Alliance Geotechnical

Engineering | Environmental | Testing

Report Type:	Á
Supplementary Contamination Assessment	Á
Project Name:	Á
Bankstown North Public-School Redevelopment	Á
	Á
Project Address: 322 Hume Highway, Bankstown, NSW 2200	Á
Lot 14 in DP1000689	Á
	Á
Client Name:	Á
School Infrastructure NSW (c/- JDH Architects)	Á
20 June 2020	Á
30 June 2020 Report No: 9150-ER-1-1 Rev 1	Á
	Á
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Document Control

Revision	Date	Author	Reviewer
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Ü^çÆÁ	HEÁRT}^ÁGEGEÁ	Ræ&ljàÁvræ∥\^¦ÁnóAÚæ{ `^ Á Qlæ{^œãÁ	OEãaæ)ÁÜ[[}^^Á
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Name	Ræ&[àÁYæ∯\^¦Á	Name	Œãaæ) ÁÜ[[}^^Á
Title	Ò}çã[}{^}œq\Á Ô[}• ઁ œa}oÁ	Title	Ú¦āj&ājæqkíÔ}çā[}{^}æqkÁ Ô[}•ĭ æajoÁ
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Executive Summary

CE|ae) &^ÁÕ^[c^&@, a&e)ÁÚ¢ ÁŠcåÁÇCEÕDÁ; æ Á³} *æť^åÁà^ÁÛ&@[|ÁQ, dæ d`&č l^ÁÞÙY ÁQ&EËÆÖPÁŒ&@ær&oDÁĘÁ ¸³å^læà^ÁæA¸]] |^{ ^}æé^Á&[}ææí} Áæe•^••{ ^}oÁ; lÁÓæ) \•d; }ÁÞ[lo@ÁŬ`à|a&EÜ&@[|ÁÜ
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APPENDICES

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1. Introduction

1.1. Background

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- •Á V@Á&|ā} ơÁ^~ ã^•ÁæÁ*]] |^{ ^} cæĠ Á&[} cæḍ āj ææā[} Áæ••^••{ ^} oÁ[Áæåå¦^••Ás@Áāj åāj *•Áj Ás@Á Ú¦^|ā[āj æð ÁÖ} çā[] { ^} cæḍÁŪãc^ÁOĒ•^••{ ^} oÁ } å^¦ cæð ^} Ás ÁÖ^[Ö} çā[ÁÔ[} • `| cæð & ÁÚc ÁŠcå ĚÁ

1.2. Proposed Development

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- •Á Ú¦[çãå^Á^&[{ { ^} åæaā[}•Á[¦Á*¦c@¦Á\$]ç^•cātæaā[}ÉA(æ)æt^{ ^}oÁæ)å†D¦Á^{ ^åãæaā[}ÁÇãÁ _æk¦æ)c^åDÉA

Table 1-1 - SEARs and Relevant Reference

SEARs Item	Report Reference
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1.3. Objectives

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 ãơÉ, ão@Á^~¦^}&^Ág,ÁœÁæd^æ,Á;Áx)çã[]{ ^}cædÁ&[}&^!}Á^][¦♂åÁā,Áo@Á,¦^|ã, ð,ædÁ
 ^}çã[]{ ^}cædÁæe•^••{ ^}clÁ
- •Á Ú¦[çãå^Áæåçã&^Á;}Á, @ c@ ¦Ás@ Á ãc^Á, [ˈ|åÁs^Á ãæà|^ÁÇã, Ás@ Á&[} c^¢cÁ; -Áæ) åÁ&[}cæ{ ājææā[}DÁ;¦Á c@ Á;¦[][•^åÁæ) åÁ •^Á^ccā; *LÁæ) åÁ
- •Á Ú¦[çãā^Á^&[{ { ^} åææā[}•Á[¦Á`¦o@¦Ás[ç^•cātææā[}ÉA(æ)æ*^{ ^}oÁæ)å†D¦Á^{ ^åãææā[}ÁÇāÁ ;æb¦æ)¢^åDEÁ

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1.4. Scope of Work

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- •Á Šæà[¦æq[¦^Áæq)æ|^•ãrLÁæq)åÁ
- •Á ÖæææÁæ•^••{ ^}oÁæ)åÁ^][¦æ]*ÈÁÁ Á

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2. Site Setting

2.1. Site Identification

Table 2-1 Site Identification Information

Ùã c^ÁŒ å¦^∙∙Á	HGCÁP~ {^ÁPât@, æêÉAÓæ)\•o[, }ÉAÞÙYÁGG€€Á
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	FÍF ^I €GAFÏÈEÎ+ÁÒÁ
	ÇÙ[~¦&^KÁÕ[[* ^ÁÒæbơ@DÁ
Ùãc^ÁQE^æÁ	GÌGÁ@ &cc¢^•Á
	ÇÙ[ˇ├&^KAÛã¢Tæ]•ÆË <u>@òd]•KED)æ]•ÈāøÈ;•¸È[çÈæĕE</u> DÓA
Z[}	ÙÚGÁ ÁQ ⊀æ dˇ &č ¦^ÁÁ
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Ô` ¦¦^} ơỗౙ) åÁV•^Á	Ú`à a&AÛ&@[ÁÁ
Ú¦[][•^åÆsæ)åÁW•^Á	Ú* à a&ÁU&@[Á
Š[8æ‡ÁÕ[ç^¦}{^}ơÁŒ^^}&^Á	Ôæ) c^¦à`¦^ÁÓæ) \•({;}}ÁÔ[`}&ã Á

2.2. Ground Conditions and Surrounding Environment

Table 2-2 Summary of Ground Conditions and Surrounding Environment

Õ^[[* ^Á	CEÁ^çã, Á, -Ác@ÁÙ^å}^ÁFKC̀ʀ€ÁÕ^[[*ākækÂÛ@^cÁHªÁÒåātā[}Ás]åākæc^åÁ cœæcÁc@ÁrācÁsaÁsāÁsā^jÁt^ Át[Ás^Á}å^¦ æasjÁsaÁs@ÁYāæ)æ;æcæcæAÕ;[ĭ]ĒÁjāc@ÁU[co•Á Pā ÁÙæ)å••(}}^ÁçÜ,]ĒÁsæc¢ÀEkædà[}æ&^[ĭ•Ás æ•(t}^ĒÁæ;ājāc^ĒÁæb^Ás[æþÁ æ)åÁc~ÈÁ
V[][*¦æ]@Á	V@^Áar^Ák[][*¦æ}@^ÁarÁ*^}^¦æ ^Á¦ææÁ,ão@ÁæÁ ã@Áá[¸}¸æåáÁ*¦æåã*}oÁ¦[{Á ^æ•oÁk[Á¸^•oEÁ
Ùãc^ÁÒ ^çæaã[}Á	ÎG(ÁgÁÎÎ(CEPÖÁ
OB&ãaÁÙĭ -æer^ÁÙ[ā¦ÁÜãa·\Á	CB88[¦åā]*ÁţÁDĒÙÜÒÙÁÁOB8āåÁÙ* -æe^ÁÙ[ā†Á;æ]ÁCE •dæjāæ)ÁÙ[āÁÜ^•[*l8^Á Q;-{¦{æāj}}ÁÛ^•e^{Dájåä8æe^åÁs@æeÁæêÆå•Áæ³åÁs}•ÁājÁæ)ÁæèAæá;æ]^ååæèAĕ U¦[àæàāãō qá,ão@Á^•]^8oÁtÁæ&ãáÁ* -æe^Á[ā†ÈV@áÁjA-¦•Ác@æeÁæ)åÁ {æ}æ*\ãæ†ĚÁ
	Ø`¦o@`¦Áæ••^••{^}of\^Áæ&ãāÁ*` -æ&^Ár[āp-Ás\Ás@ Ás[}&^¢of\-Ás@áAs ç^•cā*ææā }Á ãrÁs[}•ãā^¦^åÁs^ÁOBÕÁæ-Á;[oó;æb¦æ;¢°åBÁ
Ùãr^ÁÖ¦æājæt^Á	Ölænajæt^ÁnajÁ@ed啜ajåÁnad^æe/ÆniÁnā^ ^Án[Ána^Æn[l ^&c^åÁnad)åÁnajåÁnad^ædikajåÁnad\@ed*^åÁnajÁna@eÁ { `}an&ajædÁnd[l{ _ æe^lÁn^•c^{EÖlænajæt^ÁnjÁ}•^æd^Ándd^æe/ÁnjÁnda^ ^ÁnjÁnda^ &[}•ãnoÁnjÁnaja^&oÁn[ājÁnjajaddæænaj}Ánad)åÁnjç^l ædjåÁn[¸EÁ

Á		
Þ^æd^∙oÁÙˇ¦-æ&^Á Yæe^¦à[å^Á	Ö`&\ÁÜãç^¦ÊĞ,ão@ÁÚæd¦æd;ædæææÁÜãç^¦Áås[¸}•d^æd; ÈÁ	

2.3. Hydrogeology and Groundwater Use

OTçænalænà|^Á@ å¦[*^[|[*ā&æn-Ánà;ææn-Ánà;åÁn^&[¦å•Án;-Án;|[ˇ}叿æ^¦Á.•^ÉAnàcænal;^åÁn;-Án;-Ánænál;}ÉÉand;^Á •`{{æ÷ã^å-Ánà^[, Anj ÁnTable 2-3 ÉA

Table 2-3 Background Hydrogeological Information

Œ~ã^¦Á/^]^Á	W;8[}-āj^åÁsjÁ`;8[}•[āñæe^åÁse `çāæqÁn^åā[^}o•ÈÁ W;8[}-āj^åÁs[Án^{{āËS[}-āj^åÁsjÁ+æ8cč¦^åÁ[&\Áse [}*Ándč8cč¦^•ÈÁ X^¦cã8æqÁse)åÁpæe^¦æpÁ[],Ás[{][}^}o•ÈÁ Š[&æqÁj^¦&@ð;*Áseà[ç^Ás æêËā&@Áæô~¦•Ásj^æ•[}æpDòÁ
Ö^] c@Áq Ár ææ^¦cææì ^FÁ	GÁĮ ÂÍĄ Á
Q.^\\^åÁÕ\[`}叿e^\ÁØ [¸Á Öä^&cā[}ÁÁ	Óæ•^åÁ()}Á,!^çæaāja;*Ánār^Áq[][*læ;]@Ét:[*}å,æer\lÁ [,Ánān^&cai}}Án,Án@Á ça&ajārA,Án@Anār^ÁnarÁn,Ar!!^åÁqÁn,Ánq,æbå•Án@An[*c@Aq[Á,^•dÈÁ

Notes:

3. Site History and Condition

 $(\hat{A}) \cdot (\hat{A}) \cdot ($

3.1. Previous Contamination Assessments

 $\bullet \acute{A} \quad \tilde{O}^{[\dot{O}]} \circ \ddot{a} [\acute{A}\tilde{O}[] \bullet \check{\ }] \circ \ddot{a} \& \hat{A} \acute{U} \circ \hat{A} \check{S} \circ \mathring{A} \acute{A} \acute{U} \circ \hat{A} \check{S} \circ \mathring{A} \acute{A} \acute{U} \circ \hat{A} \circ \mathring{A} \circ \mathring$

OEÁ* { { æˆΛί Α΄σῶ•ΛΑ΄] [¦ σ Α΄π Λί Α'•Λ } σ å Α΄π Α΄Section 3.1.1.

3.1.1. GeoEnviro (2018)

V@Á, à b 8 8 6 6 ^ 1 Á 4 6 @ Á ; | b 8 6 Á ^ 1 ^ Á € KÁ

- •Á Ü^çã\ Áx@ Áxã^Á@ (; |^Áx) å Áxq;æqiæà|^Áxã^Ás, -[| {æqi} } Á+[{ Áy`à|a&Á^&[| å•Áq Áæ•^^• Áx@ Á] [c^} caæpiÁx2^æ Áx3] cæ(ā) æ) (*Áx1] & \lambda | ke) (*Ax1) & \lambda | ke) (*A
- $\bullet A \quad O \bullet \bullet \bullet \bullet A \circ O \bullet A \circ \bullet A \circ$
- $\bullet \acute{A} \ U'_{[\hat{G}aa^{\hat{A}}a_{[\{ \{ ^ \}o^{\hat{A}}_{i} \} \acute{A}^{'} | co^{\hat{A}}_{i} \} \acute{A}^{'} | co^{\hat{A}}_{i}]} \acute{E}_{i} \ aa) act^{\{ ^ \}o^{\hat{A}}a_{[]} | aa^{\hat{A}}_{i} | aa^{\hat$
- •Á OE•^••Ác@Á, æ•c^Ás|æ•ēā&ææā}}Ár,Á[ā+Ás*;|ā,*Ás[|^@|^Ás;ç^•cā*ææā}}Ár;|Á;~Æ*ãc^Ásā*][•æþÉÁ V@Á;&[]^Á;-Á;[¦\•Á}å^|cæ\^}Ár,Áæåå|^••Ác@Á;|b/&cÁ;àb/&cãç^•ÉÁs;&|*å^åkÁ
 - •Á OĐÁ^çã\ Á; -Áseçæājæà|^Áā; -{|{ ææā;}}Á;}Ás@ Á; ãc^Á@ā; d;|^Á;[{ Áse¢¦ãæb;Á; @; d; *|æ; @ ÈÁ
 - •Á OZÁ^æ&@Á -Á^&[¦å•Á;}Á;¦^çã; *•Á;[œãx^•Áã•*^åÁà^ÁpÙYÁÒÚOĐÁ
 - •Á OĐÁ ^æ &@Á -ÁB -{ | { ææð} } ÁB } ÁÖ | [` } å ¸ ææ \ ÁB [| ^ @ | | ^ ÁB Ác@ Áæ \ æÁ | { Ác@ Áæ ÙY Áæ æc` | æÁ Ü Ü ^ [` | & Ác@ Áæ Û D Ü OĐĐÁ
 - •Á OZÁ^çã\, Á;-ÁÔæ); c^¦à`¦^ÁÓæ);\•q[, }ÁÔ[`}&ãq;ÁÛ^&cã[}ÁF€HÌÇŒDÁZ[}ā]*ÁÔ^¦cãã&æe^•ÈÁ
 - •Á CF_{A} •]^8 cA_{A} 1} A_{A} 6 $A_{$
 - •Á Ù[āļÁæ{]|ā,*Á¦[{ Ás@Á*^[c^&@]a&æjÁa[|^@||^•Áæ}åÁ&@{ a&æjÁæjæj^•ã;Á{Áa^c^&cós@Á;|^•^}&^A [¦Á;c@¦_ã^Á;Ás@Á&]}æ;ā;æj;o*Á;Ás(}&^|}ÈÁ

V@ÁãrÁæðať!^Ásææææs[||^&c^åÁæðaÁðaÁða^Áæ^Á¸æð\[ç^\Á¸à•^\çææā]}•Á;æå^Á¸^\^Áæ••^••^åÁ¸ãæðaÁ¸ææÁ¸áæÁ
[àb%æãr¸^•Á;-ÁsææÁ;![b%%ææÁ;]6¢æÁs[}c^¢cÁ;-Ás@Á;![][•^åÁsû^ç^|[]{^}cÁ;@æóÆæ•^•••{^}•6]^3cÁ
ãå^}æãa³åÁæò^æÁ;-Ás}çã[}{^}ææÁs[}&^!}ÁÇDDÔÆæ³åÁs[}ææ;āæ;æ¼Á]cæðaÁsæÁs[}&^!}ÁÇDUÚÔDÁ;@æóÆæ^Á;!^•^}c³åÁsÁsææ&@åÆfigure 3Áæ³åÁæ••[&ææ°åÁÖUÚÔÆæò^Á;!^•^}c°åÁsjÁæææ&@åÆfigure 3Áæ³åÁæ••[&ææ°åÁ

Table 3-1 Areas of Environmental Concern

ID	Area of Environmental Concern	Land Use Activity	Contaminants of Potential Concern
AEC01	Ù"¦~æ&^Áã Á; ææ^¦ãæ;†ÁÁ	Ö^{[āīā[}Áse)åÁ ˇ}&[}d[^åÁa[a]*Á	Œà^∙đ़•ÉÁP^æç^Á; ^œ≄•ÉÁUÔÚq ÉÁUÔÓq ÉÁ VÜPÉÁOVÒÝÉÁUŒPÁ⊖; åÁ;PÁ

Óæ•^åÁ;}ÁŐ^[Ò}çã[ÁÔ[}•ˇ|œæ)&`ÁÚĉ ÁŠcå Ēn• Áæ••^••{ ^}ơÁ; Ás@ Áš^•\d[]Á^çã\, Ás; -{;{ ææā;}Ásæ}åÁ -æ}|å¸[;\ÁsæææÆÁ;Ás@ Ás[} c^¢ơÁ; Ás@ Á;![][•^å Ás@æ)*^Ás;Áæ)åÁ •^Áse]|æ8ææā;}ÆŐ^[Ò}çã[ÁÔ[}•ˇ|œæ)&`Á { æå^Ás@ Á[||[¸ā]*Ás[}&|ĭ•ā;}•KÁ

- •Á U}^Á[ā/Áæ;]|^&&;||^&&c*åÁæóÓPCGŒÌŒÌÐÁ;[{ Á@Áæ;]@ækæðá¦ãç^, æÊý ærÁ[ˇ}åÁ[Áœæ;^Á
 •Íā @ļ´Ár|^çæc*åÁ&[}&^}dæā]}•Á;—Áa^}:[GæÐ]^!^}^ÁJEÉ{ *Ð*ÞÁr¢&^åå;*Á@ÁÖUŠÁ&iæc*læá
 GĒÏ { *Đ*Þæå[] c*åÁ[!Áæ@ÁæřÈV@Á|^çæc*åÁ&[}&^}dæā]}Á;√Áa^}:[GæÐ]^!^}^Á^][!c*åÁ[!Á
 ÓPCGŒÌËËÊDÆñÁa^|^Áå^|^Áå^|^Áæ&@]*ÁUOÐÁ;[{ Áæ@Áæ] @ækæðÁå!ãç^, æÁæ}åÁā[^•Á;[cÁ
 &[]•œï c*ÁæÁ&[}ææá]}Á@[œ][dÁæ)åÁÁ

Óæ^åÁi,}Ás@•^Ás[}&|`•ãi,}•ÆŐ^[Ò}çã[ÁÔ[]•`|æ;&^ÁÚcŠcåÁ;æå^Ás@Á[||[¸ã;*Á^&[{ { ^} åæãi}}•KÁ

- •Á OTāåãāā} adÁsiç^•cātaæāi}•Á @ `|åÁs^Ásæd¦ā\åÁi`dLÁ
- •Á CEÁ æ ơ Á& æ ã& æ ā } Áæ ^ • { ^ } ơḥ Áœ ^ • { ^ } ơḥ Áœ Á [āḥ ́ æ c \ ãæ + Á | [] [^ å Áṭ Áà ^Á ¢ & æç æ c ^ å Áæ } å Á | ^ { [ç ^ å Á @ ĭ | å Áà ^ Á à œ ā] ^ å Á [{ Áæ Á ĭ ãæ à [Á ¢] ^] 8 ^ å Á } çā [] { ^ } œ þ Æ [} ˇ | œ ð · Óḥ | āḥ ʿ Ác @ Á [āḥ á æ c \ ãæ + LÁæ) å Á
- •Á ØĀļÁ[ā•Á;[][•^åÁ;Áà^Ár¢&æçæc^åÁæ&;[••Ás@Áãc^Á;@][•^åÁ;~•ãc^Á;Áà;Áæ&;[¦åæ)&^Á ão@Á^|^çæ)dÁpÙYÁÒÚOEÁ,æcc^Á&;æ•ãæææā}Á* ãå^|ā^•ÈÁ

3.2. Anecdotal Information

 $V@!^{\dot{A}}$ æ \dot{A} [\dot{A} \dot{A}

3.3. Incident Reports

V@\^Á, ^\^Á,[Á§,&ãå^} œÁ^][\œÁ,\[çãå^åÁq,ÁŒÕÁæ;Á,æcÁ,æcÁ,∞áçã;Á;[b/&dÉÁ

3.4. Complaints History

 $V@ \mid ^ A_{\hat{A}} \approx A_{\hat{A}} [A_{\hat{A}} [A_{\hat{A}}] \mid a = A_{\hat{A}} e^{A_{\hat{A}}} e^{A$

3.5. Site condition and Surrounding Environment

 $V@\dot{A} \tilde{a}c^{A}\&[\ \} \mathring{a}\tilde{a}\tilde{a}\tilde{a}\ \} \mathring{A}\tilde{a}c\tilde{a}c^{A}\&[\] \mathring{a}c^{A}\&[\] \mathring{a}c^{A}\&[\$

Δ

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4. Data Integrity Assessment

QEÕÁ@æ•Á^|ā^åÁ;}Ás@•Á[||[¸ā]*Á[ˇ|&^•Á;ÁæææÁ;@ā/Á;}å^¦æàā;*Ás@áÆ;ç^•æāææã;}KÁ

- •Á ŒÕÁã\|å/[ià•^¦çææā]}•Áå ; |ā] *Áœ Áã\|å, [;\•LÁ
- •Á Ôæ) c^¦à ¡^ÁÓæ) \• ([] ÁÔ[] &āLÁ
- •Á Ö^]æd(^}o/fi -ÁŠæ) åÁæ) åÁv ææ^¦ÁÔ[}•^¦çææa]}•LÁ
- •Á Ö^]ædq ^}oÁ; -ÁÚlā[æd^ÁQlå*•dā?•Á.ÁYææ^lLÁ
- •Á Œ•dæqãæq ÂÛ[ãµÂÛ^•[*¦&^ÁQQ-[¦{ææã[}ÂÛ^•e^{{ LÁ
- •Á Õ[[*|^ÁÒædc@LÁ
- •Á Þæðai}æþÁÖ}çãi[}{ ^}œÁÚ¦[c^&ðai}}ÁÔ[ˇ}&ãlLÁ
- •Á Þ^æ{ æ}LÁ
- •Á ÞÙY ÁÒ} çã[} { ^} ơÁÚ¦[ơ^&cã[} ÁŒ c@ ¦ ãc LÁ
- •Á ÞÙY ÁŠæ) åÁæ) åÁú¦[]^¦c ÁQ,-{¦{ ææā[}LÁæ) åÁ
- •Á Yæe^\¦ÁÞÙYÈÁ

Óæ•^åÁ;}ÁŒÕœ;Á°¢]^¦ā°}&^Áæ;åÁ;¦[~^••ā[}æḥÁŏå*^{^}dÁ;aæ;Á¸àææÁ;àææÁ;àææÁ;àææÁ;àææÁ;àæ;Á;[{ Ás@Ai[`¦&^•Á^|ð°åÁ `][}ÊÁmÁK[}•ãá^¦^åÁq[Áa^Áæå^``ææ^|^Á;\^&æi^ÊÁæ&&`¦ææ^ÊÁ^]¦^•^};ææā;^ÊÆk[{]|^œ^Áæ;åÆk[{]æbæà|^Á ¸ão@jÁs@A;àb%&ãç^•Á;Ás@éÁg;ç^•cãtææā;}Áæ;åÁq[¦Ás@Aj`¦][•^Á;A妿;āj*ÁK[}&|`•ā[}•Á^*æbåāj*Áæ)åÁ &[}ææ{ājææā]}Áã\•ÁææÁs@Á*ã¢ÈÁ

Á Á

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5. Conceptual Site Model

\text{Cf&i} & \frac{A}{\text{\bar}\hat{\bar}\h

5.1. Sources of Contamination

Ú[ơ^}cãa ḥÁ·[ˇl&^•Á;Á&[}cæ ṭājæāā]}Ás@æ Á@æç^Áà^^}Áãa^}cãa ðåÁåˇlāj*Á^çãð, Á;Á-Áião Á@à-ḍl^Á^&[lå•Á āj&|ˇå^kÁ

- \bullet Á $W_{N} \setminus [.]$ Ác] ^Áce} å ÁS[] &^} d æceā[} Á; -ÁS[] cæ(ā) æð; Á ãc@a Áā]Á[ā•ÁceS|[••Ác@ Á*] cā^Ácē^LÁ

5.2. Contaminants of Potential Concern

 $\dot{U}[c^*] c \ddot{a} = \dot{A}[\tilde{a}^*] + \dot{A}[\tilde{a}^*] +$

5.3. Source - Pathway - Receptor Linkages

OZÁ`{{ æ\$^Áq-Ág[ơ}cãæpÁq[`'\&^Á,Áqæc@; æÂÁ^\&^]q['Áq}\æ*^•Ásā^}cãæ^åÁq!Áx@Aáæ^ÁæqàÁq![][•^åÁ '^å^ç^|[]{ ^}c%āÁ;^•^}&^åÁşÁTable 5-1.Á
$$\begin{split} \dot{U}^*]] & | ^{ } ^{ } \cos^{ } \acute{\Omega}[\ \,) \cos \ \, \mathring{a} \ \, & \ \, \end{aligned} \} & \ \, \mathring{ADE} \bullet \wedge \bullet \bullet \{ \ \, ^{ } \ \,) \circ \acute{A} \\ & \ \, HOGAP^* \{ \ \, ^{ } \acute{AP}\ \, \mathring{a} \ \, \textcircled{ae} \ \, \mathring{E} (0a) \land \bullet (\ \,) \circ ($$

Á

Table 5-1 Summary of Source – Pathway – Receptor Linkages for the Site

Potential Sources	Impacted Media	Contaminants of Potential Concern	Transport mechanism	Exposure pathway	Potential receptor
Ù ˈ-æ&^Ááj Á; ææ^¦ãæ; Á Á Ù[āÁ; [ˇ}åÁÁ Á Pãro[¦ã&æ;Áàˇāåā]*Áå^{ [ãái]}Á	ù[ặ Á	Œà^∙₫°ÊðưÁ { ^œ₽ÊÛÔÚªÊÁ ÚÔÓªÊVÜPÊŐVÒÝÊÁ ÚŒPÈÁ	Öãr c´ là aà) &^Á; -Á* l-æ&^Áaò) åÁ • `à•`l-æ&^Á; [ā•Áa` lā; *Áãc^Á l^å^ç^ [] { ^} dÊ\`c` l^Á; ãc^Á { aæ] c^} aò) &^Áaò) åÁ` c` l^Á; -Ác@Á • ãc^Á; [•dĒ^å^ç^ [] { ^} oÁA	Q*^•cā[}Á Ö^¦{æ x&[}ææ&cÁ Q;@e eæaā[}Á;Á&`•cÁ]æ cā&` æe^•Á T^&@e)&&e Á;æ)•][¦cÁ	Ô[}•dˇ&cā[}Ásc)åÁ {æā]c^}æ)&^Á¸[¦\^¦•Á Ò}åÁ•^¦•Áj-Ásc@Á;āc^Á][•dĒ^å^ç^ []{^}oÁ
			OE([•]@\#36#a@]^\•4[}Á\[{ Á\[4Á(Á [čá[[\Áse)a/Aja[[\Ásea/Á]æ&^•Á	O)*^•cā[}Á O)@edeccā[}Ási*•oÁ]ætcā&* æe^•Á	

6. Sampling and Analysis Quality Plan (SAQP)

6.1. Data Quality Objectives

ÞÒÚÔÁÇŒFHàDÁSchedule B(2) Guideline on Site CharacterisationÁsa) å ÀÒÚŒÁÇŒFÏ DÁGuidelines for the NSW Site Auditor SchemeÅ; [çãå^Á* ããæ) &^Á; Ás@Ás^ç^[] { ^} oÁ; ÁsææÁ* æáð Á; à b' &æç^• ÁÇÜÛUDÁ* • ¾ *ÁæÁ^ç^} Ë c'] Á; [&^•• ÈV @ ÁÖÛUÁs^ç^[]] ^ å Á[; Ás@Á; [b' &oÁs-Á^oÁ; oÁ; ÁTable 6-6-1 ÈÁ

Table 6-6-1 Data Quality Objectives

Step	Commentary					
FÈÁÙcæe^Ás@-Á Ú¦[à ^{Á	V@^Áāl•o^Ác^]Áşiç[ç^•Án~{{ ætārāj*Ás@^Á&[}cæ;ājææāj}Áj: à ^{Ás@ææÁ^~~ã^•Ás^¸Á ^}çā[]{ ^}cæ†ÁsæææÁænjåÁsā^}cã-ˆāj*Á^•[~¦&^•Áæçæájæàn ^Áq[Ár[ç^Ás@^Áj:[à ^{EÁ					
	V@ Ájàb/8-cãç^•Áj-Ás@áÁj¦[b/8-cÁsek^Ás[kÁ					
	■Á CE•^••Ác@Á[ơ) cã đÁ, æč¦^Ásð; åÁv¢ơ}ơÁ; Ásã^) cáãð åÆQ[}cæ; ā; æð; σ∙Á; -Á, [ơ) cã đÁ &[}&^ }Á;}Ác@Á;ā°É¸ãc@Á^~¦^}&^Á;Ác@Ásò^æÁ; Ác@Ásò^æÁ; -Á^}çā[}{ ^}cæÞÆQ[}&^ }Á ^][¦ơ°åÆjÁc@Á;¦^ ā[ā]æð^Á;}çā[]{ ^}cæÞÆæ•^•••{ ^}dÁ					
	■Á Ú¦[çãã^Ásœåçã&^Áj}Á, @°o@\Ás@Árãc^Á, [ˇ åÁsà^Árˇãææà ^ÁQā,Ás@Ás[}♂¢oÁ, Áæ)åÁ &[}œæ[ð]ææã[}DÁ;¦Ás@Áj¦[][•^åÁæ)åÁ·•^Ár^œā;*LÁse)åÁ					
	■Á Ú¦[çãã^Á^&[{ { ^} åæaā[}●Á[¦Áˇ¦ơ@¦Á5]ç^●cãtæaā[}ÉÄ(æ)æt^{ ^}oÁæ)å⊕∏¦Á ¦^{ ^åãæaā[}ÁÇãÁ;æ¦æ)c^å□EĂ					
	V@^Á,¦[b^&o^%a Áa^ā,*Á;}å^¦œaà^}Áa^&æ*•^KÁ					
	■Á V@ÁnãoÁanÁ,¦[][●^åÁų¦Á^å^ç^ []{ ^}dLÁaa)å					
	=Á V@ Á& ā^} ơÁ^~ ã^•ÁæÁ*]] ^{^} oæ Á&[} oæ ā ææā } Áæ •^••{ ^} ơÁ[Áæåå ^••Áæ@Á -ā åā *•Á -Áo@ÁÚ ^ ā ā æ -ÁO}; çā[]{ ^} oæ ÁÛ㺠Áæ •^••{ ^} ơᠱ} å^ oæ ^} Ásî^Á Ō^[Ò}; çā[ÁÔ[]•* oæ &î ÁÚc Ásoa ÉÁ					
	V@^Á,¦[b^&oÁc^æ(Ána^^)cã&}åÁ[¦Ás@a^Á,¦[b^&oÁs[}•ã·o•Á,-Á*ănæaà ^Ár¢]^¦&}&^åÁ ^}çã[]{ ^}cæ∮Æ[}•` cæ)•o•Á;[{ÁOEŌÈÁ					
	V@^Á^*ˇ æq[¦^Áœĕc@[¦ãæ?•Áæa^}cãæ?^åÁ;[¦Áx@ò*Á;¦[b^&cÁs;& ˇå^Á⇔ÙYÁÒÚŒÁœ)åÁÔ[ˇ}&ãÆÐÁ					
ΘΕĂ (2)}α≆ Ás@ Á Ö^&ã a[} ÁDÁ	V@Án^&[}åÁnc^]Áşiç[ç^•Ásså^}cs÷āj*Ás^&āā]}•Ás@encÁ,^^åÁgÁsà^Á;æå^Ásæà[čóÁs@Á &[}cæ{ājæaāj}Á,¦[à ^{ÁæjåÁs@Á,^,Án}çā[]{^}cædÁsæææÁ^č āl^åÁgÁ;æà^Ás@{ÉÁ					
Ö[憕AjAko@A Ùcă^Á	V@^Áså^&@rā[}•Ás@eneÁ;^^åÁn[Ásà^Án; ænså^Ánsˇ¦ā]*Ás@nrÁ; [b%soÁn]s8 ˇå^KA					
00 d /\	■Á QÁx@Án}çã[}{ ^}cæþÁsæææÁs[^8&c^åÁإ¦Ás@Áj¦[b/8xdÃn*ãææà ^Á[¦Ásæ•^^•ā]*Án ^çæà;o⁴ æàåÁs[}cæ{ā}ææã[}Áý][•*¦^Áãn\•ÑÁ					
	■ÁÖ[Ás@ Á&[}&^}dæaā[}•Á;Ása^}cãa^àÁ&[}cæ;ā;æ;o•Á;Á;[c^}cãæ†Á&[}&^¦}ÁQÔUÚÔDÁ]¦^•^}oóæ;Á;æ&&^]cæà ^Ár¢][•ˇ¦^Áã\Á;Ása^}cãa^åÁ^&^]q;□•ÆÁ;¦Ás@ Á;![][•^åÁ æ;åÁ•^Á•^œā;*ÑÁ					
	■Á QÁ Ác@Árāt^Ár ã aceà ^Á;¦Ác@Á;¦[][•^å Áce}åÁ •^Ár^ca}*ÉÉB,Ác@Ás[}c^¢óÁ;Áce}åÁ &[}ceé;ā]æaā[}ÑÁ					
HEÁ C21^}cã-Ás@•Á O2-{¦{ a,ee4[}Á	V@^Áx@ālåÁnc^]Ænjç[ç^•Ánna^}cã-ĉaj*Áx@^Ánj-¦ {æncā[}Án,^^å^åÁn[Án*]][cÁna^&ærā[}•Ánca)åÁ ¸@c@-lÁn,^¸Án}çā[]{ ^}cæ-Ánaeæ-Ájā Ana^An-^å^åÈÁ					
Q] ઁΦÁ	V@^A\$j]ˇo∙Án^ˇǎā^åÁqfÁ;æà^Ás@^Áå^&æïā[}•Án^oÁpˇoÁspÁjā Ásp& ˇå^KÁ					
	■Á Ú¦[][•^åÁæ)åÁ••^Áæ)åÁæê[ˇơÁ;-Ás@ Áå^ç^ []{ ^}dÁ					
	■Á Qa.{¦{ accāj}}Áracc@¦^åÁçãccÁc@Árãc^Á@árq(¦^Á/^çã^, LÁ					
	■Á V@ÁÔÙTÁ\$^ç^ []^åÁ[¦Ás@Á;ão°LÁ					
	■Á V@^Á, æeč¦^Áæa) åÁ^¢c^}có{, -Á;æ(] ā;*Áæcóko@ Á;ãc^ÉÁa, & `åā;*Áa[coÁáa^}●ãcÁæ) åÁ åãrdāa`cā[}LÁ					
	■Á Ùæ(] āj*Áj-Áj^ ^çæ)oÁjão^Áj ^åãæ4Á					
	■Á V@Á; ^æ• ˇ¦^åÁ; @ • 38æ4Áæ) åÐ ¦Á&@{ 38æ4Á; æbæ; ^ơ'; •Á; Áo@Á áō^Á; ^å áæÁ æ;] ^• Á Çaj & ˇåāj *Áæ) åÁ &!^^} āj *Áæ) åÁæà[¦æð[¦æð[¦^Áæ) æ∱ •ã ÉÀ; @¦^Á^ ^çæ) dDÁæ) åÁ					
	■Á OĒ•^••{ ^}ơÁ&¦ãæ^¦ãæ∕\$æå[]ơ^åÁ[¦Ás@>Á; ^åãæÁæ{ [] ^åĚÁ					

Ù"]]|^{^}caé^ÁÔ[}caé{ā}aaaā[}ÁŒ•^••{^}oÁ Óaa}\•({;}Á⊅[¦c@ÁÚ"à|a8£EU&@[[AÜ^å^ç^|[]{^}oÁ

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Step Commentary IÈÁÖ^-ã^Ác@^Á V@Á[ĭ¦c@Ác^]ÁBjç[|ç^•Án]^&ã-âj*Ás@Án]æããa4Ása)åÁc^{][¦æ4Ásæ•]^&c•Á; Æs@Á Ùč å^ Á ^} çã[} { ^} œdÁ ^åãæÁœæÁœæÁœæÁœ ÁsææÁ ~• oÁ^] ¦^•^} oÁfÁ ¸] [¦ oÁs^&ã ã } • ÈÁ Ó[ˇ}åædan•Á V@Á]æaāepÁ\¢c^}oÁ; Aó@Á; [b\8oÁ, ā|Áa^Áā, āc^åÁ; Áo@Á`àb\8oÁa, c^•cā æaā;}Áæc^æÁæe Á å^-āj^åÁsî^Ásī•Ás[ˇ}åæðā•ÁÇ^-A¦ÁFigure 2DÉÁ V@^Ac^{][¦ædÁs[ˇ}åæd∂n•A[Ás@^A];[b^&cÁs[&]ˇå^hÁÁ ■Á V@Á;|[b^&oÁaã ^;|æ{ ^Á;|^•^} c^åÁa,Áo@ÁOEÕÁ;|[][•æ4Á;|Áo@áÁ;|[b/&dÊÁ ■Á W}æ&&^]œæà|^Á, ^æœ@\Á&[}åããã}}•ÁææÁs@Aáã, ^Á;-Á}å^¦œæàā,*Áā\|å、[¦\ÊÁā,&|čåā,*Á ¦æaj, -æd|Éñ&K||åÁæd) åÐD¦Á@∿æddÁæd) åÁ ■Á CES&^••ÁæçæajaæàjāačÁgÁc@Ájāc^ÁqgÁà^Áà^-āj^åÁsî^Ás@Ájāc^Áj;}^¦ED^]¦^•^}cæaāç^DDÁÁ Ô[}•dæng oṇÁ, @ans@nk, æiÁnge-^8aokho@ Ánsæhlîng *Án`onk, Áns@an Án;|[b/8aoÁ, æiÁng &lj`å^Ánsæ8&^••Á |ã[ãœãa]}•Ên,¦^•^} &^Á; -Ásæà[ç^Ásæ) å Ás^|[¸Át¦[ˇ} å Ásj, √æ•dˇ&cč¦^ Êbæ) å Á@æ æ+å•Á &\^aaaa * Á@ ado@Áad å Á æ ^ c Á ã \ • ÉÁ ÍÈÁÖ^ç^|[]Ás@AÁ V@Áão@Ácv]Ágç[|ç^•Ás^-aja]*Ás@Ájæbæ{^cv¦Áj-Ágcv¦^•dÁa]^8ã^a]*Ás@Áæ&dā[}Árç^|ÉÁ OBjæţî œa&æţÁ æ}åÁsjc^*¦ææāj*Ásj-{¦{ææāj}Á√;[{ÁÛc^]•ÁrÁq[ÁlÁsjq[ÁsœÁ-āj*|^Árœec^{^}}oÁsœæcÁ-ãç^•ÁsæÁ O目] | [æ&@ÁC[¦Á |[*a8aqAsaeaaA[¦Asa@[•ā]*Asa^c,^^}Asqe^\;}aeaac^Asasaā[}•BA Ö^&æ ã } Á Quality Assurance / Quality Control (QA/QC) Ü ' |^• DÁ V@Ase) æļ ca8æļÁæà[¦æq[¦^ÁÛOEĐÛÔÁ¸¦[*¦æq[Á¸ā]Ásî]a8æq|^Ás¸8√]å^Áæà[¦æq[¦^Á¸^cQ@åÁ à |æà | \Á æ {] |^• ÉA æ dã Á] ã ^ Á æ {] |^• ÉA * ; | [* æ e^ Á] ã ^ Á æ {] |^• ÉA æ a [| æ [| ^ Á&[] d [| Á •æ[]|^•ÊÉæn;åÁpæà[¦ææ[¦^Áå*]|&Bææn^Ápæé]|^•ÈÉÁ If / Then Decision Rules OĐỗÁ@æ Áxaå[] c^åÁx@Á[||[, ā, * Áif/then'Áå^&ãā]}Á`|^•Á[¦Áx@āÁ;|[b/&dAÁ ■Á QÁs@Á^• ` |oÁ; Ás@Áse•^••{ ^} oÁ; Ásã\ å Ásaà; å Ásaà; | |æe; | ^ Ásà; æe; a&sædÁsæædÁs &[}•ãã^¦^åÁn×ãtæà|^Á[¦Ásjơ^¦]¦^œæã[}ÁÇãt@3jÁs@ Án&[]^Áj-Ás@áÁ;¦[b/&dDÁæ)åÁ $= A \cdot GAA | a A \Rightarrow a A$ ^¢][•ˇ¦^Áãr\•Áq[Áãa^}œãààÁ^&^]q[¦•Êãæ;^Á&[}•ãå^¦^åÁæ&&^]œàà|^ÈÁ Q Ás@ Á ç^} cÁā | å Ásp) å ED | Ázsà [¦æe[¦^ Ásp) æf ca8æþÁs æææÆs Ás[} • ãs^ \^ å Á, [cÁs[Ás^ Á č ãææà |^ Á -{|Á\$; c^{||^8cat|} A, ``|] [•^• Êxc@} Áxaás^8aïa[} A, ``#] [•^• Êxc@} Áxaás^8aïa[} A, ``#] [•^• Êxc@} Áxaás^8aïa[] A, ``#] [•^• Êxc@} Áxaás^8aïa[] A, ``#] [•^• Êxc@] A, ``#] A, ``#]

à^Á^~~~ã^åĒĀQ Á©^Á°ç^} Å©œœÁ? |åÁåæææÁæ) åÐ ¦Áæà[¦æē[¦ Áæ) æ‡ æ3æ4ÁåææÁ ¢&^åA æå[] c^åÁæ•^••{ ^} oÆ;ãc/åæÉæ) Áæ••^••{ ^} oÆ, Á© Á°ç&^^åæ) &^Áæ) &^Á§ Á© Æ&[} c^¢oÆ, Á c@Á;¦[þ/&oÆ, àb/&cãç^•Á,ā|Áa^Æ{[}]|^c^åÆ[Á•cæà]ã @ÆÁæååãã[}æÁåææÆÉ; æ)æ*^{ ^} dÉ

æ) åÐ ¦Á^{ ^åãæaãi j Ás Á^¨ ã^åÈÁ

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Î ÈÁ Ù] ^&& Ác@ Á Ú^!-{ !{ æ} &^ Á [!Á OB&&^] æ} &^ Á	V@Ánācc@Ánc^]Áspç[ç^•Án]^8ēa^ā;*Ás@Ásh^8ēnā;}Á;æh^lopÁse8&^]cæà ^Áā;āno-Á;}Á å^8ēnā;}Án': [!•ÉA;@B&@Áse^Á*•^åÁs[Án•cæà ēn@Án^!-[:{æ;8&^f[æh-Á;!Áajānā;*Á ~}8^!cæājcān•ÁsjÁc@ÁsæææÉV/@}Áse•^••ā;*Ás[}cæájāæc^åÁæ)åÉás@!^Áse4^Á*^}^!æ#^Á ç[Ác]^•Á;-Án': [!•ÁsjÁsh^8æãā;}Á;æàā;*KÁ
Ô¦ãc^¦ãæÁ	■ÁÔ[}cæ; ājæaā[}Á^¢][•ˇ¦^Áā*\•Á[¦ÁsæÁ*]^&ãā&Áæ)åÁ`•^Ár^cɑāj*Áse}^Ásæ&&^]cæà ^ÉA ¸@}Ás@^Áse^^Á;[dÁse)åÁ
	■ÁÔ[}œæ[ā]ææā[}Á^¢][•ˇ¦^Áā*\•Á[¦Áæá+]^&ãā&Áæ)åÁ`•^Ár^œã;*Áæb^Á;[ơÁæ&&^]œæà ^ÊÁ ¸@}Áœ^Áæb^ÈÁ
	c@ Áã \Áj-Áå^&ã qj}Á\;[¦ĢDÁjā Áà^Ájãā æc^åÁà^KÁ
	$ \begin{tabular}{lllllllllllllllllllllllllllllllllll$
	■Á OE•ê∄}{^}œÁ; Áã^ å¸[¦\Ásæe\•Áq[Án`ãææà ^Án¢]^¦ãn}&^åÁOŒÕÆq[}•` œä;*Ánœe-ÉÉæa)åÁ •`ãææà ^Án¢]^¦ān}&^åÁ&[}dæ&q[¦•LÁ
	■Á OE••ã*}{^}on[xá)æà[¦ææ[¦^Áæa)æ °a3&æ)Áææ•\•ÁqfÁ^]*cæà ^Án>OE/OEÁæ&&¦^åãe^åÁ æ)æ °a3&æ4Áæà[¦ææ[¦ãv•LÁæ)åÁ
	 A OE•â*) { ^} oÁ; ÁsaææÁs; o^!] ¦^ cæaã; } Ásæ• \•Á(Á*ãæà ^Á*¢) ^!â*) &^åÁOEÕÁ&(}• ` cā;*Á • cæ-ÉÁæ; åÁ; č• [` &ā;*Á(Á*&@) &&æÁ*¢) ^!o•Á; @\^Á^` ă^åÈ
	CEŐÁ, āļÁsd∲[Áscál]] oÁscÁa) *^Á, ÁslæszeÁ *æácíÁs, å ā8æc[¦•ÁÇÖÛŒM;Áæs&ājāzæ^Ásæ•^•^••{ ^} oÁ [Ás@Ás[{] ^o/}^••ÉSs[{]æbænàjācíÉÁ^]¦^•^} cæcāç^}^••ĒĀ,¦^8æñā[}Ásæ)åÁsæs&*¦æs6`Á Ça ãæ DÉSsæÁ;¦^•^} o^åÁs,ÁTable 6-2EÁ
ÏËÁÖ^ç^ []Ás@^Á Ú æ}Á{¦Á Uàcæ∄jā}*Á ÖæææÁ	V@Án^ç^}c@Án^c]Áşiç[ç^•Ása^}cã-āj*Ás@Á;[•cÁn^•[ˇ &^Án-^&cãç^Ánæe;] āj*ÁsajåÁ æjæf•ãnÁs^•ãt}Á[¦Án^}^!ææāj*Ás@ÁsææaÁs@æó√ánÁnˇ ãn^åÁ[Ánææãn-Ás@ÁÖÛU•ÈÁN@Á Ùæe;] āj*ÉÁOE;æf•ãnÁsajåÁÛˇæþãcÁÇÙOEÛÚDÁ[¦Áso@áÁsjç^•cātææā[}Án}&[{]æ••^•Ásection 7ÉÁ

6.2. Data Quality Indicators

 $\ddot{O} = 2\dot{A} + \dot{A} +$

Table 6-2 Data Quality Indicators

Completeness			-
Field Considerations	Assessment Criterion	Laboratory Considerations	Assessment Criterion
Ô¦ããã8æ4Á[8æãā}}•Á •æ{] ^åÁ	Ü^-A¦ ∕Section 6.4 Á	Ô¦ããã8æ4Áæ4;] ^•Áæ4;æ4°•^å./ æ888[¦åā]*Á4;ÁÖÛUÁ	Ü^-A¦ÁSection 6.5Á
Ô¦ãã&adÁra4;] ^∙Á &[^&c^åÁ	Ü^-A¦ ∕Section 6.4 Á	CE; æ†î c^•Áæ) æ†î•^åÁ æ&&[¦åā]*Á([ÁÖÛUÁ	Ü^-A¦ÁSection 6.5Á
ÙUÚ•Áæ]]¦[]¦ãæec^Á æ)åÁ&[{] ā^åÁ¸ão@Á	F€€Ã Á	OT_] [] ãæe* Áæà [æe [^ Á æ) æ cã&æ (^ c@ å • Áæ) å Á ŠUÜ • Á	Ü^-∆¦ Section 6.5Á
Ø2n\åÆi[&~{^}cæeai[}Á &[{] ^c^Á	CE∏Áræ{] ā]*Á;[ā]oÁ;(*•ÉÁ &æþā⦿æā[}Á;(*•Áæ)åÁ&@æājÁ;√ & ĭ•[å°Á[¦{•Á	Ùæ{] ^Ás[&~{ ^} cæaa[} Á &[{] ^c^Á	O∏ Áræ{] ^Ár&^a]oÁ æåçã&^•ÊÆ# Á&^¦Œã&ææ^•Á [—Áæ)æf•ãA
ËÄ	ÉÁ	Ùæ{] ^Ár¢dæ&cā[}Áæ)åÁ @[åā *Áæ[^•Á&[{] āråÁ ¸ãc@Á	Ü^-∆¦ÁSection 6.5Á

Comparability				
Field Considerations	Assessment Criterion	Laboratory Considerations	Assessment Criterion	
Ùæ{ ^ÁÛUÚ•Á′•^åÁ{}}/ ^æ&@Á;&&æð[}}Á	F€€Ã Á	Ùæ(^Áæ)æ† cã&æ)Á, ^c@, å•Á ˇ•^åÁa^Á, lã(æ† Á æà[¦æ[¦^Á	Ü^-∆¦ Section 6.5Á	
Ô ã(æaã&Á&[}åããā[}•Á	Ùæ{] ^•Ánd; ^åÁ\$jÁ\$j•` ææ^åÁ &[}œæ]^!•Á;ãr@Á\$&^ÉÁ ā[{^åãææ^ ^Ásee^\¦Á&[^&cā[}Á	Ùæ(^ÁŠUÜ•ÁæaÁ)¦ā(æt^Á æà[¦æa[¦^Á	Ü^-∆¦∕ Section 6.5 Á	
Ùæ{ ^Ác}]^•Á;-Á •æ{] ^•Ás[^&c^åÉ æ}åÁ @æ}å ^å⊕ ^^•^\;ç^åÆ;/ •æ{ ^Á; æ}}^¦Á	O∏Á[ãÁæ[] ^•Áæ[^Áã^ÉÁ æ Ád[¦^åÁgÁg•ĭ æe^åÁ &[}ææ]^¦•Á¸ão@ÁæA^Á	Ùæ{^Ápæà[¦æa[¦^Áq[¦Á]¦ā[æbî^Ánæ{] ^Áæ}æ¢î•ãnÁ	O∏Á¦ã æ^Áæ;] ^•Á;Á Ò`¦[-ā]•Áæ;*óÁ	
ËÁ	ËÁ	Ùæ{ ^Áæ} æ‡ ˆæ&æ‡Á { ^æ• ˇ¦^{ ^} oÁ} æ•Á	Ü^-∆¦ ∕Section 6.5 Á	
RepresentativenessÁ	L.			
Field Assessment Criterion Considerations		Laboratory Considerations	Assessment Criterion	
O∏[]¦[]¦ãæe^Á; ^åãæÁ •æ{] ^åÁæ&&[¦åã]*Á qÁÖÛUÁ	Ü^-∆¦ÁSection 6.5Á	Ùæ{] ^•Áæ}æ ^•^åÁ æ&&[¦åā]*Á[ÁÖÛUÁ	Ü^-∆¦ ∕Section 6.5 Á	
T^åãæÁså^}cãaðåÁsjÁ ÖÛUÁræ{] ^åÁ	Ü^-∆¦ÁSection 6.5Á	Á	Á	
PrecisionÁ				
Field Considerations	Assessment Criterion	Laboratory Considerations	Assessment Criterion	
Øða å Åå `] 38æe^ ÁdÁ dðj 38æe^ ÁÜÚÖÁ	Tājā[ˇ{ÁlÃÁåˇ] a8aee^^Áæojå/ dā] a8aee^•Á	Šæàa[¦æa[¦^Áå*] ã&ææ^•Á	Þ[Án¢&n^åæ)&n•Án-Á æà[¦æe[¦^Áæ&&n]æ)&nÁ	
	Þ[Áaj ãaÁj¦Áæ)adjaðadÁ∧•° o•/ ŁF€Áaj ^•ÁšUÜÁ		&¦ãc^¦ã ccÁ	
	Í€ÃÁ[¦Ása)榰œ38æ4Á^•° o•Á F€EG€Ásą̃^•ÆSUÜÁ			
	H€ÃÁ[¦Áse]æ[îc&Bæ†Á^•ˇ o•Á NF€Ásē[^•ÁSÜÜÁ			
ÙUÚ•Áæ]]¦[]¦ãæec^Á æ)åÁ&[{] ā^åÁ,ão@ÁÁ	F€Ã Á	Á	Á	

Óæ)\•({;} ÁÞ[¦c@ÁÚ*à|æ8ÉÜ&@[|ÁÜ^å^ç^|[]{^}cÁ

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Accuracy (bias)Á						
Field Considerations	Assessment Criterion	Laboratory Considerations	Assessment Criterion			
Øā\ åÁdāļÁ+]ã^•Á	Ü^&{ç^¦āN•Ásà^ç^^}Án.€ÃÁ æ)åÁrl€ÃÁ	Tædã¢Ár]ã ^Ár &[ç^¦^Á	Þ[Án¢&^^åæ)&^•Á;-Á æà[¦ææ[¦^Áæ&&^]œ)&^Á &lão^¦ãæÁ			
Øā\ åÁdā Ás æ}\•Á	O5;aqîo∿Á&[}&^}daæā[}ÁuŠUÜ/	Ù" [*æe^Á;]ã^Á^&[ç^ ^Á	Þ[Án¢&^^åæ)&^•Á;-Á æà[¦ææ[¦^Áæ&&^]œa)&^Á &lão^¦ãæÁ			

6.3. Investigation Criteria

Væiā]*ÁBjq[ÁB[]•ãā^¦ææā[}Ás@ Ájàb^8cāç^•Á;Ás@āÁ;¦[b^8cĒÁsæ]åÁs@ ÁS[]8^]c´æþÁjāc^Á;[å^|Ásæ]åÁæ)åÁ·•^Á •^cæā]*Áj¦^•^}c^åÁBjÁSection 5Á;Ás@āÁ;![b/8cĒÁs@ Áṭ||[,ā]*Ás[āþÁs;ç^•æā]ææā[}Áslāc^¦āæÁ^|^çæ)cÁt[Ás@Á]¦[][•^åÁæ)åÁ·•^Á·^cæā;*Á@æç^Ás^^}Ása^]c*åÁ[¦Ás@āÁ;![b/8cbÁs

Table 6-6-3 Tier 1 Soil Investigation Criteria

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P*{ æ}ÁP^æ c@ÁÔ¦ã£^¦ãæÁ	■Á Pˇ{æ)Á@ æ¢o@Ásã^&oÁS[}œ&oÁÁPŒŠ•ÁSJÁVæà ^ÁFŒÁÇFDÁSJÁPÒÚTÁDEÙÔÁ GEFHÁ¢è)åÁPÙŠ•ÁSJÁVæà ^ÁÓIÁ;ÁØlã°à^ ÉÁÓÁSÁPæåå^àæí{ÉÁÚÁÇGEFFDEÁ
	■Á Pˇ{æ)Á@ædo@Ánj@edpænā[}Enjædj[ˇ¦Ánjdˇ•ā[}Á.ÁPÙŠ•ÁnjÁ/æàn)^ÁrÁnjCHEÁnjÁ ÞÒÚTÁOEÙÔÁG€FHEÁ
	■Á Pˇ{æ)Á@ æ¢c@Á@æà^•q[•DÁ,Áæà•^}&^ÁÐÁ,¦^•^}&^Á[;Á,¦^ ā[ā]æ∳^Á •&¦^^}ā]*Éæa)åÅ,[Áçã;ãa] ^ÁDÉÔTÁ[}Á∵¦-æ&VÉÁ
Ò&[[* ã&æ‡ÁÔ¦ã£^¦ãæÁ	Ò&[[*a&æ ÁQ;ç^•ca*aæaa[}Áæ);åÁæ);åÁÛ& ^^}ā]*Áĕ^°ç^ •Áæ;Á&æ;&* æe^åÁæ;Á;^¦Áæ;ÒÚTÁ ŒÙÔÁGEFHÁ/æà; ^ÁFÁÇÓDÁFÉIÈÁ
	ÒCŠÁ& ão \ão Á; láo Á; lÁo \}:[ÇD] ^ l^ \^ ÁC; là æ) Á ^ • ão ^ } cão Á Á; à láo Á; à láo Á;] ^ } Á;] æ& ^ DÁ å ^ lão ^ å Á;[{ ÁÔÜÔÁÔCEÜÒÁÇO EFÏDÁ
Tæ)æ*^{^}o%Sā[æ•Á	Ú^d[^~`{Á@å¦[&æ+à[}Á&[{][~`}å•ÁQ;æ+)æ*^{^}oÁa[ã•DÁ.Á/æà ^ÁFÁÓÁQ;DÁ [Á->ÒÚTÁODÙÓÁGÆFHÁ
C12°• c2® c38• Á	CPC • c@ case Á Á [Á@ @ íá, æ a a a a a a a a a a a a a a a a a a

6.4. Soil Investigation

V@ Á; ^c@ å[|[*^Á^{]|[^^åÁs`¦ā]*Ás@ Ás; d`•āç^Á;[ā/Ás; ç^•cā ææā;} Ásē Á; `dā,^åÁs^|[¸Ás; ÁTable 6-4ÈÁ Ùæ{]|ā]*Á[8ææā;}•Á:cājā-^åÁ禦Ás@ Ás;ç^•cā ææā;} Áse\^Á;¦^•^}c⁄s Æfigure 4ÈÁ

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Table 6-4 Soil Investigation Methodology

Ùæ{] ā] * ÁÜææā[}æ‡^Á	V@^Ánæ[] ā]*Áææā[}æd^Ás^c^ []^åÁ[¦Ás@^Á[ā[Ás]ç^•cðiææā[}Á;æ-Ásæ-^åÁ ˇ][}Ás@^Áā]åā]*•Á;-Ás@^Ás^•\d[]Ás[ç^•cðiææā[}ÉAi&rÁ;æh[[ç^¦ÉÁÔÙTÉÁse)åÁ c@^ÁÖÛUÁs^ç^ []^åÉÁÓæ-^åÁ][}Ás@okÁse]]¦[æ&@Ás@^Á[[]ā]*Áææā[}æd^Á]æ-Áæå[]c^åkÁ
	•Á Óæ-^åÁ;}Ás@ Áã^Á;Ás@ ÁãºÆsÁ;[*¦æ;Á;Á^^•¢{ ææ&Á[ãÁæ;] ā;*Á
	 Á V^• ơీ, ãn/Áng ả hán[¦^ @ ^ Án ¢&æçææā] } Á, æð Á • ^ å hát Ánæ• ã ơీ, ãn @Án@ Á å^• & að að að sæða þá - Áng Án [ā• ĒĀt [, ^ å Án ^ Án ¢ơ }) • āt } Át - Án • æt] ā * Át [ā • Ænt að eð eð
	■ÁÔ[^&cā[}Á,Á§ã&\^c^Á[ā]Á[ā]Áæ[] ^•Á [{ÁœA* [~}åÁ* ~~&\ÉA]Á[ā]ÉA æ)åÁæÆÉEÄÁ,Á§c^lçæp•Á;lÁ[ā]ÁdææÆ&@æ)*^•EÁ
Opd`•ãç^ÁOpç^•cãtæaā[}Á T^cQệåÁ	Ùão^Á, [¦\•Á, ^¦^Á,^¦-{¦{ ^åÁ,} }à °ÁÞ[ç^{ à^¦ÁG€FJÈÁV^•ơÁ, ão Á[&ææā, }•Á ¸^¦^Ár¢&æçæc^åÁ•ā, *Áæã, EcÁr¢&æçæe[¦ÊÁæ); åÁa[¦^@ ^Á[&ææā, }•Á, ^¦^Á æåçæ); &^åÁ•ā, *Á, *• @Ác à^•ÊÁæ); åÁ, ^¦^Ár¢c^}å^åÁg, Áæč; læþÁ[āÈÁZē]; æþÁ •æ{] ā, *Á,[ā, oÁá^] c@Áæ); *^åÁá^ç, ^^}Á€ÈCÁ, ÓÕŠÁæ); åÁrÈÁ, ÓÕŠÉÁ
Ù[āļAŠ[**ā]*Ása)åÁl261\ åÁ Uà•^¦çæsa[}•Á	Ù[ạੈ• Áṣ•) ả Á ác• Áác@ [* ^ Á¸ ^ ^ Ás^• & laā^ à Æ; Ác@ Áa^ å Æ; ác@Á [ājÁ & æ• āæææææææææææææææææææææææææææææææææææ
	Ù[āļÁ[*Áš^•&¦ā]cā[}•Ása)åÁāN åÁ[à•^¦çæsā[}•Ása>^Á*{ { æbār^åÁs,ÁSection 8Ása)åÁ;!^•^}♂åÁ;}Ác^•ơÁ;ãó/[*•Á;¦[çãs^åÁs,ÁAppendix FEÁ
Ù[ā ÁÛæ[] ā *Á	■Á Ù[āļÁræ{] ^•Á,^¦^Á&[^&c^åÁs^Át¦æàÁ;^c@@åÁÇ}ઁ•^åÉŠs^åã&æc^åÁ }ãdā^Át [ç^•DÁæjåÁ, æ&^åÁsjq[Áæà[¦ææ[¦^Á*]] ā^åÉSæ&ãáÁ;æe@åÉÁ •[ç^}óÁā,•^åÉx æ•Áæd÷ÉÁ
	 ■Á Ó āj åÁæ³ åÁå³] ā&ææ^•Á&[^&c^åÁ¸^\^Á^] æ ææ^åÁ-[{Á¸ ¦ã; æ †Áræ{] ^•Á æ) åÁ, æ&^åÁ¸q* Á¹ æ•Áææ+ēÉ
	■Á CDÁ{ æ Á`àĒæ;] ^Á¦[{ Á\æ&@Áæ;] ^Á; æ•Æ{ ^&c^åÆ; åÁ; æ&^åÆ; q[Á æÁ;ā]Ë[&\Áàæ;Á¦¦Á[ā/k;æ;[`¦Á;&¦^^}ā;*ÉÁ
	■Á CEÁ{ æ‡ Ár`àË æ;] ^Á, æ•Á&[^&c^åÁ¦[{ Áræ&@Áa Áræ;] ^Áæ;åÁ, æ&^åÁ ā,q[ÁæÁ,ā]Ë[&\Áàæ*Á;¦Áæ•à^•q[•Áæ;æf°āïÈÁ
	■Á Ő¦æçã[^dækÁæeà^•q[•Áræ{] ā]*Á¸æeÁ&æd¦āNåÁ[ĭoÁ¸ão@ā¸ÁVÚFŒA
Ù[āþxæ][*¦Áù&!^^}ā;*Á	OEÁ, @ d Eā[} ā æcā[} Ás^c/sd[¦ÁQÚÖÖDÉÁāc/åÁ, ā @ÁcóÆEÐÁNXÁæd;]ÉÁ, æ Á • ^åÁ d Ás¦^^} Á æ&@Ásā & o Á[āÁaæd;] / Á(¦Ás@Á,¦^•^} & Á, -Á,[c/} cāædÁs[læcā/Á [¦*æ)ā&Ás[{][ĭ}å•EÁU[āÁsæd;[ĭlÁs&o^}]ā*Á^•* lo Á, ^¦^Ásæþ[Ácājār^åÁ[¦Á c@Á^ ^&cā[}Á, -Áæd;] ^•Á(¦Áæà[læc[¦^Ásæ)懰•ārEÁ
Ö^&[}cæ{ã;æã[}Á	Ö^åä&æe^åÁjādā^Á; [ç^•Áj^\^Á •^åÁ; Ác@Á&[^&cāj}Á;—Áræ&@Á[ājÁræé] ^ÈÁ
	O. ĒÁr[āļÁræ;] ^•Á;^¦^Ás[^&c^åÁsā^&d^Ár[{Ár@Ás^}d^Ár—Ár@Ár¢&æçæ;[¦Á à š&\^dÉsh^&;}cæ;ājææ;}Ár;[&^å ; ^•Á;^ cÁr~ ĭā^åÉÁ

 $\label{eq:condition} $$\dot{U}^{-}]^{-} ^{\circ} \cos^{\hat{A}}(\hat{D}_{-}^{\circ})^{-} ^{\circ} ^{\circ} $$ ($\dot{D}_{-}^{\circ})^{-} ^{\circ} ^{\circ} ^{\circ} $$ ($\dot{D}_{-}^{\circ})^{-} ^{\circ} ^{\circ} ^{\circ} $$ ($\dot{D}_{-}^{\circ})^{-} $$ ($\dot{D}_{-}^$

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	Ùæ[] ā]*Á&[}cæā]^¦•Á,^¦^Áæà^ ^åÁ,ão@Áão^Á]^&ãã&Á,[{^}&læečl^ÉA
U(læ* ^ Êæ) å Āræ) å ā * Å	書 & * 前 : 前 : か & が : ネ 下 本 か を か を 本 本 で を 本 か を 本 か を 本 か を 本 か を 本 か を 本 か を 本 か を か を か か か か か か
	Olo^¦Ëpæne[¦æne[¦^Ána`] &Bæne^Áræne[] ^•Á,^¦^Ádæne][¦o^åÁd[ÁOE•dænēæne)Á Šæne[¦æne[¦^ÁU^¦ç&U^•ÁnÇOEŠÙDÓEæneArOEVOZÁne&&U^å&u^åÁne)æne[æne[¦æne[¦æne[¦í ÉÁu[¦Á ÛOEÐÛÔÁne)æne[œne[¦æne[¦í ÉÁu]¦í •^•ÉÁ
	OZÁÚæ;] ^ÁÜ^&^ā]oÁOZáçã&^Á, æ•Á,\![çãá^åÁs^Áræ&@Áæà[¦æa[¦≏ÉÁ å[&~{^}cā]*Áræ;] ^Ás[}åããā[}•Á][}Á^&^ā]dĚÁ
	Ô[] at • Á; -ÁÔUÔÁS) å ÁÚæ{] ^ÁÜ^&^ ā] cÁCTắç B&^ ÁÇÜÜCEDÁS[& `{^} o• ÁSH^ Á]¦^•^} c^ å Á§ ÁAppendix DÉÁ
Û ĭæplácíÁ 05≘• ĭ¦æ) & ^ÁÐÁ Û ĭæplácíÁ Ô[}d[ÁÁ	Ô[^&cā[}Áse]åÁse]æf•ãrÁ[-Á*ækācÁse•*¦æ]&^Ð*ækācÁs[}d[ÁQÛOEÐÛÔDÁ •æ[] ^•Á,æÁs[{] ^ơ°åÁs[Ásæ&S[¦åæ)&^Á,ão@ÁpÒÚÔÁQG€FHDÁ^**ã^{^}∂°EÁ
Šæà[¦æ{[¦^ÁŒ;æ‡^•ãrÁ	V@^Ápæà[¦ææ[¦^Áæ);æqfc38æ4Á*`ãr^ÉÁ@ åāj*Áaq̄^•ÉÁæ);æqfc38æ4Á;^c@ å•Áæ);åÁ ã[ãæ-Á;-Á^][¦cāj*ÁÇŠUÜDÁ*•^åÁ[¦Ás@a-Á;¦[b^&dÉÁæ-^Á;¦^•^};c^åÁsjÁSection 6.5ÉÁ

6.5. Laboratory Analysis and Sample Analytical Suite

V@Áa∉]|^•Á&[||^&c^åÁ¸^\^Átæ)•][¦c^åÁq[Áo@Áæ)æfcæ&æþÁæà[¦ææ[¦^ÊÄ•ā]*Á&@æājÁqÁ&`•q[å^ÁÇÔUÔDÁ]¦[q[&[]•ÈÄOZÁ^|^&a[]}ÁqÁœ•^Áaæ]]|^•Á¸æ•Áa&@å*|^åÁq[¦Áæ)æf°ēāE¸ão@Á^-△¦^}&^Áq[Áo@Á^|^çæ)cÁ ÔUUÔÁãa^}cãa³åÁq¦Áo@ÁOEÒÔÁo@æóA@Áæ[]|^•Á¸^¦^A&[||^&c^åÁq[{ÈÁ

OĦÁ[āÁæ{]|^•Á¸^\^Á[¦¸æå^åÁqÁqÁqÁæA>OEVOÆææ&\^åãæ^åÁæà[lææ[|^Á;lÁæ)æq`•ãÁ,ÁœÁæ)æq`°āÁ;Áæ@Áæ)æq`°åÁ¸Á à^|[¸ÊÓ`|[-⏕ÁØT*ơ¸^\^Á•^åÁq¦lÁœÆæ)æq°•ãÁ¸Á¸lã;æb^Åæ;]|^•Áæ)åÁÜÕÙÁq¦lÁæ@Áæ)æq°•ãÁ¸Á ā¸ơ\|ææ[lææ[|^Áæ{]|^•ÉŤableÂË å^ææ¶•ÁœÆæ)æq°•ãÁ¸Å°læ&^}Áq[āÁæ)åŸææ^lÁæ{]|^•È

Table 6-5 Soil Analytical Schedule

Óæ)\•([;}ÁÞ[¦c@ÁÚ*à|æ8ÉÜ&@[[ÁÜ^å^ç^|[]{^}oÁ

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Sample ID	TRH	втех	РАН	ОСР	Metals *	PCBs	Asbestos	CEC / Clay Conc.	AG ENM Suite
VÚ€FEÈÈÈÈÈÑVÚ€CŒÈË €ÈÃVÚ€FËÈËÈÌÍ ÃVÚ€ Ë €ÈËÈÌÃVÚ€ ËÈÈËÈÑĂ VÚ€ ËÈËÈÌÃVÚ€ ËÈËËÒÃ VÚ€ ËÈËËÈÑÃVÚ€ ËÈËË €ÈÃVÚÈ ËÈËËÈÑÃVÚ€JË €ÈËÌÃVÚFEËÈËÈÑÃVÚFCËÈË €ÌÃVÚFHËÈËÈÌÍ ÃVÚFIË €ÈËÈÌÃÝÚFEÈÈËÌÍ ÃVÚFIË €ÈËÈÌÃÝÚFIËÈËÈÌÍ ÂVÚFIË €ÈËÈÌÃÝÚCEËÈËÈÌÍÃ VÚÇËÈËËÌÃÝÚCŒÈËËÌÑÁ VÚÇËÈËËÌÃÝÚCŒÈËËÌÑÁ VÚÇËÈËËÌÃÝÚCËÈËÈÌÃÍ €ÌÃÝÚCHËÈËÈÌÃÝÚCCËÈË €ÌÃÝÚCHËÈËÈÌÃÝÚCCËÈË €ÌÃÝÚCHËÈËÈÌÃÝÚCCËÈË €ÌÃÝÚCHËÈËËÌÃÝÚCCËÈËË €ÌÃÝÚCHËÈËËÌÃÝÚCCËÈËË €ÌÃÝÚCHËÈËËÌÃÝÚCCËÈËË	ÝÁ	ÝÁ	ÝÁ	ÝÁ	ÝÁ	ÝÁ	ÝÁ	Á	Á
VÚ CHERETER ÉVÚ CHERETER ÉVÉ CHERETER ÉVÉ ÉTÉ ÉTÉ ÉTÉ ÉTÉ ÉTÉ ÉTÉ ÉTÉ ÉTÉ ÉTÉ	Á	Á	Á	Á	Á	Á	Á	Á	ÝÁ
VÚ ĐI THỆ THỆ THÝ THỆ ĐỘI THÝ	Á	Á	Á	Á	Á	Á	Á	ÝÁ	ÝÁ
ÖWÚËEFÉÖWÚËFŒÖWÚËEŒÊ ÖWÚËEŒÁ	Á	Á	Á	Á	ÝÁ	Á	Á	Á	Á
VÚFI EZŐÙÉKÓPGÍ EZŐÙÁ	Á	Á	Á	Á	Á	Á	ÝÁ	Á	Á
VÜQÚÁÙÚQSÒÁÐÁÓŠŒÞSÁ	ÝÁ	ÝÁ	Á	Á	Á	Á	Á	Á	Á
Á	Á	Á	Á	Á	Á	Á	Á	Á	Á

Notes:Á

Ēr^cæ † kÁOE ĒÁÔ å ĒÁÔ ¦ ĒÁÔ ĚÁP * ĒÁP åĒÁÚ à ĒÁZ } Á

 CF; æf ca8æ4/æà[| ææ[| ^ /k8^ | caãa8ææ^ • /k - /kæ) æf • ã Ébeb^ /k | ^ • ^ } c^ å /k§ /kAppendix D/æò; å /kæ; æf `ca8æ4/ | ^ • * | c /kæ/ Áæà* | ææ^ å /kæ) å /k | ^ • ^ } c^ å /k§ /kæ@ /kæææ&@ å /t able LAR1 EÁ

V@^Ápæà[¦æq[¦^Á@|åāj*Áqā]^•Ébæ)æf°cã8æþÁ(^c@)å•Áæ)åÁqãã•Á;^Á^][¦cāj*ÁqšUÜDÁs^āj*Á;•^åÁ[¦Ác@;Á];[b^8c£Éæb^Á;¦^•^};c³åÁşjÁTable 6-6ÈÁ

Table 6-6 Laboratory Holding Times, Analytical Methods and Limits of Reporting

Analyte	Holding Time	Analytical Method	Limit of Reporting
ÓVÒÝÁæ) åÁ/ÜPÁÔì ËÔ⊦∈Á	FIÁåæê∙Á	WÙÒÚŒÁ €H€Ê GÎ €ÓÆG) å €ŒÉÁ	€ÌÈCÏŒĬ ÁÇ *Ð*DÁ
VÜPÁNÔF€ËÔI €Á	FIÁ&aæê∙Á	WÙÒڌ €FÍ ÓÆBÁÔÁ	G elÏ+ €€ÁÇ; *Ð×ĐÁ

Analyte	Holding Time	Analytical Method	Limit of Reporting
ÚŒPÁ	Fl Áåæê∙Á	WÙÒÚŒÂGÏ€Á	€ÈËËŽÁÇ*Ð*DÁ
UÔÚÐJÚÚÁ	Fl Áåæê∙Á	WÙÒÚŒÂ.€ÌFÁ	€ÌÈÀÇ * Ð>* DÁ
ÚÔÓÁ	GÌÁåæê∙Á	WÙÒÚŒÂGÏ €Á	€ÌÈЭÁÇ * Ð>* DÁ
T^c憕Áǰ¢ÉÁP*ÁBÁÔ¦ ^{×9} DÁ	ÎÁ,[}c@-Á	WÙÒÚŒÂN €FÍ ÓÁBÁÔÁ	€BEÍÁÁGÁÇ;*Ð*DÁ
P*ÁBÁÔ¦ ^{XŒ}	GÌÁåæê•Á	WÙÒڌ €FÍ ÓÁBÁÔÁ	€BEÍÁÁGÁÇ *Ð*DÁ
Œà^• ([•Á	Þ[ÁjãjãpÁ	ŒÙIJÎIKG€€IÁ	Œa•^}&^ÁÐÁ;¦^•^}&^Á

7. Data Quality Assessment

CḤ Áæ•^••{ ^} ơḥ ⋌̇̀ò@ Á&[{] |^♂\}^•••ḥ ⋌åæææÆ&[||^&c^åŸæ•Á`}å^¦æà^} ÅÅœ@Á^•ˇ|••∱\^•^} c^åÆ;Á Appendix CÈÁ

Á Á

Óæ)\•([,}ÁÞ[¦c@ÁÚ`à|æBÉU&@[|ÁÜ^å^ç^|[]{^}cÁ

8. Results

8.1. Site Geology

Ù[āḥí![āḥ^i, a^•ḥâ•^lç^å Ásə) å Ás^•&lās^å Ás] ā&æþ| Ás[}•ārơḥ Ásæĥāc Ás|æ Áā|Þá, c^!|^ā, *Á^•ās æþák|æ ÈÁ

CḤ c@[][*^}ā&hí ææ²lãæþ•ḥ^l^híà•^lç^åḥão@ðháæðháæðh^cç^læþhí &ææā;}•Ēḥão@áng &lǐ•ā;}•Á

&[{]|ārā;*ḥ-Ás[}&l^o chíaæþ-ḥôc] æ •Ēbàlāsù Ēbāh Ásaþ å Ár[{^Aj.[c²}oāæþ| Ásæð^•o•ḍ•Ás[}œæā;]*Æ;āææhā;*hæ à Ac[{ ohj.[c²}oāæþ| Ásæð à Ac[}oæbhæ; a Ac[}œæā;]*Á;ææ³lāæþ-ḥóc]

ÇŪCĒT ÞĒV^•oḥāæhæåçæ;&Ac[ḥóaæˈlæþh[āþææhaækæhææ]æhæ;]|ā;*Á[&ææā;}Æjãoæhæ Ár¢&^]æi;}Á;ÁÓP€ÌĒĀ

VÚGÏ Ásaþ å ÁrÚGÌÞĀ

8.2. Field Observations

Øā\åÁuà•^¦çæaā}}Á&[{]ā^åÁå`¦ā;*Ás@^Áā;d`•āç^Áā;ç^•cā*æaā}}Áæ¢^Á·`{{æbãa^åÁà^|[,kÁ

- •Á U|-æ&q'|^Á\çãa^}&^Á;-Á&[}œq[ã;ææā]}Á;æ;Á;[œh&^c^&c^åA\$;Áæ;^Á;-Ás@;Á;āÁæ;]|^•Á&[||^&c^åĚÁ
- •Á Xãi a thá çãi } & A, [c'] cã thá à A ([•Á&[] cæā] ā] * Á; æc' lã th ÁÇÚ CEÔT DÁ; à A ¦ ç ^ å Á, ã c@a Á á@ Á áll Á { æc' lã th Áæc Á VÚFI BÁ
- •Á ÚCÔÁ&!^^}ā]*Á^•ˇ|O•Á&[||^&c^åÁåˇ|ā]*Áæ{]|ā]*ÁåãåÁ,[OÁã^^};Cã^Á|^çæc^åÁ^^ç^|•Á;ÁXUÔ•ÈÁ

8.3. Soil Analytical Laboratory Results

Human Health

 $V[capÁÚCPP Êbah]: [ÇD]^{h} ^AÇÓÇDÚDÁVÒÛ ÊÂU ÔÚÊBap} åÁÚÔÓÊÂA ^{hÁn} [| chá ÁbarÁS[} & h } d asaā[] Án • • Ác@ap Á asá[] chá Ár CŠÉDÆB ā ^ & chás[] chá Ár CŠÉDÆB ā ^ & chás[] chá Ár CŠÉDÆB ā ^ & chás[] chá Ár Ar asá[] hÁn • • Ác@ap Ár & chás[] chás[ā chás[] asaáh chás[] chás[]$

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Ecological Receptors

Ecological Investigation Levels (EILs)

Ùãc^Á]^&ãa&ÃÒŒ•Á¸^¦^Ásæ¢&`|æc^åÁ¡¦ÁÔ@[{ã {ÁŒŒÔ[]]^¦ÊÁpæ\$\^|Áæ;åÁZāj&Á•ā;*Á[ājÁæ;]|^•Á
&[||^&c^åÁæ&|[••ÁœÁ*æċÁ[{Ác°•^Á;ã•Á\jábe*PÁÒŒŠÁÔæ¢&`|æē;¦Á[Á*^}`|o•Á;àæð;^åÁ;[{Ác°•^Áæ;]|^•Á
¸^¦^Á;}c^¦^åÆ;qíÁæÁpÒÚTÁŒĐÔÁŒFHÁÒŒŠÁÔæ¢&`|ææ[¦Á[Á*^}^;æc^Á;ā°Á;]^&ãæÅÖŒ\$•Áæ;åÁs@Á^•`|o•Á
æ¢^Á@;}Ás^[[ÁsAfatle 8.1Áæ;åÁTable 8.2KÁ

Table 8.1 Laboratory Result used for Site Specific Derivations of ACLs

Analyte/	TP5 0.5-0.7	TP14 1.3-1.5	TP24 0.8-1.0	
Sample ID	(mg/kg)	(mg/kg)	(mg/kg)	
à ÁÔ æ Á	HÌ Á	ΗÁ	Η̈́Á	

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Δ	
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] PÁ	ÍÈÁ	ÍÈÁ	ÍÈ€Á
ÔÒÔÁ	FHÁ	FFÁ	FÌ Á

Table 8.2 Site EILs Derived from NEPM ASC 2013 EIL Calculator

Analyte/ Sample ID	TP5 0.5-0.7 (mg/kg)	TP14 1.3-1.5 (mg/kg)	TP24 0.8-1.0 (mg/kg)	Adopted site criteria (mg/kg)
Ô[]]^¦ÁÇÔ`DÁ	FH€Á	F€€Á	F €€ Á	FH€Á
ÀG6	G€€Á	FÌ€Á	ď€Á	G€€Á
Ô@[{ã{Á000Á ÇÔ¦ª•DÁ	Î H€ Á	Î €€ Á	Î ŒÁ	Î H€Á
Zāj &ÁÇZ} DÁ	HF€Á	GÎ €Á	Ĝ€Á	HF€Á

Óæ•^åÁ;}Ác@Áæç^¦æť^Áå^]c@Á;ÁájÁæ&¦[••Áæ*ÊKOEĎÁ&[}•ãå^¦^åÁæÁæj]¦[]¦ãææ^ÁqÁæå[]cÁçæj*^•Áå^¦ãç^åÁ ¼[{Á/UÍÁÉÍËEÍÉÁæ•Ác@Áæå[]c^åÁæ*Áj^8&ãæAÓOŠÁ&¦ãr^¦ãæÁ;¦Ác@Áæ•^•••{^}of;Áç°ŒÉÔ*ÉÁæàjåÁZāj&Á æ&¦[••Ác@Ááæ*Áà^&æ*•^Ác@áÁæ•Á^A}ÁgæÁ^A}ÁgÁ;ÁkjÁkjÁkjÁkjÁkjÁkjÁkjÁæ*Áæ%;Áææåç^Á;Ác@Áæ*ÈÁ

Metals

Total Recoverable Hydrocarbons (TRHs)

$$\begin{split} &\check{\mathtt{Sa}} \wedge_{\hat{\mathtt{a}}} \check{\mathtt{a}} \wedge \check{\mathtt{Chc}} - \mathsf{Ca}_{\mathbf{a}} \left(\mathbf{F3} \right) \check{\mathtt{A}}_{\hat{\mathtt{a}}} \check{\mathtt{A}} \wedge \check{\mathtt{Chc}} - \mathsf{Ca}_{\mathbf{a}} \left(\mathbf{F3} \right) \check{\mathtt{A}}_{\hat{\mathtt{a}}} \check{\mathtt{A}} \otimes \check{\mathtt{A}}_{\hat{\mathtt{a}}} \check{\mathtt{A}} & \check{\mathtt{Chc}} - \mathsf{Ca}_{\mathbf{a}} \left(\mathbf{F3} \right) \check{\mathtt{A}}_{\hat{\mathtt{a}}} \check{\mathtt{A}} \otimes \check{\mathtt{A}}_{\hat{\mathtt{a}}} & \check{\mathtt{A}}_{\hat{\mathtt{a}}} \otimes \check{\mathtt{A}}_{\hat{\mathtt{a}}} & \check{\mathtt{A}}_{\hat{\mathtt{a}}} \otimes \check{\mathtt{A}}_{\hat{\mathtt{a}}} & \check{\mathtt{A}}_{\hat{\mathtt{a}}} \otimes \check{\mathtt{A}}_{\hat{\mathtt{a}}} & \check{\mathtt{A}}_{\hat{\mathtt{a}}} & \check{\mathtt{A}}_{\hat{\mathtt{a}}} \otimes \check{\mathtt{A}}_{\hat{\mathtt{a}}} & \check{\mathtt{A}}$$

PAHs

V @ Á&[} &^ } d ææā[} • Á; -Á^ |^ çæ; oÁÚOEP ÁÔU Ú Ô• Á; ^ |^ Á/ • • Ás@æ; Áæå[] c^ å ÁÔÙŠÁ&l æ~ | ææÁÇĒĒ { * Đ * DÉÀ, ǎs@Ás@ Á ^ c&^] a f -Ás ^ } : [Ç D]^ | ^ } ^ ÁÇÓÇÆÐÚ DÁS, Á æ{] | ^ • ÁVÚ €Í ЁЁЁЁЁЁЁЁЁЎÁÇ ЁЕЗ * Đ * DÁS; å ÁÓP GÍ ЁЁЁЁЁЁЁ Á ÇĒÐ { * Đ * DÉÀ

OEĎÁS[}•ãa^¦•Ás@æEÃscho@`*@Ás@Á^•`|œÁ^][¦ċ^åÁsch]]^æÁs[Ás^Ásæà[ç^Ás@ÁrÒÚTÁOEÙÔÁGEFHÁÒÙŠEÒCŠEÁc@ÁrÔÜÔÁÔOEÜÒÁ/^&@) &BæhÁÜ^][¦oÁHUÁ;}ÁÜã\Ëàæe^åÁ(æ)æt^< ^}oÁs@àÁ^{ ^åãææā;}Á* ãåæ)&^Á;¦Áàà^}:[ÇæD^¦^}^AÁGEFÏDÁcææ*•Ás@ædÁ

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‰ the ESLs in the NEPM are classified as low reliability, it is useful to consider whether there is additional and more recent information that allows higher reliability values to be estimated. Note that values derived in this way are intended to assist in informing an assessment of B(a)P following NEPM ecological risk assessment guidelines, but as they have not been developed through the NEPM review process, they should not be cited as NEPM ESLs ÉÁ

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Table 8.3 High reliability ecological guideline for fresh B(a)P

Land use	% protection	Derived ecological guideline (95% confidence limits) mg/kg	NEPM low reliability ESL mg/kg	Canadian SQGE
Ô[{{^\¦&ãan(Áxc)}åÁ ājåĭ•dãad(Á	ÎÍÁ	FÏGÁÓÇÏ.HÏFDÁ OPã®Á∧ ãæàāãcDÁ	FÈÁ	Ï GÁ
Wàæ) Á ¦^∙ãã^} cãæ(Ás) åÁ] `à ã&Á;]^} Á •]æ&^Á	ìÍÁ	HHÁÇGF. FHÍ DÁ ÇP ar @Á^ amaà apac DÁ	€ÏÁ	G€Á
Þæda } ædÁ]æ \• Ðæd^æ Á ão@Á @ã @á\&! [* ã&ædÁ çæ; ^• Á	JJÁ	€ÈCÁÇEÈE. CFDÁ CPªã OÁA^ ãeaà đặc DÁ	€ÏÁ	ÞŒÁ

ÙÛÕòAMÁ[ãÁ * æjácîÁ * ãá^|ã, ^ • Á[¦Án} çã[}{ ^} ædÁ@ ædo@ÁÇÔÔT ÒÁG€F€DEÁ

Management Limits and AestheticsÁ

 $V@/kS[] & $^$ d = aa_i $ \bullet A_i - AUPAO_i = BO_{Fe}BAO_{Fe}BO_{F$

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9. Discussion

9.1. Soil Characterisation

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 $P[\ ,\ ^c\wedge'] \stackrel{\text{EA}}{\text{EA}} \times \text{ad} \circ \text{ad} \times \text{ad}$

9.2. Revised Conceptual Site Model

Table 9-1 Revised Conceptual Site Model

AEC ID	Location	Potential Sources	Impacted Media	Contaminants of Potential Concern	Exposure Pathway	Potential Receptors
ŒÒÔ€FÁ	VÚ€Í Á	Ù`¦-æ&^ÁāļÁ {æc^¦āæ+Á Pãrq[¦ā&æ†Ás`ājåāj*Á å^{[āīāj}Á	ù[ajá	Zāj&Á sa) åÁ Ó^}:[QæÐÚ^¦^}^Á	Q*^• ca[} Á Ö^ { a=bÁ &[}ca=&cÁ Q:@ed=a=a[} ÁÁ Á	\tilde{O}[\} \cdot \tilde{G} \tilde{A}
ŒÒÔ€GÁ	ÓP€ÏÁ	Ù`¦-æ&^Áā Á {æc^¦āad+Á Pãrd[¦ā&ad+Áa`ā¦åā]*Á å^{[āāā]}Á	ù[ājÁ	Zą &Á	Q*^•cā[}Á Ö^¦{æ‡Á &[}ææ&oÁ Q:@æ‡ææā[}ÆÁ Á	Ô[] • d* & cā[] Á æ) å Á { æā] ¢^} æ) & ^ Á [!\^!• Á Ò} å Á • ^ !• Á; Á @ Á • ã ^ Á; [• cË !^å^ç^ [] { ^} cÁ
ŒÒÔ€HÁ	VÚFI Á	Ö^{[ãcā[}Ácc)åÁ `}&[}d[^åÁā[]ā]*Á	ù[āÁ	Ó[}å^åÁOGÔTÁ ∄Áá∏Á(æc^¦ãædÁ	Qu@edpaeaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa	Ô[] • d* &cā[] Á æ) å Á { æā] ¢ } æ) & ^ Á [!\ ^! • Á Ò] å Á • ^! • Á; -Á; @ Á • ãc ^ [] { ^ } cÁ ! ^ å ^ ç ^ [] { ^ } cÁ

$$\begin{split} \dot{U}^*]] & | ^{ } ^{ } \cos^{ } \hat{AO}[\} \cos (\hat{a}_{1}) \sin (\hat{a}_{2}) + (\hat{a}_{3}) \sin (\hat{a}_{3}) + (\hat{a}_{3}) \sin (\hat{a}_{3}) + (\hat{a}_{3}) \sin (\hat{a}_{3}) \sin (\hat{a}_{3}) + (\hat{a}_{3}) \sin (\hat{a}$$

AEC ID	Location	Potential Sources	Impacted Media	Contaminants of Potential Concern	Exposure Pathway	Potential Receptors
À BÔŒ	ÓPÁ Á	Ö^{[ãcā[}Ásc)åÁ `}&[}d[^åÁā[]ā]*Á	Ù[ặÁ	Ó[}å^åÁŒÓTÁ [}Án`¦-æ&^Á •[āf•Á	Q. @eteceā[} Á	Ô[] • d* &cā[] Á æ) å Á { æā] ¢^] æ) &^ Á [¦\^!• Á Ò] å Á* • ^ ¦• Á; -Ás@ Á • ãr^ Á; [• dË ^å^ç^ [] { ^} cÁ

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10. Conclusions and Recommendations

Óæ•^åÁi,}Ás@·Áājåāj*•Ái,-Áå^•\d[]Á^çā\,Áāj-{¦{ææāi}}ÉÁā\|å,[¦\Áià•^¦çææāi}}•Áæò;寿ò[!ææ[¦^Áæò)æf;æææÁ åæææÆājÁs@·Á&[}c^¢oÁ;-Ás@·Á;[][•^åÁ^å^ç^|[]{^}oÁ•&^}æð|å£0£0Á;æò^•Ás@·Á;||[]āj*Á&[}&['•āj}•KÁ

- Á V@Áá^c/&c^åÁ&[}&^}dæā[}•Á;Áà^}:[ÇD]^¦^}^ÁÇÓÇDÚDÁVÒÛÁ^&[¦å^åÁ§Á[ãÁæ{]|^ÁVÚ€ÍË €ÌÈËÈÌÁÇÌÈÇ(*Đ)*DÁæ•^••åЁÄ(æÁ;¦^•^}cÁæ)Á'}æ&&^]œæì|^Ááã^&cÁ&[}ææ&cÁ@{æ)Á@æ¢c@Á ^¢][•*¦^Áã\LÁ
- •Á $V@As^{\circ}a^{\circ}a^{\circ}As^{\circ}a^{\circ$

- Á Ó[} å^å Áæ à^• d[• Á&[} cæājāj* Á; ææ^¦ ãæþÁåo^c^&c^å ÁājÁ; ææ^¦ ãæþÁææÁ;æé] |āj* Áj[āj cÁ/ÚFI Áæ) å Áj} Á
 ` |-æ&c^Á[āp Áæl[`}å Áæé]] |āj* Áj[āj cÁÓP GÍĒÄ; æê Áj¦^•^} cÁ} ææ&&^] cæà |^ Ááiā^&cÁ&[} cæ&cÁ@{ æ) Á
 @ æþc@Ár¢][• ` '^Áã\ ÈÁÁ

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Óæ•^åÁ;}Ás@•^Á&;}&|~•ã;}•ÉÐEÕÁ;æà^•Ás@Á;||[ā;*Á^&;{ { ^}åææã;}•kÁÁ

- •Á V@ ÁÜ CŒÚÁ @(`|åÁà^Á;¦^]æb^åÁà^ÁæÁ `ãææà|^Áv¢]^¦āN}&^åÁn}çã[}{ ^}æðÁ&[}•`|œæ)dĚÁ

 $V@\hat{a} \hat{A}^{-}[d\hat{a} \otimes \hat{a} * \hat{a$

11. Statement of Limitations

V@Áājåāj*•Á;!^•^} &åÁājÁo@áÁ^][!oÁse}^Áàæ•^åÁ;]Á!]^&ãã&Á^æ\$&@•Á;Á^|^çæajæÉt[ç^!}{ ^}oÁ@á@[!ã&ædÁ åæææàæ•^•ÁæjåÁæj^&å[cæþÁāj-{!{ææāj}Áo@æeÁ,^!^Á;æå^Áæçæājææà|^Áå;'āj*Áo@Á&[`!•^ÆjÆá;Æá;Æá;Æá;EbÁ V[Áo@Áà^•oÁ;Æj*;IÁ}[¸|^å*^ÊÁo@•^Á;à•^!çææāj}•Á^]!^•^}oÁæÁ^æ•[}ææà|^Æájæ¹]!^œæāj}Æí,Æó@Á*^}^!ædÁ &[}åããaj}Á;Æó@ÁáæÁæÁ@Ááā;Áá;A^][!oÆ[{]|^cÆj}EÁ

V@āÁ^][¦oÁ@æeÁa^^}Ái¦^]æd^åÁn[|^|^Áu[łÁs@Á•^Áp-Ás@Á&Jāð}oÁu[Á, @u[Ásóæáå¦^••^åÁæe)åÁ,[Ánc@¦Á]ædcÁsóÁsÁs}oād^åÁu[Á^|^Án}Ásóæða]*•ÈÁ

 $V@a^{A}/][|cA|^* \circ cA^{A}/A^{2}]^{a}A_{A} A_{A} A_{A$

Š[*•ÉÁā*'^•ÉÁa)åÁa¦æ,āj*•Áæ^Á^^}^|æe^åÁq;¦Ás@ĕÁ^][¦ÓÁaæ•^åÁq}Áajåāçãa`ædÁŒŐÆQ[}•`|œæ)óÁ āje^¦]¦^œæā[}•Áp-Áp[{ājæe^åÁa&æædÉÆæ•Á,^||Áæ•Ápà•^¦çææā[}•Á;æå^ÁææÁ@^Áaā,^Árāc^Á,æd\[ç^¦Ð-Á,^!^Á &[{]|^e^åEÆÁ

ÖæææÁæy åÐ | ÁB, -{ | { ææā[} Á, |^•^} & åÁB, Ás@æ Á^] [| oÁ, ˇ• oÁ, [oÁæ^Á^å | æç } ÁÇ | Áær ÁB, &| ˇ•ā[} ÁB, ÁÇ o@ | Á^] [| o•ÊÁ] |æ)•Á; |ÁB[& ´{ ^} o•ÊÁ, [| Ár @ Ў | å Ás@ærÁs æææÁæy åÐ | HÁB, -{ | { ææā[} Ás^Á^] æ æc^å Á+[{ Ás@ærÁ^] [| oÆB, Áæ) ^Á, æê ÉÁ

Ù @ `|å Áscå å ãcā[} æ þÁs, -[¦{ æcā[} Ásc@ æcÁ; æ Ás[] æ ScÁ[} Ásc@ Á-ā] å āj* • Á; -Ásc@á Á^][¦cÁs ^Á^} &[`} c^¦^ å Á; ¦Á ãc^ Á &[} å ãcā[} • Ásc@ æ) * ^ ÉÁOEÕ Á^ • ^¦ç^ • Ásc@ Á ā? @ Ás[Á^çā], Áse} å Áse{ ^} å Ásc@á Á^][¦cÈÁ

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HGGÁP°{ ^ÁPª @ æÊÁÓæ}\•([, }ÊÁÞÙYÁGG€€Á

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12. References

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Ò} Üã \ • ÁŒFÎ ÉÉProposed Decision Tree for Prioritising Sites Potentially Contaminated with PFASsÉA åæc^åÁGÍ ÁØ^à¦`æ^ÁŒFÎ ÈÁ

Þæā[}æÁÖ]çã[]{ ^}œÁÚ¦[œ'&æā[}ÁÔ[ˇ] &áÁŊÞÒÚT DÁG€FHæÆÁSchedule B(1) Guideline on Investigation Levels for Soil and GroundwaterÆÞææā[}æÁÖ]çã[]{ ^}œÁÚ![œ'&æā[}ÁÇŒ•^••{ ^}œÁ;ÁÛãc'ÁÔ[}œ€ā[]æÁÇ]ÞÁT ^æ´¦^ÁŊÞÒÚT DÁæÁæ(^}å^ÁBÁĞ ÁT æÁG€FHEĂ

Þæā[}æÁÖ}çã[]{ ^}œÁÚ|[c^&cā[}ÁÔ[ˇ] &ãÁÞÞÒÚÔÞÓ€FHàÆSchedule B(2) Guideline on Site CharacterisationÆÞæā[}æÁÖ]çã[]{ ^}œÁÚ|[c^&cā[}ÁÇŒ•^••{ ^}œÁ¸ÁÛã¢ÁÔ[}œ€ā]æã[}DÁT^æ*\^Á QÞÒÚT ÞÁæÁæÁ¸ÁTæÁÁ¸ÁTæÁÆFHEÁ

ÞÙY ÁÒÚŒÆJJÍ ÉEContaminated Sites: Sampling Design GuidelinesÉA

ÞÙY ÁÒÚŒÆFÏ ÉÉContaminated Land Management: Guidelines for the NSW Site Auditor SchemeÉÁ

ÞÙY ÁÒÚŒÆG€ŒÉConsultants reporting on contaminated landÉContaminated land guidelines

Y ΆUPÁŒIJŒGuidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia⊞aæ∧åÁTæ ÁG€€JÉÁ

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13. Abbreviations

OEOOA OE(aa) oAOas(*!["] aAO[] & das[] A

OEDŠÁ $OEåå^åADC[] cæ[] aaa oKŠã[] ãoÁ$

OĐÔT ÁÁ O• à^• \mathbf{q} • \mathbf{A} O[\mathbf{a} \mathbf{a} , \mathbf{a} \mathbf{b} \mathbf{a} \mathbf{a} \mathbf{a} \mathbf{a} \mathbf{a} \mathbf{a}

OĐÔÁ OĐ^æ (i + i) çã[(i + i) cæ(i + i) A

ΟΕΘÁ ΟΕ à^• d • ÁΘΒ ^• Á

OEÙÁ Œ•dæjæjÁÙæjåæåÁ

OÈÙÙÁ OB&ãåÁÙˇ |-æc°ÁÙ[♣ Á

ÓÇ ĐÚÁ Ó^}:[Ç D)^\^}^Á

ÓVÒÝÞÁ Ó^}:^}^ÊÝ[|~^}^ÊÔc@|à^}:^}^ÊÉÝ^|^}^ÊÞa‡@@æ‡^}^Á

ÔÒÔÁ Ôæaj } ÁÒ¢&@aj * ^ ÁÔæj æ&ãĉ Á

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c@\AO\ çã[} { ^} cÁ

 \ddot{O} OGÁ \ddot{O}° [] { ^} σ OGÍ] | \ddot{a} Sææð[} Á \ddot{O} OÚÁ \ddot{O}° [] { ^} σ OÚÍ \dot{O}° d [] \dot{A} Ú|æ) Á

ÖތڊÁ Ö^}•^ÁÞ[}Ëĕˇ^[ˇ•ÁÚ@æ•^ÆŠã˘šãÁ

ÖUÁ Öã•[|ç^åÁJ¢^*^}Á

ÖÚÁ Ö^] [•ãc^åÁÚ|æ) Á

ÖÛQÁ ÖæræÁÛ ĕ¢ãrê ÁQ å å å ær [+• Á

ÖÛUÁ ÖææÁÛ`æþác ÁUàld%áç^•Á

Ö\QÁ\ Ö\\ \approx \approx \dighta \lambda \lambda \approx \dighta \approx \dig

ÒCŠÁ Ò&[|[* 38aqÁQ;ç^• c3* aæa[] }Á§^ç^|Á

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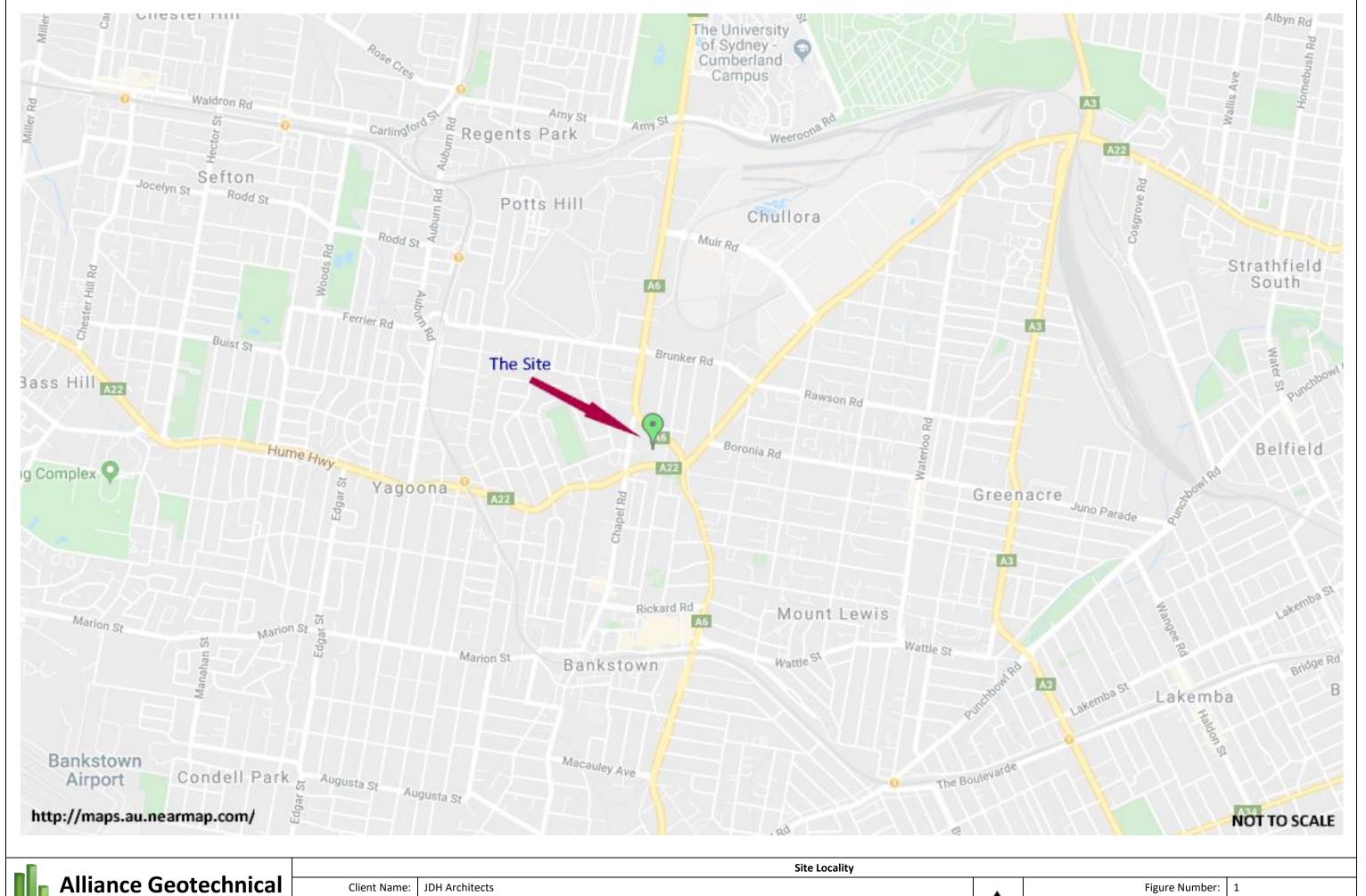
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ENGINEERING | ENVIRONMENTAL | TESTING Manage the earth, eliminate the risk

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Client Name:	JDH Architects		
Project Name:	Supplementary Contamination Assessment	\triangle	
Project Location:	North Bankstown Public School, 322 Hume Highway, Bankstown, 2200, NSW	10	ſ

Figure Date:

Report Number:

22 June 2020

9150-ER-1-1 Rev 1



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Client Name:	JDH Architects	
Project Name:	Supplementary Contamination Assessment	/
Project Location:	North Bankstown Public School, 322 Hume Highway, Bankstown, 2200, NSW.	

	Figure Number:	2
(Figure Date:	22 June 2020
	Report Number:	9150-ER-1-1 Rev 1



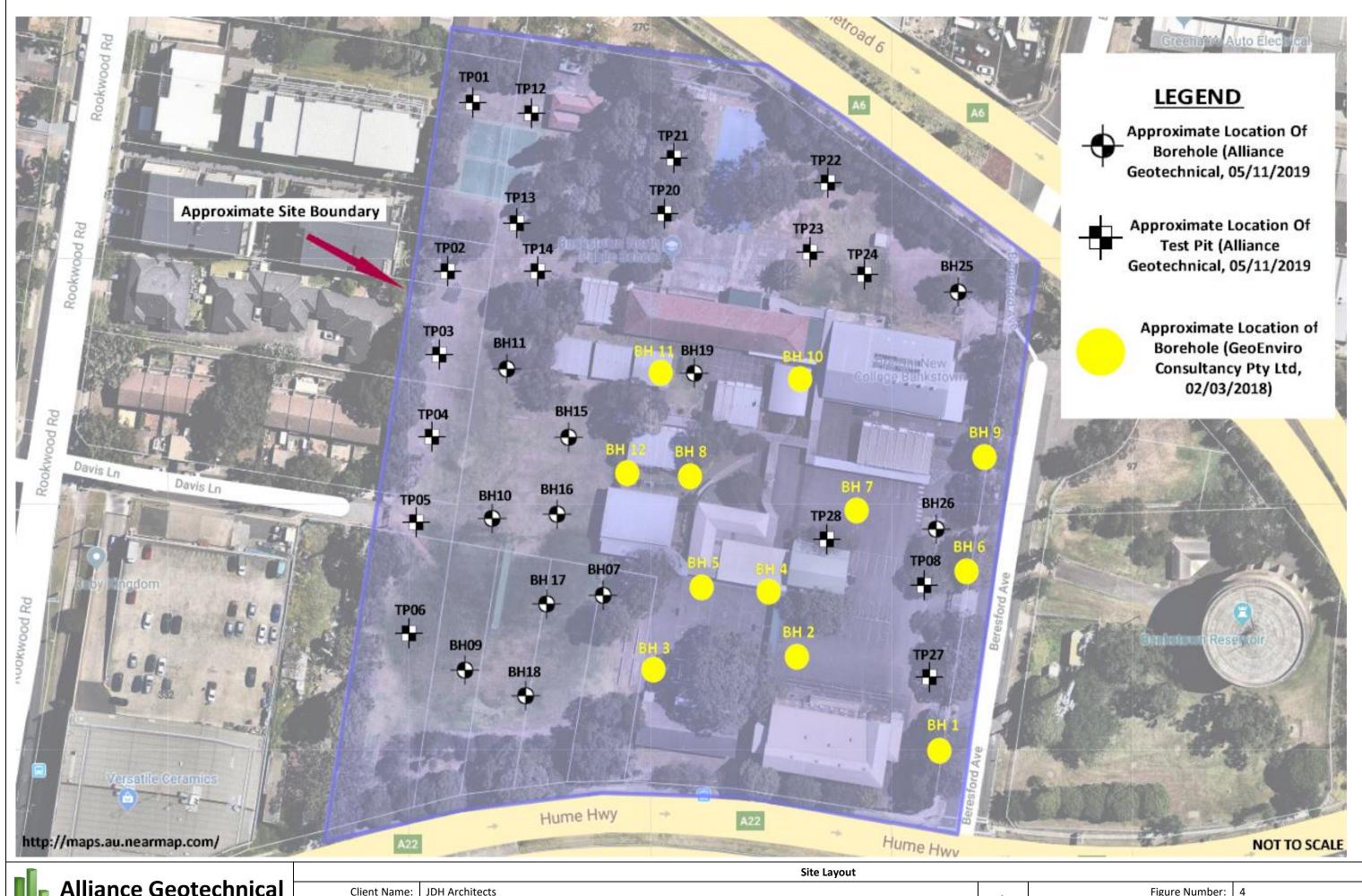
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Client Name:	JDH Architects	
Project Name:	Supplementary Contamination Assessment	
Project Location:	North Bankstown Public School, 322 Hume Highway, Bankstown, 2200, NSW	

•	Figure Number:	3
\sim	Figure Date:	22 June 2020
14	Report Number:	9150-ER-1-1 Rev 1



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Client Name:	JDH Architects	
Project Name:	Supplementary Contamination Assessment	/
Project Location:	North Bankstown Public School, 322 Hume Highway, Bankstown, 2200, NSW	'

	Figure Number:	4
\mathbf{M}	Figure Date:	22 June 2020
14	Report Number:	9150-ER-1-1 Rev 1

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	TABLES
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Table 1				
North Banksto	own Public School, 322 Hume Highway, Banksto	own NSW 220	00	
Soil Results &	Adopted Site Criteria			
9150-ER-1-1 R	ev1			

	town Public School, 322 Hume Highway, Bank	stown NSW 220	00									Reference		S19-No06605	S19-No06606	S19-No06607	S19-No06608	\$19-No06609	S19-No06610	S19-No06611	S19-No06612	\$19-No06613	\$19-No
sults & R-1-1 F	k Adopted Site Criteria Rev1											Date Sampled Sample Matrix		5/11/2019 Soil	5/11, Sc								
				Screening Levels for Direct Contact (mg/kg - CRC Care 2011	Inhalation	/ Vapour Intrusic NEPC 2013 (CI	on HSLs (mg/kg) - LAY)	Management Limits for TPH Fractions F1 - F4 in soil (mg/Kg) - NEPC 2013	ESLs and EILs for Heavy Metals TPH Fractions F1 - F4, BTEX and Benzo(a)pyrene - NEPC 2013	ESL for CRC CARE 2017 (Table 10.1)	Health Investigation Levels for Soil Contaminants - NEPC 2013												
oup	Analyte	Units	PQL	HSL - A Residential (Low Density)		HSL B - Low - sity Residential	Soil Saturation Concentration (Csat)	Residential, Parkland and Public Open Space	Urban Residential and Public Open Space	Urban Residential and Public Open Space	Residential A	Data Set Minimum	num Data Set Maximum										
					0 m to <1 r	m 1 m to <2 m		Fine Soil Texture	Fine Soil Texture	Canadian SQGE (95%)													
	Arsenic, As Cadmium, Cd	mg/kg mg/kg	0.4	-		-	-		100	-	100 20	3 <0.4	23 1.1	13 < 0.4	8.8 < 0.4	9.5	9 < 0.4	12 < 0.4	15 < 0.4	18 0.6	11 < 0.4	9.4 < 0.4	<(
	Chromium, Cr	mg/kg	5.0	-	-	-	-		630	-	100	8	35	33	24	23	21	23	31	15	23	16	2
tals	Copper, Cu Lead, Pb	mg/kg mg/kg	5.0	-	-	-	-		130 1100	-	6,000 300	13 11	87 290	33 59	33 170	46 24	34 130	26 18	17 44	87 290	34 21	17 54	1
	Mercury (inorganic)	mg/kg	0.10	-	-	-	-		-	-	40	<0.1	0.4	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.4	< 0.1	< 0.1	<
	Nickel, Ni	mg/kg	5.0	-	-	-	-	-	200 310	-	400 7,400	<5	26 380	10	9.5 120	11	11 140	9.9	13 57	16 360	22 120	8.3 63	+
	Zinc, Zn Acenaphthene	mg/kg mg/kg	5.0 0.5	-	-	-	-		-	-	-	<0.5	<0.5	73 < 0.5	< 0.5	68 < 0.5	< 0.5	56 < 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<
	Acenaphthylene	mg/kg	0.5	-	-	-	-		-	-	-	<0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5	<
	Anthracene	mg/kg	0.5	-	-	-	-	-	-	-	-	<0.5	0.8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.8	< 0.5	< 0.5	<
	Benzo(a)anthracene Benzo(a)pyrene	mg/kg mg/kg	0.5 0.5	-	-	-	-		Refer to CRC CARE ESL	20		<0.5 <0.5	1.4 5.2	< 0.5 < 0.5	1.4 5.2	< 0.5 < 0.5	< 0.5 < 0.5	<					
	Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>3</td><td><0.5</td><td>8.6</td><td>< 0.5</td><td>< 0.5</td><td>< 0.5</td><td>< 0.5</td><td>< 0.5</td><td>< 0.5</td><td>8.6</td><td>< 0.5</td><td>< 0.5</td><td><</td></lor=0<>	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	3	<0.5	8.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	8.6	< 0.5	< 0.5	<
	Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>0.6</td><td>8.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>8.6</td><td>0.6</td><td>0.6</td><td></td></lor=lor<>	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	0.6	8.6	0.6	0.6	0.6	0.6	0.6	0.6	8.6	0.6	0.6	
	Carcinogenic PAHs, BaP TEQ <lor=lor 2="" benzo(b&i)fluoranthene<="" td=""><td>TEQ (mg/kg) mg/kg</td><td>0.5</td><td>-</td><td>-</td><td></td><td></td><td></td><td>-</td><td></td><td></td><td>1.2 <0.5</td><td>8.6 6.6</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td>8.6 6.6</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td> </td></lor=lor>	TEQ (mg/kg) mg/kg	0.5	-	-				-			1.2 <0.5	8.6 6.6	1.2 < 0.5	8.6 6.6	1.2 < 0.5	1.2 < 0.5	 					
	Benzo(ghi)perylene	mg/kg	0.5	-		-	-	-	-	-		<0.5	6.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	6.7	< 0.5	< 0.5	
	Benzo(k)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-		<0.5	2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2	< 0.5	< 0.5	
	Chrysene Dibenzo(ah)anthracene	mg/kg mg/kg	0.5 0.5	-	-	-	-		-	-	-	<0.5 <0.5	2.2 1.5	< 0.5 < 0.5	2.2 1.5	< 0.5 < 0.5	< 0.5 < 0.5	+					
	Dibenzo(ah)anthracene Fluoranthene	mg/kg mg/kg	0.5	-			-		-			<0.5	1.5	< 0.5 < 0.5	1.5	< 0.5 < 0.5	< 0.5 < 0.5						
	Fluorene	mg/kg	0.5	-	-	-	-		-	-		<0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	-	-	-		-	-	-	<0.5	7.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	7.7	< 0.5	< 0.5	
	Naphthalene Phenanthrene	mg/kg mg/kg	0.5	1,400	5	NL -	10		170	-	-	<0.5 <0.5	<0.5 0.6	< 0.5 < 0.5	< 0.5 0.5	< 0.5 < 0.5	< 0.5 < 0.5	+					
	Pyrene	mg/kg	0.5	-	-	-	-	-	-	-	-	<0.5	2.1	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	2.1	< 0.5	< 0.5	
	Total PAH	mg/kg	0.5	-	-	-	-	-	-	-	300	<0.5	39	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	39	< 0.5	< 0.5	
	TRH C10-C36 Total TRH C10-C14	mg/kg	50	-	-	-	-	-	-	-	-	<50 <20	2200 110	168	166	< 50	155	< 50	< 50	2200	< 50	< 50	
	TRH C15-C28	mg/kg mg/kg	20 50	-	-	-	-	-	-			<50	1100	< 20 74	< 20 77	< 20 < 50	< 20 71	< 20 < 50	< 20 < 50	< 200 1100	< 20 < 50	< 20 < 50	
	TRH C29-C36	mg/kg	50	-	-	-	-	-	-	-	-	<50	1100	94	89	< 50	84	< 50	< 50	1100	< 50	< 50	
	TRH C6-C9	mg/kg	20	-	-	-	-	-	-	-	-	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	
	Naphthalene TRH >C10-C16 (F2)	mg/kg	0.5 50	1,400 3,300	5	NL NL	10	1 000	170	-	•	<0.5 <50	<0.5 130	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	+
	TRH >C10-C16 (F2) - Naphthalene	mg/kg mg/kg	50	-	280	-	560	1,000	120	-	-	<50	130	< 50 < 50	< 500 < 500	< 50 < 50	< 50 < 50	+					
	TRH C10-C40 Total (F bands)	mg/kg	100	-	-	-	-		-	-	-	<100	1900	140	140	< 100	130	< 100	< 100	1900	< 100	< 100	
	TRH >C16-C34 (F3) TRH >C34-C40 (F4)	mg/kg	100	4,500 6,300	-	-	-	3,500	1,300	-	-	<100 <100	1900 300	140	140	< 100	130	< 100	< 100	1900	< 100	< 100	
	TRH C6-C10	mg/kg mg/kg	100 20	4,400	-	-	-	10,000 800	5,600 180	-	-	<20	<20	< 100 < 20	< 1000 < 20	< 100 < 20	< 100 < 20	+					
	TRH C6-C10 minus BTEX (F1)	mg/kg	20	-	50	90	850	-	-	-	-	<20	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	
	Benzene	mg/kg	0.1	100	0.7		430		65	-	-	<0.1	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
	Ethylbenzene m/p-xylene	mg/kg mg/kg	0.1	4,500	NL -	NL -	68		125	-		<0.1 <0.2	<0.1 0.5	< 0.1 < 0.2	< 0.1	< 0.1 < 0.2							
	o-xylene	mg/kg	0.1	-	-	-	-		-		-	<0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	+
	Toluene	mg/kg	0.1	14,000	480	NL	630	-	105	-	-	<0.1	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
	Total Xylenes	mg/kg	0.3	12,000	110	310	330	-	45	-	-	<0.3	0.8	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	
	4.4 - DDD 4.4 - DDE	mg/kg mg/kg	0.05	-	-	-	-	-	-		-	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	-	< 0.05 < 0.05	
	4.4 - DDT	mg/kg	0.05	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	
	a - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	
	Aldrin Aldrin + Dieldrin (total)	mg/kg mg/kg	0.05	-	-		-		-	-	- 6	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	-	< 0.05 < 0.05	+-
	b - BHC	mg/kg	0.05			-	-	-	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	
	Chlordanes (total)	mg/kg	0.05	-	-	-	-	-	-	-	50	< 0.1	< 0.1	< 0.1	< 0.1	-	< 0.1	< 0.1	-	< 0.1	-	< 0.1	
	d - BHC DDT + DDE + DDD (total)	mg/kg mg/kg	0.05 0.05	-	-	-	-		-	-	- 240	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	+
	Dieldrin (total)	mg/kg mg/kg	0.05	-	-		-			-	- 240	< 0.05	< 0.05	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	-	< 0.05 < 0.05	+
	Endosulfan 1	mg/kg	0.05	-	-	-	-	-	-	-		< 0.05	< 0.05	< 0.05	< 0.05		< 0.05	< 0.05		< 0.05	-	< 0.05	
	Endosulfan 2	mg/kg	0.05	-	-	-	-	-	-	-		< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	+
	Endosulfan sulphate Endrin	mg/kg mg/kg	0.05	-			-		-		- 10	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	-	< 0.05 < 0.05	+
	Endrin Aldehyde	mg/kg	0.05	-	-	-	-		-	-		< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	
	Endrin Ketone	mg/kg	0.05	-	-	-	-		-	-		< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	\perp
	g-BHC (Lindane) Heptachlor	mg/kg mg/kg	0.05	-				-	-		- 6	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	-	< 0.05 < 0.05	+
	Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	-		< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	
	Hexachlorobenzene	mg/kg	0.05	-	-	-	-		-	-	10	< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	
	Methoxychlor Toxaphene	mg/kg mg/kg	0.05 1.0	-					-	-	300	< 0.2	< 0.2	< 0.2	< 0.2	-	< 0.2 < 1	< 0.2 < 1	-	< 0.2	-	< 0.2 < 1	+
	Vic EPA IWRG 621 OCP 9total)	mg/kg	0.1	-		-	-	-	-	-		< 0.2	< 0.2	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	-	< 0.2	
	Vic EPA IWRG 621 Other OCP (total)	mg/kg	0.1	-	-	-	-	-	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	-	< 0.2	
	Alpha + Beta Endosulfan	mg/kg	0.05	-	-	-	-		-	-	270	< 0.05	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	-	< 0.05	1
	Aroclor-1016 Aroclor-1221	mg/kg mg/kg	0.1	-				-	-			< 0.5 < 0.1	< 0.5 < 0.1	< 0.5 < 0.1	< 0.5 < 0.1	-	< 0.5 < 0.1	< 0.5 < 0.1	-	<5 <1	-	< 0.5 < 0.1	+
	Aroclor-1221 Aroclor-1232	mg/kg	0.1	-	-	-	-	-	-	-		< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	-	<5	-	< 0.5	\perp
	Aroclor-1242	mg/kg	0.1	-	-	-	-		-	-		< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	-	<5	-	< 0.5	
	Arcelor-1248	mg/kg mg/kg	0.1	-	-	-	-		-	-	-	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5	-	< 0.5	< 0.5	-	<5 <5	-	< 0.5 < 0.5	+
	Aroclor-1254 Aroclor-1260	mg/kg mg/kg	0.1	-					-	-		< 0.5	< 0.5	< 0.5	< 0.5 < 0.5	-	< 0.5 < 0.5	< 0.5 < 0.5	-	<5 <5	-	< 0.5 < 0.5	+
	Total PCB*	mg/kg	0.1	-	-	-	-			-	1	< 0.5	< 0.5	< 0.5	< 0.5	-	< 0.5	< 0.5	-	<5	-	< 0.5	
_	Total PCB*	878																					

TP01-0.0-0.1 TP02-0.0-0.2 TP02-0.2-0.4 TP03-0.0-0.15 TP04-0.0-0.2 TP04-0.2-0.4 TP05-0.0-0.2 TP05-0.5-0.7 TP06-0.0-0.2 TP06-0.0-0.2

Highlighted concentration exceeds the adopted site criteria - Screening Levels for Direct Contact (mg/kg) - CRC Care 2011
Highlighted concentration exceeds the adopted site criteria - Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)
Highlighted concentration exceeds the adopted site criteria - Management Limits for TPH Fractions F1 - F4 in soil (mg/kg) - NEPC 2013
Highlighted concentration exceeds the adopted site criteria - ESLs for TPH Fractions F1 - F4, BTEX and Benzo(a)pyrene - NEPC 2013
Highlighted concentration exceeds the adopted site criteria - Health Investigation Levels for Soil Contaminants - NEPC 2013

No published criteria or sample not analysed Not Limiting Non-Detect

able 1												Sample ID	BH07-0.0-0.2	BH07-0.2-0.4	BH08-0.0-0.2	BH09-0.0-0.3	BH10-0.0-0.2	BH10-0.2-0.4	BH11-0.0-0.1	TP12-0.0-0.1	TP12-0.1-0.3	TP13-0.0-0.15	TP14-0.0-0.2	TP14-1.3-1.
	town Public School, 322 Hume Highway, Ba & Adopted Site Criteria	nkstown NSW 22	00									Reference Date Sampled	\$19-No06615 5/11/2019	\$19-No06616 5/11/2019	S19-No06617 5/11/2019	\$19-No06618 5/11/2019	\$19-No06619 5/11/2019	S19-No06620 5/11/2019	\$19-No06621 5/11/2019	S19-No06622 5/11/2019	S19-No06623 5/11/2019	S19-No06624 5/11/2019	S19-No06625 5/11/2019	S19-No0662 5/11/2019
150-ER-1-1												Sample Matrix	5/11/2019 Soil	Soil	Soil	5/11/2019 Soil	5/11/2019 Soil	5/11/2019 Soil	5/11/2019 Soil	Soil	5/11/2019 Soil	Soil	5/11/2019 Soil	5/11/2019 Soil
	I																							
				Screening Levels for				Management Limits	ESLs and EILs for Heavy	ESL for CRC CARE	Health Investigation	l												
				Direct Contact (mg/kg)	Inhalation /	Vapour Intrusi NEPC 2013 (C	on HSLs (mg/kg) LAY)	for TPH Fractions F1 - F4 in soil (mg/Kg) -	Metals TPH Fractions F1 - F4, BTEX and Benzo(a)pyrene -	2017	Levels for Soil Contaminants - NEPC													
				- CRC Care 2011			•	NEPC 2013	NEPC 2013	(Table 10.1)	2013	1												
	l																							
Group	Analyte	Units	PQL		HSI A & H	HSLB - Low -		Residential, Parkland	Urban Residential and Public	Urban Residentia	ı	l												
				HSL - A Residential		ity Residential	Soil Saturation	and Public Open Space	Open Space	and Public Open Space		Data Set Minimum												
				(Low Density)			Concentration (Csat)				Residential A	\vdash												
					0 m to <1 m	1 m to <2 m		Fine Soil Texture	Fine Soil Texture	Canadian SQGE		l												
										(95%)														
	Arsenic, As Cadmium, Cd	mg/kg mg/kg	0.4	-	-	-	-		100	-	100 20	3 <0.4	15 < 0.4	11 < 0.4	11	5.6 < 0.4	4.2 < 0.4	6.1 < 0.4	8 < 0.4	9.7 < 0.4	5 < 0.4	9 < 0.4	3 < 0.4	5 < 0.4
	Chromium, Cr	mg/kg	5.0	-	-	-	-	-	630	-	100	8	19	20	17	13	12	11	18	24	19	21	13	19
Metals	Copper, Cu	mg/kg	5.0	-	-	-	-		130	-	6,000	13	43	40	38	21	13	44	36	37	23	33	16	15
	Lead, Pb Mercury (inorganic)	mg/kg mg/kg	5 0.10	-		+ :	-		1100		300 40	11 <0.1	170 0.1	14 < 0.1	150 0.2	54 < 0.1	30 < 0.1	16 < 0.1	100 < 0.1	95 < 0.1	15 < 0.1	93 < 0.1	41 < 0.1	17 < 0.1
	Nickel, Ni	mg/kg	5.0	-	-	-	-	-	200	-	400	<5	16	13	12	6.3	9.7	6.6	10	9.7	8.5	9.1	< 5	7.1
	Zinc, Zn	mg/kg	5.0	-	-	-	-	-	310	-	7,400	23	380	98	270	82	59	47	140	130	40	120	84	25
	Acenaphthene	mg/kg	0.5	-		-	-	-	-	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Acena phthylene Anthracene	mg/kg mg/kg	0.5	-				-	-	-		<0.5 <0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
	Benzo(a)anthracene	mg/kg	0.5	-							-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Benzo(a)pyrene	mg/kg	0.5	-	-	-	-	-	Refer to CRC CARE ESL	20	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Carcinogenic PAHs, BaP TEQ <lor=0< td=""><td>TEQ (mg/kg)</td><td>0.5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>3</td><td><0.5</td><td>< 0.5</td><td>< 0.5</td></lor=0<>	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	3	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Carcinogenic PAHs, BaP TEQ <lor=lor< td=""><td>TEQ (mg/kg)</td><td>0.5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td><td>0.6</td></lor=lor<>	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-	-	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
	Carcinogenic PAHs, BaP TEQ <lor=lor 2="" benzo(b&i)fluoranthene<="" td=""><td>TEQ (mg/kg) mg/kg</td><td>0.5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>1.2 <0.5</td><td>1.2</td><td>1.2</td><td>1.2 < 0.5</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td><td>1.2 < 0.5</td></lor=lor>	TEQ (mg/kg) mg/kg	0.5	-	-	-	-	-	-	-	-	1.2 <0.5	1.2	1.2	1.2 < 0.5	1.2	1.2	1.2	1.2 < 0.5	1.2 < 0.5	1.2 < 0.5	1.2 < 0.5	1.2 < 0.5	1.2 < 0.5
	Benzo(ghi)perylene	mg/kg	0.5	-	-		-				-	<0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
PAH	Benzo(k)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Chrysene	mg/kg	0.5	-	-	-	-	-	-	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Dibenzo(ah)anthracene	mg/kg	0.5	-	-	-	-		-	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Fluoranthene Fluorene	mg/kg mg/kg	0.5	-	-	-	-	•	-	•		<0.5 <0.5	< 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5	< 0.5 < 0.5	< 0.5	< 0.5	< 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	-	-	+ :	-				-	<0.5	< 0.5 < 0.5	< 0.5	< 0.5	< 0.5 < 0.5	< 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Naphthalene	mg/kg	0.5	1,400	5	NL	10	-	170	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Phenanthrene	mg/kg	0.5	-	-	-	-		-	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Pyrene	mg/kg	0.5	-	-	-	-		-	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
	Total PAH TRH C10-C36 Total	mg/kg	0.5 50	-	-	-	-	-	-	-	300	<0.5 <50	< 0.5 231	< 0.5 < 50	< 0.5 773	< 0.5 430	< 0.5 231	< 0.5 < 50	< 0.5 289	< 0.5 206	< 0.5 < 50	< 0.5 281	< 0.5 82	< 0.5 < 50
	TRH C10-C14	mg/kg mg/kg	20	-	-	+ :	-		-		-	<20	21	< 20	83	430	21	< 20	39	35	< 20	35	24	< 20
	TRH C15-C28	mg/kg	50	-	-	-	-	-	-	-	-	<50	110	< 50	420	160	80	< 50	110	78	< 50	96	< 50	< 50
	TRH C29-C36	mg/kg	50	-	-	-	-	-	-	-	-	<50	100	< 50	270	230	130	< 50	140	93	< 50	150	58	< 50
	TRH C6-C9	mg/kg	20	-		-	-	-	-	-	-	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
TRH	Naphthalene TRH >C10-C16 (F2)	mg/kg	0.5 50	1,400 3,300	5	NL NL	560	1 000	170	-	-	<0.5 <50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5 < 50	< 0.5 < 50	< 0.5 < 50	< 0.5 < 50
IKII	TRH >C10-C16 (F2) - Naphthalene	mg/kg mg/kg	50	-	280	-	- 560	1,000	120 -	- :	-	<50	< 50 < 50	< 50 < 50	87 87	< 50 < 50	< 50 < 50	< 50 < 50	< 50 < 50	< 50 < 50	< 50	< 50	< 50	< 50
	TRH C10-C40 Total (F bands)	mg/kg	100	-	-	-	-	-	-	-	-	<100	180	< 100	857	500	170	< 100	210	140	< 100	300	< 100	< 100
	TRH >C16-C34 (F3)	mg/kg	100	4,500	-	-	-	3,500	1,300	-	-	<100	180	< 100	560	330	170	< 100	210	140	< 100	200	< 100	< 100
	TRH >C34-C40 (F4)	mg/kg	100	6,300	-	-	-	10,000	5,600	-	-	<100	< 100	< 100	210	170	< 100	< 100	< 100	< 100	< 100	100	< 100	< 100
	TRH C6-C10 TRH C6-C10 minus BTEX (F1)	mg/kg mg/kg	20	4,400	50	90	850	800	180	-	-	<20 <20	< 20 < 20	< 20 < 20	< 20 < 20	< 20 < 20	< 20 < 20	< 20 < 20	< 20 < 20	< 20 < 20	< 20 < 20	< 20 < 20	< 20 < 20	< 20 < 20
	Benzene	mg/kg	0.1	100	0.7	1	430		65	-	-	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Ethylbenzene	mg/kg	0.1	4,500	NL	NL	68	-	125	-	-	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BTEX	m/p-xylene	mg/kg	0.2	-	-	-	-	-	-	-	-	<0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	o-xylene	mg/kg	0.1	-	-	-	-	-	-	-	-	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	Toluene Total Xylenes	mg/kg mg/kg	0.1	14,000	480 110	NL 310	630 330		105 45	-		<0.1 <0.3	< 0.1 < 0.3	< 0.1 < 0.3	< 0.1 < 0.3	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1 < 0.3	< 0.1 < 0.3	< 0.1 < 0.3	< 0.1	< 0.1 < 0.3
	4.4 - DDD	mg/kg	0.05	-	-		-		-	-	-	< 0.05	< 0.05		< 0.05	< 0.05	< 0.05		< 0.05	< 0.05	-	< 0.05	< 0.05	
	4.4 - DDE	mg/kg	0.05							-		< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	4.4 - DDT	mg/kg	0.05	-	-	-	-	-	-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	a - BHC	mg/kg	0.05	-		-	-	-	-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	Aldrin Aldrin + Dieldrin (total)	mg/kg mg/kg	0.05	-				-	-	-	- 6	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-
	b - BHC	mg/kg	0.05	-	-	-	-		-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	Chlordanes (total)	mg/kg	0.05	-	-	-	-		-	-	50	< 0.1	< 0.1	-	< 0.1	< 0.1	< 0.1	-	< 0.1	< 0.1	-	< 0.1	< 0.1	-
	d - BHC	mg/kg	0.05	-	-	-	-		-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	DDT + DDE + DDD (total)	mg/kg	0.05	-	-	-	-		-	-	240	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	Dieldrin Endosulfan 1	mg/kg mg/kg	0.05	-				-	-	-	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-
	Endosulfan 2	mg/kg	0.05	-	-	-	-		-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
OCP	Endosulfan sulphate	mg/kg	0.05	-	-	-	-	-	-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	Endrin	mg/kg	0.05	-	-	-	-	-	-	-	10	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	Endrin Aldehyde	mg/kg	0.05	-	-	-	-		-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	Endrin Ketone	mg/kg	0.05	-		-	-	•	-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	g-BHC (Lindane) Heptachlor	mg/kg mg/kg	0.05	-				-	-	-	- 6	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-
	Heptachlor epoxide	mg/kg	0.05	-	-	-	-		-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	Hexachlorobenzene	mg/kg	0.05	-	-	-	-		-	-	10	< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-
	Methoxychlor	mg/kg	0.05	-					_		300	< 0.2	< 0.2	-	< 0.2	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-

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270

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< 0.5 < 0.5

ND

Highlighted concentration exceeds the adopted site criteria - Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)

Highlighted concentration exceeds the adopted site criteria - Management Limits for TPH Fractions F1 - F4 in soil (mg/kg) - NEPC 2013

Highlighted concentration exceeds the adopted site criteria - ESLs for TPH Fractions F1 - F4, BTEX and Benzo(a)pyrene - NEPC 2013 Highlighted concentration exceeds the adopted site criteria - Health Investigation Levels for Soil Contaminants - NEPC 2013

mg/kg 0.05 mg/kg 1.0

mg/kg 0.1 mg/kg 0.1 mg/kg 0.05

mg/kg 0.05
mg/kg 0.1

%w/w 0.001

No published criteria or sample not analysed

Vic EPA IWRG 621 OCP 9total)

Aroclor-1016

roclor-1221

Aroclor-1242

Aroclor-1248

Aroclor-1254

Aroclor-1260

Total PCB*

PCB

Vic EPA IWRG 621 Other OCP (total)

Not Limiting

Non-Detect

Asbestos Asbestos in Soil

Table 1
North Bankstown Public School, 322 Hume Highway, Bankstown NSW 2200
Soil Results & Adopted Site Criteria
9150-ER-1-1 Rev1

	North Bankstown Public School, 322 Hume Highway, Bankstown NSW 2200											Reference	\$19-No06627	S19-No06628	\$19-No06629	S19-No06630	S19-No06631	S19-No06632	S19-No06633	S19-No06634	S19-No06635	S19-No06636	\$19-No06637	S19-No06638	S19-No06639	
The column	Soil Results & Adopted Site Criteria									l						-										
Part	9150-ER-1-1 Rev1									Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Part					Direct Contact (mg/kg)				for TPH Fractions F1 - F4 in soil (mg/Kg) -	Metals TPH Fractions F1 - F4, BTEX and Benzo(a)pyrene -	2017	Levels for Soil Contaminants - NEPO	:													
March Marc	Group	Analyte	Units	PQL		HSL A & HSL	SLB - Low -					ı														
Marie Mari						High density	/ Residential	Concentration	and Public Open Space	Open Space	Space		Data Set Minimum													
March 196 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						0 m to <1 m	1 m to <2 m		Fine Soil Texture	Fine Soil Texture																
Mary Color					-	-	-	-	-	100	-				_											
*** **********************************					-	-	-	-	-	-	-															
Second Column Col	*****				-	-	-	-	-		-															
March Marc	ivietais		mg/kg	_	-	-	-		-	1100	-															
March Section Sectio					-	-	-	-		200	-															
## Color Col			mg/kg		-	-	-	-	-	310	-	7,400			_											
Part					-		-	-	-	-	-	-														
Part					-	-	-	-		-	-	-														
## PATENTIAL STATE OF THE PATENTIAL STATE OF					-	-	-	-	-	-	-	-	<0.5				< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	
## Manual Control of C						-	-	-		Refer to CRC CARE ESL	20	-														
THE PARTY NAME OF THE PARTY NA					-	-	-	-		-	-													<u> </u>		_
## PRINT		Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" th=""><th>TEQ (mg/kg)</th><td>0.5</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td></td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td><td>1.2</td></lor=lor>	TEQ (mg/kg)	0.5	-	-	-	-	-	-	-		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
## Activation Fig. 64 10 10 10 10 10 10 10 1					-	-	-	-			-													 		
Part	PAH				-		-	-																		
Fig. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		Chrysene	mg/kg	0.5	-	-	-	-	-	-	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
## Company Com						-	-	-		-	-	-												1		
March						-	-	-		-		-														
Ference 190 10 10 10 10 10 10 1		Indeno(1,2,3-cd)pyrene			-	-	-	-		-	-	-												 		
THE					1,400	5	NL	10		170		-														
THE PART OF THE PA					-	-	-	-			-															
MICHAEL 1964 196 197 19 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					-	-	-	-		-	-	300														
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M PACCIONNE SALE AND STATE OF THE PACCIONNE SALE AND STATE OF							-			-																
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March Marc					-	-	-			-		-		1										1		
March Marc	TRH										-	- :														
March 1940 1940 1940 1940 1940 1940 1940 1940	l IIII				-	- 280	-	-		- 120	-	-		1												
March Marc			mg/kg		-	-	-	-	-	-	-	-														
Property 15					-	-	-	-			-													 		
March Marc						-	-	-			-			-												
Profession Pro		TRH C6-C10 minus BTEX (F1)		20	-	50	90	850	-	-	-	-														
Profession Pro											-	-														
March Control Contro					-	-	-	-		- 125		-														
Market	BIEX	o-xylene	mg/kg		-	-	-	-	-	-	-	-														
Mar. Charles Mar.									-		-	-														
Fig. Control		·			-	-	-	-	-	-		-				-				-		-				
Fig. 1. Fig. 1				0.05							-		< 0.05	< 0.05		-				-		-		-		
Fig.					-	-	-	-		-	-					-						-		 		
Man- Control (Incl.) Many May						-	-	-		-						-						-				
Part Control Final Control Final Control C			mg/kg			-	-	-		-	-				< 0.05	-	< 0.05	< 0.05	< 0.05		< 0.05		< 0.05		< 0.05	< 0.05
First Company Graph Company					-		-	-						l		-						-		 		
Part Formation Part Pa					-	-	-	-		-	-					-				-				 		
Marchan			mg/kg			-	-	-		-	-			< 0.05	< 0.05	-	< 0.05	< 0.05	< 0.05	-	< 0.05	-	< 0.05	<u> </u>	< 0.05	< 0.05
Enclosure Fine Fi							-							 		-								1		
Endownflare Marphile	ocn				-	-	-	-		-	-					-								<u> </u>		
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Entinistations may/le 0.05							-	-		-	-					-						 		 		
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Head-information marging 0.05					-		-			-		6				-				-		-		I		
Todaphene mg/kg 1.0						-	-	-		-	-	10				-								1		
Vic EPA NUMG 621 OP Potabal mg/kg 0.1						-	-	-		-	-					-				-		-		-		
Vic EPA INVRG 621 Other OCP (total)							-	-								-										
Alpha + Beta Endosulfan mg/kg 0.05 mg/kg 0.1						- 1	-	-		-	-			1		-						 		 		
Action-1221 mg/kg 0.1 <					-	-	-		-	-	-					-	-	-		-		-				
PCB Arcdor-1232 mg/kg 0.1 <							-	-								-						-				
Arcdor 1242					-	-	-	-		-	-			1		_						-		 		
Arodor-1286 mg/kg 0.1	РСВ	Aroclor-1242	mg/kg		-	-	-	-		-	-	_		< 0.5	< 0.5	-	< 0.5	< 0.5	< 0.5	-	< 0.5	-	< 0.5	-	< 0.5	< 0.5
Arodor 1260 mg/kg 0.1 · · · · · · · · · · · · · · · · · · ·																-						-		-		
Total PCB*						- 1	-	-		-	-	-				-						-				
Asbestos Asbestos Asbestos in Soil %w/w 0.001 - - - - Detected - ND ND <th></th> <th></th> <th>mg/kg</th> <th></th> <th></th> <th>-</th> <th>-</th> <th></th> <th>-</th> <th>-</th> <th>-</th> <th></th> <th></th> <th>< 0.5</th> <th>< 0.5</th> <th></th> <th>< 0.5</th> <th>< 0.5</th> <th></th> <th></th> <th>< 0.5</th> <th></th> <th>< 0.5</th> <th></th> <th>< 0.5</th> <th>< 0.5</th>			mg/kg			-	-		-	-	-			< 0.5	< 0.5		< 0.5	< 0.5			< 0.5		< 0.5		< 0.5	< 0.5
	Asbestos	Asbestos in Soil	%w/w	0.001	-	-	•		•	•		Detected	<u> </u>	ND] BD	ND ND	ND	ND	ND ND	ND	ND	ND ND	ND ND	ND	ND ND	ND ND

Sample ID BH15-0.0-0.1 BH16-0.0-0.1 BH16-0.1-0.3 BH17-0.0-0.1 BH18-0.0-0.1 BH19-0.0-0.2 BH19-0.3-0.5 TP20-0.0-0.2 TP21-0.0-0.2 TP21-0.0-0.2 TP21-0.4-0.6 TP22-0.0-0.2 TP23-0.0-0.2

Highlighted concentration exceeds the adopted site criteria - Screening Levels for Direct Contact (mg/kg) - CRC Care 2011

Highlighted concentration exceeds the adopted site criteria - Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)

Highlighted concentration exceeds the adopted site criteria - Management Limits for TPH Fractions F1 - F4 in soil (mg/kg) - NEPC 2013

Highlighted concentration exceeds the adopted site criteria - ESLs for TPH Fractions F1 - F4, BTEX and Benzo(a)pyrene - NEPC 2013

Highlighted concentration exceeds the adopted site criteria - Health Investigation Levels for Soil Contaminants - NEPC 2013

No published criteria or sample not analysed

Not Limiting Non-Detect

ble 1	
orth Bankstown Public School, 322 Hume Highway, Bankstown NSW 2200	
il Results & Adopted Site Criteria	
50-ER-1-1 Rev1	

Table 1													TP24-0.0-0.2	TP24-0.8-1.0	BH25-0.0-0.3	BH26-0.0-0.2	BH26-0.2-0.4	BH27-0.0-0.2	BH28-0.0-0.2	DUP-01	DUP-02	TP14-FCS	BH25-FCS	TRIPSPIKE1	TRIPBLANK1
North Bankstown Public School, 322 Hume Highway, Bankstown NSW 2200												Reference	S19-No06640	S19-No06641	S19-No06642	S19-No06643	S19-No06644	S19-No06645	S19-No06646	S19-No06647	S19-No06648	19-No06649	19-No06650	S19-No06651	S19-No06652
												Date Sampled	5/11/2019	5/11/2019	5/11/2019	5/11/2019	5/11/2019	5/11/2019	5/11/2019	5/11/2019	5/11/2019	5/11/2019	5/11/2019	5/11/2019	5/11/2019
9150-ER-1-1 F	Rev1	1										Sample Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Frag	Frag	Water	Water
								Management Limite	ESLs and EILs for Heavy		Health Investigation	l													
				Screening Levels for	Inhalation /	/ Vapour In	ntrusion HSLs (mg/kg)	Management Limits for TPH Fractions F1 -	Metals TPH Fractions F1 - F4,	ESL for CRC CARE	Levels for Soil	l													
				Direct Contact (mg/kg) - CRC Care 2011	0	NEPC 20	13 (CLAY)	F4 in soil (mg/Kg) -	BTEX and Benzo(a)pyrene -	2017 (Table 10.1)	Contaminants - NEPC														
								NEPC 2013	NEPC 2013		2013	l													
Group	Analyte	Units	PQL											<u> </u>	<u> </u>	<u> </u>						l .			<u> </u>
a.oup	Analyse	0			HSLA & F	HSLB - Lov	w -	Residential, Parkland	Urban Residential and Public	Urban Residential	ı	l													
						sity Residen		and Public Open Space	Open Space	and Public Open Space		Data Set Minimum													
				HSL - A Residential (Low Density)			Concentration			Space	Residential A														
							(Csat)					l													
					0 m to <1 m	m 1 m to	<2 m	Fine Soil Texture	Fine Soil Texture	Canadian SQGE (95%)		l													
	Arsenic. As	mg/kg	2	-	-	+ -	-	-	100	-	100	3	13	10	8.5	12	23	4.9	5.6	6.9	8.8	-	-	-	-
	Cadmium, Cd	mg/kg	0.4	-	-	-	-	-	-	-	20	<0.4	< 0.4	< 0.4	0.7	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	-	-	-	-
	Chromium, Cr	mg/kg	5.0	-	-	-	-	-	630	-	100	8	18	20	15	18	23	8.7	14	22	15	-	-	-	-
Metals	Copper, Cu Lead, Pb	mg/kg mg/kg	5.0		-	+ :	-	-	130 1100	-	6,000 300	13 11	15 28	21 20	24 81	19 83	20 14	31 68	21 57	24 41	13 34	-	-	-	-
	Mercury (inorganic)	mg/kg	0.10	-	-	-	-	-	-	-	40	<0.1	< 0.1	< 0.1	0.4	0.1	< 0.1	0.1	0.2	< 0.1	< 0.1	-	-	-	-
	Nickel, Ni	mg/kg	5.0	-	-	+	-	-	200	-	400	<5	10	7.2	13	12	5.9	6.4	5.5	8.4	7.2	-	-	-	-
-	Zinc, Zn Acenaphthene	mg/kg mg/kg	5.0 0.5	-	- :	+ :	-	-	310	- :	7,400	23 <0.5	47 < 0.5	36 < 0.5	200 < 0.5	85 < 0.5	23 < 0.5	110 < 0.5	160 < 0.5	55	41				-
	Acenaphthylene	mg/kg	0.5	-	-	-	-			-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Anthracene	mg/kg	0.5	-	-	-	-	-		-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Benzo(a)anthracene	mg/kg	0.5	-	-	-		-	-	-	-	<0.5	< 0.5	< 0.5	0.7	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Benzo(a)pyrene Carcinogenic PAHs, BaP TEQ <lor=0< th=""><th>mg/kg</th><th>0.5</th><th>-</th><th></th><th></th><th></th><th></th><th>Refer to CRC CARE ESL</th><th>20</th><th>3</th><th><0.5</th><th>< 0.5</th><th>< 0.5</th><th>0.9</th><th>< 0.5</th><th>< 0.5</th><th>0.6</th><th>< 0.5</th><th>-</th><th>-</th><th>-</th><th>-</th><th>-</th><th></th></lor=0<>	mg/kg	0.5	-					Refer to CRC CARE ESL	20	3	<0.5	< 0.5	< 0.5	0.9	< 0.5	< 0.5	0.6	< 0.5	-	-	-	-	-	
	Carcinogenic PAHs, BaP TEQ <lor=u <lor="LOR</th" bap="" carcinogenic="" pahs,="" teq=""><th>TEQ (mg/kg) TEQ (mg/kg)</th><th>0.5</th><th></th><th></th><th></th><th></th><th>-</th><th></th><th></th><th></th><th><0.5 0.6</th><th>< 0.5 0.6</th><th>< 0.5 0.6</th><th>1.1</th><th>< 0.5 0.6</th><th>< 0.5 0.6</th><th>0.7</th><th>< 0.5 0.6</th><th>-</th><th>-</th><th>-</th><th></th><th></th><th>-</th></lor=u>	TEQ (mg/kg) TEQ (mg/kg)	0.5					-				<0.5 0.6	< 0.5 0.6	< 0.5 0.6	1.1	< 0.5 0.6	< 0.5 0.6	0.7	< 0.5 0.6	-	-	-			-
	Carcinogenic PAHs, BaP TEQ <lor=lor 2<="" th=""><th>TEQ (mg/kg)</th><th></th><th>-</th><th>-</th><th>-</th><th>-</th><th>-</th><th>-</th><th>-</th><th>-</th><th>1.2</th><th>1.2</th><th>1.2</th><th>1.7</th><th>1.2</th><th>1.2</th><th>1.3</th><th>1.2</th><th>-</th><th>-</th><th>-</th><th>-</th><th>-</th><th>-</th></lor=lor>	TEQ (mg/kg)		-	-	-	-	-	-	-	-	1.2	1.2	1.2	1.7	1.2	1.2	1.3	1.2	-	-	-	-	-	-
	Benzo(b&j)fluoranthene	mg/kg	0.5	-	-	-	-	-	-	-	-	<0.5	< 0.5	< 0.5	0.9	< 0.5	< 0.5	0.7	< 0.5	-	-	-	-	-	-
PAH	Benzo(ghi)perylene	mg/kg	0.5	-	-	-	-	-		-	-	<0.5	< 0.5	< 0.5	0.7	< 0.5	< 0.5	0.7	< 0.5	-	-	-	-	-	-
	Benzo(k)fluoranthene Chrysene	mg/kg mg/kg	0.5					-				<0.5 <0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 0.7	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	-	-	-			-
	Dibenzo(ah)anthracene	mg/kg	0.5	-			-	-		-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Fluoranthene	mg/kg	0.5	-	-	-	-	-		-	-	<0.5	< 0.5	< 0.5	1.4	< 0.5	< 0.5	0.6	< 0.5	-	-	-	-	-	-
	Fluorene	mg/kg	0.5	-	-	-	-		-	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	1,400	- 5	- NL	- L 10	-	- 170	-	-	<0.5 <0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5	0.5	< 0.5	-	-	-	-	-	-
	Naphthalene Phenanthrene	mg/kg mg/kg	0.5	-	-	INL	- 10	-	-	- :	-	<0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 0.6	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	-	-	-	-	-	-
	Pyrene	mg/kg	0.5	-	-	-	-		-	-	-	<0.5	< 0.5	< 0.5	1.4	< 0.5	< 0.5	0.7	< 0.5	-	-	-	-	-	-
	Total PAH	mg/kg	0.5	-	-	-	-			-	300	<0.5	< 0.5	< 0.5	7.9	< 0.5	< 0.5	3.8	< 0.5	-	-	-	-	-	-
	TRH C10-C36 Total	mg/kg	50	-	-	-	-	-	-	-	-	<50	80	< 50	383	634	< 50	432	910	-	-	-	-	-	-
II.	TRH C10-C14	mg/kg	20	-	-	+ -	-	-	-	-	-	<20	< 20	< 20	43	54	< 20	32	110	-	-	-	-	-	-
	TRH C15-C28 TRH C29-C36	mg/kg mg/kg	50 50			+ -				- :	-	<50 <50	< 50 80	< 50 < 50	170 170	310 270	< 50 < 50	180 220	370 430	-	-	-	-	-	-
	TRH C6-C9	mg/kg	20	-	-	-	-	-	-	-	-	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	-	-	-	-	-	-
	Naphthalene	mg/kg	0.5	1,400	5	NL	L 10	-	170	-	-	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	-	-	-	-	-	-
TRH	TRH >C10-C16 (F2)	mg/kg	50	3,300	280	NL	L 560	1,000	120	-	-	<50	< 50	< 50	< 50	110	< 50	< 50	130	-	-	-	-	-	-
	TRH >C10-C16 (F2) - Naphthalene TRH C10-C40 Total (F bands)	mg/kg mg/kg	50 100	-	-	+ -	-	-	-	-	-	<50 <100	< 50 100	< 50 < 100	< 50 390	110 730	< 50 < 100	< 50 500	130 1070	-	-	-	-	-	-
	TRH >C16-C34 (F3)	mg/kg	100	4,500	-	+ -	-	3,500	1,300	-	-	<100	100	< 100	270	460	< 100	330	640	-	-	-	-	-	-
	TRH >C34-C40 (F4)	mg/kg	100	6,300	-	-	-	10,000	5,600	-	-	<100	< 100	< 100	120	160	< 100	170	300	-	-	-	-		-
	TRH C6-C10	mg/kg	20	4,400	-	-	-	800	180	-	-	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	-	-	-	-	-	-
	TRH C6-C10 minus BTEX (F1)	mg/kg	20	-	50	90		-	-	-	-	<20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	-	-	-	-	-	0.004
	Ethylbenzene Ethylbenzene	mg/kg mg/kg	0.1	100 4,500	0.7 NL	NL	430 L 68	-	65 125		-	<0.1 <0.1	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	< 0.1 < 0.1	-	-	-	-	97 97	< 0.001 < 0.001
	m/p-xylene	mg/kg	0.2	-	-	-	-		-	-	-	<0.2	< 0.2	< 0.2	0.5	< 0.2	< 0.2	< 0.2	< 0.2	-	-	-	-	130	< 0.002
BTEX	o-xylene	mg/kg	0.1	-	-	-	-	-	-	-	-	<0.1	< 0.1	< 0.1	0.3	< 0.1	< 0.1	< 0.1	< 0.1	-	-	-	-	97	< 0.001
	Toluene	mg/kg	0.1	14,000	480	NL		-	105	-	-	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-	-	-	-	97	< 0.001
	Total Xylenes 4.4 - DDD	mg/kg mg/kg	0.3	12,000	110	310	0 330	-	45		-	<0.3 < 0.05	< 0.3 < 0.05	< 0.3	0.8 < 0.05	< 0.3 < 0.05	< 0.3	< 0.3 < 0.05	< 0.3 < 0.05	-	-	-	-	95	< 0.003
	4.4 - DDE	mg/kg	0.05		 	+ -				-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-		-
	4.4 - DDT	mg/kg	0.05	-	-	-	-	-		-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	,	-	-		-
	a - BHC	mg/kg	0.05	-	-	-	-	-	-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
	Aldrin	mg/kg	0.05	-	-	-	-	-	-	-	- 6	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
	Aldrin + Dieldrin (total) b - BHC	mg/kg mg/kg	0.05					-			-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	-	-		-	-
	Chlordanes (total)	mg/kg	0.05	-	-	-	-		-	-	50	< 0.1	< 0.1	-	< 0.1	< 0.1	-	< 0.1	< 0.1	-	-	-	-	-	-
II.	d - BHC	mg/kg	0.05	-	-	-	-	-		-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
	DDT + DDE + DDD (total)	mg/kg	0.05	-	-		-	-	-	-	240	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
	Dieldrin Endosulfan 1	mg/kg mg/kg	0.05	-				-			-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	-	-			-
000	Endosulfan 2	mg/kg	0.05	-	-	-	-	-	-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
ОСР	Endosulfan sulphate	mg/kg	0.05	-	-	-	-	-	-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
	Endrin	mg/kg	0.05	-	-	-	-	-	-	-	10	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-		-	-
	Endrin Aldehyde Endrin Ketone	mg/kg mg/kg	0.05	-	-	+ -	-	-	-	-	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05 < 0.05	-	< 0.05 < 0.05	< 0.05	-	-	-		-	-
	g-BHC (Lindane)	mg/kg	0.05	-	-	-	-	-		-		< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05 < 0.05	-	-		-	-	-
	Heptachlor	mg/kg	0.05	-	-	-	-	-	-	-	6	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
	Heptachlor epoxide	mg/kg	0.05	-	-	-	-	-	-	-	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
	Hexachlorobenzene Methovychlor	mg/kg	0.05	-	-	-		-			10	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
	Methoxychlor Toxaphene	mg/kg mg/kg	1.0	-							300	< 0.2	< 0.2	-	< 0.2 < 1	< 0.2 < 1	-	< 0.2 < 1	< 0.2 < 1	-	-	-	-	-	-
	Vic EPA IWRG 621 OCP 9total)	mg/kg	0.1	-	-		-	-		-	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	-	-	-		-
II	Vic EPA IWRG 621 Other OCP (total)	mg/kg	0.1	-	-	-	-	-		-	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	< 0.2	< 0.2	-	-	-	-	-	-
	Alpha + Beta Endosulfan	mg/kg	0.05	-	-	-	-	-	-	-	270	< 0.05	< 0.05	-	< 0.05	< 0.05	-	< 0.05	< 0.05	-	-	-	-	-	-
	Aroclor-1016	mg/kg	0.1	-	-	-		-		-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	-	-	-	-	-
	Aroclor-1221 Aroclor-1232	mg/kg mg/kg	0.1	-				-			-	< 0.1 < 0.5	< 0.1 < 0.5	-	< 0.1 < 0.5	< 0.1 < 0.5	-	< 0.1 < 0.5	< 0.1 < 0.5	-	-	-		-	-
DCF	Aroclor-1242	mg/kg	0.1	-	-	-	-	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	-	-	-	-	-
PCB	Aroclor-1248	mg/kg	0.1	-	-	-	-	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	-	-	-	-	-
	Aroclor-1254	mg/kg	0.1	-	-	-	-	-	-	-	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	< 0.5	< 0.5	-	-	-	-	-	-
	Aroclor-1260 Total PCB*	mg/kg mg/kg	0.1	-		-	-	-			1	< 0.5 < 0.5	< 0.5 < 0.5	-	< 0.5 < 0.5	< 0.5 < 0.5	-	< 0.5 < 0.5	< 0.5 < 0.5	-	-	-	-	-	-
Asbestos	Asbestos in Soil	mg/kg %w/w	0.001	-				-			Detected	- < 0.5	VD ND	ND ND	< U.S ND	ND ND	ND	< 0.5 ND	VD.S	-	-	Detected	- ND	-	-
<u> </u>											_														

Highlighted concentration exceeds the adopted site criteria - Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)
Highlighted concentration exceeds the adopted site criteria - Inhalation / Vapour Intrusion HSLs (mg/kg) - NEPC 2013 (CLAY)
Highlighted concentration exceeds the adopted site criteria - Management Limits for TPH Fractions F1 - F4 in soil (mg/kg) - NEPC 2013
Highlighted concentration exceeds the adopted site criteria - ESLs for TPH Fractions F1 - F4, BTEX and Benzo(a)pyrene - NEPC 2013
Highlighted concentration exceeds the adopted site criteria - Health Investigation Levels for Soil Contaminants - NEPC 2013

No published criteria or sample not analysed

Not Limiting Non-Detect

Table LAR2 North Bankstov	wn Public School, 322 Hume Highway, Bankstown, 2200, NSW.			TP01-0.0-0.1 S19-No06605	DUP-01 S19-No06647		TP01-0.0-0.1 S19-No06605	DUP-1A ES1936614-001		TP06-0.0-0.2 S19-No06613	DUP-02 S19-No06648		TP06-0.0-0.2 S19-No06613	DUP-2A ES1936614-002	
RPD Table	 ,,,	Date Sampled		5/11/2019		5/11/2019	5/11/2019		5/11/2019	5/11/2019		5/11/2019	5/11/2019		
9150-ER-1-1 Re	v 1		Matrix	Soil	Soil		Soil	Soil		Soil	Soil		Soil	Soil	
Group	Analyte	Units	LOR			RPD (%)			RPD (%)			RPD (%)			RPD (%)
	Arsenic	mg/kg	2	13	6.9	61	13	6	74	9.4	8.8	7	9.4	9	4
	Cadmium	mg/kg	0.4	< 0.4	< 0.4	#VALUE!	< 0.4	<1	#VALUE!	< 0.4	< 0.4	#VALUE!	< 0.4	<1	#VALUE!
	Chromium	mg/kg	5.0	33	22	40	33	18.0	59	16	15	6	16	16	0
Metals	Copper	mg/kg	5.0	33	24	32	33	27	20	17	13	27	17	11	43
ivictals	Lead	mg/kg	5	59	41	36	59	54	9	54	34	45	54	39	32
	Mercury	mg/kg	0.1	< 0.1	< 0.1	#VALUE!	< 0.1	<0.1	#VALUE!	< 0.1	< 0.1	#VALUE!	< 0.1	<0.1	#VALUE!
	Nickel	mg/kg	5	10	8.4	17	10	8.0	22	8.3	7.2	14	8.3	5	50
	Zinc	mg/kg	5	73	55	28	73	59	21	63	41	42	63	35	57

RPD exceeding criteria

VALUE Primary, Duplicate or Triplicate less than LOR and/or not analysed

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	APPENDIX A
	SITE PHOTOGRAPHS
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Image 1 View of Test Pit Excavation at TP04



Image 2 Example of fill into natural profile at sampling points BH09

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Image 3 Suspected ACM Fragment collected from within AEC03 at sampling point BH25



Image 4 Depiction of the mounding within AEC02 and establishment of sampling point TP14

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	APPENDIX B
	BOREHOLE LOGS
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Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Bearing: ---Contractor: Alliance Geotechnical Checked: Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL FILL: Silty CLAY, brown, moist, soft. No ACM, staining or hydrocarbon odours present. BH07 - 0.0-0.2 CLAY, bright orange with grey mottling, moist, stiff. М BH07 - 0.2-0.4 0.5 Borehole BH07 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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Borehole Log

BOREHOLE 9150-ER-1-1-FINAL. GPJ GINT STD AUSTRALIA, GDT 29/11/19

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL FILL: Silty CLAY, brown, moist, soft. No ACM, staining or hydrocarbon odours present. BH08 - 0.0-0.2 Borehole BH08 terminated at 0.2m 0.5 1.0 1<u>.5</u>

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Sheet: 1 of 1 Job No:9150

BH No: BH09

Borehole Log

Client: JDH Architects

Project: Supplementary Contamination Assesment

Location: North Bankstown Public School

Hole Location: North Bankstown Public School

Started: 5/11/19

Finished: 5/11/19

Borehole Size mm

Location: North Bankstown Public School Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL: Silty CLAY, light brown, dry, soft. Trace gravels. No ACM, staining or hydrocarbon odours present. BH09 - 0.1-0.3 CLAY, orange/grey with red mottling, moist, very stiff. М BH09 - 0.3-0.5 0.5 Borehole BH09 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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Sheet: 1 of 1 Job No:9150

BH No: BH10

Borehole Log

1<u>.5</u>

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm

Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Bearing: ---Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL: Silty CLAY, light brown, dry, soft, Trace gravels. No ACM, staining or hydrocarbon odours present. BH10 - 0.0-0.2 CLAY, orange/grey with red mottling, moist, very stiff. М BH10 - 0.2-0.4 0.5 Borehole BH10 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19

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BH No: BH11 Sheet: 1 of 1 Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL FILL: Silty CLAY, brown, dry, firm. No ACM, staining or hydrocarbon odours present. BH11 - 0.0-0.1 CLAY, orangegrey moist, stiff. BH11 - 0.1-0.3 0.5 1.0 Borehole BH11 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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Sheet: 1 of 1 Job No:9150

BH No: BH15

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Hole Location: North Bankstown Public School Borehole Size mm

Location: North Bankstown Public School Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Bearing: ---Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL FILL: Silty CLAY, brown, dry, soft. Concrete gravels. No ACM, staining or hydrocarbon odours present. BH15 - 0.0-0.1 CLAY, orange/grey, moist, firm. BH15 - 0.1-0.3 0.5 1.0 Borehole BH15 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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BH No: BH16 Sheet: 1 of 1 Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Bearing: ---Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL FILL: Silty CLAY, brown, dry, soft. Concrete gravels. No ACM, staining or hydrocarbon odours present. BH16 - 0.0-0.1 CLAY, grey/orange, moist, very stiff. BH16 - 0.1-0.3 0.5 1.0 Borehole BH16 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

Sheet: 1 of 1 W: www.allgeo.com.au Job No:9150

BH No: BH17

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Hole Location: North Bankstown Public School Borehole Size mm

Location: North Bankstown Public School Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Bearing: ---Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL FILL: Silty CLAY, brown, dry, soft. Concrete gravels. No ACM, staining or ¥ hydrocarbon odours present. BH17 - 0.0-0.1 CLAY, grey/orange, moist, firm. BH17 - 0.1-0.3 0.5 1.0 Borehole BH17 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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BH No: BH18

Sheet: 1 of 1

Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Bearing: ---Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL FILL: Silty CLAY, brown, dry, very loose, soft. Concrete gravels. No ACM, staining or hydrocarbon odours present. BH18 - 0.0-0.1 CLAY, grey/brown with orange mottling, moist, firm. BH18 - 0.1-0.3 0.5 1.0 Borehole BH18 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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Sheet: 1 of 1
Job No:9150

Borehole Log

		JDH :: Sur	ted: 5/11/19 shed: 5/11/19										
Project:Supplementary Contamination AssessmentFinished:5/11/19Location:North Bankstown Public SchoolHole Location:North Bankstown Public SchoolBorehole Size													
Riç	ј Тур	oe:				Hole Coordinates , m	Dril	ller:			Logged: AW		
RL	Sur	face:	m			Contractor: Alliance Geotechnical	Bea	aring:	1		Checked:		
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description		Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations		
VH VH			- 0. <u>5</u> - -		CL	FILL: Silty CLAY, brown, dry, very loose, soft. Concrete gravels. CLAY, grey/orange, moist, firm.		BH19 - 0.0-0.2	M		No ACM, staining or hydrocarbon odours present.		
<u> </u>				/////		Borehole BH19 terminated at 1.1m							
BONERIOLE 9190-EN-1-1-11VAL.GF3 GINI 31D AGS INALIA.GD1 29/11/19			1 <u>.5</u>										

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BH No: BH20 Sheet: 1 of 1 Job No:9150

Borehole Log

ı		JDH Sup::			Contan	nination Assesment			ırted: iished			
	-			-		blic School Hole Location: North Bankstown Public	Sch				e mm	
ı	ј Тур					Hole Coordinates , m		ller:			Logged: AW	
RL	Sur	face:	m			Contractor: Alliance Geotechnical	Bea	aring:			Checked:	
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description		Samples Tests Remarks	Moisture	Consistency/ Density Index	Additional Observations	
HA			- - 0. <u>5</u>		FILL	FILL: Silty CLAY, dark brown, dry, very loose, soft. Concrete gravels. CLAY, grey/orange, moist, firm.		BH20 - 0.0-0 BH20 - 0.3-0	M		No ACM, staining or hydrocarbon odours present.	
			- - - 1 <u>.0</u>									
			- 1 <u>.5</u>			Borehole BH20 terminated at 1.1m						

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BH No: BH21 Sheet: 1 of 1 Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Bearing: ---Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL: Silty CLAY, dark brown, dry, very loose, soft. Concrete gravels. No ACM, staining or hydrocarbon odours present. BH21 - 0.0-0.2 CLAY, grey/orange, moist, firm. М BH21 - 0.3-0.5 0.5 1.0 Borehole BH21 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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BH No: BH25 Sheet: 1 of 1 Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) Η FILL: Silty CLAY, dark brown, dry, loose, soft. Concrete gravels. No ACM, staining or hydrocarbon odours present. BH25 - 0.1-0.3 CLAY, grey/orange with red mottling, moist, firm. М BH25 - 0.3-0.5 0.5 1.0 Borehole BH25 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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Borehole Log

	Client: JDH Architects Started: 5/11/19 Project: Supplementary Contamination Assesment Finished: 5/11/19													
	Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm													
Rig	ј Туј	oe:				Hole Coordinates , m	Dr	iller:			Logged: AW			
RL	Sur	face:	m			Contractor: Alliance Geotechnical	Ве	aring:			Checked:			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description		Samples Tests Remarks	Moisture Condition	Consistency/ Density Index				
H			_		FILL	FILL: Silty CLAY, brown, dry, soft. CLAY, orange/brown with red mottling, moist, stiff.		BH26 - 0.0-0.2	D		No ACM, staining or hydrocarbon odours present.			
			- 0. <u>5</u>					BH26 - 0.2-0.4						
BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19			- 1 <u>.5</u>			Borehole BH26 terminated at 1.1m								

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Borehole Log

Client: JDH Architects Started: 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Hole Coordinates , m Driller: Logged: AW RL Surface: m Bearing: ---Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL FILL: Silty CLAY, brown, dry, soft, trace gravels. No ACM, staining or TP01 - 0.0-0.1 (DUP01/DUP1A) hydrocarbon odours present. CLAY, red with grey mottling, dry, very stiff. TP01 - 0.1-0.3 0.5 Borehole TP01 terminated at 0.5m 1.0 BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

E: office@allgeo.com.au W: www.allgeo.com.au BH No: TP02 Sheet: 1 of 1 Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m Bearing: ---RL Surface: m Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL FILL: Silty CLAY, brown, dry, soft, trace gravels. No ACM, staining or hydrocarbon odours present. TP02 - 0.0-0.2 CLAY, red with grey mottling, dry, very stiff. D TP02 - 0.2-0.4 Borehole TP02 terminated at 0.6m 1.0 BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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Borehole Log

Client: JDH Architects

Project: Supplementary Contamination Assesment

Location: North Bankstown Public School

Project: Supplementary Contamination Assesment

Hole Location: North Bankstown Public School

Borehole Size mm

Priller: Logged: AW

Rig Type: Hole Coordinates , m Driller: Logged: AW RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL FILL: Silty CLAY, brown, dry, soft, trace gravels. No ACM, staining or hydrocarbon odours present. TP03 - 0.0-0.15 CLAY, red with grey mottling, dry, very stiff. D TP03 - 0.15-0.3 0.5 Borehole TP03 terminated at 0.5m 1.0 BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

E: office@allgeo.com.au W: www.allgeo.com.au BH No: TP04 Sheet: 1 of 1 Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Hole Coordinates , m Driller: Logged: AW RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL FILL: Silty CLAY, brown, dry, soft, trace gravels. No ACM, staining or hydrocarbon odours present. TP04 - 0.0-0.2 CLAY, red with grey mottling, dry, very stiff. TP04 - 0.2-0.4 0.5 Borehole TP04 terminated at 0.5m 1.0 BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

W: www.allgeo.com.au

BH No: TP05 Sheet: 1 of 1 Job No:9150

Borehole Log

	Client: JDH Architects Started: 5/11/19 Project: Supplementary Contamination Assesment Finished: 5/11/19													
	Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm													
Ri	g Ty _l	pe:				Hole Coordinates , m	Dri	ller:			Logged: AW			
RI	Sur	face:	m			Contractor: Alliance Geotechnical	Bea	aring:			Checked:			
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description		Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations			
BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 El Method		RL (m)	Depth (m)		Classifin Classifin Symbol	FILL: Silty CLAY, dark brown, dry, soft. Glass, brick, tile. CLAY, red with grey mottling, dry, very stiff. Borehole TP05 terminated at 0.9m		TP05 - 0.0-0.2	D D D D C CONC		No ACM, staining or hydrocarbon odours present.			
BOREHOLE 9150-ER-1-1-FINAL.G			-											

W: www.allgeo.com.au

BH No: TP06 Sheet: 1 of 1 Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Hole Coordinates , m Driller: Logged: AW Bearing: ---RL Surface: m Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL: Silty CLAY, light brown, dry, soft. Gravels. No ACM, staining or hydrocarbon odours present. TP06 - 0.0-0.2 (DUP02/DUP2A) CLAY, red/grey, moist, firm. М 0.5 TP06 - 0.4-0.6 Borehole TP06 terminated at 0.8m 1.0 BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

E: office@allgeo.com.au W: www.allgeo.com.au BH No: TP12 Sheet: 1 of 1 Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Hole Coordinates , m Driller: Logged: AW RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL FILL: Silty CLAY, brown, dry, soft, trace gravels. No ACM, staining or hydrocarbon odours present. TP12 - 0.0-0.1 CLAY, red with grey mottling, dry, very stiff. TP12 - 0.1-0.3 0.5 Borehole TP12 terminated at 0.5m 1.0 BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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BH No: TP13 Sheet: 1 of 1 Job No:9150

Borehole Log

1<u>.5</u>

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Hole Coordinates , m Driller: Logged: AW RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL FILL: Silty CLAY, brown, dry, soft, trace gravels. No ACM, staining or hydrocarbon odours present. TP13 - 0.0-0.15 CLAY, red with grey mottling, dry, very stiff. D TP13 - 0.15-0.3 0.5 Borehole TP13 terminated at 0.5m 1.0 BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19

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BH No: TP14
Sheet: 1 of 1
Job No:9150

Borehole Log

Client: JDH Architects
Started: 5/11/19
Project: Supplementary Contamination Assesment
Location: North Bankstown Public School
Rig Type:
Hole Coordinates , m
Started: 5/11/19
Finished: 5/11/19
Borehole Size mm
Logged: AW

Rig	ј Тур	e:				Hole Coordinates , m	Dri	ller:			Logged: AW
RL	Sur	face:	m			Contractor: Alliance Geotechnical	Bea	aring:			Checked:
Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description		Samples Tests Remarks	Moisture Condition	Consistency/ Density Index	Additional Observations
Ш			0. <u>5</u> 1. <u>0</u>		FILL	Fill: Silty CLAY, grey/brown, dry, stiff. Concrete gravels, brick, tile.		TP14 - 0.0-0.2	D		ACM noted within FILL layer.
			1 <u>.5</u>		CL	CLAY, red with grey mottling, dry, very stiff.		TP14 - 1.3-1.5	D		No ACM, staining or hydrocarbon odours present.

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Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m Bearing: ---RL Surface: m Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL: Silty CLAY, brown, dry, soft, trace gravels. No ACM, staining or hydrocarbon odours present. TP22 - 0.0-0.2 CLAY, red with grey mottling, dry, very stiff. D TP22 - 0.3-0.5 Borehole TP22 terminated at 0.6m 1.0 BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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Sheet: 1 of

Job No:9150

BH No: TP23 Sheet: 1 of 1

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Hole Coordinates , m Driller: Logged: AW Bearing: ---RL Surface: m Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL: Silty CLAY, brown, dry, soft, trace gravels. No ACM, staining or hydrocarbon odours present. TP23 - 0.0-0.2 CLAY, red with grey mottling, dry, very stiff. D TP23 - 0.3-0.5 Borehole TP23 terminated at 0.6m 1.0 BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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E: office@allgeo.com.au W: www.allgeo.com.au BH No: TP24 Sheet: 1 of 1 Job No:9150

Borehole Log

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Hole Coordinates , m Driller: Logged: AW Bearing: ---RL Surface: m Contractor: Alliance Geotechnical Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL: Silty CLAY, brown, dry, soft. Trace gravels and aggregate gravels. No ACM, staining or hydrocarbon odours present. TP24 - 0.0-0.2 0.5 CLAY, red with grey mottling, dry, firm. D TP24 - 0.8-1.0 1.0 Borehole TP24 terminated at 1.1m BOREHOLE 9150-ER-1-1-FINAL.GPJ GINT STD AUSTRALIA.GDT 29/11/19 1<u>.5</u>

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E: office@allgeo.com.au W: www.allgeo.com.au BH No: TP27 Sheet: 1 of 1 Job No:9150

Borehole Log

BOREHOLE 9150-ER-1-1-FINAL. GPJ GINT STD AUSTRALIA, GDT 29/11/19

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL FILL: Silty CLAY, brown, moist, soft. No ACM, staining or hydrocarbon odours present. TP27 - 0.0-0.2 Borehole TP27 terminated at 0.2m 0.5 1.0 1<u>.5</u>

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BH No: TP28
Sheet: 1 of 1
Job No:9150

Borehole Log

BOREHOLE 9150-ER-1-1-FINAL. GPJ GINT STD AUSTRALIA, GDT 29/11/19

Client: JDH Architects **Started:** 5/11/19 Finished: 5/11/19 Project: Supplementary Contamination Assesment Location: North Bankstown Public School Hole Location: North Bankstown Public School Borehole Size mm Rig Type: Driller: Logged: AW Hole Coordinates , m RL Surface: m Contractor: Alliance Geotechnical Bearing: ---Checked: Classification Symbol Samples Graphic Log Additional Observations Material Description Tests Method Remarks Depth (m) FILL FILL: Silty CLAY, brown, moist, soft. No ACM, staining or hydrocarbon odours present. TP28 - 0.0-0.2 Borehole TP28 terminated at 0.2m 0.5 1.0 1<u>.5</u>

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C. Data Quality Assessment

C.1 Completeness

CJ; Áær•^••{ ^} oÁ; Áœ Á&[{] |^ c^} ^••Á; ÁæææÁ&[||^ &c^ åÁ; æ Á } å^!cæà^} ÊÁæ; åÁæ@ Á^•ˇ |o•Á; !^•^} c^ åÁş Á
Table C-1ÈÁ

Table C-1 Completeness DQI

Field Considerations	Target	Actual	Comment
Ô¦ãããBæ‡Á[8ææã[}•Áræ[] ^åÁ	ĠÁ	Ġ Á	Ú^¦-{¦{ an} & ^Ánd anā] • oÁs) å å å å æne[¦Á &[}• å ā^¦^å Ánd & ^] canà ^ÈÁ
Ô¦ããã8æ4Áæ{] ^•Á&[^&c^åÁ	ĠÁ[āÁ	IGÁ[ājÁ	Ú^¦-{¦{ aò} & ^Ánd ao∄ • oÁn, å a3&aod ¦Á &[} • aña^¦^å Ánd&&^] canà ^ÈÁ
ÙUÚ•Áæ]]¦[]¦ãææ^Áæ)åÁ &[{] ā^åÁ¸ão@Á	F€Ã Á	F€€Ã Á	Ú^¦-{¦{ an} & ^Ánd an∄ • oÁn, å a3∧ ¦Á &[} • aña^¦^å Ánd&&^] canà ^ÈÁ
Øā\åÅå[&~{^}cæēā[}Á &[{] ^¢^Á	OT[Á æ [] [ā] * Á] [ā] cÁ[* • ÉÁ &æļā⦿æā[} Á[* • Áæ) å Á& @æā] [-Á&` • d[å^ Á[¦{ • Á	OT[Á;æ[][ā]*Á][ā]oÁ Á[[*•ÉÁ&æáāilæáā]}Á[*• æ)åÁ&@æājÁ[-Á & *•[å^Á[:{•Á	Ú^¦-{¦{ an} &^Ánd an∄ •oÁng å ä&ana[¦Á •/&[}•ānā^¦^åÁna&&^]canà ^ÈÁ
Laboratory Considerations	Target	Actual	Comment
Ô¦ãã&æ¦Áæ;] ^•Áæ;榰•^åÁ æ&&[¦åāj*Á;[ÁÖÛUÁ	Ü^-^\ÂÛ^8cā[}ÂÎĚÁ	F€€Ã Á	Ú^¦-{¦{ an} & ^Ánd anāj • oÁsj å å å å æng ¦Á &[}• å ā^¦^å Ánd å & ^] canà ^ÈÁ
OF; æf c^• Áæ) æf•^å Áæ&&[¦åā]*/ ₫ ÄÖÛUÁ	ÁÜ^&Aj/\&Aj \AÎ HĂ Á	F€€Ã Á	Ú^¦-{¦{ an} & ^Ánd an∄ • oÁn, å å å & æn{¦Á &[}• å å^¦^å Ánd& & ^] canà ^ÈÁ
CE[]¦[]¦ãæec^Ápaæè[¦æe[¦^Á æ)憰aã&æ4Á(^oc@[å•Áæ)åÁšUÜ•	Ü^-^\ÂÛ^&@{}}ÂÎĚÁ ;	F€€Ã Á	Ú^¦-{¦{ an} & ^Ánd an∄ • oÁn, å å&ene{¦Á &[}• åã^¦^å Ánd&&^] canà ^ÈÁ
Ùæ[] ^&a[&~{^}cææa[}Á &[{] ^&^Å	C⊞Áræ(] ^Á^&^ā]oÁ æåçã&^•ÊÁæ /&v^¦cãã&æe^•Á;~ æ)憕ã•Á	F€€Ã Á Á	Ú^¦-{¦{ an} &^Ánd anā}• oÁn, åä&ana[¦Á &[}•āñ^¦^åÁna&&^] canàn ^ÈÁ
Ùæ{] ^Án¢dæ&aā[}Áæ}åÁ @{ åā]*Áaā[^•Ás[{] āñåÁ,ão@Á	Ü^-^¦ÁÛ/^8cā[}ÁÎÉÁ	F€Ã Á	Ú^¦-{¦{ æ} &^Áset æ ā} • oÁs, å å & æ æ [¦Á &[} • ãã^¦^å Áse& &^] cæ à ^ÉÀ

 $V@ \acute{A}a = 26 \acute{A}a = 48 \acute{A}a \acute{A$

C.2 Comparability

 CJ; Áæ
 • ^ • • { ^ } oÁ; Áæ
 Á

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Table C-2 Comparability DQI

Field Considerations	Target	Actual	Comment
Ùæ{ ^ÁÙUÚ•Á•^åĄí}Á^æ&@Á [&&æ•ã[}Á	F € Ã Á	F € Ã Á	Ú^¦-{¦{ æ} &^Ásetæ ā j• oÁsjå ã & æ e [¦Á &[}•ãã^¦^å Áse& &^] æ æ i ^ÉÁ
Ô ã(æã&A&{}}åããã;}•Á	Ùæ{] ^•Ánd; ^寧Á āj•` ææ^寧[}cæāj^!•Á ¸ão@Á\$&^ÉÆ§[{^åãææ^ ^Á ææ^!Ƨ[^&æāj}Á	F €€ Ã Á	Ú^¦-{¦{ æ}, &^Áse*æã, •oÁs, åä&æ [¦Á &[}•ãã^¦^åÁse&&^]œæì, ÞĒÁ
Ùæ{^Ás]^•Án; -Án æ{] ^•Á &[^&c^å ĒŠan); åÁ @an); å ^åÐ]¦^•^¦ç^åÁ5jÁn æ{^Á {an); }^¦Á	C目[Á[āÁæ[] ^•Áæ[^Á •ã^ĒÁæ[Á[;^áÁ§Á ā]•` ææ^áÁ&[}œæ]^¦•Á ¸ãc@Á&AÁ	F €€ Ã Á	Ú^¦-{¦{ an} & ^Ánd* anã, • oÁs, å a® ana[¦Á &[}•ãna^¦^å Ánd& & ^] canà ^ÉÁ
Laboratory Considerations	Target	Actual	Comment
Ùæ(^Áæ)æ†.cã&æ4Á,^c@(å•Á `•^åÆa`Á,¦ā[æ;^Áæa}[¦æa[¦^Á	Ü^-^\ÁÙ^&á[} Á É Á	F€€Ã Á	Ú^¦-{¦{ aa} &^Ánd* aa5]•oÁ5]å å 38aæ[¦Á &[}•ãã^¦^å Ánd&&^]cæà ^ÉÁ
Ùæ(^ÁŠUÜ•ÁsæÁj¦ā(æ)^Á æà[¦æa[¦^Á	Ü^-4\ÂÛ^&@{}}ÂİĚÁ	F€€Ã Á	Ú^¦-{¦{ aà} &^Ánd* anāj.•oÁnj.å a®ana[¦Á &[}•ãnā^¦^å Ánd&&^] canà ^EÁ
Ùæ{^Ájæàa[¦æag[¦^Án[¦Án]¦ã[æb^ <i>f</i> •æ{[] ^Ása}æf°•ãrÁ	Á CELLÁ, Lã e e ^ Á æ e] ^ • Á e Á Ò` - [-ā] • Á Á, * c Á	ı F€€Ã Á	Ú^¦-{¦{ æ}, &^Áæ* æã, •oÁs, åä&æ €¦Á &[}•ãã^¦^åÁæ&&^]œæà ^ÉÁ
Ùæ(^Áæ)æ†`@&æ†Á {^æ•`¦^{^}oÁ'}ã•A	Ü^-4¦ÁÙ^&aã;}ÁiÉÁ	F€€Ã Á	Ú^¦-{¦{ æ} &^Ásetæ ji•oÁsjå å ä&æ g¦Á &[}•ãå^¦^å Áse&&^] ææà ^ÉÁ

C.3 Representativeness

CJ; Áœ•^••{ ^} oÁ; Ás@Á^] ¦^•^} cæð;^}^••Á; ÁåæææÁ&[||^&c^åÁ; æ•Á} å^¦cæà^} ÅÁs@Á^•`|o•Á; ¦^•^} c^åÁ ∄ ÁTable C-3ÈÁ

Table C-3 Representativeness DQI

Field Considerations	Target	Actual	Comment
CE[] [] ãæe^Á; ^åãæÁ æ [] ^åÁ æ&&[åð] * Á [ÁÖÛUÁ	Ü^-^\ÁÛ^&@[} Á ÈÉÁ	F€Ã Á	Ú^¦-{¦{ æ} &^Áætæã}•oÁş å 38æqt¦Á &[}•ãã^¦^åÁæ&&^]œæà ^ÈÁ
T^åãæÁsã^}cãã^åÁsjÁÖÛUÁ •æ{] ^åÁ	Ü^^\ÁÛ^-8cā[} Á ÈFÁ	F€€Ã Á	Ú^¦-[¦{ æ} &^Áncēæ ā} • oÁā, å ā&æ ē[¦Á &[} • āā^¦^å Ánc& &^] cæà ^ÈÁ
Laboratory Considerations	Target	Actual	Comment
Ùæ(1 ^•Áæ)æ(•^åÁæ&&(¦åã)*Á (‡ÁÖÛUÁ	Ü^^\ÁÛ^-&cā[} ÂÎĚÁ	Ü^≁¦Á&[{{^}}♂Á	Ú^¦-{¦{ æ} &^Áse*æã, •oÁs, åã&æa[¦Á &[}•ãã^¦^åÁsæ&&^]œæà ^ÈÁ

 $V@/\hat{k}_{a}^{a}aeee/\hat{k}_{a}^{c}] | ^{8}c^{a}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{9}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}\hat{k}_{a}^{c}| ^{4}\hat{k}_{a}^{c}|

 $\dot{U}^*]]|^{\{\ ^\}} cad^{\hat{}} \acute{A} \hat{O}[] cad^{\hat{}} \tilde{a}] acc \tilde{a}] \lambda \tilde{O} \tilde{E} \bullet ^{\wedge} \bullet \bullet \{\ ^{\wedge}\} c \acute{A}$

HGGÁP*{ ^ÁP∄@, æêÊAÓæ)\•([;}ÊÁPÙYÁGG€€Á

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C.4 Precision

Oξ /ae•^••{ ^} σ¼ -/ac@ /μ | ^8æ a¼ } /μ -/aeæ a½ | ||^8c° å Å æ A′ } å^| cæ Α′ } å^| cæ Α΄ } å Ac@ Α΄ • ` |σ /μ |^•^} c° å Æβ ÁTable C-4

Table C-4 Precision DQI

Field Considerations	Target	Actual	Ô[{ { ^}} œ́
Øða å Áða *] ðaðaær Ádóa d ðj. ðaðaær ÁÚÚÖ	T 勇 道 `{ Á Ã Á Å 〕 aðææ^• Á æ) å Á j aðææ^• Á Þ[Á ā ã Á j aðææ^• Á Þ[Á ā ã Á j kæ) æ j caðæþ Á ¦^• ` o Á F € Á ā ^• Æ UÜÁ Í € Ã Á j Áæ) æ j caðæþ Á ^• ` o / F € Ü € Á ā ^• Æ UÜÁ H € Ã Á j Áæ) æ j caðæþ Á ^• ` o / N 3 € Á ā ^• Æ UÜ N 3 € Á ā ^• Æ UÜ	æ)åÁFGEÍÁÑÁ dāj∣a8æee∿∙Á Þā∣Á	Úæ'^} o'\bar`] 38æe' 162 aj 38æe' Á !^ æaj } • @aj • Áæb Áæ Ái [, • hÁ ÖWÚ€TEFOZÁ ÁVÚ€FËETÈETÈCÁ ÖWÚ€GE000ZÁ ÁVڀΠËETÈETÈCÁ Þ[Ár¢&'^åæj &'•Á ^!^Á^&[¦å^åÁ Ç'^~!Áj ÁTable 2)Á Ú^!-{!{ æj &^Áæë æaj • o'Aj åä&æej !Á &[}•ãa^!^åÁæ&&*] œæi ^Á
ÙUÚ•Áæ}]¦[]¦ãææ^Áæ)åÆ &[{] ā^åÁ,ão@Á	F€€Ã Á	F € ÃÁ	Ú^¦-{¦{ aà &^Áset aaā}•oÁājā ā&baaa[¦Á &[}•ãā^¦^åÁse&&^]canà ^ÉÁ
Laboratory Considerations	Target	Actual	Comment
Šæà[¦æq[¦^Áåĭ] &&ææ^•Á	Þ[Án¢&^^åæ)&^•Á(-Á æà[¦ææ[¦^Áæ&&^]œe)&^Á &lãe^¦ãæA	Þ[Ár¢&^^åæ) &^• Á	Ú^¦-{¦{ æ}, &^Áset æãj•oÁsjå å&Læe[¦Á &[}•ãã^¦^åÁsæ&L&^]cæà ^ÈÁ

C-5 Accuracy

CJ; Áæ•^••{ ^} oÁ; Ás@Á; |^ &@ Á; |^ &@ Á; | / &@ Á; | / &@ Á; AfaææÁ&[|| / &c å Á; æ Á } å ^ | cæ ^ } Êæ; å Ás@ Á ^ • ` | o• Á; | / • • ^ } c å Á§ ÁTable C-5 EÁ

$$\begin{split} \dot{U}^*]] & | ^{ \wedge }_{ }_{ }^{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{$$

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Table C-5 Accuracy DQI

Field Considerations	Target	Actual	Comment
Øā^ åÁdājÁn]ã^•Á	Ü^&[ç^¦ãN•Áà^ç,^^}Á ΀ÃÁæ)åÁπI€ÃÁ	Ü^&{ç^¦ãN•Ásà^ç,^^}Á JÏÃÁsa}åÁFF€ÃÁ	Ú^¦-{¦{ aa} &^Ánd* aaā}•oÁājå aã&aaa[¦Á &[}•ãã^¦^å Ánd&&^] caaà ^ÈÁ
Øā\ åÁdāļÁs æ}\•Á	OĘ æj^ ơ Á&[} &^ } dæcā[} Á ŁŠUÜÁ	O [;æ∳î¢^Á&[}&^}dæaā[}Á ŁŠUÜÁ	Ú^¦-{¦{ æ}, &^Áæ*; æã; •oÁā; å ä&æa; ¦Á &[}•ãã^¦^å Áæ&&^] ææà ^ÉÁ
Laboratory Considerations	Target	Actual	Comment
Šæà[¦æq[¦^Á(,^o@ åÁa æ)\	ḟÞ[Án¢&^^åæ)& ^•Λj(-Á æà[¦ææ[¦^Áæ&&^]œe)&^Á & ¦ãe∿¦ãæÁ		Ú^¦-{¦{æ},&^Áed*æā},•oÁā,åä&æa[¦Á ,&[}•ãã^¦^åÁe&&^]œaà ^ÈÁ
Tædã¢Án]ãi^Án^&[ç^¦î Á Á	Þ[Ár¢&^^åæ;&^•Á;-Á æà[¦ææ[¦^Áæ&&^]œe;&^Á &¦ãæ\¦ãæÁ		Ú^¦-[¦{æ},&^Ásetæ\$j•oÁsjå&Bæq[¦Á 、&[}•ãã^¦^åÁse&&^]oæà; ^ÉÁ
Ù" [*ææ^Ár]ã^Ár&[ç^\;^	/Þ[Án¢&^^åæ)& ^•Áj-Á æà[¦ææ[¦^Ásæ&&^]œe)&^Á & ¦ãe∿¦ãæÁ		Ú^¦-{¦{æ},&^Áed*æā},•oÁā,åä&æa[¦Á ,&[}•ãā^¦^åÁed&&^]oæàa ^ÉÁ
Šæà[ˈæq[ˈ/Á&[]d[Á •æ{] ^Án^&[ç^¦^Á	Þ[Ár¢&^^åæ)&^•Áj-Á æà[¦æq[¦^Ána&&^]æ)&^Á &¦ão^¦ãnaÁ		Ú^¦-{¦{æ}}&^Ánd æā}•oÁsjååã&æa[¦Á ,&[}•ãã^¦^åÁnd&&&^]ææà ^ÈÄ

V@ ÁsaææÁN[||^&c^åÁsaÁN[}•ãå^¦^åÁs[}•ãå^¦^åÁs[Ás^Áæå^ˇ æe^|^Áæ&&`¦æe^Áæ)åÁ,ão@t,Ás@ Ásàb'&cãç^•Áæ)åÁN[}•dæãjo•Á [~Ás@-Áj¦[b'&dÈÁ
$$\begin{split} \dot{U}^*]] & | ^{ \wedge }_{ }_{ }^{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }_{ }^{ }^{ }_{ }^{ }^{ }_{ }^{$$

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APPENDIX D LABORATORY CERTIFICATES

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Alliance Geotechnical 10 Welder Road Seven Hills NSW 2147





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: Steven Wallace

Report 686434-S

Project name NORTH BANKSTOWN PUBLIC SCHOOL

Project ID 9150

Received Date Nov 05, 2019

Client Sample ID			TP01-0.0-0.1	TP02-0.0-0.2	TP02-0.2-0.4	TP03-0.0-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06605	S19-No06606	S19-No06607	S19-No06608
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	74	77	< 50	71
TRH C29-C36	50	mg/kg	94	89	< 50	84
TRH C10-C36 (Total)	50	mg/kg	168	166	< 50	155
ВТЕХ	•					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	99	99	128	61
Total Recoverable Hydrocarbons - 2013 NEPM	Fractions					
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)N04	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)N01	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	140	140	< 100	130
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	140	140	< 100	130
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluorantheneN07	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5



Client Sample ID			TP01-0.0-0.1	TP02-0.0-0.2	TP02-0.2-0.4	TP03-0.0-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06605	S19-No06606	S19-No06607	S19-No06608
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons		-				
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	92	92	94	89
p-Terphenyl-d14 (surr.)	1	%	103	107	107	104
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
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	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
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	< 0.2	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	74	101	-	75
Tetrachloro-m-xylene (surr.)	1	%	99	90	-	88
Polychlorinated Biphenyls	0.5			.05		
Arcelor 1331	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Arodor 1333	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Arcelor 1343	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Arodor 1248	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Arcelor 1254	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1254 Aroclor-1260	0.5 0.5	mg/kg	< 0.5 < 0.5	< 0.5 < 0.5	-	< 0.5 < 0.5
Total PCB*	0.5	mg/kg mg/kg	< 0.5	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	// // // // // // // // // // // // //	74	101	-	75
Tetrachloro-m-xylene (surr.)	1	%	99	90	-	88



Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled Test/Reference	LOR	Unit	TP01-0.0-0.1 Soil S19-No06605 Nov 05, 2019	TP02-0.0-0.2 Soil S19-No06606 Nov 05, 2019	TP02-0.2-0.4 Soil S19-No06607 Nov 05, 2019	TP03-0.0-0.15 Soil S19-No06608 Nov 05, 2019
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	220	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	5.2	-
% Moisture	1	%	12	14	14	13
Heavy Metals						
Arsenic	2	mg/kg	13	8.8	9.5	9.0
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	33	24	23	21
Copper	5	mg/kg	33	33	46	34
Lead	5	mg/kg	59	170	24	130
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.1
Nickel	5	mg/kg	10	9.5	11	11
Zinc	5	mg/kg	73	120	68	140

Client Sample ID			TP04-0.0-0.2	TP04-0.2-0.4	G01 TP05-0.0-0.2	TP05-0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06609	S19-No06610	S19-No06611	S19-No06612
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM	Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 200	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	1100	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	1100	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	2200	< 50
ВТЕХ						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	84	112	118	73
Total Recoverable Hydrocarbons - 2013 NEPM	Fractions					
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)N04	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 500	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 500	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	1900	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 1000	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	1900	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	8.6	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	8.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	8.6	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	0.6	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	0.8	< 0.5



Client Sample ID			TP04-0.0-0.2	TP04-0.2-0.4	G01 TP05-0.0-0.2	TP05-0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06609	S19-No06610	S19-No06611	S19-No06612
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons	'	'				
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	1.4	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	5.2	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	6.6	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	6.7	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	2.0	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	2.2	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	1.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	1.7	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	7.7	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	2.1	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	39	< 0.5
2-Fluorobiphenyl (surr.)	1	%	95	94	98	77
p-Terphenyl-d14 (surr.)	1	%	108	105	107	96
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	-
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	0.2	mg/kg	< 0.2	-	< 0.2	-
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	< 0.2	-	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	99	-	66	-
Tetrachloro-m-xylene (surr.)	1	%	134	-	91	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 5	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 1	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 5	-



Client Sample ID			TP04-0.0-0.2	TP04-0.2-0.4	G01 TP05-0.0-0.2	TP05-0.5-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06609	S19-No06610	S19-No06611	S19-No06612
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 5	-
Total PCB*	0.5	mg/kg	< 0.5	-	< 5	-
Dibutylchlorendate (surr.)	1	%	99	-	66	-
Tetrachloro-m-xylene (surr.)	1	%	134	-	91	-
% Clay	1	%	-	-	-	38
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	57	-	330
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	5.8	-	5.3
% Moisture	1	%	15	7.3	13	16
Heavy Metals						
Arsenic	2	mg/kg	12	15	18	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	0.6	< 0.4
Chromium	5	mg/kg	23	31	15	23
Copper	5	mg/kg	26	17	87	34
Lead	5	mg/kg	18	44	290	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.4	< 0.1
Nickel	5	mg/kg	9.9	13	16	22
Zinc	5	mg/kg	56	57	360	120
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	-	-	13

Client Sample ID			TD00 0 0 0 0	TP06-0.4-0.6	BH07-0.0-0.2	BH07-0.2-0.4
Sample Matrix			TP06-0.0-0.2 Soil	Soil	Soil	Soil
•			1			
Eurofins Sample No.			S19-No06613	S19-No06614	S19-No06615	S19-No06616
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fra	actions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	21	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	110	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	100	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	231	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	123	66	92	98
Total Recoverable Hydrocarbons - 2013 NEPM Fra	actions					
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)N04	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50



Client Sample ID			TP06-0.0-0.2	TP06-0.4-0.6	BH07-0.0-0.2	BH07-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06613	S19-No06614	S19-No06615	S19-No06616
Date Sampled				Nov 05, 2019		Nov 05, 2019
•	1.00		Nov 05, 2019	NOV 05, 2019	Nov 05, 2019	NOV 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM						
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	180	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	180	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Actor	0.5 0.5	mg/kg	< 0.5	< 0.5	< 0.5 < 0.5	< 0.5 < 0.5
Anthracene Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5		1
()	0.5	mg/kg	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5	< 0.5 < 0.5
Benzo(a)pyrene Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	92	140	141	112
p-Terphenyl-d14 (surr.)	1	%	103	INT	INT	129
Organochlorine Pesticides		,,,				120
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	-
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	0.2	mg/kg	< 0.2	-	< 0.2	-
Toxaphene	1	mg/kg	< 1	-	< 1	-



Client Sample ID			TP06-0.0-0.2	TP06-0.4-0.6	BH07-0.0-0.2	BH07-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06613	S19-No06614	S19-No06615	S19-No06616
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	< 0.2	-	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2	-
Dibutylchlorendate (surr.)	1	%	89	-	125	-
Tetrachloro-m-xylene (surr.)	1	%	99	-	126	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	=
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5	-
Dibutylchlorendate (surr.)	1	%	89	-	125	=
Tetrachloro-m-xylene (surr.)	1	%	99	-	126	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	66	-	120
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units		5.9	-	5.3
% Moisture	1	%	11	14	24	15
Heavy Metals	1	T				
Arsenic	2	mg/kg	9.4	13	15	11
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	16	23	19	20
Copper	5	mg/kg	17	20	43	40
Lead	5	mg/kg	54	16	170	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Nickel	5	mg/kg	8.3	< 5	16	13
Zinc	5	mg/kg	63	30	380	98

Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled Test/Reference	LOR	Unit	BH08-0.0-0.2 Soil S19-No06617 Nov 05, 2019	BH09-0.0-0.3 Soil S19-No06618 Nov 05, 2019	BH10-0.0-0.2 Soil S19-No06619 Nov 05, 2019	BH10-0.2-0.4 Soil S19-No06620 Nov 05, 2019
Total Recoverable Hydrocarbons - 1999 NEPM Fr		Offic				
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	83	40	21	< 20
TRH C15-C28	50	mg/kg	420	160	80	< 50
TRH C29-C36	50	mg/kg	270	230	130	< 50
TRH C10-C36 (Total)	50	mg/kg	773	430	231	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1



Client Sample ID			BH08-0.0-0.2	BH09-0.0-0.3	BH10-0.0-0.2	BH10-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06617	S19-No06618	S19-No06619	S19-No06620
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
•	1.00	Linit	1407 05, 2019	NOV 03, 2019	1407 03, 2019	1407 05, 2019
Test/Reference BTEX	LOR	Unit				
	0.3	m a/lea	.03	< 0.3	.02	.02
Xylenes - Total 4-Bromofluorobenzene (surr.)	1	mg/kg %	< 0.3 90	118	< 0.3	< 0.3 67
Total Recoverable Hydrocarbons - 2013 NEPM		70	90	110	111	67
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)N04	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	87	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	87	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	560	330	170	< 100
TRH >C34-C40	100	mg/kg	210	170	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	857	500	170	< 100
Polycyclic Aromatic Hydrocarbons	1	, 5		1		
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	59	124	99	INT
p-Terphenyl-d14 (surr.)	1	%	59	142	112	125
Organochlorine Pesticides	<u> </u>	T				
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 d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Dieldrin	0.05 0.05	mg/kg	< 0.05 < 0.05	< 0.05 < 0.05	< 0.05 < 0.05	-
Endosulfan I	0.05	mg/kg mg/kg	< 0.05	< 0.05	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	-



Client Sample ID			BH08-0.0-0.2	BH09-0.0-0.3	BH10-0.0-0.2	BH10-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06617	S19-No06618	S19-No06619	S19-No06620
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	0.2	mg/kg	< 0.2	< 0.2	< 0.2	-
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	< 0.2	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	150	98	85	-
Tetrachloro-m-xylene (surr.)	1	%	130	93	95	-
Polychlorinated Biphenyls		.				
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	150	98	85	-
Tetrachloro-m-xylene (surr.)	1	%	130	93	95	-
		•				
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	-	450
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	-	-	5.1
% Moisture	1	%	21	13	11	18
Heavy Metals		•				
Arsenic	2	mg/kg	11	5.6	4.2	6.1
Cadmium	0.4	mg/kg	1.1	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	17	13	12	11
Copper	5	mg/kg	38	21	13	44
Lead	5	mg/kg	150	54	30	16
Mercury	0.1	mg/kg	0.2	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	6.3	9.7	6.6
Zinc	5	mg/kg	270	82	59	47



a			I	I	I	1
Client Sample ID			BH11-0.0-0.1	TP12-0.0-0.1	TP12-0.1-0.3	TP13-0.0-0.15
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06621	S19-No06622	S19-No06623	S19-No06624
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM	l Fractions	•				
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	39	35	< 20	35
TRH C15-C28	50	mg/kg	110	78	< 50	96
TRH C29-C36	50	mg/kg	140	93	< 50	150
TRH C10-C36 (Total)	50	mg/kg	289	206	< 50	281
ВТЕХ		1 3 3				
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.1	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	// // // // // // // // // // // // //	111	114	113	119
Total Recoverable Hydrocarbons - 2013 NEPM		/0	111	114	113	119
Naphthalene ^{N02}	0.5		< 0.5	.0.5	- 0.5	- 0.5
•		mg/kg		< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	210	140	< 100	200
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	100
TRH >C10-C40 (total)*	100	mg/kg	210	140	< 100	300
Polycyclic Aromatic Hydrocarbons		T				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	116	108	108	87
p-Terphenyl-d14 (surr.)	1	%	132	123	136	126



Client Sample ID			BH11-0.0-0.1	TP12-0.0-0.1	TP12-0.1-0.3	TP13-0.0-0.15
Sample Matrix			Soil	Soil	Soil	Soil
•						
Eurofins Sample No.			S19-No06621	S19-No06622	S19-No06623	S19-No06624
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
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
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	0.2	mg/kg	< 0.2	< 0.2	-	< 0.2
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	< 0.2	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	102	83	-	80
Tetrachloro-m-xylene (surr.)	1	%	112	96	-	86
Polychlorinated Biphenyls	T					
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Arcolor-1254	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1 1	%	102	83	-	80
Tetrachloro-m-xylene (surr.)	1	%	112	96	-	86
Conductivity (1:5 agreeus sytrast at 25°C as as 1	10	u2/a~			110	
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	-	110	-
pH (1:5 Aqueous extract at 25°C as rec.) % Moisture	0.1	pH Units %		11	5.3	9.1
% Moisture Heavy Metals		70	18	11	14	9.1
•	1 2	malle	0.0	0.7	F 4	0.1
Arsenic	2	mg/kg	8.0	9.7	5.1	9.1
Chamium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Copper	5	mg/kg	18	24	19	21
Copper	5	mg/kg	36	37	23	33
Lead Mercury	0.1	mg/kg mg/kg	100 < 0.1	95 < 0.1	15 < 0.1	93 < 0.1



Client Sample ID Sample Matrix Eurofins Sample No.			BH11-0.0-0.1 Soil S19-No06621	TP12-0.0-0.1 Soil S19-No06622	TP12-0.1-0.3 Soil S19-No06623	TP13-0.0-0.15 Soil S19-No06624
Date Sampled Test/Reference	LOR	Unit	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Heavy Metals						
Nickel	5	mg/kg	10.0	9.7	8.5	9.1
Zinc	5	mg/kg	140	130	40	120

Client Sample ID			TP14-0.0-0.2	TP14-1.3-1.5	BH15-0.0-0.1	BH16-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06625	S19-No06626	S19-No06627	S19-No06628
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM I	Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	24	< 20	42	41
TRH C15-C28	50	mg/kg	< 50	< 50	150	140
TRH C29-C36	50	mg/kg	58	< 50	180	180
TRH C10-C36 (Total)	50	mg/kg	82	< 50	372	361
BTEX	•	, , ,				
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	107	104	108	107
Total Recoverable Hydrocarbons - 2013 NEPM I	Fractions					
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)N04	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)N01	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	280	260
TRH >C34-C40	100	mg/kg	< 100	< 100	110	120
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	390	380
Polycyclic Aromatic Hydrocarbons	·					
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluorantheneN07	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5



Client Sample ID			TP14-0.0-0.2	TP14-1.3-1.5	BH15-0.0-0.1	BH16-0.0-0.1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06625	S19-No06626	S19-No06627	S19-No06628
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	102	81	112	110
p-Terphenyl-d14 (surr.)	1	%	132	144	128	113
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
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	0.2	mg/kg	< 0.2	-	< 0.2	< 0.2
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	< 0.2	-	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	-	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	76	-	98	85
Tetrachloro-m-xylene (surr.)	1	%	86	-	106	100
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	< 0.1	-	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	< 0.5	-	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	76	-	98	85
Tetrachloro-m-xylene (surr.)	1	%	86	-	106	100
% Clay	1	%	-	34	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	-	100	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	-	5.0	-	-
% Moisture	1	%	4.6	14	21	16



Client Sample ID Sample Matrix Eurofins Sample No. Date Sampled			TP14-0.0-0.2 Soil S19-No06625 Nov 05, 2019	TP14-1.3-1.5 Soil S19-No06626 Nov 05, 2019	BH15-0.0-0.1 Soil S19-No06627 Nov 05, 2019	BH16-0.0-0.1 Soil S19-No06628 Nov 05, 2019
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	3.0	5.4	9.3	6.7
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	13	19	14	12
Copper	5	mg/kg	16	15	28	26
Lead	5	mg/kg	41	17	100	90
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	7.1	12	9.6
Zinc	5	mg/kg	84	25	160	140
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	-	11	-	-

Client Sample ID			BH16-0.1-0.3	BH17-0.0-0.1	BH18-0.0-0.1	BH19-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06629	S19-No06630	S19-No06631	S19-No06632
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM	Fractions	•				
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	36	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	140	53	65
TRH C29-C36	50	mg/kg	< 50	160	67	92
TRH C10-C36 (Total)	50	mg/kg	< 50	336	120	157
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	92	106	116	112
Total Recoverable Hydrocarbons - 2013 NEPM	Fractions					
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)N04	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)N01	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	250	< 100	130
TRH >C34-C40	100	mg/kg	< 100	110	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	360	< 100	130
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5



Client Commis ID			B.1.4.0.0.4.0.0	B1147 0 0 0 4	D1140 0 0 0 4	B.U.O.O.O.O.O.
Client Sample ID			BH16-0.1-0.3	BH17-0.0-0.1	BH18-0.0-0.1	BH19-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06629	S19-No06630	S19-No06631	S19-No06632
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	58	122	113	114
p-Terphenyl-d14 (surr.)	1	%	129	124	120	120
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
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	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
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	-	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	-	95	85	91
Tetrachloro-m-xylene (surr.)	1	%	-	105	103	102
Polychlorinated Biphenyls		n		0.5	0.5	2 -
Aroclor-1016	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Arcelor-1232	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5



Client Sample ID			BH16-0.1-0.3	BH17-0.0-0.1	BH18-0.0-0.1	BH19-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06629	S19-No06630	S19-No06631	S19-No06632
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls						
Aroclor-1260	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	-	95	85	91
Tetrachloro-m-xylene (surr.)	1	%	-	105	103	102
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	390	-	-	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	5.2	-	-	-
% Moisture	1	%	18	16	8.9	11
Heavy Metals						
Arsenic	2	mg/kg	8.9	4.8	16	12
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	14	10.0	28	27
Copper	5	mg/kg	30	25	22	22
Lead	5	mg/kg	15	96	98	47
Mercury	0.1	mg/kg	< 0.1	0.2	0.4	< 0.1
Nickel	5	mg/kg	9.8	7.4	9.6	26
Zinc	5	mg/kg	59	150	120	170

Client Sample ID			BH19-0.3-0.5	TP20-0.0-0.2	TP20-0.3-0.5	TP21-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06633	S19-No06634	S19-No06635	S19-No06636
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM	Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	48	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	170	54	< 50
TRH C29-C36	50	mg/kg	< 50	180	60	59
TRH C10-C36 (Total)	50	mg/kg	< 50	398	114	59
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	107	119	65	114
Total Recoverable Hydrocarbons - 2013 NEPM	Fractions					
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)N04	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)N01	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	290	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	120	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	410	< 100	< 100



Client Sample ID			BH19-0.3-0.5	TP20-0.0-0.2	TP20-0.3-0.5	TP21-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06633	S19-No06634	S19-No06635	S19-No06636
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	85	105	106	108
p-Terphenyl-d14 (surr.)	1	%	119	109	115	111
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 < 0.05
b-BHC d-BHC	0.05	mg/kg mg/kg	-	< 0.05 < 0.05	-	< 0.05
Dieldrin	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan I	0.05	mg/kg	-	< 0.05	-	< 0.05
Endosulfan II	0.05	mg/kg		< 0.05	-	< 0.05
Endosulfan sulphate	0.05	mg/kg	_	< 0.05	-	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	-	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	_	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	-	< 0.05
g-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	0.2	mg/kg	-	< 0.2	-	< 0.2
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	-	< 0.2	-	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	-	< 0.2
Dibutylchlorendate (surr.)	1	%	-	92	_	85
Dibutyichiorendate (Surr.)						



Client Sample ID			BH19-0.3-0.5	TP20-0.0-0.2	TP20-0.3-0.5	TP21-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06633	S19-No06634	S19-No06635	S19-No06636
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Polychlorinated Biphenyls	•					
Aroclor-1016	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1221	0.1	mg/kg	-	< 0.1	-	< 0.1
Aroclor-1232	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1242	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1248	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1254	0.5	mg/kg	-	< 0.5	-	< 0.5
Aroclor-1260	0.5	mg/kg	-	< 0.5	-	< 0.5
Total PCB*	0.5	mg/kg	-	< 0.5	-	< 0.5
Dibutylchlorendate (surr.)	1	%	-	92	-	85
Tetrachloro-m-xylene (surr.)	1	%	-	93	-	92
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	710	-	190	-
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	5.1	-	5.1	-
% Moisture	1	%	23	16	16	11
Heavy Metals						
Arsenic	2	mg/kg	4.0	5.8	8.5	7.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.1	18	21	15
Copper	5	mg/kg	29	25	24	24
Lead	5	mg/kg	11	47	15	51
Mercury	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	9.9	9.0	8.2
Zinc	5	mg/kg	29	68	41	73

Client Sample ID Sample Matrix			TP21-0.4-0.6 Soil	TP22-0.0-0.2 Soil	TP23-0.0-0.2 Soil	TP24-0.0-0.2 Soil
Eurofins Sample No.			S19-No06637	S19-No06638	S19-No06639	S19-No06640
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fract						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	42	27	< 20
TRH C15-C28	50	mg/kg	< 50	150	110	< 50
TRH C29-C36	50	mg/kg	< 50	130	94	80
TRH C10-C36 (Total)	50	mg/kg	< 50	322	231	80
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	108	88	106	78
Total Recoverable Hydrocarbons - 2013 NEPM Fract	ions					
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)N04	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50



Client Sample ID			TP21-0.4-0.6	TP22-0.0-0.2	TP23-0.0-0.2	TP24-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06637	S19-No06638	S19-No06639	S19-No06640
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM	Fractions	•				
TRH >C10-C16 less Naphthalene (F2)N01	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	230	160	100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	230	160	100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	111	118	100	112
p-Terphenyl-d14 (surr.)	1	%	117	123	103	115
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
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	0.2	mg/kg	-	< 0.2 < 1	< 0.2	< 0.2



Client Sample ID			TP21-0.4-0.6	TP22-0.0-0.2	TP23-0.0-0.2	TP24-0.0-0.2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06637	S19-No06638	S19-No06639	S19-No06640
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	-	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	-	99	96	95
Tetrachloro-m-xylene (surr.)	1	%	-	92	98	101
Polychlorinated Biphenyls	•	•				
Aroclor-1016	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1242	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1248	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1254	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Aroclor-1260	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Total PCB*	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
Dibutylchlorendate (surr.)	1	%	-	99	96	95
Tetrachloro-m-xylene (surr.)	1	%	-	92	98	101
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	320	-	-	_
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units		-	_	_
% Moisture	1	%	15	10	11	9.3
Heavy Metals						
Arsenic	2	mg/kg	8.6	19	9.7	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	22	35	18	18
Copper	5	mg/kg	28	24	26	15
Lead	5	mg/kg	20	58	56	28
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	11	11	10
Zinc	5	mg/kg	55	86	100	47

Client Sample ID			TP24-0.8-1.0	BH25-0.0-0.3	BH26-0.0-0.2	BH26-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06641	S19-No06642	S19-No06643	S19-No06644
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 199	9 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	43	54	< 20
TRH C15-C28	50	mg/kg	< 50	170	310	< 50
TRH C29-C36	50	mg/kg	< 50	170	270	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	383	634	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	0.5	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	0.3	< 0.1	< 0.1



mg/kg	TP24-0.8-1.0 Soil S19-No06641 Nov 05, 2019 < 0.3 85 < 0.5 < 20 < 20 < 50 < 100 < 100 < 100 < 100 < 0.5 0.6 1.2 < 0.5	BH25-0.0-0.3 Soil S19-No06642 Nov 05, 2019 0.8 104 < 0.5 < 20 < 50 < 50 270 120 390 1.1 1.4 1.7	Soil S19-No06643 Nov 05, 2019 < 0.3	SH26-0.2-0.4 Soil S19-No06644 Nov 05, 2019 < 0.3 84 < 0.5 < 20 < 50 < 100 < 100 < 100
mg/kg % mg/kg	<pre>< 0.3</pre>	\$19-No06642 Nov 05, 2019 0.8 104 <0.5 <20 <50 <50 270 120 390 1.1 1.4	\$19-No06643 Nov 05, 2019 < 0.3 73 < 0.5 < 20 < 20 110 110 460 160 730 < 0.5	<pre>\$19-No06644 Nov 05, 2019 < 0.3 84 < 0.5 < 20 < 50 < 100 < 100 < 100</pre>
mg/kg % mg/kg	<pre></pre>	0.8 104 < 0.5 < 20 < 20 < 50 270 120 390 1.1	 Nov 05, 2019 < 0.3 73 < 0.5 < 20 < 20 110 110 460 160 730 < 0.5 	 Nov 05, 2019 < 0.3 84 < 0.5 < 20 < 50 < 50 < 100 < 100 < 100
mg/kg % mg/kg	< 0.3 85 < 0.5 < 20 < 20 < 50 < 100 < 100 < 100 < 1.2	0.8 104 < 0.5 < 20 < 20 < 50 < 50 270 120 390	< 0.3 73 < 0.5 < 20 < 20 110 110 460 160 730 < 0.5	< 0.3 84 < 0.5 < 20 < 20 < 50 < 100 < 100 < 100
mg/kg % mg/kg	85 < 0.5 < 20 < 20 < 50 < 100 < 100 < 100 < 0.5 0.6 1.2	104 < 0.5 < 20 < 20 < 50 < 50 270 120 390 1.1 1.4	73 < 0.5 < 20 < 20 110 110 460 160 730 < 0.5	84 < 0.5 < 20 < 20 < 50 < 100 < 100 < 100
mg/kg	85 < 0.5 < 20 < 20 < 50 < 100 < 100 < 100 < 0.5 0.6 1.2	104 < 0.5 < 20 < 20 < 50 < 50 270 120 390 1.1 1.4	73 < 0.5 < 20 < 20 110 110 460 160 730 < 0.5	84 < 0.5 < 20 < 20 < 50 < 100 < 100 < 100
mg/kg	85 < 0.5 < 20 < 20 < 50 < 100 < 100 < 100 < 0.5 0.6 1.2	104 < 0.5 < 20 < 20 < 50 < 50 270 120 390 1.1 1.4	73 < 0.5 < 20 < 20 110 110 460 160 730 < 0.5	84 < 0.5 < 20 < 20 < 50 < 100 < 100 < 100
mg/kg	< 0.5 < 20 < 20 < 50 < 100 < 100 < 100 < 1.2	< 0.5 < 20 < 20 < 50 < 50 270 120 390	< 0.5 < 20 < 20 110 110 460 160 730 < 0.5	< 0.5 < 20 < 20 < 50 < 50 < 100 < 100 < 100
mg/kg	< 20 < 20 < 50 < 50 < 100 < 100 < 0.5 0.6 1.2	< 20 < 20 < 50 < 50 270 120 390 1.1 1.4	< 20 < 20 110 110 460 160 730 < 0.5	< 20 < 20 < 50 < 50 < 100 < 100 < 100
mg/kg	< 20 < 20 < 50 < 50 < 100 < 100 < 0.5 0.6 1.2	< 20 < 20 < 50 < 50 270 120 390 1.1 1.4	< 20 < 20 110 110 460 160 730 < 0.5	< 20 < 20 < 50 < 50 < 100 < 100 < 100
mg/kg	< 20 < 50 < 50 < 100 < 100 < 100 < 0.5 0.6 1.2	< 20 < 50 < 50 270 120 390 1.1 1.4	< 20 110 110 460 160 730 < 0.5	< 20 < 50 < 50 < 100 < 100 < 100
mg/kg	< 50 < 50 < 100 < 100 < 100 < 0.5 0.6 1.2	< 50 < 50 270 120 390 1.1 1.4	110 110 460 160 730 < 0.5	< 50 < 50 < 100 < 100 < 100
mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	< 50 < 100 < 100 < 100 < 100 < 0.5 0.6 1.2	< 50 270 120 390 1.1 1.4	110 460 160 730 < 0.5	< 50 < 100 < 100 < 100
mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	<100 <100 <100 <100 <0.5 0.6 1.2	270 120 390 1.1 1.4	460 160 730 < 0.5	< 100 < 100 < 100
mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg	< 100 < 100 < 0.5 0.6 1.2	120 390 1.1 1.4	160 730 < 0.5	< 100 < 100
mg/kg mg/kg mg/kg mg/kg mg/kg	< 100 < 0.5 0.6 1.2	390 1.1 1.4	730	< 100
mg/kg mg/kg mg/kg mg/kg	< 0.5 0.6 1.2	1.1	< 0.5	
mg/kg mg/kg mg/kg mg/kg	0.6 1.2	1.4		- O E
mg/kg mg/kg mg/kg mg/kg	0.6 1.2	1.4		_ O E
mg/kg mg/kg mg/kg	1.2		0.0	< 0.5
mg/kg mg/kg		4 7	0.6	0.6
mg/kg	< 0.5	1./	1.2	1.2
		< 0.5	< 0.5	< 0.5
mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
	< 0.5	< 0.5	< 0.5	< 0.5
mg/kg	< 0.5	0.7	< 0.5	< 0.5
mg/kg	< 0.5	0.9	< 0.5	< 0.5
mg/kg	< 0.5	0.9	< 0.5	< 0.5
mg/kg	< 0.5	0.7	< 0.5	< 0.5
mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
mg/kg	< 0.5	0.7	< 0.5	< 0.5
mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
mg/kg	< 0.5			< 0.5
mg/kg	< 0.5			< 0.5
mg/kg	< 0.5			< 0.5
mg/kg	< 0.5	< 0.5		< 0.5
mg/kg	< 0.5	0.6		< 0.5
				< 0.5
				< 0.5
				89
%	117	126	111	116
	-			-
mg/kg	-	< 0.05	< 0.05	-
mg/kg	-			-
mg/kg	-	< 0.05	< 0.05	-
mg/kg	-	< 0.05	< 0.05	-
mg/kg	-			-
mg/kg	-			-
	-			-
mg/kg	-			-
	-			-
mg/kg	-			-
	-			-
mg/kg		< 0.05	< 0.05	-
	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg % mg/kg	mg/kg < 0.5	mg/kg < 0.5	mg/kg < 0.5



Client Sample ID			TP24-0.8-1.0	BH25-0.0-0.3	BH26-0.0-0.2	BH26-0.2-0.4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06641	S19-No06642	S19-No06643	S19-No06644
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
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	0.2	mg/kg	-	< 0.2	< 0.2	-
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	-	< 0.2	< 0.2	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.2	< 0.2	-
Dibutylchlorendate (surr.)	1	%	-	106	133	-
Tetrachloro-m-xylene (surr.)	1	%	-	92	91	-
Polychlorinated Biphenyls	•	•				
Aroclor-1016	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1221	0.1	mg/kg	-	< 0.1	< 0.1	-
Aroclor-1232	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1242	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1248	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1254	0.5	mg/kg	-	< 0.5	< 0.5	-
Aroclor-1260	0.5	mg/kg	-	< 0.5	< 0.5	-
Total PCB*	0.5	mg/kg	-	< 0.5	< 0.5	-
Dibutylchlorendate (surr.)	1	%	-	106	133	-
Tetrachloro-m-xylene (surr.)	1	%	-	92	91	-
% Clay	1	%	37	-	-	_
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	280	-	-	110
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	5.0	-	-	5.4
% Moisture	1	%	17	8.8	8.4	16
Heavy Metals		•				
Arsenic	2	mg/kg	10	8.5	12	23
Cadmium	0.4	mg/kg	< 0.4	0.7	< 0.4	< 0.4
Chromium	5	mg/kg	20	15	18	23
Copper	5	mg/kg	21	24	19	20
Lead	5	mg/kg	20	81	83	14
Mercury	0.1	mg/kg	< 0.1	0.4	0.1	< 0.1
Nickel	5	mg/kg	7.2	13	12	5.9
Zinc	5	mg/kg	36	200	85	23
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	18	-	_	_



					1	
Client Sample ID			BH27-0.0-0.2	BH28-0.0-0.2	DUP-01	DUP-02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06645	S19-No06646	S19-No06647	S19-No06648
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM	Fractions	•				
TRH C6-C9	20	mg/kg	< 20	< 20	-	-
TRH C10-C14	20	mg/kg	32	110	=	-
TRH C15-C28	50	mg/kg	180	370	-	_
TRH C29-C36	50	mg/kg	220	430	-	_
TRH C10-C36 (Total)	50	mg/kg	432	910	-	-
ВТЕХ		1 3 3				
Benzene	0.1	mg/kg	< 0.1	< 0.1	_	_
Toluene	0.1	mg/kg	< 0.1	< 0.1	_	_
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	_	_
m&p-Xylenes	0.1	mg/kg	< 0.2	< 0.1	-	-
o-Xylene	0.1	mg/kg	< 0.2	< 0.1	-	-
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	-	-
4-Bromofluorobenzene (surr.)	1	%	103	95	_	_
Total Recoverable Hydrocarbons - 2013 NEPM		/0	103	93	-	-
Naphthalene ^{N02}	0.5	m a/l.a	< 0.5	.05		
TRH C6-C10		mg/kg		< 0.5	-	-
	20	mg/kg	< 20	< 20	-	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	-	-
TRH > C10-C16	50	mg/kg	< 50	130	-	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	130	-	-
TRH >C16-C34	100	mg/kg	330	640	-	-
TRH >C34-C40	100	mg/kg	170	300	-	-
TRH >C10-C40 (total)*	100	mg/kg	500	1070	-	-
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	0.7	< 0.5	=	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	1.0	0.6	=	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.3	1.2	-	-
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	-	-
Anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Benzo(a)pyrene	0.5	mg/kg	0.6	< 0.5	=	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	0.7	< 0.5	=	-
Benzo(g.h.i)perylene	0.5	mg/kg	0.7	< 0.5	-	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	-	-
Chrysene	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	-	-
Fluoranthene	0.5	mg/kg	0.6	< 0.5	-	-
Fluorene	0.5	mg/kg	< 0.5	< 0.5	-	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	0.5	< 0.5	-	-
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	-	-
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	-	-
Pyrene	0.5	mg/kg	0.7	< 0.5	-	-
Total PAH*	0.5	mg/kg	3.8	< 0.5	-	-
2-Fluorobiphenyl (surr.)	1	%	83	92	-	-
p-Terphenyl-d14 (surr.)	1	%	110	103	-	-



Client Comple ID			DU07.0.0.0	DUI00 0 0 0 0	DUD 04	DUD 00
Client Sample ID			BH27-0.0-0.2	BH28-0.0-0.2	DUP-01	DUP-02
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S19-No06645	S19-No06646	S19-No06647	S19-No06648
Date Sampled			Nov 05, 2019	Nov 05, 2019	Nov 05, 2019	Nov 05, 2019
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	-	-
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	0.2	mg/kg	< 0.2	< 0.2	-	-
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	< 0.2	< 0.2	=	-
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	-	-
Dibutylchlorendate (surr.)	1	%	91	97	-	-
Tetrachloro-m-xylene (surr.)	1	%	96	84	-	-
Polychlorinated Biphenyls						
Aroclor-1016	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	-	-
Aroclor-1232	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1242	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1248	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1254	0.5	mg/kg	< 0.5	< 0.5	-	-
Aroclor-1260	0.5	mg/kg	< 0.5	< 0.5	-	-
Total PCB*	0.5	mg/kg	< 0.5	< 0.5	-	-
Dibutylchlorendate (surr.) Tetrachloro-m-xylene (surr.)	1	%	91 96	97 84	-	-
Tetracilioto-iii-xyielle (Sull.)		70	90	04	 	-
% Moisture	1	%	8.8	14	11	11
Heavy Metals		1 /0	0.0	14		11
Arsenic	2	mg/kg	4.9	5.6	6.9	8.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	8.7	14	22	15
Copper	5	mg/kg	31	21	24	13
Lead	5	mg/kg	68	57	41	34
Mercury	0.1	mg/kg	0.1	0.2	< 0.1	< 0.1
Nickel	5	mg/kg	6.4	5.5	8.4	7.2
Zinc	5	mg/kg	110	160	55	41



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.

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

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 08, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 08, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 08, 2019	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 08, 2019	
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 08, 2019	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Sydney	Nov 08, 2019	7 Days
- Method: LTM-INO-4030 Conductivity			
pH (1:5 Aqueous extract at 25°C as rec.)	Sydney	Nov 08, 2019	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Metals M8	Sydney	Nov 08, 2019	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Organochlorine Pesticides	Sydney	Nov 08, 2019	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Polychlorinated Biphenyls	Sydney	Nov 08, 2019	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
% Clay	Brisbane	Nov 07, 2019	0 Days
- Method: LTM-GEN-7040			
% Moisture	Sydney	Nov 06, 2019	14 Days
- Method: LTM-GEN-7080 Moisture			
Cation Exchange Capacity	Melbourne	Nov 07, 2019	180 Days



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

Order No.:

Report #:

Phone:

Fax:

Melbourne 6 Monterey Road Dandenong South VIC 3175 Phone: +61 3 8564 5000

NATA # 1261 Site # 1254 & 14271

686434

1800 288 188

02 9675 1888

Sydney Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone: +61 2 9900 8400

Received:

Priority:

Contact Name:

Due:

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:

Alliance Geotechnical

Address:

10 Welder Road

Seven Hills

NSW 2147

Project Name: Project ID:

9150

NORTH BANKSTOWN PUBLIC SCHOOL

Eurofins Analytical Services Manager: Andrew Black

5 Day

Nov 5, 2019 6:10 PM

Nov 12, 2019

Steven Wallace

			mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
	ourne Laborato			271										Х		X
	ney Laboratory						Х	Х	Х	Х	Х	Х	Х	Х	Х	X
	bane Laboratory					Х										
	h Laboratory - N		36													
	rnal Laboratory			T												
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
1	TP01-0.0-0.1	Nov 05, 2019		Soil	S19-No06605		Х					Х	Х		Х	
2	TP02-0.0-0.2	Nov 05, 2019		Soil	S19-No06606		Х					Х	Х		Х	
3	TP02-0.2-0.4	Nov 05, 2019		Soil	S19-No06607								Х			Х
4	TP03-0.0-0.15	Nov 05, 2019		Soil	S19-No06608		Х					Х	Х		Х	
5	TP04-0.0-0.2	Nov 05, 2019		Soil	S19-No06609		Х					Х	Х		Х	
6	TP04-0.2-0.4	Nov 05, 2019		Soil	S19-No06610								Х			X
7	TP05-0.0-0.2	Nov 05, 2019		Soil	S19-No06611		Х					Х	Х		Х	
8	TP05-0.5-0.7	Nov 05, 2019		Soil	S19-No06612	Х							Х	Х		X
9	TP06-0.0-0.2	Nov 05, 2019		Soil	S19-No06613		Х					Х	Х		Х	



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NATA # 1261

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

Company Name:

Alliance Geotechnical

Address:

10 Welder Road

Seven Hills

NSW 2147

Project Name: Project ID:

NORTH BANKSTOWN PUBLIC SCHOOL

9150

Order No.:

Report #: 686434

Phone:

Fax:

1800 288 188

02 9675 1888

Contact Name:

Priority:

Received:

Due:

Nov 12, 2019 Steven Wallace

Nov 5, 2019 6:10 PM

Eurofins Analytical Services Manager: Andrew Black

5 Day

		Sa	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Mell	ourne Laborato	ory - NATA Site	# 1254 & 142	71										Х		X
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Х										
Pert	h Laboratory - N	NATA Site # 237	36	1												
10	TP06-0.4-0.6	Nov 05, 2019		Soil	S19-No06614								Х			Х
11	BH07-0.0-0.2	Nov 05, 2019		Soil	S19-No06615		Х					Х	Х		Х	
12	BH07-0.2-0.4	Nov 05, 2019		Soil	S19-No06616								Х			X
13	BH08-0.0-0.2	Nov 05, 2019		Soil	S19-No06617		Х					Х	Х		Х	
14	BH09-0.0-0.3	Nov 05, 2019		Soil	S19-No06618		Х					Х	Х		Х	
15	BH10-0.0-0.2	Nov 05, 2019		Soil	S19-No06619		Х					Х	Х		Х	
16	BH10-0.2-0.4	Nov 05, 2019		Soil	S19-No06620								Х			X
17	BH11-0.0-0.1	Nov 05, 2019		Soil	S19-No06621		Х					Х	Х		Х	\square
18	TP12-0.0-0.1	Nov 05, 2019		Soil	S19-No06622		Х					Х	Х		Х	
19	TP12-0.1-0.3	Nov 05, 2019		Soil	S19-No06623								Х			X
20	TP13-0.0-0.15	Nov 05, 2019		Soil	S19-No06624		Х					Х	Х		Х	
21	TP14-0.0-0.2	Nov 05, 2019		Soil	S19-No06625		Х					Х	Х		Х	



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Alliance Geotechnical

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Project Name:

Address:

NORTH BANKSTOWN PUBLIC SCHOOL

Project ID: 9150

Order No.:

Phone:

Report #: 686434

1800 288 188

Fax:

02 9675 1888

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Due:

Nov 5, 2019 6:10 PM Nov 12, 2019

Priority: 5 Day

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		Sai	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Mell	oourne Laborate	ory - NATA Site	# 1254 & 142	71										Х		Х
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Χ										
Pert	h Laboratory - I	NATA Site # 237	36													
22	TP14-1.3-1.5	Nov 05, 2019		Soil	S19-No06626	Χ							Х	Х		Х
23	BH15-0.0-0.1	Nov 05, 2019		Soil	S19-No06627		Х					Х	Х		Х	
24	BH16-0.0-0.1	Nov 05, 2019		Soil	S19-No06628		Х					Х	Х		Х	
25	BH16-0.1-0.3	Nov 05, 2019		Soil	S19-No06629								Х			Х
26	BH17-0.0-0.1	Nov 05, 2019		Soil	S19-No06630		Х					Х	Х		Х	
27	BH18-0.0-0.1	Nov 05, 2019		Soil	S19-No06631		Х					Х	Х		Х	
28	BH19-0.0-0.2	Nov 05, 2019		Soil	S19-No06632		Х					Х	Х		Х	
29	BH19-0.3-0.5	Nov 05, 2019		Soil	S19-No06633								Х			Х
30	TP20-0.0-0.2	Nov 05, 2019		Soil	S19-No06634		Х					Х	Х		Х	
31	TP20-0.3-0.5	Nov 05, 2019		Soil	S19-No06635								Х			Х
32	TP21-0.0-0.2	Nov 05, 2019		Soil	S19-No06636		Х					Х	Х		Х	
33	TP21-0.4-0.6	Nov 05, 2019		Soil	S19-No06637								Х			Х



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NATA # 1261 Site # 20794

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Address:

10 Welder Road

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NSW 2147

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9150

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Phone: Fax: 1800 288 188 02 9675 1888

Contac

Priority: 5 Day

Contact Name: Steven Wallace

Eurofins Analytical Services Manager: Andrew Black

Nov 5, 2019 6:10 PM

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Mell	oourne Laborat	ory - NATA Site	# 1254 & 142	271										Х		Х
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Х										
Pert	h Laboratory - I	NATA Site # 237	36													
34	TP22-0.0-0.2	Nov 05, 2019		Soil	S19-No06638		Х					Х	Х		Х	
35	TP23-0.0-0.2	Nov 05, 2019		Soil	S19-No06639		Х					Х	Х		Х	
36	TP24-0.0-0.2	Nov 05, 2019		Soil	S19-No06640		Х					Х	Х		Х	
37	TP24-0.8-1.0	Nov 05, 2019		Soil	S19-No06641	Х							Х	Х		Х
38	BH25-0.0-0.3	Nov 05, 2019		Soil	S19-No06642		Х					Х	Х		Х	
39	BH26-0.0-0.2	Nov 05, 2019		Soil	S19-No06643		Х					Х	Х		Х	
40	BH26-0.2-0.4	Nov 05, 2019		Soil	S19-No06644								Х			Х
41	BH27-0.0-0.2	Nov 05, 2019		Soil	S19-No06645		Х					Х	Х		Х	
42	BH28-0.0-0.2	Nov 05, 2019		Soil	S19-No06646		Х					Х	Х		Х	
43	DUP-01	Nov 05, 2019		Soil	S19-No06647					Х			Х			
44	DUP-02	Nov 05, 2019		Soil	S19-No06648					Х			Х			
45	TP14-FCS	Nov 05, 2019		Building	S19-No06649			х								



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Mell	ourne Laborato	ory - NATA Site	# 1254 & 142	271										Х		Х
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laboratory	y - NATA Site #	20794			Х										
Pert	h Laboratory - N	NATA Site # 237	36													
				Materials												
46	BH25-FCS	Nov 05, 2019		Building Materials	S19-No06650			х								
47	TRIPSPIKE1	Nov 05, 2019		Water	S19-No06651						Х					
48	TRIPBLANK1	Nov 05, 2019		Water	S19-No06652						Х					
49	TP01-0.1-0.3	Nov 05, 2019		Soil	S19-No06653				Х							
50	TP03-0.15-0.3	Nov 05, 2019		Soil	S19-No06654				Х							
51	BH09-0.3-0.5	Nov 05, 2019		Soil	S19-No06655				Х							
52	BH11-0.1-0.3	Nov 05, 2019		Soil	S19-No06656				Х							
53	TP13-0.15-0.3	Nov 05, 2019		Soil	S19-No06657				Х							
54	TP14-0.8-1.0	Nov 05, 2019		Soil	S19-No06658				Х							
55	BH15-0.1-0.3	Nov 05, 2019		Soil	S19-No06659				Х							



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Melk	ourne Laborato	ory - NATA Site	# 1254 & 14271										Х		Х
Syd	ney Laboratory	- NATA Site # 18	3217			Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site # :	20794		Х										
Pert	h Laboratory - N	NATA Site # 237	36												
56	BH17-0.1-0.3	Nov 05, 2019	Soil	S19-No06660				Х							
57	BH18-0.1-0.3	Nov 05, 2019	Soil	S19-No06661				Х							
58	TP22-0.3-0.5	Nov 05, 2019	Soil	S19-No06662				Х							
59	TP23-0.3-0.5	Nov 05, 2019	Soil	 S19-No06663				Х							
60	BH25-0.3-0.5	Nov 05, 2019	Soil	S19-No06664				Х							
Test	Counts				3	28	2	12	2	2	28	44	3	28	14



Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram ug/L: micrograms per litre ug/L: micrograms per litre

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 US Department of Defense Quality Systems Manual Version 5.3

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 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

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

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	<u> </u>	•	'		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	mg/kg	< 20	20	Pass	
TRH C10-C14	mg/kg	< 20	20	Pass	
TRH C15-C28	mg/kg	< 50	50	Pass	
TRH C29-C36	mg/kg	< 50	50	Pass	
Method Blank					
BTEX					
Benzene	mg/kg	< 0.1	0.1	Pass	
Toluene	mg/kg	< 0.1	0.1	Pass	
Ethylbenzene	mg/kg	< 0.1	0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2	0.2	Pass	
o-Xylene	mg/kg	< 0.1	0.1	Pass	
Xvlenes - Total	mg/kg	< 0.3	0.3	Pass	
Method Blank	1				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene	mg/kg	< 0.5	0.5	Pass	
TRH C6-C10	mg/kg	< 20	20	Pass	
TRH >C10-C16	mg/kg	< 50	50	Pass	
TRH >C16-C34	mg/kg	< 100	100	Pass	
TRH >C34-C40	mg/kg	< 100	100	Pass	
Method Blank	IIIg/Rg	100	100	1 455	
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	mg/kg	< 0.5	0.5	Pass	
Acenaphthylene	mg/kg	< 0.5	0.5	Pass	
Anthracene	mg/kg	< 0.5	0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5	0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5	0.5	Pass	
Benzo(b&i)fluoranthene	mg/kg	< 0.5	0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5	0.5	Pass	
Benzo(k)fluoranthene		< 0.5	0.5	Pass	
Chrysene	mg/kg	< 0.5	0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5	0.5	Pass	
	mg/kg	< 0.5	0.5	Pass	
Fluorene Fluorene	mg/kg	1			
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5	0.5 0.5	Pass Pass	
\	mg/kg	< 0.5			
Naphthalene	mg/kg	< 0.5	0.5	Pass	
Phenanthrene	mg/kg	< 0.5	0.5	Pass	
Pyrene Math ad Blank	mg/kg	< 0.5	0.5	Pass	
Method Blank					
Organochlorine Pesticides		.04	0.4	Dana	
Chlordanes - Total 4.4'-DDD	mg/kg	< 0.1	0.1	Pass	
	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	



Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
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	< 0.2	0.2	Pass	
Toxaphene	mg/kg	< 1	1	Pass	
Method Blank	IIIg/kg			1 433	
Polychlorinated Biphenyls		T T	T I		
Aroclor-1016	mg/kg	< 0.5	0.5	Pass	
Aroclor-1221	mg/kg	< 0.1	0.5	Pass	
Arcelor 1232	mg/kg	< 0.5	0.5	Pass	
Aroclor-1242	mg/kg	< 0.5	0.5	Pass	
Aroclor-1248	mg/kg	< 0.5	0.5	Pass	
Aroclor-1254	mg/kg	< 0.5	0.5	Pass	
Aroclor-1260	mg/kg	< 0.5	0.5	Pass	
Total PCB*	mg/kg	< 0.5	0.5	Pass	
Method Blank		T T	T	ı	
% Clay	%	<1	1	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10	10	Pass	
Method Blank				ı	
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	
Method Blank					
Cation Exchange Capacity					
Cation Exchange Capacity	meq/100g	< 0.05	0.05	Pass	
LCS - % Recovery					
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	%	97	70-130	Pass	
TRH C10-C14	%	115	70-130	Pass	
LCS - % Recovery	,,	1.0	1.0.00		
BTEX					
Benzene	%	78	70-130	Pass	
Toluene	%	81	70-130	Pass	
Ethylbenzene Ethylbenzene	%	85	70-130	Pass	
m&p-Xylenes	%	121	70-130	Pass	
o-Xylene	%	110	70-130	Pass	
Xylenes - Total	%	117	70-130	Pass	
LCS - % Recovery					
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	1	110		_	
Naphthalene	%	110	70-130	Pass	
•					
TRH C6-C10 TRH >C10-C16	%	95 81	70-130 70-130	Pass Pass	



Test	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Polycyclic Aromatic Hydrocarbons					
Acenaphthene	%	76	70-130	Pass	
Acenaphthylene	%	79	70-130	Pass	
Anthracene	%	96	70-130	Pass	
Benz(a)anthracene	%	71	70-130	Pass	
Benzo(a)pyrene	%	77	70-130	Pass	
Benzo(b&j)fluoranthene	%	85	70-130	Pass	
Benzo(g.h.i)perylene	%	82	70-130	Pass	
Benzo(k)fluoranthene	%	84	70-130	Pass	
Chrysene	%	84	70-130	Pass	
Dibenz(a.h)anthracene	%	80	70-130	Pass	
Fluoranthene	%	77	70-130	Pass	
Fluorene	%	85	70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	70	70-130	Pass	
Naphthalene	%	78	70-130	Pass	
Phenanthrene	%	84	70-130	Pass	
Pyrene	%	77	70-130	Pass	<u> </u>
LCS - % Recovery	70	11	10-130	Fa55	
Organochlorine Pesticides					
Chlordanes - Total	0/	00	70-130	Door	
	%	90		Pass	
4.4'-DDD	%	97	70-130	Pass	
4.4'-DDE	%	88	70-130	Pass	
4.4'-DDT	%	77	70-130	Pass	
a-BHC	%	90	70-130	Pass	
Aldrin	%	93	70-130	Pass	
b-BHC	%	89	70-130	Pass	
d-BHC	%	90	70-130	Pass	
Dieldrin	%	89	70-130	Pass	
Endosulfan I	%	117	70-130	Pass	
Endosulfan II	%	115	70-130	Pass	
Endosulfan sulphate	%	87	70-130	Pass	
Endrin	%	81	70-130	Pass	
Endrin aldehyde	%	85	70-130	Pass	
Endrin ketone	%	91	70-130	Pass	
g-BHC (Lindane)	%	90	70-130	Pass	
Heptachlor	%	88	70-130	Pass	
Heptachlor epoxide	%	97	70-130	Pass	
Hexachlorobenzene	%	90	70-130	Pass	
Methoxychlor	%	80	70-130	Pass	
Toxaphene	%	112	70-130	Pass	
LCS - % Recovery					
Polychlorinated Biphenyls					
Aroclor-1260	%	92	70-130	Pass	
LCS - % Recovery	1		10.100	1 5.55	
% Clay	%	100	70-130	Pass	
Conductivity (1:5 aqueous extract at 25°C as rec.)	%	91	70-130	Pass	
LCS - % Recovery	, ,,		70 100		
Heavy Metals					
Arsenic	%	107	70-130	Pass	
Cadmium	%	104	70-130	Pass	
Chromium	%	104	70-130	Pass	
Copper	%	104	70-130	Pass	
Lead	%	108	70-130	Pass	
Mercury	%	102	70-130	Pass	



Test			Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Nickel			%	104	70-130	Pass	
Zinc			%	100	70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery							
Total Recoverable Hydrocarbons	- 1999 NEPM Fract	ions		Result 1			
TRH C10-C14	S19-No06605	CP	%	101	70-130	Pass	
Spike - % Recovery				T			
Total Recoverable Hydrocarbons	- 2013 NEPM Fract	ions		Result 1			
TRH >C10-C16	S19-No06605	CP	%	96	70-130	Pass	
Spike - % Recovery				T			
Polycyclic Aromatic Hydrocarbor	ıs	1		Result 1			
Acenaphthene	S19-No06605	CP	%	90	70-130	Pass	
Acenaphthylene	S19-No06605	CP	%	86	70-130	Pass	
Anthracene	S19-No06605	CP	%	83	70-130	Pass	
Benz(a)anthracene	S19-No06605	CP	%	88	70-130	Pass	
Benzo(a)pyrene	S19-No06605	CP	%	89	70-130	Pass	
Benzo(b&j)fluoranthene	S19-No06605	CP	%	101	70-130	Pass	
Benzo(g.h.i)perylene	S19-No06605	CP	%	89	70-130	Pass	
Benzo(k)fluoranthene	S19-No06605	СР	%	94	70-130	Pass	
Chrysene	S19-No06605	СР	%	87	70-130	Pass	
Dibenz(a.h)anthracene	S19-No06605	СР	%	95	70-130	Pass	
Fluoranthene	S19-No06605	СР	%	89	70-130	Pass	
Fluorene	S19-No06605	СР	%	91	70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-No06605	СР	%	92	70-130	Pass	
Naphthalene	S19-No06605	СР	%	86	70-130	Pass	
Phenanthrene	S19-No06605	СР	%	87	70-130	Pass	
Pyrene	S19-No06605	СР	%	85	70-130	Pass	
Spike - % Recovery							
Organochlorine Pesticides				Result 1			
4.4'-DDD	S19-No14554	NCP	%	116	70-130	Pass	
4.4'-DDT	S19-No07341	NCP	%	102	70-130	Pass	
Endrin aldehyde	S19-No14554	NCP	%	84	70-130	Pass	
Endrin ketone	S19-No14554	NCP	%	86	70-130	Pass	
Methoxychlor	S19-No07341	NCP	%	92	70-130	Pass	
Toxaphene	S19-No07341	NCP	%	100	70-130	Pass	
Spike - % Recovery							
Polychlorinated Biphenyls				Result 1			
Aroclor-1260	S19-No14554	NCP	%	87	70-130	Pass	
Spike - % Recovery							
Heavy Metals				Result 1			
Arsenic	S19-No06608	СР	%	103	70-130	Pass	
Cadmium	S19-No06608	СР	%	101	70-130	Pass	
Chromium	S19-No06608	СР	%	109	70-130	Pass	
Copper	S19-No06608	CP	%	110	70-130	Pass	
Lead	S19-No06608	CP	%	104	70-130	Pass	
Mercury	S19-No06608	CP	%	107	70-130	Pass	
Nickel	S19-No06608	CP	%	97	70-130	Pass	
Zinc	S19-No06608	CP	%	97	70-130	Pass	
Spike - % Recovery							
Heavy Metals				Result 1			
Arsenic	S19-No06618	СР	%	98	70-130	Pass	
Cadmium	S19-No06618	CP	%	97	70-130	Pass	
Chromium	S19-No06618	CP	%	98	70-130	Pass	
Copper	S19-No06618	CP	%	112	70-130	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1	Acceptance Limits	Pass Limits	Qualifying Code
Mercury	S19-No06618	CP	%	101	70-130	Pass	
Nickel	S19-No06618	CP	%	105	70-130	Pass	
Spike - % Recovery							
Total Recoverable Hydrocarbons	- 1999 NEPM Fract	ions		Result 1			
TRH C6-C9	S19-No06619	CP	%	99	70-130	Pass	
TRH C10-C14	S19-No06619	CP	%	111	70-130	Pass	
Spike - % Recovery				<u>, , , , , , , , , , , , , , , , , , , </u>			
ВТЕХ				Result 1			
Benzene	S19-No06619	CP	%	82	70-130	Pass	
Toluene	S19-No06619	CP	%	81	70-130	Pass	
Ethylbenzene	S19-No06619	CP	%	83	70-130	Pass	
m&p-Xylenes	S19-No06619	CP	%	111	70-130	Pass	
o-Xylene	S19-No06619	CP	%	103	70-130	Pass	
Xylenes - Total	S19-No06619	CP	%	108	70-130	Pass	
Spike - % Recovery							
Total Recoverable Hydrocarbons	- 2013 NEPM Fract	ions		Result 1			
Naphthalene	S19-No06619	CP	%	79	70-130	Pass	
TRH C6-C10	S19-No06619	CP	%	99	70-130	Pass	
TRH >C10-C16	S19-No06619	CP	%	106	70-130	Pass	
Spike - % Recovery							
Organochlorine Pesticides				Result 1			
Chlordanes - Total	S19-No06621	CP	%	104	70-130	Pass	
4.4'-DDE	S19-No06621	CP	%	101	70-130	Pass	
a-BHC	S19-No06621	CP	%	109	70-130	Pass	
Aldrin	S19-No06621	CP	%	120	70-130	Pass	
b-BHC	S19-No06621	CP	%	107	70-130	Pass	
d-BHC	S19-No06621	CP	%	100	70-130	Pass	
Dieldrin	S19-No06621	CP	%	102	70-130	Pass	
Endosulfan I	S19-No06621	CP	%	101	70-130	Pass	
Endosulfan II	S19-No06621	CP	%	99	70-130	Pass	
Endosulfan sulphate	S19-No06621	CP	%	88	70-130	Pass	
Endrin	S19-No06621	CP	%	88	70-130	Pass	
g-BHC (Lindane)	S19-No06621	CP	%	89	70-130	Pass	
Heptachlor	S19-No06621	CP	%	70	70-130	Pass	
Heptachlor epoxide	S19-No06621	CP	%	107	70-130	Pass	
Hexachlorobenzene	S19-No06621	CP	%	112	70-130	Pass	
Spike - % Recovery						ı	
Polycyclic Aromatic Hydrocarbo	ns			Result 1			
Acenaphthene	S19-No06625	CP	%	102	70-130	Pass	
Acenaphthylene	S19-No06625	CP	%	93	70-130	Pass	
Anthracene	S19-No06625	CP	%	98	70-130	Pass	
Benz(a)anthracene	S19-No06625	CP	%	71	70-130	Pass	
Benzo(a)pyrene	S19-No06625	CP	%	98	70-130	Pass	
Benzo(b&j)fluoranthene	S19-No06625	CP	%	107	70-130	Pass	
Benzo(g.h.i)perylene	S19-No06625	CP	%	106	70-130	Pass	
Benzo(k)fluoranthene	S19-No06625	CP	%	119	70-130	Pass	
Chrysene	S19-No06625	CP	%	115	70-130	Pass	
Dibenz(a.h)anthracene	S19-No06625	CP	%	97	70-130	Pass	
Fluoranthene	S19-No06625	CP	%	106	70-130	Pass	
Fluorene	S19-No06625	CP	%	97	70-130	Pass	
Indeno(1.2.3-cd)pyrene	S19-No06625	CP	%	91	70-130	Pass	
Naphthalene	S19-No06625	CP	%	99	70-130	Pass	
Phenanthrene	S19-No06625	CP	%	87	70-130	Pass	
Pyrene	S19-No06625	CP	%	106	70-130	Pass	



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery		Ocurce					Lillits	Lillits	Joue
Heavy Metals				Result 1					
Arsenic	S19-No06648	СР	%	97			70-130	Pass	
Cadmium	S19-No06648	CP	%	100			70-130	Pass	
Chromium	S19-No06648	CP	%	103			70-130	Pass	
Copper	S19-No06648	CP	%	95			70-130	Pass	
Lead	S19-No06648	CP	%	107			70-130	Pass	
Mercury	S19-No06648	CP	%	105			70-130	Pass	
Nickel	S19-No06648	СР	%	96			70-130	Pass	
Zinc	S19-No06648	CP	%	105			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate							12		
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-No06605	СР	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-No06605	СР	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-No06605	СР	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-No06605	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-No06605	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S19-No06605	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate				D 1/4	D	555			
0/ 14-1-1	040 N - 00007	0.0	0/	Result 1	Result 2	RPD	000/	D	
% Moisture	S19-No06607	СР	%	14	14	1.0	30%	Pass	
Duplicate	4000 NEDM Front	lana		Dogult 1	Decult 2	DDD	l		
Total Recoverable Hydrocarbons - TRH C6-C9	S19-No06608	CP	ma/ka	Result 1 < 20	Result 2 < 20	RPD <1	30%	Pass	
Duplicate	319-11000000	CF	mg/kg	< 20	< 20	<1	30%	rass_	
BTEX				Result 1	Result 2	RPD	Т		
Benzene	S19-No06608	СР	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-No06608	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-N006608	CP	mg/kg	< 0.1	< 0.1	<1 <1	30%	Pass	
m&p-Xylenes	S19-N006608	CP	mg/kg	< 0.1	< 0.1	<1 <1	30%	Pass	
o-Xylene	S19-N006608	CP	mg/kg	< 0.2	< 0.2	<1 <1	30%	Pass	
Xylenes - Total	S19-No06608	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Duplicate	1 010 11000000	<u> </u>	mg/kg					1 433	
Total Recoverable Hydrocarbons	· 2013 NFPM Fract	ions		Result 1	Result 2	RPD			
Naphthalene	S19-No06608	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-No06608	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate			g, kg		1 20			1 400	
				Result 1	Result 2	RPD			
% Clay	M19-Oc35913	NCP	%	8.8	10	13	30%	Pass	
,. J.uj	1		/0				3370		l



-									
Duplicate				D 1/4	D 4.0	555			
One destinity (4.5 assume a stand				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C as rec.)	S19-No06616	СР	uS/cm	120	110	9.0	30%	Pass	
pH (1:5 Aqueous extract at 25°C as rec.)	S19-No06616	СР	pH Units	5.3	5.3	Pass	30%	Pass	
Duplicate							<u> </u>		
•				Result 1	Result 2	RPD			
% Moisture	S19-No06617	CP	%	21	20	6.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-No06617	CP	mg/kg	11	12	7.0	30%	Pass	
Cadmium	S19-No06617	CP	mg/kg	1.1	1.1	2.0	30%	Pass	
Chromium	S19-No06617	CP	mg/kg	17	17	2.0	30%	Pass	
Copper	S19-No06617	CP	mg/kg	38	39	3.0	30%	Pass	
Lead	S19-No06617	CP	mg/kg	150	150	3.0	30%	Pass	
Mercury	S19-No06617	CP	mg/kg	0.2	0.2	7.0	30%	Pass	
Nickel	S19-No06617	CP	mg/kg	12	12	1.0	30%	Pass	
Zinc	S19-No06617	CP	mg/kg	270	270	1.0	30%	Pass	
Duplicate					,				
Total Recoverable Hydrocarbons -			1	Result 1	Result 2	RPD		<u> </u>	
TRH C6-C9	S19-No06618	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S19-No06618	CP	mg/kg	40	32	23	30%	Pass	<u> </u>
TRH C15-C28	S19-No06618	CP	mg/kg	160	160	4.0	30%	Pass	
TRH C29-C36	S19-No06618	CP	mg/kg	230	250	8.0	30%	Pass	
Duplicate					I I				
BTEX	<u> </u>			Result 1	Result 2	RPD		_	
Benzene	S19-No06618	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-No06618	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-No06618	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-No06618	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-No06618	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-No06618	СР	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate Tatal Bassachus III. III. III. III. III. III. III. II	2042 NEDM Engel			Decult 4	Deeuk 0	DDD			
Total Recoverable Hydrocarbons -	S19-No06618	CP	ma/ka	Result 1 < 0.5	Result 2	RPD	30%	Pass	
Naphthalene TRH C6-C10	S19-N006618	CP	mg/kg mg/kg	< 20	< 0.5 < 20	<1 <1	30%	Pass	
TRH >C10-C16	S19-No06618	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-No06618	CP	mg/kg	330	340	3.0	30%	Pass	
TRH >C34-C40	S19-No06618	CP	mg/kg	170	190	13	30%	Pass	
Duplicate	01311000010	01	i ilig/kg	170	130	10	3070	1 433	
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-No06618	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-No06618	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-No06618	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-No06618	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-No06618	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-No06618	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	S19-No06618	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-No06618	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-No06618	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	S19-No06618	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-No06618	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-No06618	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S19-No06618	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-No06618	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-No06618	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-No06618	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	



Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S19-No06619	СР	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S19-No06619	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S19-No06619	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Toxaphene	S19-No06619	CP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate	0.0.10000.0	<u> </u>	19,9				0070	1	
Polychlorinated Biphenyls				Result 1	Result 2	RPD			
Aroclor-1016	S19-No06619	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1221	S19-No06619	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Aroclor-1232	S19-No06619	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1242	S19-No06619	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1248	S19-No06619	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1254	S19-No06619	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Aroclor-1260	S19-No06619	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate			<u> </u>						
				Result 1	Result 2	RPD		T	
% Moisture	S19-No06627	CP	%	21	22	5.0	30%	Pass	
Duplicate			•						
•				Result 1	Result 2	RPD			
% Moisture	S19-No06637	CP	%	15	15	1.0	30%	Pass	
Duplicate			•	_					
				Result 1	Result 2	RPD			
% Moisture	S19-No06647	СР	%	11	12	6.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-No06647	CP	mg/kg	6.9	8.1	16	30%	Pass	
Cadmium	S19-No06647	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-No06647	CP	mg/kg	22	22	3.0	30%	Pass	
Copper	S19-No06647	CP	mg/kg	24	28	16	30%	Pass	
Lead	S19-No06647	CP	mg/kg	41	49	19	30%	Pass	
Mercury	S19-No06647	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S19-No06647	CP	mg/kg	8.4	9.4	11	30%	Pass	
Zinc	S19-No06647	СР	mg/kg	55	63	14	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

G01 The LORs have been raised due to matrix interference

F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).

N01

Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed N02

all QAQC acceptance criteria, and are entirely technically valid.

F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes. N04

Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs N07

Authorised By

Andrew Black Analytical Services Manager Andrew Sullivan Senior Analyst-Organic (NSW) Emily Rosenberg Senior Analyst-Metal (VIC) Gabriele Cordero Senior Analyst-Inorganic (NSW) Gabriele Cordero Senior Analyst-Metal (NSW) Jonathon Angell Senior Analyst-Inorganic (QLD) Julie Kay Senior Analyst-Inorganic (VIC) Nibha Vaidya Senior Analyst-Asbestos (NSW)



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.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In or case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and to six production arising from this report. This document in other personal or expensed.



Alliance Geotechnical 10 Welder Road Seven Hills NSW 2147





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: Steven Wallace

Report 686434-W

Project name NORTH BANKSTOWN PUBLIC SCHOOL

Project ID 9150

Received Date Nov 05, 2019

Client Sample ID Sample Matrix			R20TRIPSPIKE1 Water	TRIPBLANK1 Water
•			S19-No06651	S19-No06652
Eurofins Sample No.				
Date Sampled			Nov 05, 2019	Nov 05, 2019
Test/Reference	LOR	Unit		
BTEX				
Benzene	0.001	mg/L	97	< 0.001
Toluene	0.001	mg/L	97	< 0.001
Ethylbenzene	0.001	mg/L	97	< 0.001
m&p-Xylenes	0.002	mg/L	130	< 0.002
o-Xylene	0.001	mg/L	97	< 0.001
Xylenes - Total	0.003	mg/L	95	< 0.003
4-Bromofluorobenzene (surr.)	1	%	128	78



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.

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.

DescriptionTesting SiteExtractedHolding TimeBTEXSydneyNov 06, 201914 Days

- Method: LTM-ORG-2010 TRH C6-C40



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

Company Name:

Alliance Geotechnical

10 Welder Road

Seven Hills

NSW 2147

Project Name: Project ID:

Address:

NORTH BANKSTOWN PUBLIC SCHOOL

9150

Order No.: Received: Nov 5, 2019 6:10 PM Report #: 686434

Due: Nov 12, 2019

Priority: 5 Day

Contact Name: Steven Wallace

Eurofins Analytical Services Manager: Andrew Black

		Sa	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	НОГД	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Melb	ourne Laborato	ory - NATA Site	# 1254 & 142	271										Х		Х
Sydi	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laboratory	y - NATA Site #	20794			Х										
Pert	h Laboratory - N	NATA Site # 237	36													
Exte	rnal Laboratory															
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
1	TP01-0.0-0.1	Nov 05, 2019		Soil	S19-No06605		Х					Х	Х		Х	
2	TP02-0.0-0.2	Nov 05, 2019		Soil	S19-No06606		Х					Х	Х		Х	
3	TP02-0.2-0.4	Nov 05, 2019		Soil	S19-No06607								Х			Х
4	TP03-0.0-0.15	Nov 05, 2019		Soil	S19-No06608		Х					Х	Х		Х	
5	TP04-0.0-0.2	Nov 05, 2019		Soil	S19-No06609		Х					Х	Х		Х	
6	TP04-0.2-0.4	Nov 05, 2019		Soil	S19-No06610								Х			Х
7	TP05-0.0-0.2	Nov 05, 2019		Soil	S19-No06611		Х					Х	Х		Х	
8	TP05-0.5-0.7	Nov 05, 2019		Soil	S19-No06612	Х							Х	Х		Х
9	TP06-0.0-0.2	Nov 05, 2019		Soil	S19-No06613		Х					Х	Х		Х	

Eurofins Environment Testing Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066 ABN: 50 005 085 521 Telephone: +61 2 9900 8400

Page 3 of 11



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Order No.:

686434

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Report #:

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NATA # 1261 Site # 1254 & 14271 Sydney Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone: +61 2 9900 8400 NATA # 1261 Site # 18217

Received:

Priority:

Contact Name:

Due:

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:

Alliance Geotechnical

Address:

10 Welder Road

Seven Hills

NSW 2147

Project Name: Project ID:

9150

NORTH BANKSTOWN PUBLIC SCHOOL

Eurofins Analytical Services Manager: Andrew Black

5 Day

Nov 5, 2019 6:10 PM

Nov 12, 2019

Steven Wallace

		Sa	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Mell	ourne Laborato	ory - NATA Site	# 1254 & 142	71										Х		X
	ney Laboratory						Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laboratory	y - NATA Site #	20794			Х										
Pert	h Laboratory - N	NATA Site # 237	36													
10	TP06-0.4-0.6	Nov 05, 2019		Soil	S19-No06614								Х			Х
11	BH07-0.0-0.2	Nov 05, 2019		Soil	S19-No06615		Х					Х	Х		Х	
12	BH07-0.2-0.4	Nov 05, 2019		Soil	S19-No06616								Х			X
13	BH08-0.0-0.2	Nov 05, 2019		Soil	S19-No06617		Х					Х	Х		Х	
14	BH09-0.0-0.3	Nov 05, 2019		Soil	S19-No06618		Х					Х	Х		Х	
15	BH10-0.0-0.2	Nov 05, 2019		Soil	S19-No06619		Х					Х	Х		Х	
16	BH10-0.2-0.4	Nov 05, 2019		Soil	S19-No06620								Х			Х
17	BH11-0.0-0.1	Nov 05, 2019		Soil	S19-No06621		Х					Х	Х		Х	
18	TP12-0.0-0.1	Nov 05, 2019		Soil	S19-No06622		Х					Х	Х		Х	
19	TP12-0.1-0.3	Nov 05, 2019		Soil	S19-No06623								Х			Х
20	TP13-0.0-0.15	Nov 05, 2019		Soil	S19-No06624		Х					Х	Х		Х	
21	TP14-0.0-0.2	Nov 05, 2019		Soil	S19-No06625		Х					Х	Х		Х	



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NATA # 1261

686434

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Site # 1254 & 14271

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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: Alliance

Alliance Geotechnical 10 Welder Road

Seven Hills

NSW 2147

Project Name:

Address:

NORTH BANKSTOWN PUBLIC SCHOOL

Project ID: 9150

0150

Received: Nov 5, 2019 6:10 PM

Due: Nov 12, 2019

Priority: 5 Day

Contact Name: Steven Wallace

		Sai	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Mel	oourne Laborat	ory - NATA Site	# 1254 & 142	71										Х		Х
Syd	ney Laboratory	- NATA Site # 1	3217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Χ										
Pert	h Laboratory - I	NATA Site # 237	36													
22	TP14-1.3-1.5	Nov 05, 2019		Soil	S19-No06626	Χ							Х	Х		Х
23	BH15-0.0-0.1	Nov 05, 2019		Soil	S19-No06627		Х					Х	Х		Х	
24	BH16-0.0-0.1	Nov 05, 2019		Soil	S19-No06628		Х					Х	Х		Х	
25	BH16-0.1-0.3	Nov 05, 2019		Soil	S19-No06629								Х			Х
26	BH17-0.0-0.1	Nov 05, 2019		Soil	S19-No06630		Х					Х	Х		Х	
27	BH18-0.0-0.1	Nov 05, 2019		Soil	S19-No06631		Х					Х	Х		Х	
28	BH19-0.0-0.2	Nov 05, 2019		Soil	S19-No06632		Х					Х	Х		Х	
29	BH19-0.3-0.5	Nov 05, 2019		Soil	S19-No06633								Х			Х
30	TP20-0.0-0.2	Nov 05, 2019		Soil	S19-No06634		Х					Х	Х		Х	
31	TP20-0.3-0.5	Nov 05, 2019		Soil	S19-No06635								Х			Х
32	TP21-0.0-0.2	Nov 05, 2019		Soil	S19-No06636		Х					Х	Х		Х	
33	TP21-0.4-0.6	Nov 05, 2019		Soil	S19-No06637								Х			Х



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Company Name: Alliance Geotechnical

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NSW 2147

Project Name:

NORTH BANKSTOWN PUBLIC SCHOOL

Project ID:

9150

Order No.:

Report #: 686434

Phone: Fax:

1800 288 188 02 9675 1888

Received: Nov 5, 2019 6:10 PM Due: Nov 12, 2019

Priority: 5 Day

Contact Name: Steven Wallace

		Sai	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Mell	oourne Laborat	ory - NATA Site	# 1254 & 142	271										Х		Х
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Х										
Pert	h Laboratory - I	NATA Site # 237	36													
34	TP22-0.0-0.2	Nov 05, 2019		Soil	S19-No06638		Х					Х	Х		Х	
35	TP23-0.0-0.2	Nov 05, 2019		Soil	S19-No06639		Х					Х	Х		Х	
36	TP24-0.0-0.2	Nov 05, 2019		Soil	S19-No06640		Х					Х	Х		Х	
37	TP24-0.8-1.0	Nov 05, 2019		Soil	S19-No06641	Х							Х	Х		Х
38	BH25-0.0-0.3	Nov 05, 2019		Soil	S19-No06642		Х					Х	Х		Х	
39	BH26-0.0-0.2	Nov 05, 2019		Soil	S19-No06643		Х					Х	Х		Х	
40	BH26-0.2-0.4	Nov 05, 2019		Soil	S19-No06644								Х			Х
41	BH27-0.0-0.2	Nov 05, 2019		Soil	S19-No06645		Х					Х	Х		Х	
42	BH28-0.0-0.2	Nov 05, 2019		Soil	S19-No06646		Х					Х	Х		Х	
43	DUP-01	Nov 05, 2019		Soil	S19-No06647					Х			Х			
44	DUP-02	Nov 05, 2019		Soil	S19-No06648					Х			Х			
45	TP14-FCS	Nov 05, 2019		Building	S19-No06649			х								



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10 Welder Road

Seven Hills

NSW 2147

Project Name:

Address:

NORTH BANKSTOWN PUBLIC SCHOOL

Project ID: 9150

Order No.: Received: Nov 5, 2019 6:10 PM Report #: 686434

Due: Nov 12, 2019

Priority: 5 Day **Contact Name:** Steven Wallace

		Sa	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Mell	bourne Laborate	ory - NATA Site	# 1254 & 142	271										Х		Х
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Х										
Pert	h Laboratory - N	NATA Site # 237	36													
				Materials												
46	BH25-FCS	Nov 05, 2019		Building Materials	S19-No06650			х								
47	TRIPSPIKE1	Nov 05, 2019		Water	S19-No06651						Х					
48	TRIPBLANK1	Nov 05, 2019		Water	S19-No06652						Х					
49	TP01-0.1-0.3	Nov 05, 2019		Soil	S19-No06653				Х							
50	TP03-0.15-0.3	Nov 05, 2019		Soil	S19-No06654				Х							
51	BH09-0.3-0.5	Nov 05, 2019		Soil	S19-No06655				Х							
52	BH11-0.1-0.3	Nov 05, 2019		Soil	S19-No06656				Х							
53	TP13-0.15-0.3	Nov 05, 2019		Soil	S19-No06657				Х							
54	TP14-0.8-1.0	Nov 05, 2019		Soil	S19-No06658				Х							
55	BH15-0.1-0.3	Nov 05, 2019		Soil	S19-No06659				Х							



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1800 288 188 02 9675 1888

Due: Nov 12, 2019

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Contact Name: Steven Wallace

Eurofins Analytical Services Manager: Andrew Black

Nov 5, 2019 6:10 PM

		Sa	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Melb	ourne Laborato	ory - NATA Site	# 1254 & 142	71										Х		Х
Sydi	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Χ	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Χ										
Pert	h Laboratory - N	NATA Site # 237	36													
56	BH17-0.1-0.3	Nov 05, 2019		Soil	S19-No06660				Х							
57	BH18-0.1-0.3	Nov 05, 2019		Soil	S19-No06661				Х							
58	TP22-0.3-0.5	Nov 05, 2019		Soil	S19-No06662				Х							
59	TP23-0.3-0.5	Nov 05, 2019		Soil	S19-No06663				Х							
60	BH25-0.3-0.5	Nov 05, 2019		Soil	S19-No06664				Х							
Test	Counts					3	28	2	12	2	2	28	44	3	28	14



Internal Quality Control Review and Glossary

General

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

Holding Times

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

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

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

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

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

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

Units

mg/kg: milligrams per kilogram ug/L: micrograms per litre ug/L: micrograms per litre

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 US Department of Defense Quality Systems Manual Version 5.3

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 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

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

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.

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Quality Control Results

Tes	t		Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
BTEX									
Benzene			mg/L	< 0.001			0.001	Pass	
Toluene			mg/L	< 0.001			0.001	Pass	
Ethylbenzene			mg/L	< 0.001			0.001	Pass	
m&p-Xylenes			mg/L	< 0.002			0.002	Pass	
o-Xylene			mg/L	< 0.001			0.001	Pass	
Xylenes - Total			mg/L	< 0.003			0.003	Pass	
LCS - % Recovery									
BTEX									
Benzene			%	82			70-130	Pass	
Toluene			%	85			70-130	Pass	
Ethylbenzene			%	85			70-130	Pass	
m&p-Xylenes			%	84			70-130	Pass	
o-Xylene			%	84			70-130	Pass	
Xylenes - Total			%	84			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-No07461	NCP	%	89			70-130	Pass	
Toluene	S19-No07461	NCP	%	94			70-130	Pass	
Ethylbenzene	S19-No07461	NCP	%	95			70-130	Pass	
m&p-Xylenes	S19-No07461	NCP	%	96			70-130	Pass	
o-Xylene	S19-No07461	NCP	%	91			70-130	Pass	
Xylenes - Total	S19-No07461	NCP	%	94			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-No07484	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	S19-No07484	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	S19-No07484	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	S19-No07484	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	S19-No07484	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	S19-No07484	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	



Comments

Sample Integrity

Custody Seals Intact (if used)

Attempt to Chill was evident

Yes
Sample correctly preserved

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

R20 This sample is a Trip Spike and therefore all results are reported as a percentage

Authorised By

Andrew Black Analytical Services Manager

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.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profest, damages for failure to meet deadlines and to sky production arrising from this report. This document shall not be reporteduced except in full and relates only to the items tested. (I) these indicated to therewise, the testes were performed on the samples as received.



Certificate of Analysis

Environment Testing







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: Steven Wallace Report 686434-AID

Project Name NORTH BANKSTOWN PUBLIC SCHOOL

Project ID 9150

Received Date Nov 05, 2019

Date Reported Nov 12, 2019

Methodology:

Asbestos Fibre Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a subsampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestoscontaining material (ACM) The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 %" and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.



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Project Name NORTH BANKSTOWN PUBLIC SCHOOL

Project ID 9150

Date Sampled Nov 05, 2019 Report 686434-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP01-0.0-0.1	19-No06605	Nov 05, 2019	Approximate Sample 69g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP02-0.0-0.2	19-No06606	Nov 05, 2019	Approximate Sample 125g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP02-0.2-0.4	19-No06607	Nov 05, 2019	Approximate Sample 92g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP03-0.0-0.15	19-No06608	Nov 05, 2019	Approximate Sample 89g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP04-0.0-0.2	19-No06609	Nov 05, 2019	Approximate Sample 72g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP04-0.2-0.4	19-No06610	Nov 05, 2019	Approximate Sample 118g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP05-0.0-0.2	19-No06611	Nov 05, 2019	Approximate Sample 86g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP05-0.5-0.7	19-No06612	Nov 05, 2019	Approximate Sample 121g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Eurofins Environment Testing Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066 Report Number: 686434-AID ABN: 50 005 085 521 Telephone: +61 2 9900 8400



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Report Number: 686434-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP06-0.0-0.2	19-No06613	Nov 05, 2019	Approximate Sample 120g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP06-0.4-0.6	19-No06614	Nov 05, 2019	Approximate Sample 117g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH07-0.0-0.2	19-No06615	Nov 05, 2019	Approximate Sample 50g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH07-0.2-0.4	19-No06616	Nov 05, 2019	Approximate Sample 121g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH08-0.0-0.2	19-No06617	Nov 05, 2019	Approximate Sample 90g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH09-0.0-0.3	19-No06618	Nov 05, 2019	Approximate Sample 117g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH10-0.0-0.2	19-No06619	Nov 05, 2019	Approximate Sample 65g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH10-0.2-0.4	19-No06620	Nov 05, 2019	Approximate Sample 101g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH11-0.0-0.1	19-No06621	Nov 05, 2019	Approximate Sample 47g Sample consisted of: Brown coarse-grained soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP12-0.0-0.1	19-No06622	Nov 05, 2019	Approximate Sample 109g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP12-0.1-0.3	19-No06623	Nov 05, 2019	Approximate Sample 117g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP13-0.0-0.15	19-No06624	Nov 05, 2019	Approximate Sample 108g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP14-0.0-0.2	19-No06625	Nov 05, 2019	Approximate Sample 197g Sample consisted of: Brown coarse-grained soil, concrete cement-like material and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

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Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP14-1.3-1.5	19-No06626	Nov 05, 2019	Approximate Sample 74g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH15-0.0-0.1	19-No06627	Nov 05, 2019	Approximate Sample 41g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH16-0.0-0.1	19-No06628	Nov 05, 2019	Approximate Sample 88g Sample consisted of: Brown coarse-grained soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH16-0.1-0.3	19-No06629	Nov 05, 2019	Approximate Sample 122g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH17-0.0-0.1	19-No06630	Nov 05, 2019	Approximate Sample 65g Sample consisted of: Brown coarse-grained soil, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH18-0.0-0.1	19-No06631	Nov 05, 2019	Approximate Sample 100g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH19-0.0-0.2	19-No06632	Nov 05, 2019	Approximate Sample 94g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH19-0.3-0.5	19-No06633	Nov 05, 2019	Approximate Sample 61g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP20-0.0-0.2	19-No06634	Nov 05, 2019	Approximate Sample 93g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP20-0.3-0.5	19-No06635	Nov 05, 2019	Approximate Sample 96g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP21-0.0-0.2	19-No06636	Nov 05, 2019	Approximate Sample 96g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP21-0.4-0.6	19-No06637	Nov 05, 2019	Approximate Sample 80g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP22-0.0-0.2	19-No06638	Nov 05, 2019	Approximate Sample 69g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Eurofins Environment Testing Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066 ABN: 50 005 085 521 Telephone: +61 2 9900 8400



Environment Testing





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Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
TP23-0.0-0.2	19-No06639	Nov 05, 2019	Approximate Sample 111g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP24-0.0-0.2	19-No06640	Nov 05, 2019	Approximate Sample 129g Sample consisted of: Brown coarse-grained clayey soil, concrete cement-like material and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP24-0.8-1.0	19-No06641	Nov 05, 2019	Approximate Sample 100g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH25-0.0-0.3	19-No06642	Nov 05, 2019	Approximate Sample 104g Sample consisted of: Brown coarse-grained soil, bituminous material and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH26-0.0-0.2	19-No06643	Nov 05, 2019	Approximate Sample 38g Sample consisted of: Brown coarse-grained soil, bitumen-like material, organic debris and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH26-0.2-0.4	19-No06644	Nov 05, 2019	Approximate Sample 76g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH27-0.0-0.2	19-No06645	Nov 05, 2019	Approximate Sample 105g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
BH28-0.0-0.2	19-No06646	Nov 05, 2019	Approximate Sample 59g Sample consisted of: Brown coarse-grained soil, bitumen-like material and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
TP14-FCS	19-No06649	Nov 05, 2019	Approximate Sample 11g / 40x25x4mm Sample consisted of: Grey compressed fibre cement fragment	Chrysotile and amosite asbestos detected.
BH25-FCS	19-No06650	Nov 05, 2019	Approximate Sample 4g / 40x10x4mm Sample consisted of: Grey compressed fibre cement fragment	No asbestos detected. Organic fibre detected. No trace asbestos detected.

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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.

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

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 06, 2019	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Nov 06, 2019	Indefinite



Environment Testing ABN - 50 005 085 521 ServiroSales@eurofins.com web: www.eurofins.com.au

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NATA # 1261

Site # 1254 & 14271

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NATA # 1261 Site # 18217

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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: Alliance Ge

Alliance Geotechnical
10 Welder Road

Seven Hills

NSW 2147

Project Name: Project ID:

Address:

NORTH BANKSTOWN PUBLIC SCHOOL

9150

Order No.: Report #: Phone:

Fax:

686434

1800 288 188

02 9675 1888

Received: Nov 5, 2019 6:10 PM **Due:** Nov 12, 2019

Priority: 5 Day

Contact Name: Steven Wallace

Eurofins Analytical Services Manager: Andrew Black

Sample Detail Melbourne Laboratory - NATA Site # 1254 & 14271								Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
				271										Х		X
	ney Laboratory						Х	Х	Х	Х	Х	Х	Х	Х	Х	X
	bane Laboratory					Х										\vdash
	h Laboratory - N		36													
	rnal Laboratory			T	1											
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID											
1	TP01-0.0-0.1	Nov 05, 2019		Soil	S19-No06605		Х					Х	Х		Х	
2	TP02-0.0-0.2	Nov 05, 2019		Soil	S19-No06606		Х					Х	Х		Х	
3	TP02-0.2-0.4	Nov 05, 2019		Soil	S19-No06607								Х			X
4	4 TP03-0.0-0.15 Nov 05, 2019 Soil S19-No06608						Х					Х	Х		Х	
5	TP04-0.0-0.2	Nov 05, 2019		Soil	S19-No06609		Х					Х	Х		Х	
6	TP04-0.2-0.4	Nov 05, 2019		Soil	S19-No06610								Х			Х
7	TP05-0.0-0.2	Nov 05, 2019		Soil	S19-No06611		Х					Х	Х		Х	
8	TP05-0.5-0.7	Nov 05, 2019		Soil	S19-No06612	Х							Х	Х		Х
9	TP06-0.0-0.2	Nov 05, 2019		Soil	S19-No06613		Х					Х	Х		Х	

Page 7 of 14



Environment Testing ABN - 50 005 085 521 Service Sales @eurofins.com web: www.eurofins.com.au

Melbourne 6 Monterey Road Dandenong South VIC 3175

Phone: +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271

Sydney Unit F3. Building F 16 Mars Road 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

Nov 5, 2019 6:10 PM

Nov 12, 2019

Eurofins Analytical Services Manager: Andrew Black

Company Name:

Alliance Geotechnical

10 Welder Road Seven Hills

NSW 2147

Report #: Phone:

Order No.:

686434 1800 288 188

Fax: 02 9675 1888

Priority: 5 Day **Contact Name:** Steven Wallace

Received:

Due:

Project Name:

Address:

NORTH BANKSTOWN PUBLIC SCHOOL

Project ID:

9150

% As As As As

Sample Detail							sbestos - AS4964	sbestos Absence /Presence	OLD	etals M8	TEX	urofins mgt Suite B13	oisture Set	ation Exchange Capacity	rofins mgt Suite B7	ilance ENM Exemption Suite 2014 NSW A inc Asbestos AS4964
Mell	Melbourne Laboratory - NATA Site # 1254 & 14271													Х		Х
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Χ										
Pert	h Laboratory - N	NATA Site # 237	736													
10	TP06-0.4-0.6	Nov 05, 2019		Soil	S19-No06614								Х			Х
11	BH07-0.0-0.2	Nov 05, 2019		Soil	S19-No06615		Х					Х	Х		Х	
12	BH07-0.2-0.4	Nov 05, 2019		Soil	S19-No06616								Х			Х
13	BH08-0.0-0.2	Nov 05, 2019		Soil	S19-No06617		Х					Х	Х		Х	
14	BH09-0.0-0.3	Nov 05, 2019		Soil	S19-No06618		Х					Х	Х		Х	
15	BH10-0.0-0.2	Nov 05, 2019		Soil	S19-No06619		Х					Х	Х		Х	
16	BH10-0.2-0.4	Nov 05, 2019		Soil	S19-No06620								Х			Х
17	BH11-0.0-0.1	Nov 05, 2019		Soil	S19-No06621		Х					Х	Х		Х	
18	TP12-0.0-0.1	Nov 05, 2019		Soil	S19-No06622		Х					Х	Х		Х	\sqcup
19	TP12-0.1-0.3	Nov 05, 2019		Soil	S19-No06623								Х			Х
20	TP13-0.0-0.15	Nov 05, 2019		Soil	S19-No06624		Х					Х	Х		Х	
21	TP14-0.0-0.2	Nov 05, 2019		Soil	S19-No06625		Х					Х	Х		Х	

Page 8 of 14



Order No.:

Report #:

Phone:

Fax:

Melbourne 6 Monterey Road Dandenong South VIC 3175 Phone: +61 3 8564 5000

NATA # 1261 Site # 1254 & 14271

686434

1800 288 188

02 9675 1888

Sydney Unit F3, Building F 16 Mars Road 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

Nov 5, 2019 6:10 PM

Nov 12, 2019

Steven Wallace

5 Day

Company Name:

Address:

Alliance Geotechnical

10 Welder Road Seven Hills

NSW 2147

Project Name:

NORTH BANKSTOWN PUBLIC SCHOOL

Project ID: 9150

Eurofins Analytical Services Manager: Andrew Black

Contact Name:

Received:

Priority:

Due:

		Sample	e Detail		% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Mell	oourne Laborate	ory - NATA Site # 12	54 & 14271										Х		Х
Syd	ney Laboratory	- NATA Site # 18217	•			Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site # 2079	94		Х										
Pert	h Laboratory - I	NATA Site # 23736													
22	TP14-1.3-1.5	Nov 05, 2019	Soil	S19-No06626	Х							Х	Х		Х
23	BH15-0.0-0.1	Nov 05, 2019	Soil	S19-No06627		Х					Х	Х		Х	
24	BH16-0.0-0.1	Nov 05, 2019	Soil	S19-No06628		Х					Х	Х		Х	
25	BH16-0.1-0.3	Nov 05, 2019	Soil	S19-No06629								Х			Х
26	BH17-0.0-0.1	Nov 05, 2019	Soil	S19-No06630		Х					Х	Х		Х	
27	BH18-0.0-0.1	Nov 05, 2019	Soil	S19-No06631		Х					Х	Х		Х	
28	BH19-0.0-0.2	Nov 05, 2019	Soil	S19-No06632		Х					Х	Х		Х	
29	BH19-0.3-0.5	Nov 05, 2019	Soil	S19-No06633								Х			Х
30	TP20-0.0-0.2	Nov 05, 2019	Soil	S19-No06634		Х					Х	Х		Х	
31	TP20-0.3-0.5	Nov 05, 2019	Soil	S19-No06635								Х			Х
32	TP21-0.0-0.2	Nov 05, 2019	Soil	S19-No06636		Х					Х	Х		Х	
33	TP21-0.4-0.6	Nov 05, 2019	Soil	S19-No06637								Х			Х

Page 9 of 14



Order No.:

Report #:

Phone:

Fax:

Melbourne 6 Monterey Road Dandenong South VIC 3175

Phone: +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271

686434

1800 288 188

02 9675 1888

Sydney Unit F3, Building F Brisbane 16 Mars Road

1/21 Smallwood Place Murarrie QLD 4172 Lane Cove West NSW 2066 Phone: +61 7 3902 4600 Phone: +61 2 9900 8400 NATA # 1261 Site # 20794 NATA # 1261 Site # 18217

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

Company Name:

Alliance Geotechnical

10 Welder Road

Seven Hills

NSW 2147

Project Name: Project ID:

Address:

NORTH BANKSTOWN PUBLIC SCHOOL

9150

Received: Nov 5, 2019 6:10 PM

Due: Nov 12, 2019

Priority: 5 Day

Contact Name: Steven Wallace

Eurofins Analytical Services Manager: Andrew Black

		Sai	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Mell	oourne Laborat	ory - NATA Site	# 1254 & 142	271										Х		Х
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Х										
Pert	h Laboratory - I	NATA Site # 237	36													
34	TP22-0.0-0.2	Nov 05, 2019		Soil	S19-No06638		Х					Х	Х		Х	
35	TP23-0.0-0.2	Nov 05, 2019		Soil	S19-No06639		Х					Х	Х		Х	
36	TP24-0.0-0.2	Nov 05, 2019		Soil	S19-No06640		Х					Х	Х		Х	
37	TP24-0.8-1.0	Nov 05, 2019		Soil	S19-No06641	Х							Х	Х		Х
38	BH25-0.0-0.3	Nov 05, 2019		Soil	S19-No06642		Х					Х	Х		Х	
39	BH26-0.0-0.2	Nov 05, 2019		Soil	S19-No06643		Х					Х	Х		Х	
40	BH26-0.2-0.4	Nov 05, 2019		Soil	S19-No06644								Х			Х
41	BH27-0.0-0.2	Nov 05, 2019		Soil	S19-No06645		Х					Х	Х		Х	
42	BH28-0.0-0.2	Nov 05, 2019		Soil	S19-No06646		Х					Х	Х		Х	
43	DUP-01	Nov 05, 2019		Soil	S19-No06647					Х			Х			
44	DUP-02	Nov 05, 2019		Soil	S19-No06648					Х			Х			
45	TP14-FCS	Nov 05, 2019		Building	S19-No06649			х								

Page 10 of 14



Melbourne 6 Monterey Road Dandenong South VIC 3175 Phone: +61 3 8564 5000

NATA # 1261 Site # 1254 & 14271 Sydney Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone: +61 2 9900 8400 NATA # 1261 Site # 18217

Received:

Priority:

Contact Name:

Due:

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:

Address:

Alliance Geotechnical

10 Welder Road Seven Hills

NSW 2147

Project Name:

Project ID:

NORTH BANKSTOWN PUBLIC SCHOOL

9150

Report #: 686434 Phone: 1800 288 188 Fax:

Order No.:

02 9675 1888

Eurofins Analytical Services Manager: Andrew Black

5 Day

Nov 5, 2019 6:10 PM

Nov 12, 2019

Steven Wallace

		Sar	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	HOLD	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Mell	oourne Laborato	ory - NATA Site	# 1254 & 142	.71										Х		Х
Syd	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
Bris	bane Laborator	y - NATA Site #	20794			Х										
Pert	h Laboratory - N	ATA Site # 237	36													
				Materials												
46	BH25-FCS	Nov 05, 2019		Building Materials	S19-No06650			х								
47	TRIPSPIKE1	Nov 05, 2019		Water	S19-No06651						Х					
48	TRIPBLANK1	Nov 05, 2019		Water	S19-No06652						Х					
49	TP01-0.1-0.3	Nov 05, 2019		Soil	S19-No06653				Х							
50	TP03-0.15-0.3	Nov 05, 2019		Soil	S19-No06654				Х							
51	BH09-0.3-0.5	Nov 05, 2019		Soil	S19-No06655				Х							
52	BH11-0.1-0.3	Nov 05, 2019		Soil	S19-No06656				Х							
53	TP13-0.15-0.3	Nov 05, 2019		Soil	S19-No06657				Х							
54	TP14-0.8-1.0	Nov 05, 2019		Soil	S19-No06658				Х							
55	BH15-0.1-0.3	Nov 05, 2019		Soil	S19-No06659				Х							

Page 11 of 14



Melbourne 6 Monterey Road Dandenong South VIC 3175

Phone: +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271

Sydney Unit F3, Building F 16 Mars Road Lane Cove West NSW 2066 Phone: +61 2 9900 8400 NATA # 1261 Site # 18217

Received:

Due:

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:

Alliance Geotechnical

10 Welder Road

Seven Hills

NSW 2147

Project Name:

Address:

NORTH BANKSTOWN PUBLIC SCHOOL

Project ID: 9150 Report #: 686434 Phone: 1800 288 188 Fax:

Order No.:

02 9675 1888

Priority: 5 Day **Contact Name:** Steven Wallace

Eurofins Analytical Services Manager: Andrew Black

Nov 5, 2019 6:10 PM

Nov 12, 2019

		Sa	mple Detail			% Clay	Asbestos - AS4964	Asbestos Absence /Presence	НОГД	Metals M8	втех	Eurofins mgt Suite B13	Moisture Set	Cation Exchange Capacity	Eurofins mgt Suite B7	Alliance ENM Exemption Suite 2014 NSW EPA inc Asbestos AS4964
Melb	ourne Laborato	ory - NATA Site	# 1254 & 1427	1										Х		Х
Sydi	ney Laboratory	- NATA Site # 1	8217				Х	Х	Х	Х	Х	Х	Χ	Х	Х	Х
Bris	oane Laborator	y - NATA Site #	20794			Х										
Pert	Laboratory - N	NATA Site # 237	36													
56	BH17-0.1-0.3	Nov 05, 2019	S	Soil	S19-No06660				Х							
57	BH18-0.1-0.3	Nov 05, 2019	S	Soil	S19-No06661				Х							
58	TP22-0.3-0.5	Nov 05, 2019	S	Soil	S19-No06662				Х							
59	TP23-0.3-0.5	Nov 05, 2019	S	Soil	S19-No06663				Х							
60	BH25-0.3-0.5	Nov 05, 2019	S	Soil	S19-No06664				Х							
Test	Counts					3	28	2	12	2	2	28	44	3	28	14

Page 12 of 14



Environment Testing

Internal Quality Control Review and Glossary

General

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

Holding Times

Please refer to '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 Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported. Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis grams per kilogram
Filter loading: fibres/100 graticule areas

Reported Concentration: fibres/mL Flowrate: L/min

Terms

ΑF

Dry Sample is dried by heating prior to analysis

LOR Limit of Reporting
COC Chain of Custody
SRA Sample Receipt Advice

ISO International Standards Organisation

AS Australian Standards

Date Reported: Nov 12, 2019

WA DOH Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated

Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)

NEPM National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)

ACM Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the

NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.

Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as

equivalent to "non-bonded / friable".

FA Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those

materials that do not pass a 7mm x 7mm sieve.

Friable Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is

outside of the laboratory's remit to assess degree of friability

Trace Analysis Analytical procedure used to detect the presence of respirable fibres in the matrix.

Eurofins Environment Testing Unit F3, Building F, 16 Mars Road, Lane Cove West, NSW, Australia, 2066
ABN: 50 005 085 521 Telephone: +61 2 9900 8400

Page 13 of 14

Report Number: 686434-AID



Environment Testing

Comments

Sample Integrity

Custody Seals Intact (if used)

Attempt to Chill was evident

Yes
Sample correctly preserved

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 N/A Not applicable

Asbestos Counter/Identifier:

Sayeed Abu Senior Analyst-Asbestos (NSW)

Authorised by:

Laxman Dias Senior Analyst-Asbestos (NSW)

Glenn Jackson General Manager

Final Report - this report replaces any previously issued Report

- Indicates Not Requested

Date Reported: Nov 12, 2019

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

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

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Report Number: 686434-AID



CERTIFICATE OF ANALYSIS

Work Order : ES1936614

Client : ALLIANCE GEOTECHNICAL

Contact : Enviro ALLIANCE GEO

Address : 10 Welder Road, Seven Hills, NSW

Telephone : ----

Project : 9150 North Bankstown Public School

Order number : ---C-O-C number : ----

Sampler ; A. Wallace, Stephen Wallace

Site : ----

Quote number : EN/222

No. of samples received : 2
No. of samples analysed : 2

Page : 1 of 2

Laboratory : Environmental Division Sydney

Contact : Customer Services ES

Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

Telephone : +61-2-8784 8555

Date Samples Received : 06-Nov-2019 13:45

Date Analysis Commenced : 08-Nov-2019

Issue Date : 12-Nov-2019 12:45



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

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

Celine Conceicao Senior Spectroscopist Sydney Inorganics, Smithfield, NSW

Page : 2 of 2 Work Order : ES1936614

Client : ALLIANCE GEOTECHNICAL
Project : 9150 North Bankstown Public School



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.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)		Clie	ent sample ID	DUP-1A	DUP-2A	 	
	Cli	ent sampli	ng date / time	05-Nov-2019 00:00	05-Nov-2019 00:00	 	
Compound	CAS Number	LOR	Unit	ES1936614-001	ES1936614-002	 	
				Result	Result	 	
EA055: Moisture Content (Dried @ 105-	-110°C)						
Moisture Content		1.0	%	13.6	11.4	 	
EG005(ED093)T: Total Metals by ICP-Al	ES						
Arsenic	7440-38-2	5	mg/kg	6	9	 	
Cadmium	7440-43-9	1	mg/kg	<1	<1	 	
Chromium	7440-47-3	2	mg/kg	18	16	 	
Copper	7440-50-8	5	mg/kg	27	11	 	
Lead	7439-92-1	5	mg/kg	54	39	 	
Nickel	7440-02-0	2	mg/kg	8	5	 	
Zinc	7440-66-6	5	mg/kg	59	35	 	
EG035T: Total Recoverable Mercury by	y FIMS						
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	 	

CHAIN OF CUSTODY RECORD

Psydney Laboratory
Unit F3 Bld.F, 16 Mars Rd, Lane Cove West, NSW 2066 02 9900 8400 Enviro Sample NSW@eurofins.com

■ Brisbane Laboratory
Unit 1, 21 Smallwood Pt., Murarrie, OLD 4172
07 3802 4800 EnviroSampleOLD@aurofins.com

Perth Laboratory
Unit 2, 91 Leach Highway, Kewdale WA 6105
08 9251 9500 EnviroSampleWA@eurofins.com

Melbourne Laboratory
2 Kingston Town Close, Oakleigh, VIC 3166
03 8664 5000 EnviroSample Vic@eurofins.com

10/12	Report No	1	Time	1	Date	D			1	8	Signature	DRW	DL NIT	SAD BHE MET LEEL VDF MLF DKM	INE INE	GAS				Received By	oratory use uniy
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		ナヘ						12	X		7	4	×	7	×	×	S	5/11/19	C	-0.0-	TPGI
ple Comments / Danger Goods Hazard Warning	Sample Comments / Dangerous Goods Hazard Warning	500				Ch	C	A	Ashest	AND CO	PC		0	PA	137		Matrix (Solid (S) Water (W))	Sampled Date/Time (dd/mm/yy hh:mm)		Client Sample ID	Clie
* Surcharges apply)	□Other (40mL VC 0mL PF/ (Glass c	1L Pla 250mL F 125mL F OmL Ami			A9	EC	_	us		Bs	ETA	CP	1+	EX	21+	(Note Vil				Quote ID No
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CHAIN OF CUSTODY RECORD

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bmission of samples	Eurofins mgt	Shipment		शिद्ध व	01 FIRE	91/16°	BUHER	BHU9	3 OHES	BIYUT	3 BHO.	5 Troop	1006	3	Quote ID No	Purchase Order	Special Directions	Phone No	Contact Name		Address	Company
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CHAIN OF CUSTODY RECORD

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Company	F)CLIANCE	Chec Herhorica 1	Project №	16	(といって				Project	Project Manager	S	mallace	Sib		Sampler(s)	F). WILLIAM	LiAMJ S.	Scally
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CONSTRUCTION OF THE PROPERTY O	1.8.421	ReportNe		Time		Date				Signature	Sign	WIL DRW	SYD BHE MEL PER ADL NTL DRW	- IN IN	IR I CAS				Received By	Received By Signature SYD SHE MEL PER ADL NTL DRW Signature
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Submission of samples to th	Latheratory Use Only		Method of Shipment		10	, co	7	ch .	Ü,	一種	TUNDERNIC	本	F32110SOINES	3	Quote ID Nº	Purchase Order	Special Directions	Phone No.	Contact Name		Address	Company
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4 : 00pm Real formers PHRE FULLIAND FO ☐ Melbourne Laboratory
2 Kingeton Town Close, Oakleigh, VIC 3166
03 8564 5000 ErwingSampleVic@eurofes.com A. WestAM), S. Scully. nail for Results Anviru@ally60.10m.60. admin Pullywer un Cl Overnight (9am)* □ 1 Day* Time Time - Other 2111/14. 08 9251 9600 EnviroSampleWA@eurofins.com Unil 2, 91 Leach Highway, Kewdale WA 6105 Environmental Division Sydney Work Order Reference Work Order Reference elephone: +61-2-9784 8555 S. WALALE Signature 07 3902 4600 EnviroSampleQLD@eurofins.com EDD Format (ESdat, EQuIS, Custom) 17. WILLIAMS nux(an) public schools. SZULZW North bunlayown Unit F3 Bld.F, 16 Mars Rd, Lane Cove West, NSW 2056 Name 0/0 Postal HUL Project Name Project N≗. Hand Delivered Matrix (Solid (S) Water (W)) Ŝ **を** 人 Total Counts **ALLIANCE GEOTECHNICAL** 10 WELDER ROAD, SEVEN BH26-0.0-0.2 5/11/19 CHAIN OF CUSTODY RECORD
ANN OF CUSTODY RECORD Sampled Date/Time (dd/mm/yy hh:mm) **Alexander Williams** *0418 343 007 らせれる ~ o ~ o ~ o ~ o ~ o ~ HILLS NSW | th c-2 0 - 36kg D 127 - 0.0-0.5 Condination Client Sample (D DUP - 1A Courier (# 1014-155 19-0MO Address Quote ID Ne <u>(a)</u> Θ .

Unit 1, 21 Smallwood Pt., Murarrie, QLD 4172

☐ Brisbane Laboratory

Sydney Laboratory

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ossonan wenterpling Environment Testing. Australia Pty Ltd trading as Eurofins | mgt

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PROUCL OUTPUT

		Α	В	С	D	E UCL Statis	F stics for Unc	G ensored Full	H Data Sets	I	J	K	L		
1						002 01411	J.100 101 0110	3110010a 1 a.i							
Date Time of Computation ProJUCL 5.13006/2020 6.0008 PM		ı	Iser Selec	ted Ontions											
Final Fine Nori-Sheet_a xis OFF						30/06/2020 6	S:00:08 PM								
Full Procision OFF		Date/1		•			7.00.00 T W								
Confidence Coefficient 95%						_a.xis									
Number of Bootstrap Operations 2000		Confidence Coefficient 050/													
10															
TRH > C16-C34	8	Number of B	ootstrap C	perations	2000										
TRI > C16-C34	9														
Total Number of Observations 19 19 19 19 19 19 19 1	10	TD11: 040 00													
13	11	1 RH >C16-C34	4												
13	12														
19	13							Statistics							
	14	4													
15	15									Numbei	of Missing (-		
17	16					Minimum	100					Mean	285.7		
	17					Maximum							190		
	18					SD	345.3				Std. E	rror of Mean	65.25		
Normal GOF Test	19				Coefficient	of Variation	1.208					Skewness	4.085		
Normal GOF Test Shapiro Wilk Test Statistic 0.513 Shapiro Wilk GOF Test 23 5% Shapiro Wilk Critical Value 0.924 Data Not Normal at 5% Significance Level 24 Lilliefors Test Statistic 0.306 Lilliefors GOF Test Data Not Normal at 5% Significance Level 25 5% Lilliefors Critical Value 0.164 Data Not Normal at 5% Significance Level 26 Data Not Normal at 5% Significance Level 27 Assuming Normal Distribution 95% UCLs (Adjusted for Skewness) 46.9 95% Modified-t UCL (Johnson-1978) 46.9 95% Modified-t UCL (Johnson-1978) 405.3	20														
22 Shapiro Wilk Test Statistic	21	Normal GOF Test													
23 5% Shapiro Wilk Critical Value 0.924		Observing Wills Total Obstication 0.510													
Lilliefors Test Statistic 5% Lilliefors Critical Value Data Not Normal at 5% Significance Level				5% S	hapiro Wilk C	ritical Value	0.924		Data N	ot Normal at	5% Significar	nce Level			
Data Not Normal at 5% Significance Level					Lilliefors T	est Statistic	0.306			Lilliefors	GOF Test				
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29 95% Normal UCL 95% UCLs (Adjusted for Skewness) 30 95% Student's-t UCL 396.9 95% Adjusted-CLT UCL (Chen-1995) 446.9 311 95% Modified-t UCL (Johnson-1978) 405.3 312 95% Modified-t UCL (Johnson-1978) 405.3 32 33 Gamma GOF Test 34 A-D Test Statistic 1.604 Anderson-Darling Gamma GOF Test 35 5% A-D Critical Value 0.76 Data Not Gamma Distributed at 5% Significance Level 36 K-S Test Statistic 0.185 Kolmogorov-Smirnov Gamma GOF Test 37 5% K-S Critical Value 0.168 Data Not Gamma Distributed at 5% Significance Level 38 Data Not Gamma Distributed at 5% Significance Level 39 39 30 30 30 30 30 30															
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Second State Sec				95% No	ormal UCL					6 UCLs (Adiu	sted for Ske	wness)			
Significance Sig						dent's-t UCL	396.9						446.9		
Samma GOF Test Samma GOF Test							000.0								
33 Gamma GOF Test 34 A-D Test Statistic 1.604 Anderson-Darling Gamma GOF Test 35 5% A-D Critical Value 0.76 Data Not Gamma Distributed at 5% Significance Level 36 K-S-Test Statistic 0.185 Kolmogorov-Smirnov Gamma GOF Test 37 5% K-S Critical Value 0.168 Data Not Gamma Distributed at 5% Significance Level 38 Data Not Gamma Distributed at 5% Significance Level 40 Gamma Statistics 41 k hat (MLE) 1.775 k star (bias corrected MLE) 1.609 42 Theta hat (MLE) 161 Theta star (bias corrected MLE) 177.6 43 nu hat (MLE) 99.39 nu star (bias corrected) 225.3 44 MLE Mean (bias corrected) 285.7 MLE Sd (bias corrected) 225.3 45 Adjusted Level of Significance 0.0404 Adjusted Chi Square Value (0.05) 69.19 46 Adjusted Level of Significance Incomman Gamma Distribution 95% Approximate Gamma UCL (use when n>=50)) 371.9 95% Adjusted Gamma UCL (use when n<=50)										30 70 Wicami		11110011 1070)			
A-D Test Statistic 1.604 Anderson-Darling Gamma GOF Test							Gamma (OF Test							
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So So So So So So So So	35							U					ei		
Data Not Gamma Distributed at 5% Significance Level 39 40 Camma Statistics 1.775 k star (bias corrected MLE) 1.609 42 Theta hat (MLE) 161 Theta star (bias corrected MLE) 177.6 43 nu star (bias corrected) 99.39 nu star (bias corrected) 90.08 44 MLE Mean (bias corrected) 285.7 MLE Sd (bias corrected) 225.3 45 Approximate Chi Square Value (0.05) 69.19 46 Adjusted Level of Significance 0.0404 Adjusted Chi Square Value 68.06 47 48 Assuming Gamma Distribution 371.9 95% Adjusted Gamma UCL (use when n<50) 378.1 50 51 Cognormal GOF Test 52 Shapiro Wilk Test Statistic 0.887 Shapiro Wilk Critical Value 0.924 Data Not Lognormal at 5% Significance Level 54 Lilliefors Test Statistic 0.144 Lilliefors Lognormal GOF Test 50 Cognormal GOF Test Cognormal	36									_					
Gamma Statistics Samma Statistic	37										ed at 5% Sig	nificance Lev	ei 		
40 Gamma Statistics 41 k hat (MLE) 1.775 k star (bias corrected MLE) 1.609 42 Theta hat (MLE) 161 Theta star (bias corrected MLE) 177.6 43 nu hat (MLE) 99.39 nu star (bias corrected) 90.08 44 MLE Mean (bias corrected) 285.7 MLE Sd (bias corrected) 225.3 45 Approximate Chi Square Value (0.05) 69.19 46 Adjusted Level of Significance 0.0404 Adjusted Chi Square Value 68.06 47 Assuming Gamma Distribution 49 95% Approximate Gamma UCL (use when n>=50)) 371.9 95% Adjusted Gamma UCL (use when n<50)	38				Da	ta Not Gami	ma Distribute	ed at 5% Sig	Initicance L	evel 					
K hat (MLE) 1.775	39														
Theta hat (MLE) 161 Theta star (bias corrected MLE) 177.6 43	40							Statistics							
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Approximate Chi Square Value (0.05) 69.19 Adjusted Level of Significance 0.0404 Adjusted Chi Square Value 68.06 Assuming Gamma Distribution 95% Approximate Gamma UCL (use when n>=50)) 371.9 95% Adjusted Gamma UCL (use when n<50) 378.1 Lognormal GOF Test Shapiro Wilk Test Statistic 0.887 Shapiro Wilk Lognormal GOF Test 52 Shapiro Wilk Critical Value 0.924 Data Not Lognormal at 5% Significance Level Lilliefors Test Statistic 0.141 Lilliefors Lognormal GOF Test	44			М	LE Mean (bia	s corrected)	285.7				-	*			
Adjusted Level of Significance 0.0404 Adjusted Chi Square Value 68.06 Assuming Gamma Distribution Assuming Gamma Distribution 371.9 95% Adjusted Gamma UCL (use when n<50) 378.1 Lognormal GOF Test Shapiro Wilk Test Statistic 0.887 Shapiro Wilk Lognormal GOF Test S% Shapiro Wilk Critical Value 0.924 Data Not Lognormal at 5% Significance Level Lilliefors Test Statistic 0.141 Lilliefors Lognormal GOF Test	45									Approximate	Chi Square	Value (0.05)	69.19		
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Lognormal GOF Test Shapiro Wilk Test Statistic 0.887 Shapiro Wilk Lognormal GOF Test Shapiro Wilk Critical Value 0.924 Data Not Lognormal at 5% Significance Level Lilliefors Test Statistic 0.141 Lilliefors Lognormal GOF Test		95%	Approxim	nate Gamma	UCL (use wl	hen n>=50))	371.9		95% A	djusted Gamr	na UCL (use	when n<50)	378.1		
Lognormal GOF Test							1					ļ			
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53 5% Shapiro Wilk Critical Value 0.924 Data Not Lognormal at 5% Significance Level 54 Lilliefors Test Statistic 0.141 Lilliefors Lognormal GOF Test				S	Shapiro Wilk T	est Statistic	0.887		Sha	piro Wilk Log	normal GOF	Test			
53 Lilliefors Test Statistic 0.141 Lilliefors Lognormal GOF Test 54 Date appear a program a progr					<u> </u>										
50/ Lilliafore Critical Value 0.454 Data appear Language at FW Circlifform and Language					•										
55 J															
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	Α	В	С	D	Е	F	G	Н		J	K	L			
56				Data a	appear Appro	ximate Logn	ormal at 5%	Significance	e Level						
57															
58							l Statistics								
59					Logged Data	4.605					logged Data	5.348			
60			N	laximum of l	Logged Data	7.55				SD of	logged Data	0.689			
61															
62					Assı	ıming Logno	rmal Distrib	ution							
63	95% H-UCL 352.4 90% Chebyshev (MVUE) UCL 374.0														
64				•	(MVUE) UCL	424.8			97.5%	Chebyshev (MVUE) UCL	494.5			
65			99% (Chebyshev ((MVUE) UCL	631.5									
66															
67	Nonparametric Distribution Free UCL Statistics														
68	Data appear to follow a Discernible Distribution at 5% Significance Level														
69															
70	Nonparametric Distribution Free UCLs														
71					5% CLT UCL	393				95% Ja	ckknife UCL	396.9			
72			95%	Standard Bo	ootstrap UCL	393		otstrap-t UCL	558.6						
73			9	5% Hall's Bo	ootstrap UCL	801.2		401.1							
74			(95% BCA Bo	ootstrap UCL	485.7									
75			90% Ch	ebyshev(Me	an, Sd) UCL	481.5		an, Sd) UCL	570.1						
76			97.5% Ch	ebyshev(Me	an, Sd) UCL	693.2			99% Cł	nebyshev(Me	an, Sd) UCL	935			
77															
78						Suggested	UCL to Use								
79					95% H-UCL	352.4									
80															
81	I	Note: Sugge:	•	•	ction of a 95%	•		•			ate 95% UCL				
82					ations are bas	•	•	•							
83		These recor	mmendations	are based ι	upon the resu	Its of the sim	ulation studi	es summariz	ed in Singh,	, Maichle, and	d Lee (2006).				
84	Но	wever, simu	lations result	s will not cov	ver all Real W	orld data se	ts; for additio	nal insight th	ne user may	want to cons	ult a statistici	an.			
85															
86			Prol	JCL comput	tes and outpu	ıts H-statisti	c based UCL	s for historic	cal reasons	only.					
87		H-statistic	often results	s in unstable	e (both high a	nd low) valu	es of UCL95	as shown i	n examples	in the Techn	ical Guide.				
88			lt	is therefore	recommende	ed to avoid t	he use of H-	statistic bas	ed 95% UCI	Ls.					
89	Us	e of nonpara	ametric meth	ods are pre	ferred to com	pute UCL95	for skewed	data sets w	hich do not t	follow a gam	ma distributio	n.			
90															

	A B C	D E	F stics for Unc	G ensored Ful	H I Data Sets	I	J	K	L				
1		001 0440	7.100 101 0110	onoorou r ui	. Data coto								
2	User Selected Options												
3	Date/Time of Computation	ProUCL 5.130/06/2020 5	:56:43 PM										
4	Francisco Wart-Chart via												
5	5 Full Procision OFF												
6	Confidence Coefficient												
7	Number of Bootstrap Operations	95%											
8	Number of Bootstrap Operations	2000											
9													
10	TRH >C10-C16												
11	1117010-010												
12			General	Statistics									
13	Total	Number of Observations	26	otationes		Numbo	r of Distinct (Observations	4				
14	Total	Number of Observations	20					Observations	0				
15		Minimum	50			Number	or wissing c	Mean	56.81				
16		_							50.61				
17		Maximum	130				Ot 1 -	Median					
18		SD Coefficient of Variation	20.16 0.355				Std. E	error of Mean	3.954				
19					Skewness	2.975							
20													
21	Normal GOF Test												
22		Shapiro Wilk Test Statistic	0.389				lk GOF Test						
23	5% S	hapiro Wilk Critical Value	0.92		Data No		5% Significar	nce Level					
24		Lilliefors Test Statistic	0.517				GOF Test						
25													
26		Data Not	Normal at 5	% Significa	nce Level								
27													
28			suming Norr	nal Distribut									
29	95% No	ormal UCL					sted for Ske	-					
30		95% Student's-t UCL	63.56					(Chen-1995)	65.78				
31						95% Modifie	ed-t UCL (Jo	hnson-1978)	63.95				
32													
33			Gamma (GOF Test									
34		A-D Test Statistic	7.908		Ander	son-Darling	Gamma GC	F Test					
35		5% A-D Critical Value	0.744	D	ata Not Gam	ma Distribut	ed at 5% Sig	nificance Lev	el				
36		K-S Test Statistic	0.523		Kolmog	orov-Smirno	ov Gamma G	OF Test					
37		5% K-S Critical Value	0.171	D	ata Not Gam	ma Distribut	ed at 5% Sig	nificance Lev	el				
38		Data Not Gamn	na Distribute	ed at 5% Sig	nificance Le	vel							
39													
40			Gamma	Statistics									
41		k hat (MLE)	12.9			k :	11.43						
42		Theta hat (MLE)	4.405			Theta	Theta star (bias corrected MLE) 4.9						
43		nu hat (MLE)	670.6		as corrected)	594.6							
44	M	LE Mean (bias corrected)	56.81	MLE Sd (bias corrected) 10									
45						Approximate	Chi Square	Value (0.05)	539				
46	Adjus	sted Level of Significance	0.0398			Ad	djusted Chi S	Square Value	535.5				
47													
48		Ass	suming Gam	ma Distribu	tion								
49	95% Approximate Gamma	UCL (use when n>=50))	62.66		95% Ad	justed Gamr	na UCL (use	when n<50)	63.07				
50		,,		<u> </u>			<u> </u>						
			Lognormal	GOF Test									
51	S	Shapiro Wilk Test Statistic	0.392		Shar	oiro Wilk Loc	normal GOF	- Test					
52		hapiro Wilk Critical Value	0.92	Data Not Lognormal at 5% Significance Level									
53	****	Lilliefors Test Statistic	0.52	Lilliefors Lognormal GOF Test									
54	<u> </u>	i% Lilliefors Critical Value	0.17		Data Not Lognormal at 5% Significance Level								
55			J		_ = = = = = = = = = = = = = = = = = = =	- J							

	Α	В		С		D		Е	F		G		Н	I			J		K	L
56							Dat	a Not L	.ognormal	at 5	5% Signific	ance L	_evel							
57																				
58											Statistics									
59								d Data	3.912							M			ed Data	
60					Maxim	ium of l	Logge	d Data	4.868								SD of	logge	ed Data	0.256
61																				
62	Assuming Lognormal Distribution																			
63	95% H-UCL 61.85 90% Chebyshev (MVUE) UCL														64.95					
64	95% Chebyshev (MVUE) UCL 68.84 97.5% Chebyshev (MVUE) UCL												E) UCL	74.24						
65	99% Chebyshev (MVUE) UCL 84.85																			
66																				
67	Nonparametric Distribution Free UCL Statistics																			
68	Data do not follow a Discernible Distribution (0.05)																			
69																				
70	Nonparametric Distribution Free UCLs																			
71								T UCL	63.31										ife UCL	
72						dard Bo			N/A		95% Bootstrap-t UCL								N/A	
73				!	95% H	all's Bo	ootstra	p UCL	N/A					9	5%	Percer	ntile Bo	ootstr	ap UCL	N/A
74								p UCL	N/A											
75				90% C	hebysh	nev(Me	an, S	d) UCL	68.67					959	% Ch	nebysh	nev(Me	an, S	Sd) UCL	74.04
76				97.5% C	hebysł	nev(Me	an, S	d) UCL	81.5					999	% Ch	nebysh	nev(Me	an, S	Sd) UCL	96.15
77										•										
78									Suggeste	ed U	ICL to Use									
79					9	5% Stu	ident's	-t UCL	63.56							or 9	€ 35% Mo	odifie	d-t UCL	63.95
80										•										
81		Note: Sug	ggesti	ions regar	ding th	e selec	ction c	of a 95%	6 UCL are	prov	vided to hel	lp the ι	user to s	select t	he n	nost ap	ppropri	iate 9	5% UCL	
82					Recom	nmenda	ations	are bas	sed upon d	lata	size, data	distribu	ution, ar	nd ske	vnes	SS.				
83		These re	ecomi	mendation	is are t	oased ι	upon t	he resu	lts of the s	imul	lation studi	es sun	nmarize	d in Si	ngh,	, Maich	hle, an	d Lee	(2006).	
84	Но	wever, si	imula	tions resu	lts will	not cov	ver all	Real W	orld data	sets;	; for additio	nal ins	sight the	user r	nay	want t	to cons	sult a	statistici	ian.
85	-																			