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	85	84	114	113
Triazines						
Ametryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simetryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Carbamate Pesticides						
Aldicarb	2	mg/kg	< 2	< 2	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2	< 2	< 2

Client Sample ID			TP01_0.1	TP01_0.7	TP01_1.2	TP16_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08338	S18-De08339	S18-De08340	S18-De08341
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Synthetic Pyrethroids*						
Allethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Heavy Metals						
Arsenic	2	mg/kg	860	280	230	780
Cadmium	0.4	mg/kg	1.6	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	12	9.4	15
Copper	5	mg/kg	53	46	46	48
Lead	5	mg/kg	83	12	15	18
Mercury	0.1	mg/kg	0.6	< 0.1	< 0.1	0.3
Nickel	5	mg/kg	11	14	12	15
Zinc	5	mg/kg	940	97	160	330
% Moisture	1	%	20	12	8.6	16

Client Sample ID			TP16_0.6	TP16_1.1	TP02_0.2	TP02_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08342	S18-De08343	S18-De08406	S18-De08407
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP16_0.6	TP16_1.1	TP02_0.2	TP02_0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08342	S18-De08343	S18-De08406	S18-De08407
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	134	129	129	95
Tetrachloro-m-xylene (surr.)	1	%	70	78	90	66
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	103	111	119	127
Triazines						
Ametryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP16_0.6	TP16_1.1	TP02_0.2	TP02_0.7
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S18-De08342**	**S18-De08343**	**S18-De08406**	**S18-De08407**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Triazines						
Simetryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Carbamate Pesticides						
Aldicarb	2	mg/kg	< 2	< 2	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2	< 2	< 2
Synthetic Pyrethroids*						
Allethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Heavy Metals						
Arsenic	2	mg/kg	250	180	380	43
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.4	< 0.4
Chromium	5	mg/kg	13	11	15	9.8
Copper	5	mg/kg	53	46	46	39
Lead	5	mg/kg	12	10	63	8.5
Mercury	0.1	mg/kg	0.2	< 0.1	0.3	< 0.1
Nickel	5	mg/kg	14	12	14	12
Zinc	5	mg/kg	95	81	390	62
% Moisture	1	%	11	7.9	11	9.0

Client Sample ID			TP02_1.2	TP06_0.2	TP06_0.6	TP06_1.1
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S18-De08408**	**S18-De08409**	**S18-De08410**	**S18-De08411**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	0.06	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP02_1.2	TP06_0.2	TP06_0.6	TP06_1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08408	S18-De08409	S18-De08410	S18-De08411
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	92	94	85	80
Tetrachloro-m-xylene (surr.)	1	%	59	116	114	116
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP02_1.2	TP06_0.2	TP06_0.6	TP06_1.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08408	S18-De08409	S18-De08410	S18-De08411
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	75	121	111	91
Triazines						
Ametryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simetryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Carbamate Pesticides						
Aldicarb	2	mg/kg	< 2	< 2	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2	< 2	< 2
Synthetic Pyrethroids*						
Allethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Heavy Metals						
Arsenic	2	mg/kg	43	390	26	25
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	9.4	14	9.0	8.5
Copper	5	mg/kg	28	53	41	40
Lead	5	mg/kg	14	42	8.6	11
Mercury	0.1	mg/kg	< 0.1	0.3	< 0.1	< 0.1
Nickel	5	mg/kg	10	13	12	12
Zinc	5	mg/kg	52	220	68	73
% Moisture	1	%	9.9	14	6.4	6.1

Client Sample ID			TP07_0.2	TP07_0.6	TP07_1.1	TP11_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08412	S18-De08413	S18-De08414	S18-De08415
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	82	72	101	122
Tetrachloro-m-xylene (surr.)	1	%	117	114	99	110
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP07_0.2	TP07_0.6	TP07_1.1	TP11_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08412	S18-De08413	S18-De08414	S18-De08415
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	112	89	74	69
Triazines						
Ametryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simetryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Carbamate Pesticides						
Aldicarb	2	mg/kg	< 2	< 2	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2	< 2	< 2
Synthetic Pyrethroids*						
Allethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Heavy Metals						
Arsenic	2	mg/kg	310	40	14	1400
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	13	9.4	18
Copper	5	mg/kg	56	47	46	53
Lead	5	mg/kg	47	12	12	22
Mercury	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1

Client Sample ID			TP07_0.2	TP07_0.6	TP07_1.1	TP11_0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08412	S18-De08413	S18-De08414	S18-De08415
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Heavy Metals						
Nickel	5	mg/kg	15	14	13	14
Zinc	5	mg/kg	360	80	70	240
% Moisture	1	%	15	8.2	8.0	15

Client Sample ID			TP11_0.6	TP11_1.1	TP12_0.2	TP12_0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08416	S18-De08417	S18-De08418	S18-De08419
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	64	107	71	74
Tetrachloro-m-xylene (surr.)	1	%	91	107	109	123
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP11_0.6	TP11_1.1	TP12_0.2	TP12_0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08416	S18-De08417	S18-De08418	S18-De08419
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	95	83	83	83
Triazines						
Ametryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simetryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Carbamate Pesticides						
Aldicarb	2	mg/kg	< 2	< 2	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2	< 2	< 2

Client Sample ID			TP11_0.6	TP11_1.1	TP12_0.2	TP12_0.6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08416	S18-De08417	S18-De08418	S18-De08419
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Synthetic Pyrethroids*						
Allethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Heavy Metals						
Arsenic	2	mg/kg	210	310	1000	120
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	12	11	16	9.4
Copper	5	mg/kg	53	46	49	42
Lead	5	mg/kg	12	15	22	10
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.3	< 0.1
Nickel	5	mg/kg	23	13	13	15
Zinc	5	mg/kg	210	110	190	77
% Moisture	1	%	8.6	8.0	14	5.9

Client Sample ID			TP12_1.1	QC1	QC3	QC4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08420	S18-De08421	S18-De08422	S18-De08423
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			TP12_1.1	QC1	QC3	QC4
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**S18-De08420**	**S18-De08421**	**S18-De08422**	**S18-De08423**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	114	93	106	111
Tetrachloro-m-xylene (surr.)	1	%	55	98	56	62
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	88	88	99	80
Triazines						
Ametryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			TP12_1.1	QC1	QC3	QC4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins | mgt Sample No.			S18-De08420	S18-De08421	S18-De08422	S18-De08423
Date Sampled			Dec 06, 2018	Dec 06, 2018	Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit				
Triazines						
Simetryn	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Carbamate Pesticides						
Aldicarb	2	mg/kg	< 2	< 2	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2	< 2	< 2
Synthetic Pyrethroids*						
Allethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2	< 2	< 2
Heavy Metals						
Arsenic	2	mg/kg	460	770	1300	180
Cadmium	0.4	mg/kg	< 0.4	2.0	< 0.4	< 0.4
Chromium	5	mg/kg	12	14	17	9.8
Copper	5	mg/kg	45	56	50	43
Lead	5	mg/kg	12	110	19	11
Mercury	0.1	mg/kg	< 0.1	0.8	< 0.1	< 0.1
Nickel	5	mg/kg	13	11	13	17
Zinc	5	mg/kg	110	910	240	81
% Moisture	1	%	9.0	20	16	7.3

Client Sample ID			QC5	QC7
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S18-De08424	S18-De08425
Date Sampled			Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit		
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-BHC	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05
d-BHC	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

Client Sample ID			QC5	QC7
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S18-De08424	S18-De08425
Date Sampled			Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
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-BHC (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	1	mg/kg	< 1	< 1
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	%	96	82
Tetrachloro-m-xylene (surr.)	1	%	51	99
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
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

Client Sample ID			QC5	QC7
Sample Matrix			Soil	Soil
Eurofins | mgt Sample No.			S18-De08424	S18-De08425
Date Sampled			Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
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	%	86	61
Triazines				
Ametryn	0.2	mg/kg	< 0.2	< 0.2
Atraton	0.2	mg/kg	< 0.2	< 0.2
Atrazine	0.2	mg/kg	< 0.2	< 0.2
Prometon	0.2	mg/kg	< 0.2	< 0.2
Prometryn	0.2	mg/kg	< 0.2	< 0.2
Propazine	0.2	mg/kg	< 0.2	< 0.2
Simazine	0.2	mg/kg	< 0.2	< 0.2
Simetryn	0.2	mg/kg	< 0.2	< 0.2
Terbuthylazine	0.2	mg/kg	< 0.2	< 0.2
Terbutryne	0.2	mg/kg	< 0.2	< 0.2
Carbamate Pesticides				
Aldicarb	2	mg/kg	< 2	< 2
Bendiocarb	2	mg/kg	< 2	< 2
Carbaryl	2	mg/kg	< 2	< 2
Carbofuran	2	mg/kg	< 2	< 2
Methomyl	2	mg/kg	< 2	< 2
Oxamyl	2	mg/kg	< 2	< 2
Thiobencarb	2	mg/kg	< 2	< 2
Synthetic Pyrethroids*				
Allethrin*	2	mg/kg	< 2	< 2
Cyfluthrin*	2	mg/kg	< 2	< 2
Cypermethrin (total)*	2	mg/kg	< 2	< 2
Fenvalerate*	2	mg/kg	< 2	< 2
Permethrin	2	mg/kg	< 2	< 2
Phenothrin*	2	mg/kg	< 2	< 2
Resmethrin*	2	mg/kg	< 2	< 2
Tetramethrin*	2	mg/kg	< 2	< 2
Heavy Metals				
Arsenic	2	mg/kg	400	36
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	14	11
Copper	5	mg/kg	50	43
Lead	5	mg/kg	36	9.8
Mercury	0.1	mg/kg	0.3	< 0.1
Nickel	5	mg/kg	13	12
Zinc	5	mg/kg	180	65
% Moisture	1	%	14	8.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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 | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Dec 13, 2018	14 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Melbourne	Dec 13, 2018	14 Day
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Triazines	Melbourne	Dec 13, 2018	14 Day
- Method: LTM-ORG-2080			
Carbamate Pesticides	Melbourne	Dec 13, 2018	14 Day
- Method: LTM-ORG-2290 Carbamates in waters and soils by HPLC			
Synthetic Pyrethroids*	Melbourne	Dec 13, 2018	14 Day
- Method: LTM-ORG-2170 Synthetic Pyrethroids by HPLC-UV			
Metals M8	Melbourne	Dec 13, 2018	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Dec 07, 2018	14 Day
- Method: LTM-GEN-7080 Moisture			

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Site # 23736

Company Name: SLR Consulting (Sydney)
Address: 2 Lincoln St
Lane Cove West
NSW 2066

Project Name: PROTEN TAMWORTH SCA
Project ID: 610.18456.00100

Order No.:
Report #: 631838
Phone: 02 9428 8100
Fax:

Received: Dec 7, 2018 2:21 PM
Due: Dec 14, 2018
Priority: 5 Day
Contact Name: Junaidi Ibrahim

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	TP01_0.1	Dec 06, 2018		Soil	S18-De08338		X	X	X	X	X	X
2	TP01_0.7	Dec 06, 2018		Soil	S18-De08339		X	X	X	X	X	X
3	TP01_1.2	Dec 06, 2018		Soil	S18-De08340		X	X	X	X	X	X
4	TP16_0.2	Dec 06, 2018		Soil	S18-De08341		X	X	X	X	X	X
5	TP16_0.6	Dec 06, 2018		Soil	S18-De08342		X	X	X	X	X	X
6	TP16_1.1	Dec 06, 2018		Soil	S18-De08343		X	X	X	X	X	X
7	TP02_0.2	Dec 06, 2018		Soil	S18-De08406		X	X	X	X	X	X
8	TP02_0.7	Dec 06, 2018		Soil	S18-De08407		X	X	X	X	X	X
9	TP02_1.2	Dec 06, 2018		Soil	S18-De08408		X	X	X	X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	TP06_0.2	Dec 06, 2018		Soil	S18-De08409		X	X	X	X	X	X
11	TP06_0.6	Dec 06, 2018		Soil	S18-De08410		X	X	X	X	X	X
12	TP06_1.1	Dec 06, 2018		Soil	S18-De08411		X	X	X	X	X	X
13	TP07_0.2	Dec 06, 2018		Soil	S18-De08412		X	X	X	X	X	X
14	TP07_0.6	Dec 06, 2018		Soil	S18-De08413		X	X	X	X	X	X
15	TP07_1.1	Dec 06, 2018		Soil	S18-De08414		X	X	X	X	X	X
16	TP11_0.2	Dec 06, 2018		Soil	S18-De08415		X	X	X	X	X	X
17	TP11_0.6	Dec 06, 2018		Soil	S18-De08416		X	X	X	X	X	X
18	TP11_1.1	Dec 06, 2018		Soil	S18-De08417		X	X	X	X	X	X
19	TP12_0.2	Dec 06, 2018		Soil	S18-De08418		X	X	X	X	X	X
20	TP12_0.6	Dec 06, 2018		Soil	S18-De08419		X	X	X	X	X	X
21	TP12_1.1	Dec 06, 2018		Soil	S18-De08420		X	X	X	X	X	X

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Sample Detail						HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
22	QC1	Dec 06, 2018		Soil	S18-De08421		X	X	X	X	X	X
23	QC3	Dec 06, 2018		Soil	S18-De08422		X	X	X	X	X	X
24	QC4	Dec 06, 2018		Soil	S18-De08423		X	X	X	X	X	X
25	QC5	Dec 06, 2018		Soil	S18-De08424		X	X	X	X	X	X
26	QC7	Dec 06, 2018		Soil	S18-De08425		X	X	X	X	X	X
27	R01	Dec 06, 2018		Water	S18-De08426					X		
28	R02	Dec 06, 2018		Water	S18-De08427		X	X	X		X	
29	TP17_0.1	Dec 06, 2018		Soil	S18-De08428	X						
30	TP17_0.8	Dec 06, 2018		Soil	S18-De08429	X						
31	TP17_1.2	Dec 06, 2018		Soil	S18-De08430	X						
32	TP03_0.2	Dec 06, 2018		Soil	S18-De08431	X						
33	TP03_0.6	Dec 06, 2018		Soil	S18-De08432	X						

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Sample Detail						HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
34	TP03_1.1	Dec 06, 2018		Soil	S18-De08433	X						
35	TP04_0.2	Dec 06, 2018		Soil	S18-De08434	X						
36	TP04_0.7	Dec 06, 2018		Soil	S18-De08435	X						
37	TP04_1.1	Dec 06, 2018		Soil	S18-De08436	X						
38	TP05_0.2	Dec 06, 2018		Soil	S18-De08437	X						
39	TP05_0.6	Dec 06, 2018		Soil	S18-De08438	X						
40	TP05_1.1	Dec 06, 2018		Soil	S18-De08439	X						
41	TP08_0.1	Dec 06, 2018		Soil	S18-De08440	X						
42	TP08_0.5	Dec 06, 2018		Soil	S18-De08441	X						
43	TP08_1.0	Dec 06, 2018		Soil	S18-De08442	X						
44	TP09_0.1	Dec 06, 2018		Soil	S18-De08443	X						
45	TP09_0.5	Dec 06, 2018		Soil	S18-De08444	X						

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
46	TP09_0.9	Dec 06, 2018		Soil	S18-De08445	X						
47	TP10_0.1	Dec 06, 2018		Soil	S18-De08446	X						
48	TP10_0.4	Dec 06, 2018		Soil	S18-De08447	X						
49	TP10_0.8	Dec 06, 2018		Soil	S18-De08448	X						
50	TP13_0.2	Dec 06, 2018		Soil	S18-De08449	X						
51	TP13_0.6	Dec 06, 2018		Soil	S18-De08450	X						
52	TP13_1.0	Dec 06, 2018		Soil	S18-De08451	X						
53	TP14_0.2	Dec 06, 2018		Soil	S18-De08452	X						
54	TP14_0.6	Dec 06, 2018		Soil	S18-De08453	X						
55	TP14_1.1	Dec 06, 2018		Soil	S18-De08454	X						
56	TP15_0.2	Dec 06, 2018		Soil	S18-De08455	X						
57	TP15_0.7	Dec 06, 2018		Soil	S18-De08456	X						

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Sample Detail						HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
58	TP15_1.2	Dec 06, 2018		Soil	S18-De08457	X						
59	TS	Dec 06, 2018		Soil	S18-De08522	X						
60	TB	Dec 06, 2018		Soil	S18-De08523	X						
61	LAB SPIKE	Dec 06, 2018		Soil	S18-De08524	X						
Test Counts						33	27	27	27	27	27	26

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil 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. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
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	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	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-BHC (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	< 1			1	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	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Triazines							
Ametryn	mg/kg	< 0.2			0.2	Pass	
Atraton	mg/kg	< 0.2			0.2	Pass	
Atrazine	mg/kg	< 0.2			0.2	Pass	
Prometon	mg/kg	< 0.2			0.2	Pass	
Prometryn	mg/kg	< 0.2			0.2	Pass	
Propazine	mg/kg	< 0.2			0.2	Pass	
Simazine	mg/kg	< 0.2			0.2	Pass	
Simetryn	mg/kg	< 0.2			0.2	Pass	
Terbuthylazine	mg/kg	< 0.2			0.2	Pass	
Terbutryne	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Carbamate Pesticides							
Aldicarb	mg/kg	< 2			2	Pass	
Bendiocarb	mg/kg	< 2			2	Pass	
Carbaryl	mg/kg	< 2			2	Pass	
Carbofuran	mg/kg	< 2			2	Pass	
Methomyl	mg/kg	< 2			2	Pass	
Oxamyl	mg/kg	< 2			2	Pass	
Thiobencarb	mg/kg	< 2			2	Pass	
Method Blank							
Synthetic Pyrethroids*							
Allethrin*	mg/kg	< 2			2	Pass	
Cyfluthrin*	mg/kg	< 2			2	Pass	
Cypermethrin (total)*	mg/kg	< 2			2	Pass	
Fenvalerate*	mg/kg	< 2			2	Pass	
Permethrin	mg/kg	< 2			2	Pass	
Phenothrin*	mg/kg	< 2			2	Pass	
Resmethrin*	mg/kg	< 2			2	Pass	
Tetramethrin*	mg/kg	< 2			2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	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	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	77			70-130	Pass	
4.4'-DDD	%	71			70-130	Pass	
4.4'-DDE	%	119			70-130	Pass	
4.4'-DDT	%	73			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
a-BHC	%	124			70-130	Pass	
Aldrin	%	112			70-130	Pass	
b-BHC	%	101			70-130	Pass	
d-BHC	%	123			70-130	Pass	
Dieldrin	%	115			70-130	Pass	
Endosulfan I	%	121			70-130	Pass	
Endosulfan II	%	123			70-130	Pass	
Endosulfan sulphate	%	113			70-130	Pass	
Endrin	%	104			70-130	Pass	
Endrin aldehyde	%	118			70-130	Pass	
Endrin ketone	%	101			70-130	Pass	
g-BHC (Lindane)	%	117			70-130	Pass	
Heptachlor	%	86			70-130	Pass	
Heptachlor epoxide	%	116			70-130	Pass	
Hexachlorobenzene	%	128			70-130	Pass	
Methoxychlor	%	99			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	86			70-130	Pass	
Dimethoate	%	76			70-130	Pass	
Ethion	%	104			70-130	Pass	
Fenitrothion	%	100			70-130	Pass	
Methyl parathion	%	100			70-130	Pass	
Mevinphos	%	84			70-130	Pass	
LCS - % Recovery							
Carbamate Pesticides							
Aldicarb	%	110			70-130	Pass	
Bendiocarb	%	98			70-130	Pass	
Carbaryl	%	125			70-130	Pass	
Carbofuran	%	98			70-130	Pass	
Methomyl	%	110			70-130	Pass	
Oxamyl	%	98			70-130	Pass	
Thiobencarb	%	107			70-130	Pass	
LCS - % Recovery							
Synthetic Pyrethroids*							
Allethrin*	%	88			70-130	Pass	
Cyfluthrin*	%	93			70-130	Pass	
Cypermethrin (total)*	%	95			70-130	Pass	
Fenvalerate*	%	96			70-130	Pass	
Permethrin	%	103			70-130	Pass	
Phenothrin*	%	119			70-130	Pass	
Resmethrin*	%	125			70-130	Pass	
Tetramethrin*	%	104			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	103			80-120	Pass	
Cadmium	%	99			80-120	Pass	
Chromium	%	112			80-120	Pass	
Copper	%	110			80-120	Pass	
Lead	%	113			80-120	Pass	
Mercury	%	99			75-125	Pass	
Nickel	%	105			80-120	Pass	
Zinc	%	105			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Hexachlorobenzene	S18-De11597	NCP	%	130			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDD	M18-De14369	NCP	%	74			70-130	Pass	
4.4'-DDE	M18-De10670	NCP	%	79			70-130	Pass	
4.4'-DDT	M18-De10670	NCP	%	79			70-130	Pass	
Dieldrin	M18-De10670	NCP	%	96			70-130	Pass	
Heptachlor	M18-De10670	NCP	%	98			70-130	Pass	
Methoxychlor	M18-De10670	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Dimethoate	M18-De16675	NCP	%	73			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	S18-De08343	CP	%	96			70-130	Pass	
Ethion	S18-De08343	CP	%	114			70-130	Pass	
Fenitrothion	S18-De08343	CP	%	86			70-130	Pass	
Methyl parathion	S18-De08343	CP	%	75			70-130	Pass	
Mevinphos	S18-De08343	CP	%	91			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S18-De08409	CP	%	120			70-130	Pass	
a-BHC	S18-De08409	CP	%	116			70-130	Pass	
Aldrin	S18-De08409	CP	%	101			70-130	Pass	
b-BHC	S18-De08409	CP	%	111			70-130	Pass	
d-BHC	S18-De08409	CP	%	110			70-130	Pass	
Endosulfan I	S18-De08409	CP	%	116			70-130	Pass	
Endosulfan II	S18-De08409	CP	%	122			70-130	Pass	
Endosulfan sulphate	S18-De08409	CP	%	103			70-130	Pass	
Endrin	S18-De08409	CP	%	109			70-130	Pass	
Endrin aldehyde	S18-De08409	CP	%	108			70-130	Pass	
Endrin ketone	S18-De08409	CP	%	92			70-130	Pass	
g-BHC (Lindane)	S18-De08409	CP	%	112			70-130	Pass	
Heptachlor epoxide	S18-De08409	CP	%	98			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S18-De08409	CP	%	113			75-125	Pass	
Cadmium	S18-De08409	CP	%	95			75-125	Pass	
Chromium	S18-De08409	CP	%	108			75-125	Pass	
Copper	S18-De08409	CP	%	110			75-125	Pass	
Lead	S18-De08409	CP	%	111			75-125	Pass	
Mercury	S18-De08409	CP	%	102			70-130	Pass	
Nickel	S18-De08409	CP	%	107			75-125	Pass	
Zinc	S18-De08409	CP	%	130			75-125	Fail	Q08
Spike - % Recovery									
Carbamate Pesticides				Result 1					
Aldicarb	S18-De08412	CP	%	98			70-130	Pass	
Bendiocarb	S18-De08412	CP	%	93			70-130	Pass	
Carbaryl	S18-De08412	CP	%	118			70-130	Pass	
Carbofuran	S18-De08412	CP	%	93			70-130	Pass	
Methomyl	S18-De08412	CP	%	97			70-130	Pass	
Oxamyl	S18-De08412	CP	%	81			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Thiobencarb	S18-De08412	CP	%	103			70-130	Pass	
Spike - % Recovery									
Synthetic Pyrethroids*				Result 1					
Cyfluthrin*	S18-De08412	CP	%	92			70-130	Pass	
Cypermethrin (total)*	S18-De08412	CP	%	94			70-130	Pass	
Permethrin	S18-De08412	CP	%	98			70-130	Pass	
Resmethrin*	S18-De08412	CP	%	99			70-130	Pass	
Tetramethrin*	S18-De08412	CP	%	110			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S18-De08419	CP	%	113			75-125	Pass	
Cadmium	S18-De08419	CP	%	93			75-125	Pass	
Chromium	S18-De08419	CP	%	107			75-125	Pass	
Copper	S18-De08419	CP	%	115			75-125	Pass	
Lead	S18-De08419	CP	%	104			75-125	Pass	
Mercury	S18-De08419	CP	%	97			70-130	Pass	
Nickel	S18-De08419	CP	%	113			75-125	Pass	
Zinc	S18-De08419	CP	%	116			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M18-De08558	NCP	%	13	13	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S18-De08342	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S18-De08342	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S18-De08342	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Diazinon	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S18-De08342	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S18-De08342	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atraton	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atrazine	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometon	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometryn	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Propazine	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simazine	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simetryn	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbuthylazine	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbutryne	S18-De08342	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S18-De08408	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endrin ketone	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S18-De08408	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S18-De08408	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S18-De08408	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S18-De08408	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atraton	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atrazine	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometon	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometryn	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Propazine	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simazine	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simetryn	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbuthylazine	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbutryne	S18-De08408	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S18-De08408	CP	mg/kg	43	36	18	30%	Pass	
Cadmium	S18-De08408	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S18-De08408	CP	mg/kg	9.4	8.9	5.0	30%	Pass	
Copper	S18-De08408	CP	mg/kg	28	34	17	30%	Pass	
Lead	S18-De08408	CP	mg/kg	14	12	14	30%	Pass	
Mercury	S18-De08408	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S18-De08408	CP	mg/kg	10	11	9.0	30%	Pass	
Zinc	S18-De08408	CP	mg/kg	52	60	14	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S18-De08409	CP	mg/kg	390	400	2.0	30%	Pass	
Cadmium	S18-De08409	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S18-De08409	CP	mg/kg	14	14	2.0	30%	Pass	
Copper	S18-De08409	CP	mg/kg	53	54	1.0	30%	Pass	
Lead	S18-De08409	CP	mg/kg	42	43	1.0	30%	Pass	
Mercury	S18-De08409	CP	mg/kg	0.3	0.3	6.0	30%	Pass	
Nickel	S18-De08409	CP	mg/kg	13	14	1.0	30%	Pass	
Zinc	S18-De08409	CP	mg/kg	220	220	1.0	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S18-De08410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S18-De08410	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	S18-De08410	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
EPN	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	S18-De08410	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	S18-De08410	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atraton	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Atrazine	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometon	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Prometryn	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Propazine	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simazine	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Simetryn	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbuthylazine	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbutryne	S18-De08410	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Carbamate Pesticides				Result 1	Result 2	RPD			
Aldicarb	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Bendiocarb	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Carbaryl	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Carbofuran	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Methomyl	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Oxamyl	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Thiobencarb	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Duplicate									
Synthetic Pyrethroids*				Result 1	Result 2	RPD			
Allethrin*	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cyfluthrin*	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Cypermethrin (total)*	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Fenvalerate*	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Permethrin	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phenothrin*	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Resmethrin*	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Tetramethrin*	S18-De08411	CP	mg/kg	< 2	< 2	<1	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S18-De08418	CP	mg/kg	1000	1100	4.0	30%	Pass	
Cadmium	S18-De08418	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S18-De08418	CP	mg/kg	16	16	<1	30%	Pass	
Copper	S18-De08418	CP	mg/kg	49	47	5.0	30%	Pass	
Lead	S18-De08418	CP	mg/kg	22	23	2.0	30%	Pass	
Mercury	S18-De08418	CP	mg/kg	0.3	0.3	14	30%	Pass	
Nickel	S18-De08418	CP	mg/kg	13	13	1.0	30%	Pass	
Zinc	S18-De08418	CP	mg/kg	190	190	3.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S18-De08419	CP	mg/kg	120	120	3.0	30%	Pass	
Cadmium	S18-De08419	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S18-De08419	CP	mg/kg	9.4	9.9	6.0	30%	Pass	
Copper	S18-De08419	CP	mg/kg	42	45	6.0	30%	Pass	
Lead	S18-De08419	CP	mg/kg	10	11	5.0	30%	Pass	
Mercury	S18-De08419	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S18-De08419	CP	mg/kg	15	16	6.0	30%	Pass	
Zinc	S18-De08419	CP	mg/kg	77	81	5.0	30%	Pass	

Comments

Eurofins | mgt accreditation number 1261, corporate site 1254 and 14271 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

Sample Integrity

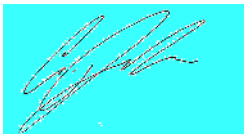
Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted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

Qualifier Codes/Comments

Code	Description
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference

Authorised By

Andrew Black	Analytical Services Manager
Chris Bennett	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson

General Manager

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.

SLR Consulting
2 Lincoln St
Lane Cove West
NSW 2066

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Junaidi Ibrahim**

Report **631838-W**
Project name PROTEN TAMWORTH SCA
Project ID 610.18456.00100
Received Date Dec 07, 2018

Client Sample ID			**R01**	**R02**
Sample Matrix			**Water**	**Water**
Eurofins | mgt Sample No.			**S18-De08426**	**S18-De08427**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Chlordanes - Total	0.001	mg/L	-	< 0.001
4.4'-DDD	0.0001	mg/L	-	< 0.0001
4.4'-DDE	0.0001	mg/L	-	< 0.0001
4.4'-DDT	0.0001	mg/L	-	< 0.0001
a-BHC	0.0001	mg/L	-	< 0.0001
Aldrin	0.0001	mg/L	-	< 0.0001
b-BHC	0.0001	mg/L	-	< 0.0001
d-BHC	0.0001	mg/L	-	< 0.0001
Dieldrin	0.0001	mg/L	-	< 0.0001
Endosulfan I	0.0001	mg/L	-	< 0.0001
Endosulfan II	0.0001	mg/L	-	< 0.0001
Endosulfan sulphate	0.0001	mg/L	-	< 0.0001
Endrin	0.0001	mg/L	-	< 0.0001
Endrin aldehyde	0.0001	mg/L	-	< 0.0001
Endrin ketone	0.0001	mg/L	-	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	-	< 0.0001
Heptachlor	0.0001	mg/L	-	< 0.0001
Heptachlor epoxide	0.0001	mg/L	-	< 0.0001
Hexachlorobenzene	0.0001	mg/L	-	< 0.0001
Methoxychlor	0.0001	mg/L	-	< 0.0001
Toxaphene	0.01	mg/L	-	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	-	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	-	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	-	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	-	< 0.001
Dibutylchlorendate (surr.)	1	%	-	53
Tetrachloro-m-xylene (surr.)	1	%	-	91
Organophosphorus Pesticides				
Azinphos-methyl	0.002	mg/L	-	< 0.002
Bolstar	0.002	mg/L	-	< 0.002
Chlorfenvinphos	0.002	mg/L	-	< 0.002
Chlorpyrifos	0.02	mg/L	-	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	-	< 0.002
Coumaphos	0.02	mg/L	-	< 0.02
Demeton-S	0.02	mg/L	-	< 0.02

Client Sample ID			R01	R02
Sample Matrix			Water	Water
Eurofins | mgt Sample No.			S18-De08426	S18-De08427
Date Sampled			Dec 06, 2018	Dec 06, 2018
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
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
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	0.002	mg/L	-	< 0.002
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	%	-	58
Triazines				
Ametryn	0.002	mg/L	-	< 0.002
Atraton	0.002	mg/L	-	< 0.002
Atrazine	0.002	mg/L	-	< 0.002
Prometon	0.002	mg/L	-	< 0.002
Prometryn	0.002	mg/L	-	< 0.002
Propazine	0.002	mg/L	-	< 0.002
Simazine	0.002	mg/L	-	< 0.002
Simetryn	0.002	mg/L	-	< 0.002
Terbuthylazine	0.002	mg/L	-	< 0.002
Terbutryne	0.002	mg/L	-	< 0.002
Carbamate Pesticides				
Aldicarb	0.01	mg/L	-	< 0.01
Bendiocarb	0.01	mg/L	-	< 0.01
Carbaryl	0.01	mg/L	-	< 0.01
Carbofuran	0.01	mg/L	-	< 0.01
Methomyl	0.01	mg/L	-	< 0.01
Oxamyl	0.01	mg/L	-	< 0.01
Thiobencarb	0.01	mg/L	-	< 0.01

Client Sample ID			R01	R02
Sample Matrix			**Water**	**Water**
Eurofins | mgt Sample No.			**S18-De08426**	**S18-De08427**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit		
Synthetic Pyrethroids*				
Allethrin*	0.2	mg/L	-	< 0.2
Cyfluthrin*	0.2	mg/L	-	< 0.2
Cypermethrin (total)*	0.2	mg/L	-	< 0.2
Fenvalerate*	0.2	mg/L	-	< 0.2
Permethrin	0.2	mg/L	-	< 0.2
Phenothrin*	0.2	mg/L	-	< 0.2
Resmethrin*	0.2	mg/L	-	< 0.2
Tetramethrin*	0.2	mg/L	-	< 0.2
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 and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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 | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Dec 12, 2018	7 Day
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Organophosphorus Pesticides	Melbourne	Dec 12, 2018	7 Day
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS			
Triazines	Melbourne	Dec 12, 2018	7 Day
- Method: LTM-ORG-2080			
Carbamate Pesticides	Melbourne	Dec 18, 2018	7 Day
- Method: LTM-ORG-2290 Carbamates in waters and soils by HPLC			
Synthetic Pyrethroids*	Melbourne	Dec 08, 2018	7 Day
- Method: LTM-ORG-2170 Synthetic Pyrethroids by HPLC-UV			
Metals M8	Melbourne	Dec 08, 2018	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			

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Site # 23736

Company Name: SLR Consulting (Sydney)
Address: 2 Lincoln St
Lane Cove West
NSW 2066

Project Name: PROTEN TAMWORTH SCA
Project ID: 610.18456.00100

Order No.:
Report #: 631838
Phone: 02 9428 8100
Fax:

Received: Dec 7, 2018 2:21 PM
Due: Dec 14, 2018
Priority: 5 Day
Contact Name: Junaidi Ibrahim

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	TP01_0.1	Dec 06, 2018		Soil	S18-De08338		X	X	X	X	X	X
2	TP01_0.7	Dec 06, 2018		Soil	S18-De08339		X	X	X	X	X	X
3	TP01_1.2	Dec 06, 2018		Soil	S18-De08340		X	X	X	X	X	X
4	TP16_0.2	Dec 06, 2018		Soil	S18-De08341		X	X	X	X	X	X
5	TP16_0.6	Dec 06, 2018		Soil	S18-De08342		X	X	X	X	X	X
6	TP16_1.1	Dec 06, 2018		Soil	S18-De08343		X	X	X	X	X	X
7	TP02_0.2	Dec 06, 2018		Soil	S18-De08406		X	X	X	X	X	X
8	TP02_0.7	Dec 06, 2018		Soil	S18-De08407		X	X	X	X	X	X
9	TP02_1.2	Dec 06, 2018		Soil	S18-De08408		X	X	X	X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	TP06_0.2	Dec 06, 2018		Soil	S18-De08409		X	X	X	X	X	X
11	TP06_0.6	Dec 06, 2018		Soil	S18-De08410		X	X	X	X	X	X
12	TP06_1.1	Dec 06, 2018		Soil	S18-De08411		X	X	X	X	X	X
13	TP07_0.2	Dec 06, 2018		Soil	S18-De08412		X	X	X	X	X	X
14	TP07_0.6	Dec 06, 2018		Soil	S18-De08413		X	X	X	X	X	X
15	TP07_1.1	Dec 06, 2018		Soil	S18-De08414		X	X	X	X	X	X
16	TP11_0.2	Dec 06, 2018		Soil	S18-De08415		X	X	X	X	X	X
17	TP11_0.6	Dec 06, 2018		Soil	S18-De08416		X	X	X	X	X	X
18	TP11_1.1	Dec 06, 2018		Soil	S18-De08417		X	X	X	X	X	X
19	TP12_0.2	Dec 06, 2018		Soil	S18-De08418		X	X	X	X	X	X
20	TP12_0.6	Dec 06, 2018		Soil	S18-De08419		X	X	X	X	X	X
21	TP12_1.1	Dec 06, 2018		Soil	S18-De08420		X	X	X	X	X	X

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Sample Detail						HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
22	QC1	Dec 06, 2018		Soil	S18-De08421		X	X	X	X	X	X
23	QC3	Dec 06, 2018		Soil	S18-De08422		X	X	X	X	X	X
24	QC4	Dec 06, 2018		Soil	S18-De08423		X	X	X	X	X	X
25	QC5	Dec 06, 2018		Soil	S18-De08424		X	X	X	X	X	X
26	QC7	Dec 06, 2018		Soil	S18-De08425		X	X	X	X	X	X
27	R01	Dec 06, 2018		Water	S18-De08426					X		
28	R02	Dec 06, 2018		Water	S18-De08427		X	X	X		X	
29	TP17_0.1	Dec 06, 2018		Soil	S18-De08428	X						
30	TP17_0.8	Dec 06, 2018		Soil	S18-De08429	X						
31	TP17_1.2	Dec 06, 2018		Soil	S18-De08430	X						
32	TP03_0.2	Dec 06, 2018		Soil	S18-De08431	X						
33	TP03_0.6	Dec 06, 2018		Soil	S18-De08432	X						

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Sample Detail						HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
34	TP03_1.1	Dec 06, 2018		Soil	S18-De08433	X						
35	TP04_0.2	Dec 06, 2018		Soil	S18-De08434	X						
36	TP04_0.7	Dec 06, 2018		Soil	S18-De08435	X						
37	TP04_1.1	Dec 06, 2018		Soil	S18-De08436	X						
38	TP05_0.2	Dec 06, 2018		Soil	S18-De08437	X						
39	TP05_0.6	Dec 06, 2018		Soil	S18-De08438	X						
40	TP05_1.1	Dec 06, 2018		Soil	S18-De08439	X						
41	TP08_0.1	Dec 06, 2018		Soil	S18-De08440	X						
42	TP08_0.5	Dec 06, 2018		Soil	S18-De08441	X						
43	TP08_1.0	Dec 06, 2018		Soil	S18-De08442	X						
44	TP09_0.1	Dec 06, 2018		Soil	S18-De08443	X						
45	TP09_0.5	Dec 06, 2018		Soil	S18-De08444	X						

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Sample Detail						HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
46	TP09_0.9	Dec 06, 2018		Soil	S18-De08445	X						
47	TP10_0.1	Dec 06, 2018		Soil	S18-De08446	X						
48	TP10_0.4	Dec 06, 2018		Soil	S18-De08447	X						
49	TP10_0.8	Dec 06, 2018		Soil	S18-De08448	X						
50	TP13_0.2	Dec 06, 2018		Soil	S18-De08449	X						
51	TP13_0.6	Dec 06, 2018		Soil	S18-De08450	X						
52	TP13_1.0	Dec 06, 2018		Soil	S18-De08451	X						
53	TP14_0.2	Dec 06, 2018		Soil	S18-De08452	X						
54	TP14_0.6	Dec 06, 2018		Soil	S18-De08453	X						
55	TP14_1.1	Dec 06, 2018		Soil	S18-De08454	X						
56	TP15_0.2	Dec 06, 2018		Soil	S18-De08455	X						
57	TP15_0.7	Dec 06, 2018		Soil	S18-De08456	X						

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Sample Detail						HOLD	Triazines	Carbamate Pesticides	Synthetic Pyrethroids*	Metals M8	Eurofins | mgt Suite B14	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217												
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
58	TP15_1.2	Dec 06, 2018		Soil	S18-De08457	X						
59	TS	Dec 06, 2018		Soil	S18-De08522	X						
60	TB	Dec 06, 2018		Soil	S18-De08523	X						
61	LAB SPIKE	Dec 06, 2018		Soil	S18-De08524	X						
Test Counts						33	27	27	27	27	27	26

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil 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. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. 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							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	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	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.02			0.02	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	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
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							
Triazines							
Ametryn	mg/L	< 0.002			0.002	Pass	
Atraton	mg/L	< 0.002			0.002	Pass	
Atrazine	mg/L	< 0.002			0.002	Pass	
Prometon	mg/L	< 0.002			0.002	Pass	
Prometryn	mg/L	< 0.002			0.002	Pass	
Propazine	mg/L	< 0.002			0.002	Pass	
Simazine	mg/L	< 0.002			0.002	Pass	
Simetryn	mg/L	< 0.002			0.002	Pass	
Terbuthylazine	mg/L	< 0.002			0.002	Pass	
Terbutryne	mg/L	< 0.002			0.002	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							
Organochlorine Pesticides							
Chlordanes - Total	%	90			70-130	Pass	
4.4'-DDD	%	91			70-130	Pass	
4.4'-DDE	%	113			70-130	Pass	
4.4'-DDT	%	93			70-130	Pass	
a-BHC	%	101			70-130	Pass	
Aldrin	%	104			70-130	Pass	
b-BHC	%	104			70-130	Pass	
d-BHC	%	108			70-130	Pass	
Dieldrin	%	95			70-130	Pass	
Endosulfan I	%	98			70-130	Pass	
Endosulfan II	%	89			70-130	Pass	
Endosulfan sulphate	%	71			70-130	Pass	
Endrin	%	83			70-130	Pass	
Endrin aldehyde	%	77			70-130	Pass	
Endrin ketone	%	72			70-130	Pass	
g-BHC (Lindane)	%	106			70-130	Pass	
Heptachlor	%	84			70-130	Pass	
Heptachlor epoxide	%	89			70-130	Pass	
Hexachlorobenzene	%	112			70-130	Pass	
Methoxychlor	%	77			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	84			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Dimethoate	%	73			70-130	Pass	
Ethion	%	109			70-130	Pass	
Fenitrothion	%	94			70-130	Pass	
Methyl parathion	%	94			70-130	Pass	
Mevinphos	%	83			70-130	Pass	
LCS - % Recovery							
Triazines							
Prometryn	%	113			75-125	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	87			80-120	Pass	
Cadmium	%	83			80-120	Pass	
Chromium	%	85			80-120	Pass	
Copper	%	87			80-120	Pass	
Lead	%	86			80-120	Pass	
Mercury	%	102			75-125	Pass	
Nickel	%	87			80-120	Pass	
Zinc	%	88			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M18-De10416	NCP	%	89			75-125	Pass	
Cadmium	M18-De10416	NCP	%	94			75-125	Pass	
Chromium	M18-De10416	NCP	%	93			75-125	Pass	
Copper	M18-De10416	NCP	%	92			75-125	Pass	
Lead	M18-De10416	NCP	%	94			75-125	Pass	
Mercury	M18-De10416	NCP	%	92			70-130	Pass	
Nickel	M18-De10416	NCP	%	92			75-125	Pass	
Zinc	M18-De10416	NCP	%	94			75-125	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	M18-De10416	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M18-De10416	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M18-De10416	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M18-De10416	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	M18-De10416	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	M18-De10416	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M18-De10416	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	M18-De10416	NCP	mg/L	0.028	0.030	5.0	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S18-De04616	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4.4'-DDD	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDE	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDT	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
a-BHC	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Aldrin	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
b-BHC	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
d-BHC	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Dieldrin	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan I	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan II	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan sulphate	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin aldehyde	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin ketone	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
g-BHC (Lindane)	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor epoxide	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Hexachlorobenzene	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Methoxychlor	S18-De04616	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Bolstar	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorfenvinphos	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorpyrifos	B18-De12402	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Chlorpyrifos-methyl	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Coumaphos	B18-De12402	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-S	B18-De12402	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-O	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Diazinon	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dichlorvos	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dimethoate	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Disulfoton	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
EPN	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethion	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethoprop	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethyl parathion	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenitrothion	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fensulfothion	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenthion	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Malathion	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Merphos	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methyl parathion	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Mevinphos	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Monocrotophos	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Naled	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Omethoate	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Phorate	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pirimiphos-methyl	B18-De12402	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Pyrazophos	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ronnel	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbufos	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tetrachlorvinphos	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tokuthion	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Triazines				Result 1	Result 2	RPD			
Ametryn	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Atraton	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Atrazine	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Prometon	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Prometryn	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Propazine	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Simazine	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	

Duplicate									
Triazines				Result 1	Result 2	RPD			
Simetryn	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbuthylazine	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbutryne	B18-De12402	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	

Comments

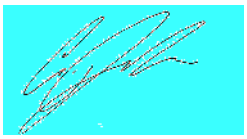
Eurofins | mgt accreditation number 1261, corporate site 1254 and 14271 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

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

Authorised By

Andrew Black	Analytical Services Manager
Chris Bennett	Senior Analyst-Metal (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson
General Manager

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.

SLR Consulting
2 Lincoln St
Lane Cove West
NSW 2066

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ben Dewhurst**

Report **633738-S**
Project name PROTEN TAMWORTH SCA
Project ID 610.18456.00100
Received Date Dec 19, 2018

Client Sample ID			**TP03_0.2**	**TP03_0.6**	**TP03_1.1**	**TP08_0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M18-De25159**	**M18-De25160**	**M18-De25161**	**M18-De25162**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	290	17	17	130
% Moisture	1	%	14	12	8.5	16

Client Sample ID			**TP08_0.5**	**TP08_1.0**	**TP13_0.2**	**TP13_0.6**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M18-De25163**	**M18-De25164**	**M18-De25165**	**M18-De25166**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	30	13	790	100
% Moisture	1	%	9.2	9.7	16	7.8

Client Sample ID			**TP13_1.0**	**TP17_0.1**	**TP17_0.8**	**TP17_1.2**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M18-De25167**	**M18-De25168**	**M18-De25169**	**M18-De25170**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	130	570	35	15
% Moisture	1	%	7.8	12	7.7	7.3

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Heavy Metals	Melbourne	Dec 19, 2018	180 Day
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Dec 19, 2018	14 Day
- Method: LTM-GEN-7080 Moisture			

eurofins | mgt

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NATA # 1261 Site # 20794

Perth
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Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: SLR Consulting (Sydney)
Address: 2 Lincoln St
Lane Cove West
NSW 2066

Project Name: PROTEN TAMWORTH SCA
Project ID: 610.18456.00100

Order No.:
Report #: 633738
Phone: 02 9428 8100
Fax:

Received: Dec 19, 2018 10:43 AM
Due: Dec 21, 2018
Priority: 2 Day
Contact Name: Ben Dewhurst

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						Arsenic	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X
Sydney Laboratory - NATA Site # 18217							
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	TP03_0.2	Dec 06, 2018		Soil	M18-De25159	X	X
2	TP03_0.6	Dec 06, 2018		Soil	M18-De25160	X	X
3	TP03_1.1	Dec 06, 2018		Soil	M18-De25161	X	X
4	TP08_0.1	Dec 06, 2018		Soil	M18-De25162	X	X
5	TP08_0.5	Dec 06, 2018		Soil	M18-De25163	X	X
6	TP08_1.0	Dec 06, 2018		Soil	M18-De25164	X	X
7	TP13_0.2	Dec 06, 2018		Soil	M18-De25165	X	X
8	TP13_0.6	Dec 06, 2018		Soil	M18-De25166	X	X
9	TP13_1.0	Dec 06, 2018		Soil	M18-De25167	X	X

eurofins | mgt

ABN– 50 005 085 521
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NATA # 1261
Site # 23736

Company Name: SLR Consulting (Sydney)
Address: 2 Lincoln St
Lane Cove West
NSW 2066

Project Name: PROTEN TAMWORTH SCA
Project ID: 610.18456.00100

Order No.:
Report #: 633738
Phone: 02 9428 8100
Fax:

Received: Dec 19, 2018 10:43 AM
Due: Dec 21, 2018
Priority: 2 Day
Contact Name: Ben Dewhurst

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						Arsenic	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X
Sydney Laboratory - NATA Site # 18217							
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
10	TP17_0.1	Dec 06, 2018		Soil	M18-De25168	X	X
11	TP17_0.8	Dec 06, 2018		Soil	M18-De25169	X	X
12	TP17_1.2	Dec 06, 2018		Soil	M18-De25170	X	X
Test Counts						12	12

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil 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. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Heavy Metals									
Arsenic			mg/kg	< 2			2	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	93			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M18-De25162	CP	%	94			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M18-De25159	CP	%	14	13	4.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M18-De25161	CP	mg/kg	17	17	4.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M18-De25162	CP	mg/kg	130	130	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M18-De25169	CP	%	7.7	7.3	5.0	30%	Pass	

Comments

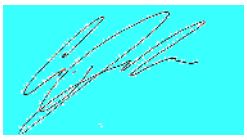
Eurofins | mgt accreditation number 1261, corporate site 1254 and 14271 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

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

Authorised By

Andrew Black	Analytical Services Manager
Chris Bennett	Senior Analyst-Metal (VIC)



Glenn Jackson
General Manager

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.

SLR Consulting
2 Lincoln St
Lane Cove West
NSW 2066

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ben Dewhurst**

Report **634417-S**
Project name PROTEN TAMWORTH SCA
Project ID 610.18456.00100
Received Date Dec 21, 2018

Client Sample ID			**TP04_0.2**	**TP04_0.7**	**TP04_1.1**	**TP09_0.1**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M18-De30955**	**M18-De30956**	**M18-De30957**	**M18-De30958**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	140	20	3.6	39
% Moisture	1	%	14	12	5.6	16

Client Sample ID			**TP09_0.5**	**TP09_0.9**	**TP14_0.2**	**TP14_0.6**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M18-De30959**	**M18-De30960**	**M18-De30961**	**M18-De30962**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	7.2	2.3	490	140
% Moisture	1	%	8.8	6.1	13	6.2

Client Sample ID			**TP14_1.1**
Sample Matrix			**Soil**
Eurofins | mgt Sample No.			**M18-De30963**
Date Sampled			**Dec 06, 2018**
Test/Reference	LOR	Unit	
Heavy Metals			
Arsenic	2	mg/kg	21
% Moisture	1	%	6.7

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Heavy Metals	Melbourne	Dec 27, 2018	180 Day
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Dec 27, 2018	14 Day
- Method: LTM-GEN-7080 Moisture			

eurofins | mgt

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NATA # 1261
Site # 1254 & 14271

Sydney
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Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: SLR Consulting (Sydney)
Address: 2 Lincoln St
Lane Cove West
NSW 2066

Project Name: PROTEN TAMWORTH SCA
Project ID: 610.18456.00100

Order No.:
Report #: 634417
Phone: 02 9428 8100
Fax:

Received: Dec 21, 2018 11:45 AM
Due: Jan 2, 2019
Priority: 3 Day
Contact Name: Ben Dewhurst

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						Arsenic	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X
Sydney Laboratory - NATA Site # 18217							
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	TP04_0.2	Dec 06, 2018		Soil	M18-De30955	X	X
2	TP04_0.7	Dec 06, 2018		Soil	M18-De30956	X	X
3	TP04_1.1	Dec 06, 2018		Soil	M18-De30957	X	X
4	TP09_0.1	Dec 06, 2018		Soil	M18-De30958	X	X
5	TP09_0.5	Dec 06, 2018		Soil	M18-De30959	X	X
6	TP09_0.9	Dec 06, 2018		Soil	M18-De30960	X	X
7	TP14_0.2	Dec 06, 2018		Soil	M18-De30961	X	X
8	TP14_0.6	Dec 06, 2018		Soil	M18-De30962	X	X
9	TP14_1.1	Dec 06, 2018		Soil	M18-De30963	X	X

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

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NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name:	SLR Consulting (Sydney)	**Order No.:**		**Received:**	Dec 21, 2018 11:45 AM
Address:	2 Lincoln St Lane Cove West NSW 2066	**Report #:**	634417	**Due:**	Jan 2, 2019
		Phone:	02 9428 8100	**Priority:**	3 Day
		Fax:		**Contact Name:**	Ben Dewhurst
Project Name:	PROTEN TAMWORTH SCA				
Project ID:	610.18456.00100				

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail	Arsenic	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271	X	X
Sydney Laboratory - NATA Site # 18217		
Brisbane Laboratory - NATA Site # 20794		
Perth Laboratory - NATA Site # 23736		
Test Counts	9	9

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil 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. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Heavy Metals									
Arsenic			mg/kg	< 2			2	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	114			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M18-De30959	CP	%	133			75-125	Fail	Q08
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M18-De30957	CP	%	5.6	6.2	10	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M18-De30958	CP	mg/kg	39	40	3.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M18-De30959	CP	mg/kg	7.2	7.8	8.0	30%	Pass	

Comments

Eurofins | mgt accreditation number 1261, corporate site 1254 and 14271 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

Sample Integrity

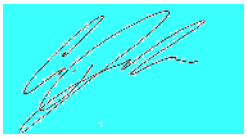
Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted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

Qualifier Codes/Comments

Code	Description
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference

Authorised By

Andrew Black	Analytical Services Manager
Chris Bennett	Senior Analyst-Metal (VIC)



Glenn Jackson
General Manager

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

SLR Consulting
2 Lincoln St
Lane Cove West
NSW 2066

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Ben Dewhurst**

Report **634849-S**
Project name PROTEN TAMWORTH SCA
Project ID 610.18456.00100
Received Date Jan 07, 2019

Client Sample ID			**TP05_0.2**	**TP05_0.6**	**TP05_1.1**	**TP15_0.2**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins | mgt Sample No.			**M19-Ja01585**	**M19-Ja01586**	**M19-Ja01587**	**M19-Ja01588**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	62	6.3	5.0	190
% Moisture	1	%	15	9.0	6.9	11

Client Sample ID			**TP15_0.7**	**TP15_1.2**
Sample Matrix			**Soil**	**Soil**
Eurofins | mgt Sample No.			**M19-Ja01589**	**M19-Ja01590**
Date Sampled			**Dec 06, 2018**	**Dec 06, 2018**
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	2	mg/kg	19	19
% Moisture	1	%	8.3	7.9

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

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
Heavy Metals	Melbourne	Jan 08, 2019	180 Day
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Melbourne	Jan 07, 2019	14 Day
- Method: LTM-GEN-7080 Moisture			

eurofins | mgt

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NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
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Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name: SLR Consulting (Sydney)
Address: 2 Lincoln St
Lane Cove West
NSW 2066

Project Name: PROTEN TAMWORTH SCA
Project ID: 610.18456.00100

Order No.:
Report #: 634849
Phone: 02 9428 8100
Fax:

Received: Jan 7, 2019 9:54 AM
Due: Jan 10, 2019
Priority: 3 Day
Contact Name: Ben Dewhurst

Eurofins | mgt Analytical Services Manager : Andrew Black

Sample Detail						Arsenic	Moisture Set
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X
Sydney Laboratory - NATA Site # 18217							
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	TP05_0.2	Dec 06, 2018		Soil	M19-Ja01585	X	X
2	TP05_0.6	Dec 06, 2018		Soil	M19-Ja01586	X	X
3	TP05_1.1	Dec 06, 2018		Soil	M19-Ja01587	X	X
4	TP15_0.2	Dec 06, 2018		Soil	M19-Ja01588	X	X
5	TP15_0.7	Dec 06, 2018		Soil	M19-Ja01589	X	X
6	TP15_1.2	Dec 06, 2018		Soil	M19-Ja01590	X	X
Test Counts						6	6

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil 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. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

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MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - 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.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	Quality Systems Manual ver 5.1 US Department of Defense
CP	Client Parent - QC was performed on samples pertaining to this report
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.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

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%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.1 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

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. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. 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.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Heavy Metals									
Arsenic			mg/kg	< 2			2	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	100			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M19-Ja01588	CP	%	173			75-125	Fail	Q08
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M19-Ja01559	NCP	%	26	27	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M19-Ja01587	CP	mg/kg	5.0	5.0	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M19-Ja01588	CP	mg/kg	190	200	2.0	30%	Pass	

Comments

Eurofins | mgt accreditation number 1261, corporate site 1254 and 14271 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

Sample Integrity

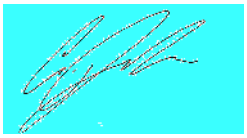
Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted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

Qualifier Codes/Comments

Code	Description
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference

Authorised By

Andrew Black	Analytical Services Manager
Chris Bennett	Senior Analyst-Metal (VIC)



Glenn Jackson
General Manager

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.

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES1837035**	Page	: 1 of 6
Client	: **SLR Consulting Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: JUNAIDI IBRAHIM	Contact	: Tyler Cachia
Address	: PO BOX 176 2/2 LINCOLN ST LANECOVE NSW, AUSTRALIA 1595	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: 610.18456.00100 PoTen Tamworth SCA	Date Samples Received	: 10-Dec-2018 11:18
Order number	:	Date Analysis Commenced	: 21-Dec-2018
C-O-C number	: ----	Issue Date	: 03-Jan-2019 15:42
Sampler	: ----		
Site	: ----		
Quote number	: EN/333 Secondary work BQ		
No. of samples received	: 2		
No. of samples analysed	: 2		

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. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Diana Mesa	2IC Organic Chemist	Brisbane Organics, Stafford, QLD
Ivan Taylor	Analyst	Sydney Inorganics, Smithfield, NSW

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by 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 Contact 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.

- EP094: The LOR for 'QC6' has been raised due to spectral interference.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	QC2	QC6	----	----	----
			Client sampling date / time	06-Dec-2018 00:00	06-Dec-2018 00:00	----	----	----
Compound	CAS Number	LOR	Unit	ES1837035-001	ES1837035-002	--------	--------	--------
				Result	Result	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	**19.4**	**13.3**	----	----	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	**623**	**354**	----	----	----
Cadmium	7440-43-9	1	mg/kg	**2**	<1	----	----	----
Chromium	7440-47-3	2	mg/kg	**11**	**11**	----	----	----
Copper	7440-50-8	5	mg/kg	**44**	**43**	----	----	----
Lead	7439-92-1	5	mg/kg	**107**	**43**	----	----	----
Nickel	7440-02-0	2	mg/kg	**8**	**11**	----	----	----
Zinc	7440-66-6	5	mg/kg	**839**	**243**	----	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	**0.8**	**0.3**	----	----	----
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	----	----	----
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	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC2	QC6	----	----	----
				Client sampling date / time	06-Dec-2018 00:00	06-Dec-2018 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES1837035-001	ES1837035-002	--------	--------	--------
					Result	Result	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
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	----	----	----
EP094A: Synthetic Pyrethroids									
Bioresmethrin	28434-01-07	0.05	mg/kg		<0.05	<0.05	----	----	----
Bifenthrin	82657-04-3	0.05	mg/kg		<0.05	<0.05	----	----	----
Phenothrin	26002-80-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Lambda-cyhalothrin	68085-85-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Permethrin	52645-53-1	0.05	mg/kg		<0.05	<0.05	----	----	----
Cyfluthrin	68359-37-5	0.05	mg/kg		<0.05	<0.05	----	----	----
Cypermethrin	52315-07-8	0.05	mg/kg		<0.05	<0.05	----	----	----
Fenvalverate & Esfenvalerate	51630-58-1/66230-04-	0.05	mg/kg		<0.05	<0.18	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC2	QC6	----	----	----
				Client sampling date / time	06-Dec-2018 00:00	06-Dec-2018 00:00	----	----	----
Compound	CAS Number	LOR	Unit		ES1837035-001	ES1837035-002	--------	--------	--------
					Result	Result	----	----	----
EP094A: Synthetic Pyrethroids - Continued									
Deltamethrin & Tralomethrin	62229-77-0/66841-25-	0.05	mg/kg		<0.05	<0.05	----	----	----
Allethrin	584-79-2	0.05	mg/kg		<0.05	<0.05	----	----	----
Transfluthrin	118712-89-3	0.05	mg/kg		<0.05	<0.05	----	----	----
Tetramethrin	7696-12-0	0.05	mg/kg		<0.05	<0.05	----	----	----
Tau-fluvalinate	102851-06-9	0.05	mg/kg		<0.05	<0.05	----	----	----
EP094B: Synergist									
Piperonyl Butoxide	63993-73-7	0.05	mg/kg		<0.05	<0.05	----	----	----
EP201: Carbamate Pesticides by LCMS									
Oxamyl	23135-22-0	0.02	mg/kg		<0.02	<0.02	----	----	----
Methomyl	16752-77-5	0.02	mg/kg		<0.02	<0.02	----	----	----
3-Hydroxy Carbofuran	16655-82-6	0.02	mg/kg		<0.02	<0.02	----	----	----
Aldicarb	116-06-3	0.02	mg/kg		<0.02	<0.02	----	----	----
Bendiocarb	22781-23-3	0.02	mg/kg		<0.02	<0.02	----	----	----
Thiodicarb	59669-26-0	0.02	mg/kg		<0.02	<0.02	----	----	----
Carbofuran	1563-66-2	0.02	mg/kg		<0.02	<0.02	----	----	----
Carbaryl	63-25-2	0.02	mg/kg		<0.02	<0.02	----	----	----
Methiocarb	2032-65-7	0.02	mg/kg		<0.02	<0.02	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**64.8**	**85.2**	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**62.9**	**83.8**	----	----	----
EP094S: Pesticide Surrogate									
DEF	78-48-8	0.05	%		**108**	**108**	----	----	----
EP201S: Carbamate Surrogate									
4-Bromo-3.5-dimethylphenyl-N-methylcarbamate	672-99-1	0.02	%		**82.5**	**92.1**	----	----	----

Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP094S: Pesticide Surrogate			
DEF	78-48-8	10	110
EP201S: Carbamate Surrogate			
4-Bromo-3.5-dimethylphenyl-N-methylcarbamate	672-99-1	59	137

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES1832597**	Page	: 1 of 6
Client	: **SLR Consulting Australia Pty Ltd**	Laboratory	: Environmental Division Sydney
Contact	: JUNAIDI IBRAHIM	Contact	: Tyler Cachia
Address	: PO BOX 176 2/2 LINCOLN ST LANECOVE NSW, AUSTRALIA 1595	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: ----	Telephone	: +61 2 8784 8555
Project	: 610.18456 DSI ProTen Tamworth	Date Samples Received	: 01-Nov-2018 15:23
Order number	:	Date Analysis Commenced	: 05-Nov-2018
C-O-C number	: ----	Issue Date	: 08-Nov-2018 16:30
Sampler	: Junaidi Ibrahim		
Site	:		
Quote number	: EN/032/17		
No. of samples received	: 1		
No. of samples analysed	: 1		

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. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

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- Analytical Results
- Surrogate Control Limits

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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*
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Diana Mesa	2IC Organic Chemist	Brisbane Organics, Stafford, QLD
Edwandy Fadjar	Organic Coordinator	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Franco Lentini		Sydney Organics, Smithfield, NSW

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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.

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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.

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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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC2	----	----	----	----
				Client sampling date / time	30-Oct-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES1832597-001	--------	--------	--------	--------
					Result	----	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)									
Moisture Content	----	1.0	%		**16.3**	----	----	----	----
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		**7**	----	----	----	----
Cadmium	7440-43-9	1	mg/kg		<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg		**17**	----	----	----	----
Copper	7440-50-8	5	mg/kg		**48**	----	----	----	----
Lead	7439-92-1	5	mg/kg		**13**	----	----	----	----
Nickel	7440-02-0	2	mg/kg		**16**	----	----	----	----
Zinc	7440-66-6	5	mg/kg		**63**	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg		<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg		<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg		<0.05	----	----	----	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	----	----	----	----
^ **Total Chlordane (sum)**	----	0.05	mg/kg		<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg		<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	----	----	----	----
^ **Endosulfan (sum)**	115-29-7	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	----	----	----	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC2	----	----	----	----
				Client sampling date / time	30-Oct-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES1832597-001	--------	--------	--------	--------
					Result	----	----	----	----
EP068A: Organochlorine Pesticides (OC) - Continued									
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	----	----	----	----
^ **Sum of Aldrin + Dieldrin**	309-00-2/60-57-1	0.05	mg/kg		<0.05	----	----	----	----
^ **Sum of DDD + DDE + DDT**	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.05	mg/kg		<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg		<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg		<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg		<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg		<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg		<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg		<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg		<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg		<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg		<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg		<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg		<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg		<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg		<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg		<0.05	----	----	----	----
Ethion	563-12-2	0.05	mg/kg		<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg		<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg		<0.05	----	----	----	----
EP068C: Triazines									
Atrazine	1912-24-9	0.05	mg/kg		<0.05	----	----	----	----
Simazine	122-34-9	0.05	mg/kg		<0.05	----	----	----	----
EP094A: Synthetic Pyrethroids									
Bioresmethrin	28434-01-07	0.05	mg/kg		<0.05	----	----	----	----
Bifenthrin	82657-04-3	0.05	mg/kg		<0.05	----	----	----	----
Phenothrin	26002-80-2	0.05	mg/kg		<0.05	----	----	----	----
Lambda-cyhalothrin	68085-85-8	0.05	mg/kg		<0.05	----	----	----	----
Permethrin	52645-53-1	0.05	mg/kg		<0.05	----	----	----	----
Cyfluthrin	68359-37-5	0.05	mg/kg		<0.05	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	QC2	----	----	----	----
				Client sampling date / time	30-Oct-2018 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES1832597-001	--------	--------	--------	--------
					Result	----	----	----	----
EP094A: Synthetic Pyrethroids - Continued									
Cypermethrin	52315-07-8	0.05	mg/kg		<0.05	----	----	----	----
Fenvalverate & Esfenvalerate	51630-58-1/66230-04-	0.05	mg/kg		<0.05	----	----	----	----
Deltamethrin & Tralomethrin	62229-77-0/66841-25-	0.05	mg/kg		<0.05	----	----	----	----
Allethrin	584-79-2	0.05	mg/kg		<0.05	----	----	----	----
Transfluthrin	118712-89-3	0.05	mg/kg		<0.05	----	----	----	----
Tetramethrin	7696-12-0	0.05	mg/kg		<0.05	----	----	----	----
Tau-fluvalinate	102851-06-9	0.05	mg/kg		<0.05	----	----	----	----
EP094B: Synergist									
Piperonyl Butoxide	63993-73-7	0.05	mg/kg		<0.05	----	----	----	----
EP201: Carbamate Pesticides by LCMS									
Oxamyl	23135-22-0	0.02	mg/kg		<0.02	----	----	----	----
Methomyl	16752-77-5	0.02	mg/kg		<0.02	----	----	----	----
3-Hydroxy Carbofuran	16655-82-6	0.02	mg/kg		<0.02	----	----	----	----
Aldicarb	116-06-3	0.02	mg/kg		<0.02	----	----	----	----
Bendiocarb	22781-23-3	0.02	mg/kg		<0.02	----	----	----	----
Thiodicarb	59669-26-0	0.02	mg/kg		<0.02	----	----	----	----
Carbofuran	1563-66-2	0.02	mg/kg		<0.02	----	----	----	----
Carbaryl	63-25-2	0.02	mg/kg		<0.02	----	----	----	----
Methiocarb	2032-65-7	0.02	mg/kg		<0.02	----	----	----	----
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**71.6**	----	----	----	----
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.05	%		**74.8**	----	----	----	----
EP094S: Pesticide Surrogate									
DEF	78-48-8	0.05	%		**117**	----	----	----	----
EP201S: Carbamate Surrogate									
4-Bromo-3.5-dimethylphenyl-N-m ethylcarbamate	672-99-1	0.02	%		**102**	----	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP094S: Pesticide Surrogate			
DEF	78-48-8	10	110
EP201S: Carbamate Surrogate			
4-Bromo-3.5-dimethylphenyl-N-methylcarbamate	672-99-1	59	137

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