

# PROPOSED CHANGES APPLICATION REPORT Appendix 1 - FCA Trial Pitting Interpretative Technical Note

# **Drax Bioenergy with Carbon Capture and Storage**

Document Reference Number: 8.5.3.1 Applicant: Drax Power Limited PINS Reference: EN010120



REVISION: 01 DATE: December 2022 DOCUMENT OWNER: WSP UK Ltd AUTHOR: L. McFadden APPROVER: R. Lindsay PUBLIC

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# 1. INTRODUCTION

- 1.1.1. The Flood Risk Assessment (FRA) (APP-160) identifies that floodplain compensation will be required to mitigate the impacts of the Proposed Scheme in the future scenario. This technical note reports on an intrusive ground investigation undertaken to determine the suitability of land at Drax Power Station identified for the provision of a Flood Compensation Area (FCA) as part of the Development Consent Order (DCO) (EN010120). The area referred to herein as 'the Site' is as shown on Plate 1.1 below.
- 1.1.2. A Preliminary Risk Assessment (**APP-156** and **APP-157**) was undertaken for area within the Order Limits and should be referenced for a full understanding of the Proposed Scheme along with the Flood Risk Assessment Extracts (Appendix 5 of the Proposed Changes Application Report (PCAR) (document reference 8.5.3.5)).
- 1.1.3. During a meeting with the Environment Agency (EA) on 23 August 2022 it was stated that it was required to demonstrate that the land is suitable for use as floodplain compensation. Development of the FCA would involve intentionally introducing flood waters to an area not previously within the floodplain, therefore an intrusive investigation was required to determine ground conditions and assess the suitability of soils for this purpose.

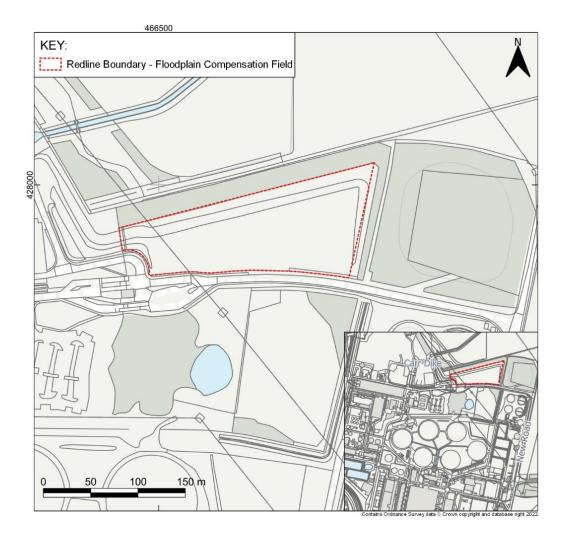


Plate 1.1 - Site Location and Boundary

### 1.2. PROPOSED WORKS

1.2.1. As shown in **Plate 1.2** and **Plate 1.3** below, it is proposed to lower the land along the north of the Site (shown in red) with a gradual slope to create additional floodplain capacity taking climate change into account (1 in 100 and 1 in 200 year storm events). Surplus material will be placed appropriately at the top of the embankment ( shown in green in **Plate 1.3**) to form a landscaping bund with the aim of avoiding off-site disposal and ensuring sustainable re-use of soils.

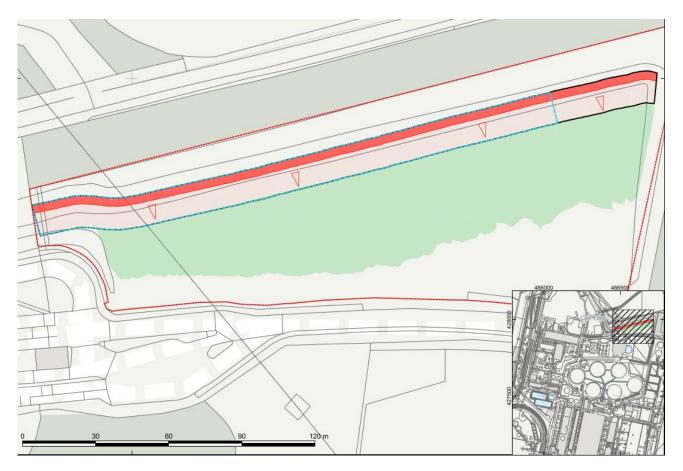


Plate 1.2 - Indicative Flood Compensation Area

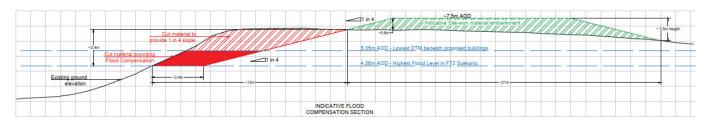


Plate 1.3 - Indicative Flood Compensation Section

## 1.3. OBJECTIVES

1.3.1. The following objectives were determined:

- a. Undertake one day of trial pitting to determine ground conditions and assess potential risks to receptors including human health and controlled waters associated with the proposed works;
- b. Undertake a Preliminary Waste Assessment (should materials be found to be unsuitable for re-use); and
- c. Provide recommendations for further works and potential remedial measures, if required.

# 2. SITE DESCRIPTION

2.1.1. The Site is roughly rectangular in shape and comprises a grassed field. The Site is within the ownership of Drax Power Ltd however it is used intermittently for the grazing of sheep by a tenant farmer. The Site is generally level with the exception of a steep embankment running along the length of and sloping down towards the northern boundary. The topographical survey of the proposed FCA, shows that the existing ground levels vary between approximately 3.3 mAOD and approximately 6.6 mAOD. From the top of the embankment the Site slopes gently to the south and east. The Site is bound to the north and east by a strip of woodland. New Road Landfill lies beyond the trees immediately to the east. Drax Power Station lies to the west and south.

### 2.2. BACKGROUND AND SITE HISTORY

2.2.1. Historical mapping (included within the Preliminary Risk Assessment (APP-156 and APP-157)) shows the Site to have remained as undeveloped open fields and agricultural land until the late 1980s when infrastructure associated with the construction of Drax Power Station is shown. **Plate 2.1** below shows the Site was adjacent to the floodplain of Carr Dike. **Plate 2.2** shows a drain just to the north of the Site along with contours indicating earthworks had taken place in the location of the current embankment which may be associated with infrastructure works for Drax Power Station on the area adjacent to the west.

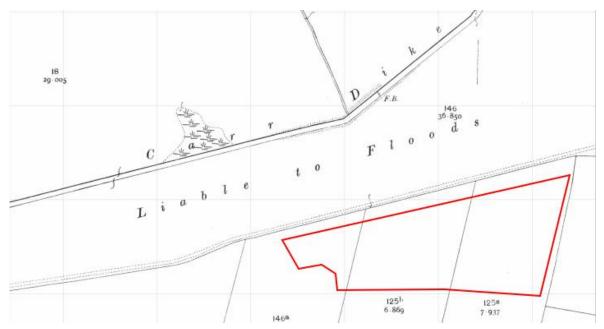


Plate 2-1 - Historical Map Dating to 1907

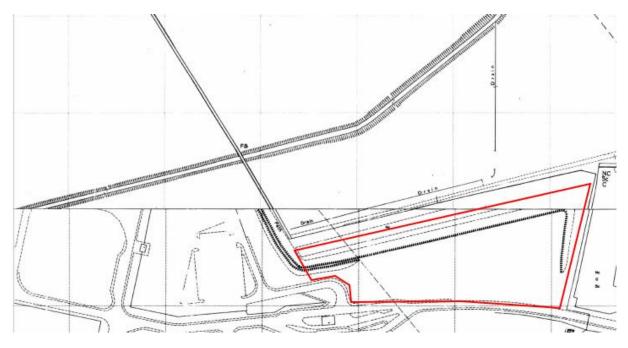


Plate 2.2 - Historical Map Dating to 1989-1994. Southern section dates to 1994

### 2.3. GEOLOGY AND HYDROGEOLOGY

- 2.3.1. Geological mapping indicates that the Site is underlain by superficial deposits including Alluvium (on the west of the Site only) and the Hemingbrough Glaciolacustrine Formation. Bedrock geology comprises the Sherwood Sandstone Group. The closest British Geological Survey (BGS) borehole log located approximately 40m north of the site (BGS ref: SE62NE123) encountered weathered sandstone of the Sherwood Sandstone Group at 18.75m below ground level (m bgl).
- 2.3.2. The Alluvium is classified as a Secondary A Aquifer and Hemingbrough Glaciolacustrine Formation is classified as an Unproductive Strata by the EA. The Sherwood Sandstone Group is classified as a Principal Aquifer.
- 2.3.3. The nearest surface water feature is Carr Dike located approximately 115m to the north, and ultimately flowing to the River Ouse, tidally influenced.

# 3. INTRUSIVE INVESTIGATION

### 3.1. COMPLETED WORKS

- 3.1.1. The ground investigation works were completed on 18 October 2022. To meet the objectives listed above, the scope of works of the investigation comprised the following:
  - a. Service clearance and surveying of exploratory hole locations by a specialist subcontractor;
  - b. The advancement of six trial pits to a maximum depth of 3.8m below ground level (bgl);
  - c. Collection of soil samples for chemical laboratory testing;
  - d. Backfill of each trial pit upon completion; and
  - e. Chemical analysis of soil samples for a suite of contaminants and Waste Acceptance Criteria (WAC) testing at a MCERTS accredited laboratory.
- 3.1.2. An exploratory hole location plan is included as Figure 1 in **Appendix A**.

### 3.2. METHODOLOGY

- 3.2.1. Trial pits were dug mechanically with a JCB 3CX, using a two foot (610mm) toothless bucket. Trial pits were backfilled with their arisings (in reverse order) on completion and left slightly mounded to allow for future settlement. Trial pits were located to provide good coverage, where access was possible (due to steepness of the slope or vegetation).
- 3.2.2. A trial pit location plan is contained within **Appendix A**. Exploratory hole logs are presented in **Appendix C** and trial pit photographs are included in **Appendix D**.

### 3.3. LABORATORY TESTING – SOIL AND SOIL LEACHATE

- 3.3.1. All soil samples were taken with due regard to industry best practice with procedures designed and implemented to minimise the potential for cross-contamination. No geotechnical laboratory testing has been undertaken as part of this investigation.
- 3.3.2. A total of 12 environmental soil samples underwent analytical testing. Samples were tested for determinants as summarised in **Table 3.1**. Analysis was undertaken by ALS Environmental (MCERTS accredited laboratory). Soil laboratory testing results are presented within **Appendix E**.

### Table 3.1 - Summary of Analytical Testing

Determinant(s) Test	No. of samples scheduled
Soil	
Asbestos identification (further quantification analysis if present)	10 (1)
Heavy metals (arsenic, barium, beryllium, cadmium, chromium III, chromium VI, copper, lead, mercury, nickel, selenium, vanadium, zinc)	12
Polycyclic Aromatic Hydrocarbons (PAHs)	12
Total Petroleum Hydrocarbons (TPH CWG) including BTEX, MTBE and TAME	12
Phenols	12
Cyanide (free & complex)	12
Ammoniacal Nitrogen as N	12
Volatile organic compounds (VOCs)	12
Semi-volatile organic compounds (SVOCs)	12
Waste Acceptance Criteria (WAC)	12
Soil Leachate Suite (similar to soil testing suite above)	5

### 3.4. GROUND CONDITIONS

3.4.1. A summary of the ground conditions encountered during the ground investigation is provided below in **Table 3.2**. Trial pits were excavated into a sloping surface, the depths were therefore recorded from the upper (highest) end of the slope.

Stratum	Top Depth (m bgl)	Base Depth (m bgl)	Top Level (mAOD)	Base Level (mAOD)	Typical Description
Made Ground	Ground Level	1.20 to 2.80 (3.80)	6.57 to 6.05 (embankme nt top) 4.62 to 4.40 (embankme nt slope)	3.28 to 2.60	Grass over soft dark brown silty sandy CLAY with frequent rootlets. (Made Ground Topsoil) Firm brown sandy slightly gravelly CLAY. Gravel of sub-angular to sub- rounded quartzite, flint, mudstone, chalk and rare timber. Occasional organic plant matter.
Alluvium <sup>1</sup>	1.70 to 2.10	0.30 to 0.50	3.28 to 2.60	2.78 to 2.30	Soft grey sandy slightly gravelly CLAY or silty gravelly organic SAND. Inclusions of relic rootlets and relic plant matter.
Hemingbr ough Glaciolac ustrine Formation	Not proven (3.60)	Not proven (1.30)	3.25 to 2.30	Not proven (1.20)	Firm grey mottled brown slightly silty slightly gravelly laminated CLAY. Gravel of sub- angular to sub- rounded fine to course quartzite and mudstone.
	dicate maxin		oven depth.		

### Table 3.2 - Summary of Ground Conditions

#### MADE GROUND

- 3.4.2. Made Ground was encountered at each of the six locations, encountered from ground level at each location to a proven base depth varying between 1.20 and 2.80 m bgl (3.28 to 2.60 mAOD). The base of the Made Ground was not proven at TP01 to a depth of 3.80 m bgl (2.77 mAOD).
- 3.4.3. At each location, the Made Ground was generally initially described as grass over a soft dark brown silty sandy clay with frequent rootlets, representing a Made Ground Topsoil ranging between 0.30m and 0.55m in thickness. Underlying this, the Made Ground was typically described as a brown sandy slightly gravelly clay, with the gravel fraction varying locally but consisting of a mixture of quartzite, flint, mudstone, chalk and timber. Occasional relic plant organic matter was also encountered.
- 3.4.4. It is considered that the Made Ground soils encountered are likely to represent reworked natural soil materials with some anthropogenic inclusions, potentially deposited in their current location at or around the time of the construction of the power station or the later extension, occurring in the 1960s-1980s.

#### ALLUVIUM

3.4.5. Alluvium was encountered beneath the Made Ground at two locations (TP02 and TP03) with a top depth ranging between 1.70 and 2.10 m bgl (2.78 to 2.30 mAOD). The stratum thickness ranged between 0.30 and 0.50m. The Alluvium was typically described as a soft grey sandy slightly gravelly CLAY or a silty gravelly organic SAND with inclusions of relic rootlets and relic plant matter.

#### HEMINGBROUGH GLACIOLACUSTRINE FORMATION

3.4.6. The Hemingbrough Glaciolacustrine Formation was encountered at each location where the base of the Made Ground was encountered (5 of 6 locations). The stratum was encountered from a top ranging between 1.50 and 2.80 m bgl (3.12 to 2.30 mAOD). The base of the stratum was not proven.

#### BEDROCK

3.4.7. Bedrock was not encountered during the investigation.

#### GROUNDWATER

3.4.8. No groundwater was encountered during the investigation.

### 3.5. CONTAMINATION ASSESSMENT

- 3.5.1. Soil testing results have been compared against Generic Assessment Criteria (GAC). GAC have been calculated using the Environment Agency's Contaminated Land Exposure Assessment (CLEA) Workbook v1.071 to assess potential health risks associated with contaminants in soil. The methodology for the derivation of GAC is presented in Appendix F.
- 3.5.2. The risk to Carr Dike has been assessed using the following criteria and tools:

- a. Environmental Quality Standards (EQS) from The Water Framework Directive (Standards and Classification) Direction (England and Wales) 2017;
- b. CL:AIRE, Petroleum Hydrocarbons in groundwater: guidance on assessing petroleum hydrocarbons using existing hydrological risk assessment methodologies, 2017; and,
- c. Water Framework Directive UK TAG, Rivers and lakes Metal Bioavailability Assessment Tool (M-BAT), July 2014.
- 3.5.3. The risk to the underlying aquifers (for the protection of drinking water) has been assessed using the following criteria:
  - a. UK Drinking Water Quality Standards (DWS) from The Water Supply (Water Quality) Regulations 2000 (amended 2004);
  - b. World Health Organisation (WHO), Guidelines for Drinking Water Quality, Fourth Edition, 2022; and,
  - c. World Health Organisation (WHO), Petroleum Products in Drinking Water, 2008.
- 3.5.4. The soil and soil leachate chemical test results are provided in **Appendix E**. Further details on the assumptions and methodologies adopted by WSP for the assessment of Controlled Waters are also presented in **Appendix E**. The results of the screening assessments are provided in **Appendix G**.

### 3.6. HUMAN HEALTH RISK ASSESSMENT

- 3.6.1. Soil chemical results (11 samples of Made Ground, one sample of natural superficial soils) have been screened against threshold values (GACs) for a public open space (POS, parks) end use (SOM 1%), representing a conservative assessment.
- 3.6.2. The results of the assessment show no exceedances of GACs for a POS (parks) end use. Asbestos fibres were detected in one sample of Made Ground at TP04 (2.2-2.3m) recording loose chrysotile fibres with a quantification of <0.001% w/w. Asbestos was not detected across an additional nine samples screened.</p>

### 3.7. CONTROLLED WATERS RISK ASSESSMENT

- 3.7.1. Screening assessments of the soil leachate laboratory results have been undertaken to assess the risks to surface water receptors (EQS screening values) and the underlying Principal Aquifer (DWS screening values).
- 3.7.2. Exceedances of the EQS screening values are summarised below in **Table 3.3**.

Table 3.3 - Summary Soil Leachate Exceedances – GACs Protective of Surface
Water Receptors (EQS)

Analyte	EQS (µg/I)	# EQS Exceeds	Exceeds Concentration Range (µg/I)	Location of EQS exceedances
Ammoniacal Nitrogen as N	300	5	6900 – 16500	TP01, TP02, TP04, TP05
Cadmium	0.08	2	1.23 – 1.25	TP02
Chromium III	4.7	1	6.25	TP05
Copper	1	11	2.04 – 15.9	TP01, TP02, TP03, TP04, TP05, TP06
Lead	1.2	3	1.25 – 10.2	TP02, TP04, TP05
Nickel	4	4	4.12 – 12.3	TP01, TP02, TP04, TP05
Zinc	10.9	3	29.9 – 126	TP02, TP05
Fluoranthene	0.0063	1	0.023	TP02
Phenol	7.7	1	20	TP05

- 3.7.3. The contaminant concentrations identified are generally within one order of magnitude of the respective EQS value, and hence are considered marginal exceedances of the extremely conservative EQS values which conservatively assume 100% bioavailability of the contaminants to water-dwelling fauna. With regards to the values of ammoniacal nitrogen as N recorded, the values recorded are attributed to the natural degradation of organic matter within the superficial deposits or may represent leachable concentrations of organic material within the Made Ground.
- 3.7.4. The recorded exceedances of the EQS values are not considered to pose a unacceptable risk to nearby surface water receptors. The risk to surface water receptors is considered to be low.
- 3.7.5. Exceedances of the DWS screening values are summarised below in **Table 3.4**.

# Table 3.4 - Summary Soil Leachate Exceedances – GACs Protective of Groundwater Receptors (DWS)

Analyte	DWS (µg/I)	# DWS Exceeds	Exceeds Concentration Range (µg/I)	Location of EQS exceedances
Ammoniacal Nitrogen as N	500	5	6900 – 16500	TP01, TP02, TP04, TP05
Arsenic	10	1	10.4	TP05
Lead	10	1	10.2	TP05

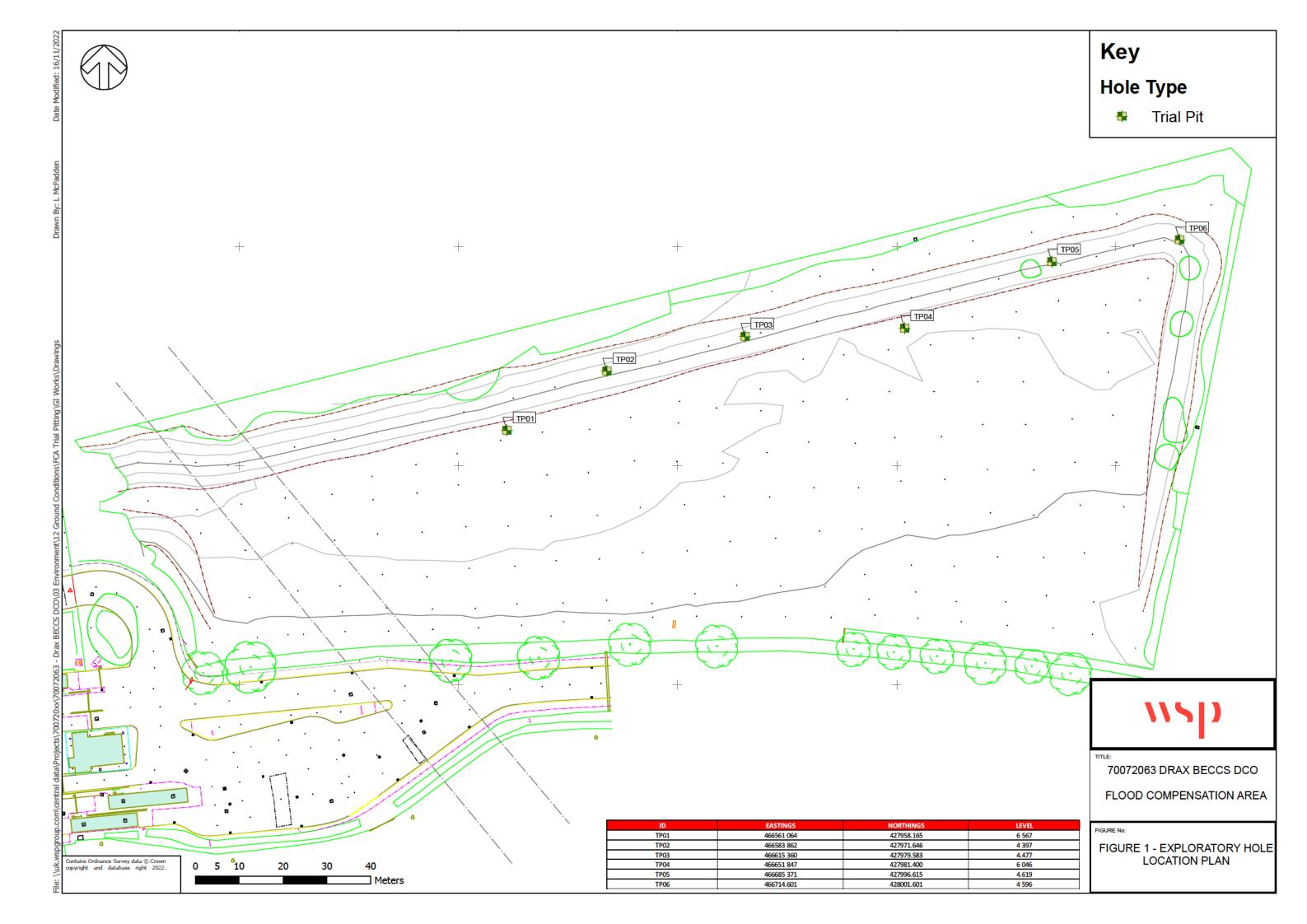
3.7.6. Similarly, elevated concentrations of ammoniacal nitrogen as N are attributed to the degradation of organic material within the Made Ground and natural superficial deposits. The recorded exceedances of the arsenic and lead DWS values at TP05 are not considered to represent a significant risk to the underlying aquifer. The recorded exceedances of the DWS values are not considered to pose an unacceptable risk to the underlying aquifers and are considered to be low.

# 4. SUMMARY AND CONCLUSIONS

- 4.1.1. With regard to the objectives of the ground investigation the following conclusions have been made:
  - a. The Site allocated for the flood compensation area was historically within an area indicated on historical mapping to be liable to flooding. Mapping indicates the Site topographical profile was created in late 1980s or early 1990s associated with the expansion of Drax Power Station with the placement of Made Ground materials, likely from the area adjacent to the west.
  - b. A ground investigation has been undertaken comprising six trial pits. Made Ground has been identified at each discrete location, predominantly comprising a soft to firm sandy gravelly clay with various gravel inclusions, and frequent relic organic matter. Made Ground soils are likely to represent reworked natural soil materials with some anthropogenic inclusions. The Made Ground is underlain locally by superficial deposits of Alluvium, and widely by laminated clay of the Hemingbrough Glaciolacustrine Formation.
  - c. Chemical analysis of soils and reported no significant contamination within soils. Asbestos has been identified within one sample with an extremely low quantification (<0.001%). No other contaminants have been found to exceed their respective conservative screening criteria for a POS (parks) land use.
  - d. Soil leachate results have been utilised to assess the risk to Controlled Waters receptors. Although exceedances have been identified, they are generally marginal in nature (i.e., within one order of magnitude) of the conservative screening values. The risk to surface water receptors and groundwater receptors is considered low.
  - e. A preliminary Hazardous Waste Assessment has classified the materials analysed as non-hazardous.
- 4.1.2. Based upon the above it is considered that the land is suitable for use as floodplain compensation. Additionally materials are considered suitable to be re-used on Site in line with Defra's Construction Code of Practice for the Sustainable Use of Soils on Construction Sites.

# 5. NEXT STEPS

- a. No boreholes were progressed as part of these works and therefore an assessment of groundwater conditions could not be completed. Prior to the commencement of earthworks for the flood compensation area, groundwater level monitoring, chemical sampling and assessment should be undertaken as well as any additional soil sampling which may be required following finalisation of earthworks design for the flood compensation area. This would form part of the Ground Investigation for the Proposed Scheme included within the REAC (AS-027) (Ref ID GC3), the mitigation within which is secured by Requirement 12 in the DCO.
- b. To demonstrate that the factors outlined in the Definition of Waste: Development Industry Code of Practice (DoWCoP, Version 2, 2011) have been satisfied, a Materials Management Plan (MMP) will be produced for any cut and fill activities to be undertaken for the flood compensation area; this is included in the REAC (AS-027) (Ref ID G3) and secured via compliance with the DCO Requirement to produce a CEMP in line with the requirements of the REAC.
- c. During a proposed movement of the Made Ground soils to facilitate construction of the FCA, the risk to human health (construction/ maintenance workers) can be satisfactorily mitigated by the adoption of appropriate standard good practice PPE and clean hygiene practices and suitably recorded on task-specific risk assessments and method statements.
- d. The Environment Agency will be consulted further during detailed design of the flood compensation area this will be secured by an update to the FRA (compliance with which is secured via a DCO Requirement).



# **APPENDIX B – LIMITATIONS**

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# **REPORT LIMITATIONS - GROUND AND WATER**

#### GENERAL

- 1. WSP UK Limited has prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed and outlined in the body of the report.
- 2. Unless explicitly agreed otherwise, in writing, this report has been prepared under WSP UK Limited standard Terms and Conditions as included within our proposal to the Client.
- 3. Project specific appointment documents may be agreed at our discretion and a charge may be levied for both the time to review and finalise appointments documents and also for associated changes to the appointment terms. WSP UK Limited reserves the right to amend the fee should any changes to the appointment terms create an increase risk to WSP UK Limited.
- 4. The report needs to be considered in the light of the WSP UK Limited proposal and associated limitations of scope. The report needs to be read in full and isolated sections cannot be used without full reference to other elements of the report and any previous works referenced within the report.

### INTRUSIVE INVESTIGATION REPORTS

Coverage: The following report titles (or combination) may cover this category of work: geo environmental site investigation; geotechnical assessment; GIR (Ground Investigation reports); preliminary environmental and geotechnical risk assessment; and, geotechnical risk register.

- 5. The investigation has been undertaken to provide information concerning either:
- 6. The type and degree of contamination present at the site in order to allow a generic quantitative risk assessment to be undertaken; or
- 7. Information on the soil properties present at the site to allow for geotechnical development constraints to be considered.
- 8. The scope of the investigation was selected on the basis of the specific development and land use scenario proposed by the Client and may be inappropriate to another form of development or scheme. If the development layout was not known at the time of the investigation the report findings may need revisiting once the development layout is confirmed.
- 9. For contamination purposes, the objectives of the investigation are limited to establishing the risks associated with potential contamination sources with the potential to cause harm to human health, building materials, the environment (including adjacent land), or controlled waters.
- **10.** For geotechnical investigations the purpose is to broadly consider potential development constraints associated with the physical property of the soils underlying the site within the context of the proposed future or continued use of the site, as stated within the report.
- 11. The amount of exploratory work, soil property testing and chemical testing undertaken has necessarily been restricted by various factors which may include accessibility, the presence of services; existing buildings; current site usage or short timescales. The exploratory holes completed assess only a small percentage of the area in relation to the overall size of the Site, and as such can only provide a general indication of conditions.

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- 12. The number of sampling points and the methods of sampling and testing do not preclude the possible existence of contamination where concentrations may be significantly higher than those actually encountered or ground conditions that vary from those identified. In addition, there may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.
- **13.** The inspection, testing and monitoring records relate specifically to the investigation points and the timeframe that the works were undertaken. They will also be limited by the techniques employed. As part of this assessment, WSP UK Limited has used reasonable skill and care to extrapolate conditions between these points based upon assumptions to develop our interpretation and conclusions. The assumption made in forming our conclusions is that the ground and groundwater conditions (both chemically and physically) are the same as have been encountered during the works undertaken at the specific points of investigation. Conditions can change between investigation points and these interpretations should be considered indicative.
- 14. The risk assessment and opinions provided are based on currently available guidance relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values. Specific assumptions associated with the WSP UK Limited risk assessment process have been outlined within the body or associated appendix of the report.
- **15.** Additional investigations may be required in order to satisfy relevant planning conditions or to resolve any engineering and environmental issues.
- 16. Where soil contamination concentrations recorded as part of this investigation are used for commentary on potential waste classification of soils for disposal purposes, these should be classed as indicative only. Due consideration should be given to the variability of contaminant concentrations taken from targeted samples versus bulk excavated soils and the potential variability of contaminant concentrations between sampling locations. Where major waste disposal operations are considered, targeted waste classification investigations should be designed.
- 17. The results of the asbestos testing are factually reported and interpretation given as to how this relates to the previous use of the site, the types of ground encountered and site conceptualisation. This does not however constitute a formal asbestos assessment. These results should be treated cautiously and should not be relied upon to provide detailed and representative information on the delineation, type and extent of bulk ACMs and / or trace loose asbestos fibres within the soil matrix at the site.
- **18.** If costs have been included in relation to additional site works, and / or site remediation works these must be considered as indicative only and must be confirmed by a qualified quantity surveyor.

### **EUROCODE 7: GEOTECHNICAL DESIGN**

- **19.** On 1st April 2010, BS EN 1997-1:2004 (Eurocode 7: Geotechnical Design Part 1) became the mandatory baseline standard for geotechnical ground investigations.
- 20. In terms of geotechnical design for foundations, slopes, retaining walls and earthworks, EC7 sets guidance on design procedures including specific guidance on the numbers and spacings of boreholes for geotechnical design, there are limits to methods of ground investigation and the quality of data obtained and there are also prescriptive methods of assessing soil strengths and methods of design. Unless otherwise explicitly stated, the work has not been undertaken in accordance with EC7. A standard geotechnical interpretative report will not meet the requirements of the Geotechnical Design Report (GDR) under Eurocode 7. The GDR can only be prepared following confirmation of all structural loads and serviceability requirements. The report is likely to represent a Ground Investigation Report (GIR) under the Eurocode 7 guidance.

# **APPENDIX C - TRIAL PIT LOGS**

	WSPL	JKL	TD						TRIAL F	PIT LOO	G			e No.	TP0	1	
	elep Fa	hone ax				Project			Drax	FCA			Sh	eet	1 of	1	
Job No	7007	206	3		•	C ent			Drax Po	ower Ltd			Da		18-10- 18-10-	22 22	
Contract	or / Dr	er			Meth	nod/P a	nt Use	d	Logged By			ites (NGR)		Groun	d Leve	(m AC	DD)
L nd e	y P an	t H re	e Ltd			JC	CB 3C>	C	L	м		466561.06 427958.17			6.5	57	
SAM	PLES &	& TE	STS							STRA	ATA						nst Bac
Depth	уре	(JpmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev (mAOD)	Depth (hick -ness)			Descr	iption				Legend	Geology	,
0 10-0 20	ES					6 27	(0 30) 0 30	rootlets	er soft dark brown Gravel is sub-ang GROUND)	slightly silty san ular to sub-roun	dy slightly gr ded fine to co	avelly CLAY v barse quartzite	vith frequ e and flin	ient it		MG	
· · · · ·						4 87	- - - - - - - - - - - - - - - - - - -	fine to co	brown sandy sligh arse mudstone o	tty gravelly CLA halk and quartz	Y Gravel is site Rare root	sub-angular to	o sub-rou GROUNE	inded ))		MG	
2 70-2 80	ES					2 77	- - - - - - - - - - - - - - - - - - -	2 60 - 3 0 3 50 - 3 8	slightly sandy CL/ 0 m bgl Grey silty 0 m bgl Frequent	fine SAND		nic matter				MG	
- - - - - - - - - -								Trial pit or	Shoring/Cumont	bgl						END	
	F	• 0.6	1 터				Length 2	50m	Shoring/Support	Date	ime	Water Strike	Strikes Minut	es	Standing	Rei	mark
	A	D	(	0 2	2.5		Width 0 Orientatii degre	61m -	Stability	General Rema (1) rial pit dug plat orm at the i noted (3) No g	rom top o em top o embankr	nent (2) No vis	ual or ol a	ctory evid	lence o co	ontamina	tion

Ŵ	SP U		TD						TRIAL F	PIT LO	G			o e No.	TP0	2	
	elept Fa				I	Project			Drax	FCA			SI	heet	1 of	1	
Job No 7	007:	206	3			C ent			Drax Po	ower Ltd			D		18-10- 18-10-		
Contractor	/ Dr	er			Met	hod/P a	nt Use	d	Logged By		Co Ord n	ates (NGR)		Grour	nd Leve	(m AC	D)
L nd ey	P ant	Hre	e Lto	1		JC	CB 3C>	< C	LI	м		466583.86 427971.65			4.4	40	
SAMPL	.ES 8	K TE	STS	;					•	STR/	ATA			·			ns Ba
Depth	ype o	(ymdd)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev (mAOD)	Depth (hick -ness)			Desc	iption				Legend	Geology	'
						4 00	-(0 40)	rootlets	er soft dark brown Gravel is sub-ang GROUND)	slightly silty sar ular to sub-rour	ndy slightly g ided fine to c	ravelly CLAY v oarse quartzite	with freq e and fli	quent int		MG	
I 10-1 20	ES					400		Firm oran sub-angu GROUN	gish brown occasi ilar to sub-rounde D)	onally grey slig d fine to coarse	ntly sandy sli mudstone a	ghtly gravelly ( nd quartzite (	CLAY ( (MADE	Gravel is		MG	
80-1 90	ES					2 60	(0 30)	Dark grey	silty slightly grave	elly fine organic	SAND Rare	soft grey clay	(ALLU	JV UM)	× · · · × · · · · · · · · · · · · · · ·	ALV	
						1 20	 (1 10)  3 20	FORMAT	r on)							HEM	
							-		ompleted at 3 2m i	~9.							
							- Length		Shoring/Support			Water	Strikes				
	F	• 0.6 B	5 <b>1 -</b>		Ť			50m		Date	ime	Strike	Minu	utes	Standing	Rei	mark
	Α		(	с :	2.5		Width 0	61m -	Stability	General Rema	arks						
	D				Ŧ			on ees rom horth		<ul> <li>(1) rial pit dug within the emba measurements</li> </ul>	within emban ankment slope were taken r	kment slope 'Gr which was dug om this point (2) groundwater end	as part o ) No visu	o the trial p al or ol acto	it and all o ory eviden	depth ce o	
Scale	1 31 2	25				l dimens dentificat		metres Log	s should be read		vith the prov	ded Key Des	criptions	s are base	d on visu	ual and	

,	NSP L		TD						TRIAL F	PIT LOO	G		ł	Ho e No.	TP0	3	
		hone			ľ	Project			Drax	FCA			S	Sheet	1 of	1	
Job No	7007	206	63		•	C ent			Drax Po	ower Ltd					18-10- 18-10-		
Contracto		-	e Lto		Met	hod/P a	nt Use		Logged By	м	E	ates (NGR) E 466615.36 N 427979.58		Grour	nd Leve 4.4		D)
	PLES 8									STR		421010.00	, 				nst
Depth				P Pen (kN/m2)	Water	Elev (mAOD)	Depth (hick			Descr					Legend	Geology	Bac
		(	)			4 18	-ness) (0 30) 0 30	rootlets (	er soft dark brown Gravel is sub-ang GROUND)							MG	
							- - - - - (0 90)	sub-angu	n slightly sandy sl Ilar to sub-rounde er (MADE GROU	d fine to coarse	LAY with lo chalk Cobb	w cobble conte les are sub-a	ent Gr ngular	avel is chalk and		MG	
0 90-1 00	90-1 00 ES					3 28	 1 20	0.01.0									
						0.79	(0 50)	Soft to firm grey sandy slightly gravelly CLAY Gravel is sub-angular to sub fine to coarse mudstone quartzite sandstone and flint Occasional rootle organic matter (ALLUV UM)					to sub-i rootlets	rounded and plant		ALV	
						278	<u>    1 70</u> - - - (1 10)	sub-angu	mottled brown slig lar to sub-rounde BROUGH GLAC	d fine to coarse	quartzite an	d mudstone	Grav	el is		НЕМ	
2 60-2 70	ES					1 68		2 50 - 2 80	0 m bgl Stiff reddi	ish brown grave	ily CLAY						
							Length		Shoring/Support			Water	Strike	s			
	A	• 0.6 B		C 2	2.5		Width	50m		Date	ime	Strike	Mit	nutes	Standing	Re	mark
	D C 2.3 Contraction Stability					Stability	General Rema (1) rial pit dug within the emba measurements contamination r completion	within emban ankment slope were taken m	which was dug om this point (2	as part ) No vis	t o the trial p sual or ol act	it and all o ory eviden	lepth ce o				
Sca	e 1 31	25				l dimens dentificat		metres Log	s should be read		vith the prov	ided Key Des	cription	ns are base	ed on visu	al and	

,	WSPL		TD						TRIAL F	PIT LOO	G		F	lo e No.	TP0	4	
	elep Fa	hone ax				Project			Drax	FCA			S	Sheet	1 of	1	
Job No	7007	206	63			C ent			Drax Po	ower Ltd			(	Date	18-10- 18-10-	22 22	
Contracto		-	e Lto		Met	hod/P a	nt Use	-	Logged By	м	1	ates (NGR) E 466651.85 N 427981.40	5	Grour	nd Leve 6.0		D)
	PLES 8									STR		427901.40	,				nst
Depth	1 1			P Pen (kN/m2)	Water	Elev (mAOD)	Depth (hick			Descr					Legend	Geology	Bad
		<u> </u>				6.75	-ness) (0 30)	rootlets (	er soft dark brown Gravel is sub-ang GROUND)							MG	
0 90-1 00	ES					575	- - - - - -(1 40) - - - - - - -	Stiff brown	n slightly sandy sli arse mudstone ar	ghtly gravelly C nd quartzite (M	LAY Gravel	l is sub-angula IND)	ar to sul	b-rounded		MG	
2 20-2 30	ES					4 35	- - - - - - - -	odour Gi Occasion	grey sandy slightly ravel is sub-angul al inclusions of re	ar to sub-round lic wood and pl	ed fine to co	arse mudston	e and c	guartzite		MG	
						2 45	- - -(0 80) -	Firm to sti	0 m bgl Redunda ff greyish reddish ACUSTR NE FO	brown laminate		EMNGBROU	GH			HEM	
							- - - - - - - - - - - -	Trial pit cc	ompleted at 3 6m i	bgl						END	
							Length		Shoring/Support				Strikes				<u> </u>
	- A	• 0.6 B	5	c :	2.5		Width 0 Orientati degr	on ees rom	Stability	Date General Rema (1) rial pit dug plat orm at the noted (3) No g	rom top o e top o embanl	kment (2) No vi	round Le	evel' represe	dence o co	on on	tion
Sca	le 1 31		)			II dimens dentificat	ions in	north	s should be read	noted (3) No g	roundwater e	ncountered (4)	Back ille	d with arisin	gs upon co	ompletior	1

						TRIAL PIT LOG								lo e No.	5		
elephone Fax						Project Drax FCA								Sheet	1 of	1	
Job No	ob No 70072063					C ent Drax Power Ltd								Date 18-10-22 18-10-22			
Contract	er			Met	hod/P ant Used Logged By Co Ord nates (NGR)							Ground Leve (m AOD)					
L nd ey P ant H re Ltd							JCB 3CX LN				M E 466685.37 N 427996.62			4.62			
SAM	PLES 8	& TE	STS						1	STR/	ATA						nst Bac
Depth	ype	(Vmqq)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev (mAOD)	Depth (hick -ness)			Descr	iption				Legend	Geology	'
						4 12	(0 50)	rootlets (	r soft dark brown Gravel is sub-ang ROUND)	slightly silty san ular to sub-roun	dy slightly g ded fine to d	ravelly CLAY coarse quartzit	with fre te and f	equent flint		MG	
0 70-0 80	ES						Firm brown slightly sandy slightly gravelly CLAY with low cobble content sub-angular to sub-rounded fine to coarse chalk Cobbles are sub-angul rare timber (MADE GROUND) (0 70)							avel is chalk and		MG	
1 20-1 30	ES					3 42 3 12	(0 30)	metal and	Soft dark grey and black slightly gravelly CLAY Gravel is sub-angular fine to coarse metal and brick Frequent relic rootlets and organic matter (MADE GROUND) Firm grey mottled brown slightly slity slightly gravelly laminated CLAY Gravel is					ND)		MG	
-						1 82	- - - - - - - - - - - - - - - - - - -	(HEM NG	lar to sub-rounde BROUGH GLAC	OLACUSTR N	E FORMAT	ON)				HEM	
-									mpleted at 2 8m l								
							Length		Shoring/Support	Date	ime	Water	Strikes		Standing	Re	marks
A D C 2.5						2 50m Width 0 61m Orientation degrees rom north			Stability	General Rema (1) rial pit dug	arks within emban ankment slope were taken r	ikment slope 'G e which was dug om this point (2	round Li as part	evel' repres	ents highe it and all o ory eviden	est elevat depth ce o	ion

WSP UK LTD						TRIAL PIT LOG								Ho e No. <b>TP06</b>				
elephone Fax						Project Drax FCA								heet	1 of	1		
Job No	No 70072063						C ent Drax Power Ltd							Date 18-10-22 18-10-22				
Contracto	er			Met	thod/P ant Used Logged By Co Ord nates (NGR)							Ground Leve (m AOD)						
Lnde	tHr	e Ltd	ı		JCB 3CX L				M E 466714.60 N 428001.60				4.60					
SAM	PLES	& TE	STS	;						STR	ATA						ns Ba	
Depth	уре	P D (ppmV)	HSV (kN/m2)	P Pen (kN/m2)	Water	Elev (mAOD)	Depth (hick -ness)			Desc	ription				Legend	Geology	(	
0 20-0 30	ES					4 05	_ _(0 55)	rootlets (MADE 0	er soft dark brown Gravel is sub-ang GROUND)	ular to sub-rou	nded fine to c	xoarse quartzit	e and fl	lint		MG		
1 50-1 60							- - - (0 75) -	Firm oran fine to co	gish brown sandy barse quartzite and	slightly graveli i flint (MADE	GROUND)	vel is angular t	o sub-r	ounded		MG		
	ES			3 30	(0 50)	Soft dark grey and black sandy slightly gravelly CLAY Gravel is angular sub-rounded fine to coarse quartzite and flint Frequent relic roots and r (0 50) (MADE GROUND)					lar to d rootle	əts		MG				
						1 60	- - - - (1 20) - - - -	sub-angu	mottled brown slig Jlar to sub-rounde BROUGH GLAC	d fine to coarse	quartzite an	d mudstone	Grave	I is		НЕМ		
								Trial pit α	ompleted at 3 0m l	bgl						END		
							- Length		Shoring/Support			Water	Strikes	•				
H 0.61 H B A C 2.5 D						2 50m Width 0 61m Orientation degrees rom north			Stability	Date         ime         Strike         Minute           General Remarks					it and all o ory eviden	est elevat depth ce o		

# **APPENDIX D – PHOTO LOG**

# **\\\\**



Photograph 1: View of the embankment from the northwest corner of the site, looking east.



Photograph 2: View of the embankment from the northeast corner of the site, looking west.

# wsp



Photograph 3: TP01, dug from the top of the embankment platform.



Photograph 4: TP01 spoil.

# **\\S**D



Photograph 5: TP02, dug within the embankment slope.



Photograph 6: TP02 spoil.

# <u>\\Sp}</u>



Photograph 7: TP03, dug within the embankment slope.



Photograph 8: TP03 spoil.

# vsp



Photograph 9: TP04, dug from the top of the embankment platform.



Photograph 10: TP04 spoil.



Photograph 11: TP05, dug within the embankment slope.



Photograph 12: TP05 spoil.

### PHOTOGRAPHIC RECORD

# wsp



Photograph 13: TP06, dug within the embankment slope.



Photograph 14: TP06 spoil.



WSP UK Limited 8 First Street Manchester Lancashire M15 4RP

Attention: Luke McFadden

# **CERTIFICATE OF ANALYSIS**

Date of report Generation:
Customer:
Sample Delivery Group (SDG):
Your Reference:
Location:
Report No:
Order Number:

08 November 2022 WSP UK Limited 221020-66 70072063 Drax FCA 667610 70072063-3X7

This report has been revised and directly supersedes 667193 in its entirety.

We received 12 samples on Thursday October 20, 2022 and 12 of these samples were scheduled for analysis which was completed on Tuesday November 08, 2022. Accredited laboratory tests are defined within the report, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden.

All sample data is provided by the customer. The reported results relate to the sample supplied, and on the basis that this data is correct.

Incorrect sampling dates and/or sample information will affect the validity of results.

The customer is not permitted to reproduce this report except in full without the approval of the laboratory.

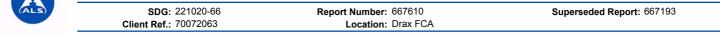
Арр				
Abb				

<u>Sonia McWhan</u> Operations Manager



ALS Laboratories (UK) Limited. ALS Life Sciences Limited registered Office: Torrington Avenue. Coventry CV4 9GU Registered in England and Wales No. 02391955. Version: 3.4 Version Issued: 08/11/2022

Validated



# **Received Sample Overview**

Lab Sample No(s)	Cu tomer Sample Ref	AGS Ref.	Depth (m)	Sampled Date
27048472	TP01	ES	0.10 - 0.20	18/10/2022
27048493	TP01	ES	2.70 - 2.80	18/10/2022
27048497	TP02	ES	1.10 - 1.20	18/10/2022
27048509	TP02	ES	1.80 - 1.90	18/10/2022
27048517	TP03	ES	0.90 - 1.00	18/10/2022
27048524	TP03	ES	2.60 - 2.70	18/10/2022
27048531	TP04	ES	0.90 - 1.00	18/10/2022
27048537	TP04	ES	2.20 - 2.30	18/10/2022
27048545	TP05	ES	0.70 - 0.80	18/10/2022
27048476	TP05	ES	1.20 - 1.30	18/10/2022
27048480	TP06	ES	0.20 - 0.30	18/10/2022
27048488	TP06	ES	1.50 - 1.60	18/10/2022

Only received samples which have had analysis scheduled will be shown on the following pages.

ALS	SDG: 221020-60 Client Ref.: 70072063				Repo			: 667 : Dra		A					Su	ipers	eded	Repo	ort: 6	6719	3		
Results Legend           X         Test           No Determination	Lab Sampi	e No(s)			27048472			27048493			27048497			27048509			27048517		27048524		27048531		27048537
Sample Types -	Custor Sample Re				TP01			TP01			TP02			TP02			TP03		TP03		TP04		TP04
Sample Types - S - Soil/Solid JNS Unspecified Solid GW - Ground Water SW - Surface Water E - Land Leachate	AGS Refe	erence			ES			ES			ES			ES			ES		ES		ES		ES
PL - Prepared Leachate PR - Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage JS - Untreated Sewage	Depth	(m)			0.10 - 0. <u>2</u> 0			2.70 - 2.80			1.10 - 1.20			1.80 - 1.90			0.90 - 1.00		2.60 - 2.70		0.90 - 1.00		2.20 - 2.30
RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas	Contai	ner	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
OTH - Other	Sample '	Туре	S		S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Ammoniacal N as NH4 in 2:1 extract	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
Ammoniacal Nitrogen	All	NDPs 0 Tests: 6					X			x		X											x
ANC at pH4 and ANC at pH 6	All	NDPs: 0 Tests: 12		X			x			x			X			x		x		x			x
Anions by Kone (soil)	All	NDPs: 0 Tests: 12		X			X			X			x			x		X		x			X
Anions by Kone (w)	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
Asbestos ID in Solid Samples	All	NDPs: 0 Tests: 10	x			x			x			x			x							x	
Asbestos Quantification - Full	All	NDPs: 0 Tests: 1																				x	
Boron Water Soluble	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
CEN Readings	All	NDPs: 0 Tests: 13		x			x			x		x	x			x		x		x			x
Chromium III	All	NDPs: 0 Tests: 6					x			x		x											x
Coronene	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
Cyanide Comp/Free/Total/Thiocyanate	All	NDPs: 0 Tests: 13		x			x			x		x	x			x		x		x			x
Dissolved Metals by ICP-MS	All	NDPs: 0 Tests: 13		x			x			x		x	x			x		x		x			x
Dissolved Organic/Inorganic Carbon	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
EPH by GCxGC-FID	All	NDPs: 0 Tests 12		x			x			X			X			X		x		x			x

27048488	TP06	ES	1.50 - 1.60	60g VOC (ALE215)	S		_	_	_	_	_	_	_					_	
				250g Amber Jar (ALE210)	S	x		x	x	x			x	x		x	x	x	х
				1kg TUB with Handle (ALE260)	ა						x								
27048480	TP06	ES	0.20 - 0.30	60g VOC (ALE215)	S														
				250g Amber Jar (ALE210)	S	x	x	x	x	x			x	x	x	x	x	x	х
				1kg TUB with Handle (ALE260)	S						x								
27048476	TP05	ES	1.20 - 1.30	60g VOC (ALE215)	S														
				250g Amber Jar (ALE210)	S	x	x	x	x	x			x	x	x	x	x	x	х
				1kg TUB with Handle (ALE260)	S						x								
27048545	TP05	ES	0.70 - 0.80	60g VOC (ALE215)	S														
				250g Amber Jar (ALE210)	S	x		x	x	x			x	x		x	x	x	х
				1kg TUB with Handle (ALE260)	S						x								
27048537	TP04	ES	2.20 - 2.30	60g VOC (ALE 215)	S														

# ALS

### **CERTIFICATE OF ANALYSIS**

Clie	SDG: 221020-66 ent Ref.: 70072063				Repo				'610 x FC/	Ą					Su	ipers	eded	Repo	ort: 6	6719	3		
Results Legend X Test No Determination Possible	Lab Sample	e No(s)			27048472			27048493			27048497			27048509			270485 7		27048524		27048531		27048537
	Cu ton Sample Ref				TP01			TP01			TP02			TP02			TP03		TP03		TP04		TP04
Sample Types - S - Soil/Solid UNS - Unspecified Solid GW - Ground Water SW - Surface Water LE - Land Leachate	AGS Refe	rence			ES			ß			ES			ß			ß		ES		ES		ES
PL - Prepared Leachate PR Process Water SA - Saline Water TE - Trade Effluent TS - Treated Sewage	Depth (	m)			0.10 - 0. <u>2</u> 0			2.70 - 2.80			1.10 - 1.20			1.80 - 1.90			0.90 - 1.00		2.60 - 2.70		0.90 - 1.00		2.20 - 2.30
US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas	Contair	ner	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)
OTH - Other	Sample T	уре	S		S	S	S	S	S	S	S		S	S	S	S	S	S	S	S	S	S	S
EPH CWG (Aliphatic) Aqueous GC (W)	All	NDPs: 0 Tests: 6					x			X		x											x
EPH CWG (Aromatic) Aqueous GC W)	All	NDPs: 0 Tests: 6					x			x		x											x
EPH CWG GC (S)	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
Fluoride	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
GRO by GC-FID (S)	All	NDPs: 0 Tests: 12		^	×		^	v		^	v		^	v		^	v	^	v	^	v		^
GRO by GC-FID (W)	All	NDPs: 0 Tests: 6			x		x	x		x	x	~		x			x		X		x		x
Hexavalent Chromium (s)	All	NDPs: 0 Tests: 12										x				~		X					
Hexavalent Chromium (w)	All	NDPs: 0 Tests: 6		x			x			X X		X	x			x		•		x			X
Loss on Ignition in soils	All	NDPs: 0 Tests: 12		x			×			×		^	x			x		x		x			x
Mercury Dissolved	All	NDPs: 0 Tests 13										v											
Vetals in solid samples by OES	All	NDPs: 0 Tests: 12		X			X			X		x	X			x		X		X			X
PAH 16 & 17 Calc	All	NDPs: 0 Tests: 12		X			X			X			X			X		X		X			X
PAH by GCMS	All	NDPs: 0 Tests: 12		x			X			X			X			X		X		X			X
PAH Spec MS - Aqueous (W)	All	NDPs: 0 Tests: 6			X		X			X			x			x		x		x			X
PCBs by GCMS	All	NDPs: 0 Tests: 12					x			X		x											x
PUDS DY GUMS	All			x			x			x			x			x		x		x			

27048537			27048545			27048476			27048480			27048488
TP04			TP05			TP05			TP06			TP06
ES			ES			ES			ES			ES
2.20 - 2.30			0.70 - 0.80			1.20 - 1.30			0.20 - 0.30			1.50 - 1.60
60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
s	) S	د	s	) S	د	s	) S	د	s	e s	د	S
					x			x				
					x			x				
		x			x			x			x	
		X			X			X			X	
x			x			x			x			X
					X			x				
		x			x			x			X	
					x			x				
					~			~				
		x			X			X			X	
		x			x			x			x	
		x			X			x			X	
		v			v			v			v	
		x			x			x			x	
		x			x			x			x	
					x			x				

# ALS

### CERTIFICATE OF ANALYSIS

Cli	SDG: 221020-66 ent Ref.: 70072063	5			Repo			: 667 : Dra		A					Su	ipers	eded	Rep	ort: 6	6719	3		
Results Legend X Test No Determination	Lab Sample	e No(s)			27048472			27048493			27048497			27048509			270485 7		27048524		27048531		2/04853/
Sample Types -	Cu ton Sample Rei				TP01			TP01			TP02			TP02			TP03		TP03		TP04		11104
S - Soil/Solid JNS - Unspecified Solid JW - Ground Water 3W - Surface Water E - Land Leachate	AGS Refe	rence			ES			ES			ES			ES			ES		ES		ES		8
PL - Prepared Leachate PR Process Water SA - Saline Water IE - Trade Effluent IS - Treated Sewage	Depth	(m)			0.10-0.20			2.70 - 2.80			1.10 - 1. <u>2</u> 0			1.80 - 1.90			0.90 - 1.00		2.60 - 2.70		0.90 - 1.00		2.20 - 2.30
US - Untreated Sewage RE - Recreational Water DW - Drinking Water Non-regulatory UNL - Unspecified Liquid SL - Sludge G - Gas	Contai	ner	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	(ALE210)
OTH - Other	Sample	Туре	S		S	S		S	s	s	S	s	S	S	ى ە	S	S	S	S			s	
Н	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
H Value of Filtered Water	All	NDPs: 0 Tests: 13		x			x			x		x	x			x		x		x			x
Phenols by HPLC (W)	All	NDPs: 0 Tests: 13		x			x			x		x	x			x		x		x			x
Phenols Spec MS (S)	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
Sample description	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
Semi Volatile Organic Compounds	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
īotal Organic Carbon	All	NDPs: 0 Tests: 12		x			x			x			x			x		x		x			x
TPH CWG (W)	All	NDPs: 0 Tests: 6					x			x		x											x
TPH CWG GC (S)	All	NDPs: 0 Tests: 12		x			x			x			x			x		X		x			x
/OC MS (S)	All	NDPs: 0 Tests 12			x			x			x			x			x		x		x		
/OC MS (W)	All	NDPs: 0 Tests: 6					x			X		x											x

27048537			27048545			27048476			27048480			27048488
TP04			TP05			TP05			TP06			TP06
ES			ES			ES			ES			ES
2.20 - 2.30			0.70 - 0.80			1.20 - 1.30			0.20 - 0.30			1.50 - 1.60
60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)	1kg TUB with Handle (ALE260)	250g Amber Jar (ALE210)	60g VOC (ALE215)
S	S	S	S	s	S	S	s	S	S	S	S	S
		Y			v			×			v	
		X			X			X			X	
		x			x			x			x	
		X			X			X			X	
		x			x			x			x	
		x			x			x			X	
		x			x			x			x	
		x			x			x			х	
					x			x				
		x			x			x			x	
x			x			x			x			x
					x			x				

ALS

SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

### Sample Descriptions

very fine	<0.063mm	fine	0.063mm - 0.1mm	medium	0. mm	- 2mm	coarse	e 2mm -	10mm	very coarse	>1
Lab Sample No(s	;) Custor	ner Sample Re	f. Depth (m)	Col	lour	Descrip	tion	Inclusions	Incl	usions 2	
27048472		TP01	0 10 0 20	Light	Brown	Sandy Lo	bam	Stones	Ve	getation	
27048493		TP01	2.70 - 2.80	Light	Brown	Loamy S	and	Stones		None	
27048497		TP02	1.10 - 1.20	Light	Brown	Sandy Lo	oam	Stones		None	
27048509		TP02	1.80 - 1.90	Light	Brown	Silt Loa	m	Stones		None	
27048517		TP03	0 90 1 00	Light	Brown	Silty Clay I	oam	Stones		None	
27048524		TP03	2.60 - 2.70	Light	Brown	Silty Cla	ау	None		None	
27048531		TP04	0.90 - 1.00	Light	Brown	Sandy Clay	Loam	Stones	Ve	getation	
27048537		TP04	2.20 - 2.30	Light	Brown	Sandy Clay	Loam	Stones		None	
27048476		TP05	120 1 0	Dark	Brown	Sandy Clay	Loam	None		None	
27048545		TP05	0.70 - 0.80	Light	Brown	Silty Cl	ау	None		None	
27048480		TP06	0.20 - 0.30	Light	Brown	Sandy Clay	Loam	Stones	Ve	getation	
27048488		TP06	1.50 - 1.60	Dark	Brown	Sandy Clay	Loam	Stones		None	

These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally ocurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.

Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

# ALS

SDG: 221020-66

## CERTIFICATE OF ANALYSIS Report Number: 667610

Superseded Report: 667193

Validated

ALS		221020-66		Report Number: 60		Super	seded Report: 6671	93
	Client Ref.	: 70072063		Location: D	rax FCA			
Results Legend		Customer Sample Ref.	704	7004	7000	7000	7000	7000
# ISOTAZS accredited.		Gustomer Sample Rer.	TP01	TP01	TP02	TP02	TP03	TP03
aq Aqueous / settled sample.		Depth (m)	0.10 - 0.20	2.70 - 2.80	1.10 - 1.20	1.80 - 1.90	0.90 - 1.00	2.60 - 2.70
diss.fiit Dissolved / mitered sample. tot.unfiit Total / unfiltered sample. Subcontracted - refer to subcontractor rep		Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
accreditation status.		Date Sampled	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
% recovery of the surrogate standard to cl efficiency of the method. The results of inc		Sampled Time Date Received	20/10/2022	20/10/2022	. 20/10/2022	. 20/10/2022	. 20/10/2022	20/10/2022
compounds within samples aren't correcte		SDG Ref	221020-66	221020-66	221020-66	221020-66	221020-66	221020-66
(F) Trigger breach confirmed		Lab Sample No.(s)	27048472 ES	27048493 ES	27048497 ES	27048509 ES	27048517 ES	27048524 ES
1-4+S@ Sample deviation (see appendix)		AGS Reference	23	C0	20	23	23	23
Component	LOD/Unit		42		44	42	44	40
Moisture Content Ratio (% of as received sample)	%	PM024	13	14	11	13	11	18
• •	_	T1040	4.00	0.40	2.24	2.40	2.0	7.04
Loss on ignition	<0.7 %	TM018	4 96	2.12	3 31	3.42	3.9	7.61
Organic Carbon, Total	-	TM420	1.02				0.740	M
Organic Carbon, Total	<0.2 %	TM132	1.03	0 396	0.542	0.627	0.712	0.656
Soil Organic Matter (SOM)		T1420	4.70				M	M
Soli Organic Matter (SOM)	<0.35	TM132	1.78	0.683	0.934	1.08	1 23	1.13
На	%	714/00		# 7.40			#	#
рп	1	TM133	7.07	7.48	5.61	7.28	6.7	7.87
Observices I laurenteet	pH Units		1	/ N	1		M	M
Chromium, Hexavalent	<0.6	TM151	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Outside Total	mg/kg		1		1		M	M
Cyanide, Total	<1	TM153	<1	<1	<1	<1	<1	<1
0	mg/kg		N				M	M
Cyanide, Free	<1	TM153	<1	<1	<1	<1	<1	<1
	mg/kg		1				M	M
Cyanide, Complex	<1	TM153	<1	<1	<1	<1	<1	<1
	mg/kg							
PCB congener 28	< 0.003	TM168	<0.003	<0.003	<0.003	<0.003	<0.003	< 0.003
	mg/kg		1		- 1		M	M
PCB congener 52	< 0.003	TM168	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
	mg/kg		1	/ N	1 N	the second se	М	M
PCB congener 101	< 0.003	TM168	< 0.003	<0.003	<0.003	<0.003	<0.003	<0.003
	mg/kg		1	/ N	1 N	1 M	М	M
PCB congener 118	< 0.003	TM168	< 0.003	<0.003	<0.003	<0.003	<0.003	<0.003
	mg/kg		1	/ N	1 N	1 M	М	М
PCB congener 138	< 0.003	TM168	< 0.003	<0.003	<0.003	< 0.003	<0.003	<0.003
	mg/kg		1	/ N	1 N	1 M	М	М
PCB congener 153	< 0.003	TM168	< 0.003	< 0.003	<0.003	< 0.003	<0.003	<0.003
	mg/kg		1	/ N	1 N	1 M	М	М
PCB congener 180	< 0.003	TM168	< 0.003	< 0.003	< 0.003	< 0.003	<0.003	<0.003
	mg/kg		1	И N	1 N	1 M	М	М
Sum of detected PCB 7 Congeners	<0.021	TM168	<0.021	<0.021	<0.021	<0.021	<0.021	<0.021
	mg/kg							
Arsenic	<0.6	TM181	8.07	4.52	5 58	6.72	7.43	10 2
	mg/kg		1	/ N	1 N	1 M	М	М
Barium	<0.6	TM181	78.6	37.1	46.2	48 9	55	164
	mg/kg			# #	¥ #	# #	#	#
Beryllium	<0.01	TM181	0.664	0 316	0.384	0.448	0.574	1.71
	mg/kg		I	И М	1 N	1 M	М	М
Cadmium	<0.02	TM181	0.467	0 249	0.301	0 358	0.414	0.781
	mg/kg		N	и м	1 N	1 M	М	М
Chromium	<0.9	TM181	13.3	6.59	8.06	9.74	11.8	28 9
	mg/kg			и м			М	М
Copper	<1.4	TM181	14.5	7.61	10.5	11.6	12.7	29.6
	mg/kg			л N	1 N	1 М	м	М
Lead	<0.7	TM181	31.3	17.4	29.7	29.6	26.9	22.2
	mg/kg			л N			М	м
Mercury	<0.1	TM181	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	mg/kg			л			M	М
Nickel	<0.2	TM181	12.8	6.26	6 94	8.11	9.9	54.7
	mg/kg			4 N			5.5 M	M
Selenium	<1	TM181	<1	<1	<1	<1	<1	<1
	mg/kg			# 1				*
Vanadium	<0.2	TM181	21.9	11	15.2	+ # 17.1	# 22.8	45
	~0.2 mg/kg	TWI OT			# #		22.0	40 #
Zinc	<1.9	TM181	47.3	25.6	32	34.4	# 42.7	79.1
	mg/kg	INTOT		23.0 M N			42.7 M	75.1 M
ANC @ pH 4	< 0.03	TM182	0.0421	0.0794	0.0457	0.0405	0.0539	0.0654
	<0.03 mol/kg	111102	0.0421	0.0134	0.0401	0.0400	0.0003	0.0004
ANC @ pH 6	<0.03	TM182	<0.03	<0.03	< 0.03	<0.03	<0.03	<0.03
and the letter of the letter o	<0.05 mol/kg	11/102	-0.00	~0.00	~0.00	NU.UJ	~U.UJ	~0.00
Boron, water soluble	<1 <1	TM222	<1	<1	<1	<1	<1	<1
Doron, water soluble		11/12/22						
	mg/kg		<u> </u>	A N	1 N	1 M	М	М



#### **CERTIFICATE OF ANALYSIS**

Validated

	SDG: 2	221020-66		Report Number: 667	7610	Super	seded Report: 6671	93
	Client Ref.: 7	70072063		Location: Dra				
Results Legend	Cu	stomer Sample Ref.	TP01	TP01	TP02	TP02	TP03	TP03
M mCERTS accredited.					11 02	11 02	1105	1103
aq Aqueous / sected sample. diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Depth (m) Sample Type	0.10 - 0.20 Soil/Solid (S)	2.70 - 2.80 Soil/Solid (S)	1.10 - 1.20 Soil/Solid (S)	1.80 - 1.90 Soil/Solid (S)	0.90 - 1.00 Soil/Solid (S)	2.60 - 2.70 Soil/Solid (S)
<ul> <li>Subcontracted - refer to subcontractor repo accreditation status.</li> </ul>		Date Sampled	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
% recovery of the surrogate standard to che efficiency of the method. The results of indi	vidual	Sampled Time Date Received	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	. 20/10/2022
compounds within samples aren't corrected the recovery		SDG Ref	221020-66 27048472	221020-66 27048493	221020-66 27048497	221020-66 27048509	221020-66 27048517	221020-66 27048524
(F) Trigger breach confirmed 1-4+6/D Sample deviation (see appendix)	· · · ·	Lab Sample No.(s) AGS Reference	ES	ES	ES	ES	ES	ES
Component	LOD/Units	Method						
Chloride (soluble)	<5 mg/kg	TM243	16 M	20.1 M	7 57 M	13 3 M	9.84 M	30.7 N
Soluble Sulphate 2:1 extract as SO4 BRE	<0.004	TM243	0.0188	<0.004	0.274	0.0047	0.0522	0.0989
Ammoniacal N as NH4 in 2:1 extract	g/l <0.0003	TM248	M 0.00264	M 0.0076	M 0.00858	M 0.00963	M 0.00395	0.00289
BRE PAH Total 17 (inc Coronene) Moisture	g/l <10	TM410	<10	<10	<10	<10	<10	<10
Corrected	mg/kg							
Coronene	<0.2 mg/kg	TM410	<0.2	<0 2	<0.2	<0 2	<0.2	<0 2
EPH Surrogate % recovery**	%	TM415	102	99 3	102	107	106	107
Mineral Oil >C10-C40 (EH_2D_AL)	<5	TM415	9.83	<5	11.1	10 5	15.6	<5
וביי_בט_חבו	mg/kg							
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	<u> </u>							
	<b></b>							

# ALS

SDG: 221020-66

## CERTIFICATE OF ANALYSIS Report Number: 667610

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Superseded Report: 667193

Validated

	SDG:         221020-66           Client Ref.:         70072063			F	Report Number: 667610 Superseded Report: 667193 Location: Drax FCA							
	Results Legend		Customer Sample Ref.	TP04		TP04	TP05		TP05	TP06		TP06
	mCERTS accredited. Aqueous / settled sample.											
diss.filt	Dissolved / filtered sample.		Depth (m)	0.90 - 1.00		2.20 - 2.30	0.70 - 0.80		1.20 - 1.30	0.20 - 0.30		1.50 - 1.60
	Total / unfittered sample. Subcontracted - refer to subcontractor report i	ior	Sample Type Date Sampled	Soil/Solid (S) 18/10/2022		Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022		Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022		Soil/Solid (S) 18/10/2022
	accreditation status. % recovery of the surrogate standard to check	the	Sampled Time									
	efficiency of the method. The results of individ compounds within samples aren't corrected fo		Date Received	20/10/2022		20/10/2022	20/10/2022		20/10/2022	20/10/2022		20/10/2022
	the recovery		SDG Ref Lab Sample No.(s)	221020-66 27048531		221020-66 27048537	221020-66 27048545		221020-66 27048476	221020-66 27048480		221020-66 27048488
	Trigger breach confirmed Sample deviation (see appendix)		AGS Reference	ES		ES	ES		ES	ES		ES
Compo	nent	LOD/Uni	its Method									
	Content Ratio (% of as		PM024	11		23	20		18	15		15
received s	ample)	%										
Loss on ig	nition	<0.7	TM018	5 33		6.24	7 58		4.28	6 92		4.9
		%			М	M		М	N		М	
Organic C	arbon, Total	<0.2	TM132	1 27		2.02	0.476		0.778	1.41		1.22
		%			М	M		М	N		М	
Soil Organ	ic Matter (SOM)	<0.35	TM132	2.19		3.48	0.821		1.34	2.43		2.1
		%			#	#		#	#		#	
pН		1	TM133	7.63		7.69	7.49		7.81	7.72		6.71
		pH Units			М	M		М	N	1	М	
Chromium	, Hexavalent	<0.6	TM151	<0.6		<0.6	<0.6		<0.6	<0.6		<0.6
		mg/kg	_		М	M		М	N	1	М	
Cyanide, T	otal	<1	TM153	<1		<1	<1		<1	<1		<1
<b>.</b>		mg/kg			М	M		М	N		М	
Cyanide, F	ree	<1	TM153	<1		<1	<1		<1	<1		<1
o		mg/kg			М	M		М	N		М	
Cyanide, (	Complex	<1	TM153	<1		<1	<1		<1	<1		<1
		mg/kg									-	
PCB cong	ener 28	< 0.003	TM168	<0.003		<0.003	<0.003		<0.003	<0.003		< 0.003
		mg/kg			М	M		М	N	1	М	
PCB cong	ener 52	< 0.003	TM168	<0.003		<0.003	<0.003		<0.003	<0.003		< 0.003
	101	mg/kg			М	M		М	N		М	
PCB cong	ener 101	< 0.003	TM168	<0.003		<0.003	<0.003		<0.003	<0.003		< 0.003
	440	mg/kg			М	M		М	N		М	
PCB cong	ener 110	< 0.003	TM168	<0.003		<0.003	<0.003		< 0.003	<0.003		< 0.003
DOD	100	mg/kg	714400		М	M		М	N 10.000		М	
PCB cong	ener 138	< 0.003	TM168	<0.003		<0.003	<0.003		< 0.003	<0.003		< 0.003
DOD	450	mg/kg			М	M		М	N		М	
PCB cong	ener 100	< 0.003	TM168	<0.003		<0.003	<0.003		<0.003	<0.003		< 0.003
PCB cong	190	mg/kg	THEO	-0.000	М	M	10,000	М	N 10.002	1	М	
FCB cong	ener 100	< 0.003	TM168	<0.003		<0.003	<0.003		<0.003	<0.003		<0.003
Sum of do	tected PCB 7 Congeners	mg/kg <0.021	TM168	<0.024	М	M	<0.024	М	<0.021		М	<0.001
Sumorue	lected i OD i Congeners			<0.021		<0.021	<0.021		<0.021	<0.021		<0.021
Arsenic		mg/kg		40.0		7.42	40.5		4.79	10.7	-	7.49
Arsenic		<0.6 mg/kg	TM181	10.2	м	7.42 M	12.5	М	4.79 N		м	1.45
Barium		< 0.6	TM181	87.5	IVI	117	99.8	IVI	65 2	113	IVI	79.7
Damann		~0.6 mg/kg	TWITOT	07.5	#	#	55.0	#	652		#	15.1
Beryllium		< 0.01	TM181	0.691	π	0.747	1.04	#	0 555	0.957	#	0.688
20. 9 10011		~0.01 mg/kg		0.031	м	0.747 M	1.04	М	0 333 N		м	0.000
Cadmium		< 0.02		0.345	iVi	0 343	<0.02	íVI	0.11	0.19	IVI	0.47
		mg/kg		0.040	м	0 040 M	0.02	М	N		м	0.47
Chromium		< 0.9	TM181	13.3	ant.	15.4	18.4		12.8	15.1		13 9
		mg/kg			М	M		М	12.0 N		м	10 0
Copper		<1.4	TM181	18.1	ant.	16 5	15.2	141	9.56	33.9		17.6
		mg/kg			м	м	10.2	М	5.00 N		м	11.0
Lead		<0.7	TM181	37.5	at	35.6	19.8		23.6	44		36
		mg/kg			М	M		М	LU.U		м	
Mercury		<0.1	TM181	<0.1		<0.1	<0.1		<0.1	<0.1		<0.1
		mg/kg			М	M		М	N		М	0.1
Nickel		<0.2	TM181	13.4		15 5	19.7		10 3	17.8		13
		mg/kg			М	М		М	N		м	
Selenium		<1	TM181	<1		<1	<1		<1	<1		<1
		mg/kg			#	#		#	#		#	
Vanadium		<0.2	TM181	23.2		26.1	41.1		22.4	29.6		23.4
		mg/kg			#	#		#	#		#	
Zinc		<1.9	TM181	65.9		66.4	55.4		448	67.3		49.8
		mg/kg			М	М		М	N		М	
ANC @ pł	14	< 0.03	TM182	0.0594		0.0607	0.061		0.068	0.0697		0.0692
		mol/kg										
ANC @ pł	16	<0.03	TM182	<0.03		0.0359	<0.03		0.0423	<0.03	Τ	<0.03
		mol/kg										
			714000	<1		0.05						
Boron, wa	ter soluble	<1	TM222	\$1		2.85	<1		<1	<1		1.09

# ALS

# CERTIFICATE OF ANALYSIS Report Number: 667610

Location: Drax FCA

Validated

SDG:	221020-66
Client Ref.:	70072063

Results Legend	Cu	ustomer Sample Ref.	TP04	TP04	TP05	TP05	TP06	TP06
M mCERTS accredited. Aqueous / setted sample.								
diss.fit Dissolved / filtered sample. tot unfit Total / unfiltered sample.		Depth (m) Sample Type	0.90 - 1.00 Soil/Solid (S)	2.20 - 2.30 Soil/Solid (S)	0.70 - 0.80 Soil/Solid (S)	1.20 - 1.30 Soil/Solid (S)	0.20 - 0.30 Soil/Solid (S)	1.50 - 1.60 Soil/Solid (S)
<ul> <li>Subcontracted - refer to subcontractor report accreditation status.</li> </ul>		Date Sampled	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
** % recovery of the surrogate standard to chec efficiency of the method. The results of indivi	k the dual	Sampled Time Date Received	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	. 20/10/2022
compounds within samples aren't corrected f the recovery	ior	SDG Ref	221020-66 27048531	221020-66 27048537	221020-66 27048545	221020-66 27048476	221020-66 27048480	221020-66 27048488
(F) Trigger breach confirmed 1-4+8/0 Sample deviation (see appendix)		Lab Sample No.(s) AGS Reference	ES	ES	27048545 ES	2/0484/16 ES	ES	27048488 ES
Component	LOD/Units	-						
Chloride (soluble)	<5	TM243	11	133	8 94	33 5	10.4	21.7
Soluble Sulphate 2:1 extract as SO4	mg/kg	71.00.00	M	M	M	M	M	M
BRE	<0.004 g/l	TM243	0.0072	0.0432 M	0.0303	<0.004	0.0229 M	0.0221 M
Ammoniacal N as NH4 in 2:1 extract	<0.0003	TM248	M 0.00218	0.0189	M 0.00247	M 0.0116	0.00219	0.00907
BRE	g/l		0.002.00		0.002.0		0.00210	
Asbestos Quantification - Gravimetric -	<0.001	TM304		<0.001				
%	%			#				
Asbestos Quantification - PCOM Evaluation - %	<0.001 %	TM304		<0.001				
Additional Asbestos Components	70	TM304		# None				
(Using TM048)		111004		none #				
Analysts Comments		TM304		N/A				
Asbestos Quantification - Total - %	<0.001	TM304		<0.001				
PAH Total 17 (inc Coronene) Moisture	% <10	TM410	<10	# <10	<10	<10	<10	<10
Corrected	<10 mg/kg	111410	×10	~10	~10	×10	×10	<b>VIV</b>
Coronene	<0.2	TM410	<0.2	<0 2	<0.2	<0 2	<0.2	<0 2
	mg/kg							
EPH Surrogate % recovery**		TM415	97.4	104	105	98	97.1	99.4
Mineral Oil >C10-C40	%	TMAAE	44.7	45.5	45.0	40.4	E 0E	64
(EH_2D_AL)	<5 mg/kg	TM415	11.7	15 5	15.8	42.4	5 95	6.1
	inging							



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ALS		: 221020-66		Report Number: 66		Super	seded Report: 6671	93
	Client Ref.	: 70072063		Location: Dr	ax FCA			
PAH by GCMS								
Results Legend SOTTU25 accredited. mCERTS accredited.		Customer Sample Ref.	TP01	TP01	TP02	TP02	TP03	TP03
M Aqueous / settled sample.								
diss.filt Dissolved / filtered sample. tot.unfilt Total / unfiltered sample.		Depth (m) Sample Type	0.10 - 0.20	2.70 - 2.80 Seit/Seit/ (S)	1.10 - 1.20	1.80 - 1.90 Soil/Solid (S)	0.90 - 1.00	2.60 - 2.70
<ul> <li>Subcontracted - refer to subcontra</li> </ul>	actor report for	Date Sampled	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022
accreditation status. " % recovery of the surrogate stand	tard to check the	Sampled Time						
efficiency of the method. The resu	uts of individual	Date Received	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
compounds within samples aren't the recovery	t corrected for	SDG Ref	221020-66	221020-66	221020-66	221020-66	221020-66	221020-66
(F) Trigger breach confirmed		Lab Sample No.(s)	27048472 ES	27048493 ES	27048497 ES	27048509 ES	27048517 ES	27048524 ES
1-4+§@ Sample deviation (see appendix)		AGS Reference	20			20	20	20
Component	LOD/Unit							
laphthalene-d8 % recovery**	%	TM218	86.2	80 9	81.8	84 2	86.1	85.4
Acenaphthene-d10 % recovery**	70	TM218	88	85 3	87.8	87	89.8	87.1
	%							
Phenanthrene-d10 % recovery**		TM218	85	84 5	87	82.8	85.4	80.8
	%							
Chrysene-d12 % recovery**		TM218	84.3	77.4	77.7	76 9	80.8	77.6
	%							
Perylene-d12 % recovery**		TM218	85.7	74	72.8	84 2	88.6	80 9
	%							
Naphthalene	<0.009	TM218	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
	mg/kg			M M		M	M	
Acenaphthylene	<0.012	TM218	<0.012	<0.012	<0.012	<0.012	<0.012	<0.012
	mg/kg			M	M	М	M	
Acenaphthene	<0.008	TM218	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
	mg/kg			M	M	M	М	
Fluorene	<0.01	TM218	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	mg/kg			м	М	М	М	
Phenanthrene	< 0.015	TM218	0.0308	<0.015	0.0307	0.0438	0.0291	<0.015
	mg/kg		,	м	м	м	м	
Anthracene	<0.016	TM218	<0.016	<0.016	<0.016	<0.016	<0.016	<0.016
and doorld		1111210						\$0.010
-	mg/kg	7110/0		M M		M	M	-0.047
Fluoranthene	<0.017	TM218	0.0361	<0.017	0.0394	0.0491	0.0464	<0.017
	mg/kg			M M		M	M	
Pyrene	<0.015	TM218	0.0319	<0.015	0.0336	0.0421	0.0394	<0.015
	mg/kg		1	M	M	М	M	
Benz(a)anthracene	<0.014	TM218	0.021	<0.014	0.0197	0.0253	0.0209	<0.014
	mg/kg			M M	М	M	М	
Chrysene	<0.01	TM218	0.0344	<0.01	0.0257	0.0286	0.0253	<0.01
	mg/kg			м	М	М	М	
Benzo(b)fluoranthene	< 0.015	TM218	0.0307	<0.015	0.0289	0.0403	0.0343	<0.015
	mg/kg			м			М	
Benzo(k)fluoranthene	<0.014	TM218	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014
	mg/kg	101210					-0.014 M	-0.014
Benzo(a)pyrene		TM218	0.0178	M M <0.015	<0.015	M 0.0193	<0.015	<0.015
Den20(a)pyrene	<0.015	TM218						<0.015
L.J	mg/kg	71000		M M		M	M	10.040
ndeno(1,2,3-cd)pyrene	<0.018	TM218	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
	mg/kg			M M		M	M	
Dibenzo(a,h)anthracene	<0.023	TM218	<0.023	<0.023	<0.023	<0.023	<0.023	<0.023
	mg/kg			M	the second se	M	M	
Benzo(g,h,i)perylene	< 0.024	TM218	< 0.024	<0.024	< 0.024	<0.024	<0.024	<0.024
	mg/kg		1	M M	M	M	М	
PAH, Total Detected USEPA 16	<0.118	TM218	0.203	<0.118	0.178	0 249	0.195	<0.118
	mg/kg							
		+ +		+				
					1			



#### **CERTIFICATE OF ANALYSIS**

Validated

SDG: 221020-66 Report Number			Benert Number 003	Supercoded Deport: 667103					
	SDG: 2 Client Ref.: 7			Report Number: 667 Location: Dra		Superseded Report: 667193			
PAH by GCMS		-							
Results Legend	Cu	stomer Sample Ref.	TP04	TP04	TP05	TP05	TP06	TP06	
mCERTS accredited.									
aq Aqueous / settled sample. diss.filt Dissolved / filtered sample.		Depth (m)	0.90 - 1.00	2.20 - 2.30	0.70 - 0.80	1.20 - 1.30	0.20 - 0.30	1.50 - 1.60	
tot.unfiit Subcontracted - refer to subcontractor re	port for	Sample Type Date Sampled	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	
accreditation status. " % recovery of the surrogate standard to c		Sampled Time							
efficiency of the method. The results of in compounds within samples aren't correct		Date Received SDG Ref	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	
(F) Trigger breach confirmed		Lab Sample No.(s)	27048531	27048537	27048545	27048476	27048480	27048488	
1-4+§@ Sample deviation (see appendix)		AGS Reference	ES	ES	ES	ES	ES	ES	
Component Naphthalene-d8 % recovery**	LOD/Units	Method TM218	82.5	75.6	86.3	77 9	84.5	85	
raphalaiche de Arecovery	%	11112-10	02.0	10.0	00.0	11 5	04.0	00	
Acenaphthene-d10 % recovery**	%	TM218	88	81.1	90.1	82.6	87.7	89 2	
Phenanthrene-d10 % recovery**	%	TM218	88.5	82.7	86.4	83.1	84.5	87 2	
Chrysene-d12 % recovery**	%	TM218	82.2	73 2	84.4	74.4	81.5	84.8	
Perylene-d12 % recovery**		TM218	78.6	71.7	86.5	71.8	86.7	87 9	
Naphthalene	% <0.009	TM218	<0.009	<0.009	<0.009	0.0924	0.0111	<0.009	
Acenaphthylene	mg/kg <0.012	TM218	<0.012	1 <u>M</u> <0.012	M <0.012	M <0.012	M <0.012	M <0.012	
	<0.012 mg/kg	111/2/10	<0.012 N		<0.012 M	<0.012 M	<0.012 M	<0.012 M	
Acenaphthene	<0.008 mg/kg	TM218	<0.008	<0.008	<0.008 M	0.0436 M	<0.008 M	<0.008	
Fluorene	<0.01 mg/kg	TM218	<0.01	<0.01	<0.01 M	0.0393 M	<0.01 M	<0.01 M	
Phenanthrene	<0.015 mg/kg	TM218	0.0618 N	0.044	<0.015 M	0 219 M	0.0523 M	0.021 M	
Anthracene	<0.016 mg/kg	TM218	<0.016	<0.016	<0.016	<0.016	<0.016 M	<0.016	
Fluoranthene	<0.017 mg/kg	TM218	0.0709 N	0.0759	<0.017 M	0.182 M	0.0596 M	0.0252 M	
Pyrene	<0.015 mg/kg	TM218	0.0639 N	0.0655	<0.015 M	0.167 M	0.0525 M	0.0219 M	
Benz(a)anthracene	<0.014 mg/kg	TM218	0.0352	0.0355	<0.014 M	0.0522 M	0.0336 M	<0.014 M	
Chrysene	<0.01 mg/kg	TM218	0.0539 N	0.0457	<0.01 M	0.0941 M	0.0484 M	0.015 M	
Benzo(b)fluoranthene	<0.015 mg/kg	TM218	0.0469	0.0507 M M	<0.015	0.0882	0.0498	0.0193 M	
Benzo(k)fluoranthene	<0.014 mg/kg	TM218	<0.014 N	<0.014	<0.014 M	0.0303 M	<0.014 M	<0.014 M	
Benzo(a)pyrene	<0.015 mg/kg	TM218	0.0274 N	0.0299	<0.015 M	0.0519 M	0.0278 M	<0.015 M	
Indeno(1,2,3-cd)pyrene	<0.018 mg/kg	TM218	0.0225 N	0.0274	<0.018 M	0.046 M	<0.018 M	<0.018 M	
Dibenzo(a,h)anthracene	<0.023 mg/kg	TM218	<0.023	<0.023	<0.023 M	<0.023 M	<0.023 M	<0.023	
Benzo(g,h,i)perylene	<0.024 mg/kg	TM218	<0.024	<0.024	<0.024 M	0.0344 M	<0.024 M	<0.024 M	
PAH, Total Detected USEPA 16	<0.118 mg/kg	TM218	0.382	0 375	<0.118	1.14	0.335	<0.118	

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**SDG:** 221020-66

Superseded Report: 667193

Validated

Client Ref.: 70072063

Interface         <	Phene	ols Spec MS (S)								
*         Active strated and and and and bit rotation append and bit rotation append bit rotation active strated appendix *         *         Section (S) (S) (S) (S) (S) (S) (S) (S) (S) (S)		Results Legend		Customer Sample Ref.	TP01	TP01	TP02	TP02	TP03	TP03
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	M	Aqueous / settled sample.								
Image: Secondation when the secondation report for sample induced to the the secondation when the secondation wh	diss.filt	Dissolved / filtered sample.								
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		Subcontracted - refer to subcontractor report	for	Date Sampled						
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		% recovery of the surrogate standard to check	k the					20/10/2022		
minute state confined track target which may speak (with may speak)         Lob with may (RS streams)         Lob	1	compounds within samples aren't corrected fo	or		221020-66	221020-66	221020-66	221020-66	221020-66	221020-66
Labor Mathema (a)         Local (a)         Note (a) <th>(F)</th> <th>Trigger breach confirmed</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	(F)	Trigger breach confirmed								
4-Nirophenol         <0.001 mg/kg         TM072 rM072         <0.001			LOD/Unit							
24,6-Trichlorophenol         <0.001 mg/kg         TM072 mg/kg         0.00207         <0.001         0.00117         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.0					<0.001	<0.001	0.00141	<0.001	0.00201	<0.001
mg/kg         mg/kg <t< td=""><td></td><td></td><td>mg/kg</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>			mg/kg							
2-Nitrophenol         <0.001 mg/kg         TM072 mg/kg         <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <	2,4,6-Tric	lorophenol		TM072	0.00207	<0.001	0.00117	<0.001	<0.001	<0.001
mg/kg         mode         mode <t< td=""><td>2 Nitroph</td><td>mal</td><td></td><td>TM070</td><td>&lt;0.004</td><td>&lt;0.004</td><td>&lt;0.004</td><td>&lt;0.004</td><td>&lt;0.004</td><td>&lt;0.004</td></t<>	2 Nitroph	mal		TM070	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
2,4-Dichlorophenol         <0.001 mg/kg         TM072 mg/kg         <0.001 <0.001         <0.001 <0.001         <0.001 <0.001         <0.001 <0.001         <0.001 <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <	2-INItroph	noi		1M072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
mg/kg         mg/kg <th< td=""><td>2,4-Dichlo</td><td>rophenol</td><td>1</td><td>TM072</td><td>&lt;0.001</td><td>&lt;0.001</td><td>&lt;0.001</td><td>&lt;0.001</td><td>&lt;0.001</td><td>&lt;0.001</td></th<>	2,4-Dichlo	rophenol	1	TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Img/kg         Img/kg<										
Phenol         <0.001 mg/kg         TM072 mg/kg         <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001         <0.001         <0.00221           4-Chloro-3-methylphenol         <0.001 mg/kg         TM072 TM072         <0.001	Pentachic	rophenol		TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
mg/kg         mm/l         m/l         mm/l         mm/l <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>										
4-Chloro-3-methylphenol         <0.001 mg/kg         TM072 TM072         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.	Phenol			TM072	<0.001	<0.001	<0.001	<0.001	<0.001	0.00221
mg/kg         mg/kg <th< td=""><td>4-Chloro-</td><td>-methylphenol</td><td></td><td>TM072</td><td>&lt;0.001</td><td>&lt;0.001</td><td>&lt;0.001</td><td>&lt;0.001</td><td>&lt;0.001</td><td>&lt;0.001</td></th<>	4-Chloro-	-methylphenol		TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2,4-Dimethylphenol         <0.001 mg/kg         TM072 mg/kg         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001 </td <td></td> <td></td> <td></td> <td>THUSTZ</td> <td>-0.001</td> <td>-0.001</td> <td>-0.001</td> <td>-0.001</td> <td>-0.001</td> <td>-0.001</td>				THUSTZ	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001
2-Chlorophenol         <0.001 mg/kg         TM072 mg/kg         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001         <0.001	2,4-Dimet	hylphenol	1	TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
mg/kg         mg/kg <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>										
Sum of Detected Phenols         <0.009         TM072         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009         <0.009	2-Chlorop	henol		TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
	Sum of D	stacted Phanols		TM072	<0.009	<0.009	<0.009	<0.009	<0.009	<0.009
Image: state	Sumord	Recleu i henois		TWO/2	~0.005	~0.005	~0.005	~0.005	~0.005	~0.005
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**CERTIFICATE OF ANALYSIS** 

Report Number: 667610

Location: Drax FCA

**CERTIFICATE OF ANALYSIS** SDG: 221020-66

Client Ref.: 70072063

Superseded Report: 667193

Validated

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Phen	OIS Spec MS (S) Results Legend		Customer Sample Ref.						
2 M	mcerts accredited.		oustomer oample Ref.	TP04	TP04	TP05	TP05	TP06	TP06
aq	Aqueous / settled sample. Dissolved / filtered sample.								
diss.filt tot.unfilt	Total / unfittered sample,		Depth (m) Sample Type	0.90 - 1.00 Soil/Solid (S)	2.20 - 2.30 Soil/Solid (S)	0.70 - 0.80 Soil/Solid (S)	1.20 - 1.30 Soil/Solid (S)	0.20 - 0.30 Soil/Solid (S)	1.50 - 1.60 Soil/Solid (S)
· ·	Subcontracted - refer to subcontractor report f accreditation status.		Date Sampled	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
-	% recovery of the surrogate standard to check efficiency of the method. The results of individ	ual	Sampled Time Date Received	20/10/2022	. 20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
	compounds within samples aren't corrected fo the recovery	r	SDG Ref	221020-66	221020-66	221020-66	221020-66	221020-66	221020-66 27048488
(F)	Trigger breach confirmed		Lab Sample No.(s) AGS Reference	27048531 ES	27048537 ES	27048545 ES	27048476 ES	27048480 ES	27048488 ES
1-4450 Compo		LOD/Unit							
4-Nitroph	ienol	<0.001	TM072	0.00157	<0.001	<0.001	0.00555	<0.001	<0.001
		mg/kg							
2,4,6-Tric	chlorophenol	<0.001	TM072	0.00166	<0.001	<0.001	<0.001	<0.001	<0.001
0.15		mg/kg							
2-Nitroph	ienol	< 0.001	TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
24-Dichl	orophenol	mg/kg <0.001	TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2,4 Dioni	orophonor	<0.001 mg/kg	TWOTZ	~0.001	S0.001	~0.001	NU.001	NU.001	NU.001
Pentachk	orophenol	< 0.001	TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
		mg/kg							
Phenol		<0.001	TM072	0.0012	<0.001	<0.001	0.00697	<0.001	0.002
<u> </u>		mg/kg							
4-Chloro-	-3-methylphenol	< 0.001	TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
24 0	thulphonol	mg/kg	71/070	-0.004	-0.001	40.004	-0.004	-0.004	-0.004
2,4-Dime	thylphenol	<0.001 mg/kg	TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
2-Chloro	phenol	<0.001	TM072	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
		mg/kg	111072	-0.001	0.001	0.001	-0.001	-0.001	-0.001
Sum of D	etected Phenols	< 0.009	TM072	<0.009	<0.009	<0.009	0.0125	<0.009	< 0.009
		mg/kg							
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Report Number: 667610

Location: Drax FCA



Validated

 SDG: 221020-66
 Report Number: 667610

 Client Ref.: 70072063
 Location: Drax FCA

Semi	Volatile Organic Co Results Legend	mpoun	ds Customer Sample Ref.						
1 M	mcents accredited.		Gustomer Sample Ref.	TP01	TP01	TP02	TP02	TP03	TP03
aq	Aqueous / settled sample. Dissolved / filtered sample.		Depth (m)	0.10 - 0.20	2.70 - 2.80	1.10 - 1.20	1.80 - 1.90	0.90 - 1.00	2.60 - 2.70
	Total / unfiltered sample. Subcontracted - refer to subcontractor report f	ior	Sample Type	Soil/Solid (S)					
· ·	accreditation status. % recovery of the surrogate standard to check		Date Sampled Sampled Time	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
-	efficiency of the method. The results of individ	ual	Date Received	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
	compounds within samples aren't corrected fo the recovery	r	SDG Ref Lab Sample No.(s)	221020-66 27048472	221020-66 27048493	221020-66 27048497	221020-66 27048509	221020-66 27048517	221020-66 27048524
(F) 1-446@	Trigger breach confirmed Sample deviation (see appendix)		AGS Reference	ES	ES	ES	ES	ES	ES
Compo	nent	LOD/Unit							
Phenol		<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pentachlo	ronhenol	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
T CHILGON	opicitor	mg/kg	TWI 57	50.1	-0.1	-0.1	50.1	-0.1	50.1
n-Nitroso-	n-dipropylamine	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Nitrobenz	ene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Isophoror	e	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlo	roethane	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg	in ior	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Hexachlo	rocyclopentadiene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Hexachlo	robutadiene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
l leve eble		mg/kg	71457	-0.4				-0.4	
nexachio	robenzene	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
n-Dioctyl	ohthalate	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Dimethyl	phthalate	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Diethyl ph	thalate	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
n-Dibutyl	nkthalate	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
II-Dibutyi	unidade	ng/kg	TWITS7	NU.1	S0.1	NU.1	NU.1	NU.1	NU.1
Dibenzofu	iran	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Carbazole	•	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Detil	-   _   .   .   .   .   .	mg/kg	714/57	-0.4		-0.1		10.1	
Butylbenz	yl phthalate	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
bis(2-Ethy	lhexyl) phthalate	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
· · ·		mg/kg							
bis(2-Chlo	proethoxy)methane	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
bis(2-Chlo	proethyl)ether	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Azobenze	ne	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg	in iter	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
4-Nitroph	enol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
4-Nitroani	line	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4-Methylp	henol	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4 wicatyip		mg/kg	TWITOT	50.1	<b>~0.1</b>	SU.1	NU.1	<b>~0.1</b>	NU.1
4-Chlorop	henylphenylether	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
4-Chloroa	niline	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
A Chieve 1	3-methylphenol	mg/kg	71457					-0.4	
4-Chioro-	o-methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4-Bromop	henylphenylether	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	····	mg/kg							
3-Nitroani	line	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
0.17		mg/kg	_						
2-Nitroph	enol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Nitroani	line	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2 . Hu Varii		 mg/kg	TWI UT	-v. i	-V.1	-v.1	- V- I	°V.1	-v. i
2-Methylp	henol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
1,2,4-Tric	hlorobenzene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg	_						



# CERTIFICATE OF ANALYSIS Report Number: 667610

Location: Drax FCA

Validated

SDG: 221020-66 Client Ref.: 70072063 Superseded Report: 667193

Semi Volatile Organic Compounds

Semi	Volatile Organic Co	ompoui	nds						
	Results Legend		Customer Sample Ref.	TP01	TP01	TP02	TP02	TP03	TP03
1			outomor oumpro rior.	IFVI	IFVI	11702	IFV2	11-03	100
M	mCERTS accredited. Aqueous / settled sample.								
aq	Dissolved / filtered sample.		Depth (m)	0.10 - 0.20	2.70 - 2.80	1.10 - 1.20	1.80 - 1.90	0.90 - 1.00	2.60, 2.70
diss.hit tot.unfilt	Total / unfiltered sample.								2.60 - 2.70
tocumit	Subcontracted - refer to subcontractor report	for	Sample Type	Soil/Solid (S)					
	accreditation status.		Date Sampled	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
	% recovery of the surrogate standard to check		Sampled Time						
	efficiency of the method. The results of indivi		Date Received	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
	compounds within samples aren't corrected for	or	SDG Ref	221020-66	221020-66	221020-66	221020-66	221020-66	221020-66
	the recovery Trigger breach confirmed		Lab Sample No.(s)	27048472	27048493	27048497	27048509	27048517	27048524
(F)	Sample deviation (see appendix)		AGS Reference	ES	ES	ES	ES	ES	ES
		_							
Compo	onent	LOD/Ur	nits Method						
2-Chlorop	phenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
· ·									
		mg/kg							
2,6-Dinitr	otoluene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1 ·									
		mg/kg							
2,4-Dinitr	otoluene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1 ·									
		mg/kg							
2,4-Dime	thylphenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
2,4-Dichle	orophenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
2,4,6-Tric	chlorophenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1		mg/kg							
<b></b>		1							
2,4,5-Tric	chlorophenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1		mg/kg							
<b></b>									
1,4-Dichle	orobenzene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1		mg/kg							
<b></b>		-							
1,3-Dichle	orobenzene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
1,2-Dichle	orobenzene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
· · · ·									
		mg/kg							
2-Chloror	naphthalene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
2-Methylr	naphthalene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Benzo(a)	anthracene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Chrysene	•	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Naphthal	ene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Bis(2-chk	oroisopropyl) ether	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
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# CERTIFICATE OF ANALYSIS Report Number: 667610

Location: Drax FCA

Validated

SDG: 221020-66 Client Ref.: 70072063

Semi	Volatile Organic Co								
1	Results Legend	Cu	istomer Sample Ref.	TP04	TP04	TP05	TP05	TP06	TP06
M aq	mCERTS accredited. Aqueous / settled sample.								
diss.filt tot.unfilt	Dissolved / filtered sample. Total / unfiltered sample.		Depth (m) Sample Type	0.90 - 1.00 Soil/Solid (S)	2.20 - 2.30 Soil/Solid (S)	0.70 - 0.80 Soil/Solid (S)	1.20 - 1.30 Soil/Solid (S)	0.20 - 0.30 Soil/Solid (S)	1.50 - 1.60 Soil/Solid (S)
· ·	Subcontracted - refer to subcontractor report i accreditation status.		Date Sampled Sampled Time	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
-	% recovery of the surrogate standard to check efficiency of the method. The results of individ	tual	Date Received	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
	compounds within samples aren't corrected for the recovery		SDG Ref	221020-66 27048531	221020-66 27048537	221020-66 27048545	221020-66 27048476	221020-66 27048480	221020-66 27048488
(F) 1-4+600	Trigger breach confirmed Sample deviation (see appendix)		Lab Sample No.(s) AGS Reference	ES	ES	ES	ES	ES	ES
Compo	onent	LOD/Units	Method						
Phenol		<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pentachk	prophenol	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
n-Nitroso	-n-dipropylamine	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Mrs. 1		mg/kg	714457						
Nitrobenz	zene	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Isophoror	ne	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Hexachlo	roethane	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlo	rocyclopentadiene	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg	AWI OF	- V. I	-v. i	- V- I	20.1	- V. I	-V.1
Hexachlo	robutadiene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Hexachlo	robenzene	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
n-Dioctyl	phthalate	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Dimethyl	phthalate	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Diethyl pł	hthalate	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dicaryr pr		mg/kg	TWITO	-0.1	-0.1	-0.1	50.1	50.1	-0.1
n-Dibutyl	phthalate	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
D1 (		mg/kg							
Dibenzofi	uran	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbazol	e	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
Butylbenz	zyl phthalate	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
bis(2-Eth	ylhexyl) phthalate	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	mg/kg	INITO	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
bis(2-Chl	oroethoxy)methane	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
15-79 OH	oroethyl)ether	mg/kg	714457	-0.4	-0.4	-0.4	10.4	-0.4	- 21
DIS(2-Chi	oroeinyijeiner	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Azobenze	ene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
4-Nitroph	enol	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4-Nitroan	iline	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
4-Methylp	phenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4-Chloror	ohenylphenylether	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
	,	mg/kg					-v. i	-0.1	-V.1
4-Chloroa	aniline	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1.0W-	3-mathulphan-1	mg/kg	T1467	-0.4	-0.4	-0.4	20.4	20.4	-0.4
-Culoro-	3-methylphenol	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4-Bromop	ohenylphenylether	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2.45		mg/kg							
3-Nitroan	lline	<0.1 mg/kg	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Nitroph	enol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
2-Nitroan	iline	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylp	phenol	mg/kg <0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
1,2,4-Tric	hlorobenzene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg	ļ						



# CERTIFICATE OF ANALYSIS Report Number: 667610

Location: Drax FCA

Validated

SDG: 221020-66 Client Ref.: 70072063 Superseded Report: 667193

Semi Volatile Organic Compounds

Semi	Volatile Organic Co	ompoun	ds						
	Results Legend		Customer Sample Ref.	TP04	TP04	TP05	TP05	TP06	TP06
	ISO17025 accredited. mCERTS accredited.			11.04	1104	1100	1100	1100	
	Aqueous / settled sample.								
aq diss.filt	Dissolved / filtered sample.		Depth (m)	0.90 - 1.00	2.20 - 2.30	0.70 - 0.80	1.20 - 1.30	0.20 - 0.30	1.50 - 1.60
	Total / unfiltered sample.		Sample Type	Soil/Solid (S)					
	Subcontracted - refer to subcontractor report	for	Date Sampled	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
	accreditation status.		Sampled Time	10/10/2022	16/10/2022	10/10/2022	10/10/2022	10/10/2022	
	% recovery of the surrogate standard to chec								
	efficiency of the method. The results of indivi	dual	Date Received	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
1	compounds within samples aren't corrected f the recovery	or	SDG Ref	221020-66	221020-66	221020-66	221020-66	221020-66	221020-66
	Trigger breach confirmed		Lab Sample No.(s)	27048531	27048537	27048545	27048476	27048480	27048488
	Sample deviation (see appendix)		AGS Reference	ES	ES	ES	ES	ES	ES
Compo		LOD/Unit	ts Method						
2-Chlorop	henol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		malka							
		mg/kg							
2,6-Dinitro	otoluene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
2,4-Dinitro	otoluene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
		-							
2,4-Dimet	thylphenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
		тіу/ку							
2,4-Dichlo	prophenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
0.4.0									
2,4,6-Tric	hlorophenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1		mg/kg							
045-0		1							
2,4,5-Tric	hlorophenol	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1		mg/kg							
11000									
1,4-Dichlo	probenzene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1		mg/kg							
4.0 -									
1,3-Dichlo	probenzene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1		mg/kg							
4.6.5		1							
1,2-Dichlo	probenzene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
2-Chloron	naphthalene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
			_						
2-Methyln	naphthalene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
		1							
Benzo(a)a	anthracene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
		1							
Chrysene		<0.1	TM157	<0.1	<0.1	<0.1	0.163	<0.1	<0.1
		mg/kg							
		1							
Naphthale	ene	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
		тіулу							
Bis(2-chlo	proisopropyl) ether	<0.1	TM157	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
		тіулку							
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Report Number: 667610

Location: Drax FCA

Validated

(ALS)	

SDG: 221020-66 Client Ref.: 70072063

TPH CWG (S) Results Legend		Customer Sample Ref.	TP01	TP01	TP02	TP02	TP03	TP03
# ISOT7025 acceduted. M mCERTS accredited.		Gustomer Sample Ker.	TP01	TP01	TP02	TP02	TP03	TP03
aq Aqueous / settled sample.		Death (a)						
tot unfit Total / unfittered sample.	.	Depth (m) Sample Type	0.10 - 0.20 Soil/Solid (S)	2.70 - 2.80 Soil/Solid (S)	1.10 - 1.20 Soil/Solid (S)	1.80 - 1.90 Soil/Solid (S)	0.90 - 1.00 Soil/Solid (S)	2.60 - 2.70 Soil/Solid (S)
<ul> <li>Subcontracted - refer to subcontractor report for accreditation status.</li> </ul>		Date Sampled	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
% recovery of the surrogate standard to check efficiency of the method. The results of individ		Sampled Time Date Received	20/10/2022	20/10/2022	. 20/10/2022	20/10/2022	. 20/10/2022	. 20/10/2022
compounds within samples aren't corrected fo the recovery		SDG Ref	221020-66	221020-66	221020-66	221020-66	221020-66	221020-66
(F) Trigger breach confirmed		Lab Sample No.(s)	27048472 ES	27048493 ES	27048497 ES	27048509 ES	27048517 ES	27048524 ES
1-4460 Sample deviation (see appendix)	LOD/U	AGS Reference						
Component GRO Surrogate % recovery**	LOD/U	nits Method TM089	95.5	106	92.3	91.7	92.2	86.7
one canogate wrecerery	%	111005	30.0	100	32.0	51.1	JE.L	00.1
Aliphatics >C5-C6	<0.0	1 TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
(HS_1D_AL)	mg/kg							
Aliphatics >C6-C8	<0.0		<0.01	<0.01	<0.01	0.0173	<0.01	<0.01
(HS_1D_AL)	mg/kg	g						
Aliphatics >C8-C10	<0.0	1 TM089	<0.01	<0.01	<0.01	0.0127	<0.01	<0.01
(HS_1D_AL)	mg/k	g						
Aliphatics >C10-C12	<1	TM414	<1	<1	<1	<1	<1	<1
(EH_2D_AL_#1)	mg/k	g	#	#	#	#	#	#
Aliphatics > C12-C16	<1	TM414	<1	<1	<1	<1	<1	<1
(EH_2D_AL_#1)	mg/k		#	#	#	#	#	#
Aliphatics >C16-C21 (EH_2D_AL_#1)	<1	TM414	1 32	<1	<1	<1	<1	<1
	mg/k		#	#	#	#	#	#
Aliphatics >C16-C35 (EH_2D_AL_#1)	<1	TM414	16	2.16	5.47	2.24	5.85	<1
Aliphatics >C21-C35	mg/k		447	0.40	5.47	0.04	5.05	
(EH_2D_AL_#1)	<1 mg/kg	TM414	14.7	2.16	5.47	2.24	5.85	<1
Aliphatics >C35-C44	۳۱۹/۸۹ <1	9 TM414	#	# <1	# <1	# <1	# <1	# <1
(EH_2D_AL_#1)	mg/kg		1.00	~1	~1	~1	~1	51
Total Aliphatics >C10-C44			17.1	<5	5.47	<5	6.09	<5
(EH_2D_AR_#1)	mg/kg			Ň	0.41	Ň	0.00	Ň
Total Aliphatics & Aromatics >C10-C44	<10		42.8	<10	<10	<10	<10	<10
(EH_2D_Total_#1)	mg/kg							
Aromatics >EC5-EC7	<0.0		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
(HS_1D_AR)	mg/kg	g						
Aromatics >EC7-EC8	<0.0	1 TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
(HS_1D_AR)	mg/k	g						
Aromatics >EC8-EC10	<0.0	1 TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
(HS_1D_AR)	mg/k	g						
Aromatics > EC10-EC12	<1	TM414	<1	<1	<1	<1	<1	<1
(EH_2D_AR_#1)	mg/k		#	#	#	#	#	#
Aromatics > EC12-EC16 (EH_2D_AR_#1)	<1	TM414	<1	<1	<1	<1	<1	<1
Aromatics > EC16-EC21	mg/k		#	#	#	#	#	#
(EH 2D AR #1)	<1 mg/kg		1.43 #	<1	<1 #	<1 "	<1 "	<1
Aromatics > EC16-EC35	۱۱۱۹/۸۹ <1		# 18.7	# <1	2 26	#	# 2.69	# <1
(EH_2D_AR_#1)	mg/kg		10.7		2 20	0.00	2.05	
Aromatics > EC21-EC35	<1	-	17.2	<1	2 26	3.35	2 56	<1
(EH_2D_AR_#1)	mg/k		#	. #	#	#	#	. #
Aromatics >EC35-EC44	<1		7.09	<1	<1	<1	<1	<1
(EH_2D_AR_#1)	mg/k	g						
Aromatics > EC40-EC44	<1	TM414	1.13	<1	<1	<1	<1	<1
(EH_2D_AR_#1)	mg/k	-						
Total Aromatics > EC10-EC44 (EH_2D_AR_#1)	<5		25.7	<5	<5	<5	<5	<5
	mg/k							
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10		42.8	<10	<10	<10	<10	<10
Total Aliphatics >C5-C10	mg/k		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
(HS_1D_AL_TOTAL)	<0.0		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Aromatics >EC5-EC10	mg/kg <0.0		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
(HS_1D_AR_TOTAL)	 mg/kg		-0.0 <del>0</del>	-v.vv	-v.vv	-0.0 <del>0</del>	-v.vv	-0.00
GR0 >C5-C10	<0.0		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
(HS_1D_TOTAL)	mg/kg		-0.0L	-0,0L	-0,0L	-0.0L	-0.0E	-0.0L
		-						



Validated

Report Number: 667610 SDG: 221020-66 Client Ref.: 70072063 Location: Drax FCA

TPH CWG (S)								
Results Legend	Cu	stomer Sample Ref.	TP04	TP04	TP05	TP05	TP06	TP06
M ///CERTS accredited. aq Aqueous / setted sample.								
diss.fit Dissolved / filtered sample. tot unfit Total / unfitered sample.		Depth (m) Sample Type	0.90 - 1.00 Soil/Solid (S)	2.20 - 2.30 Soil/Solid (S)	0.70 - 0.80 Soil/Solid (S)	1.20 - 1.30 Soil/Solid (S)	0.20 - 0.30 Soil/Solid (S)	1.50 - 1.60 Soil/Solid (S)
Subcontracted - refer to subcontractor report f accreditation status.	for	Date Sampled	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
** % recovery of the surrogate standard to check efficiency of the method. The results of individence of the method.		Sampled Time Date Received	. 20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
compounds within samples aren't corrected fo the recovery	*	SDG Ref	221020-66	221020-66	221020-66	221020-66	221020-66	221020-66
(F) Trigger breach confirmed	· · · ·	Lab Sample No.(s) AGS Reference	27048531 ES	27048537 ES	27048545 ES	27048476 ES	27048480 ES	27048488 ES
1-4450 Sample deviation (see appendix) Component	LOD/Units	Method						
GRO Surrogate % recovery**		TM089	94.3	<del>9</del> 3 5	92.1	117	103	120
	%	T1 1000						
Aliphatics >C5-C6 (HS_1D_AL)	<0.01 mg/kg	TM089	<0.01	<0.01	<0.01	0.0431	<0.01	<0.01
Aliphatics >C6-C8	<0.01	TM089	<0.01	0.0117	0.02	0.0861	<0.01	<0.01
(HS_1D_AL)	mg/kg		0.01	0.0111	0.02	0.0001	0.01	0.01
Aliphatics >C8-C10	<0.01	TM089	<0.01	<0.01	0.015	0.171	<0.01	<0.01
(HS_1D_AL)	mg/kg							
Aliphatics >C10-C12 (EH_2D_AL_#1)	<1	TM414	<1	<1	<1	<1	<1	<1
Aliphatics >C12-C16	mg/kg <1	TM414	# <1	# <1	# <1	# <1	# <1	# <1
(EH_2D_AL_#1)	mg/kg	1101414	*1		*	×1 #	*	#
Aliphatics >C16-C21	<1	TM414	<1	" <1	<1	<1	<1	<1
(EH_2D_AL_#1)	mg/kg		#	#	#	#	#	#
Aliphatics >C16-C35 (EH_2D_AL_#1)	<1	TM414	11.4	4.75	1.71	10 2	2	7.47
(EH_2U_AL_#1) Aliphatics >C21-C35	mg/kg <1	TM414	11	4.56	1.71	9.95	2	7.47
(EH_2D_AL_#1)	<1 mg/kg	1M414	11 #	4.06 #	1.71	9.95	2 #	1.47 #
Aliphatics >C35-C44	<1	TM414	<1	" <1	" <1	" ۲	۳ ۲	
(EH_2D_AL_#1)	mg/kg							
Total Aliphatics >C10-C44	<5	TM414	11.7	<5	<5	10.6	<5	7.83
(EH_2D_AR_#1)	mg/kg			10.1		10.0		
Total Aliphatics & Aromatics >C10-C44 (EH_2D_Total_#1)	<10 mg/kg	TM414	21.4	10.1	<10	19.8	<10	13
Aromatics >EC5-EC7	<0.01	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
(HS_1D_AR)	mg/kg							
Aromatics >EC7-EC8	<0.01	TM089	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
(HS_1D_AR)	mg/kg							
Aromatics >EC8-EC10 (HS 1D AR)	<0.01	TM089	<0.01	<0.01	0.01	0.114	<0.01	<0.01
Aromatics > EC10-EC12	mg/kg <1	TM414	<1	<1	<1	<1	<1	<1
(EH_2D_AR_#1)	mg/kg		. #	. #	. #	. #	. #	. #
Aromatics > EC12-EC16	<1	TM414	<1	<1	<1	<1	<1	<1
(EH_2D_AR_#1)	mg/kg		#	#	#	#	#	#
Aromatics > EC16-EC21 (EH_2D_AR_#1)	<1 ma/ka	TM414	<1	<1 "	<1	<1	<1	<1
Aromatics > EC16-EC35	mg/kg <1	TM414	#	# 4.02	#	# 7.99	#	4.19
(EH_2D_AR_#1)	mg/kg	1101414	0.1	4.02	0	1.55	0.00	4.15
Aromatics > EC21-EC35	<1	TM414	8.7	4.02	3	7.91	3.89	4.19
(EH_2D_AR_#1)	mg/kg		#	#	#	#	#	#
Aromatics >EC35-EC44 (EH_2D_AR_#1)	<1 mg/kg	TM414	<1	<1	<1	<1	<1	<1
Aromatics > EC40-EC44	<1 <1	TM414	<1	<1	<1	<1	<1	<1
(EH_2D_AR_#1)	mg/kg	100714						
Total Aromatics > EC10-EC44	<5	TM414	9.7	5.29	<5	9.16	5 22	5.19
(EH_2D_AR_#1)	mg/kg							
Total Aliphatics & Aromatics >C5-C44 (EH_2D_Total_#1+HS_1D_Total)	<10 mg/kg	TM414	21.4	<10	<10	20 2	<10	13
Total Aliphatics >C5-C10	<0.05	TM089	<0.05	<0.05	<0.05	0.3	<0.05	<0.05
(HS_1D_AL_TOTAL)	mg/kg	1111000	-0.00	0.00	0.00	0.0	-0.00	-0.00
Total Aromatics >EC5-EC10	<0.05	TM089	<0.05	<0.05	<0.05	0.114	<0.05	<0.05
(HS_1D_AR_TOTAL)	mg/kg							
GRO >C5-C10 (HS_1D_TOTAL)	<0.02	TM089	<0.02	<0.02	<0.02	0.415	<0.02	<0.02
· _··	mg/kg							



Validated

ALS	SE	<b>)G:</b> 221020-66	F	Report Number: 667	7610
	Client R	ef.: 70072063		Location: Dra	IX FCA
C MS (S)					
Results ISO 17025 accredited. InCERTS accredited. Aqueous / settled samp		Customer Sample Ref.	TP01	TP01	TP02

Image: Sector of the										
	VOC MS (S)									
····································	15017025 adda	Rattera.	Cu	istomer Sample Ref.	TP01	TP01	TP02	TP02	TP03	TP03
Burnary and an analysis of a strategy of a strate	M Agronous Looff									
Normal and mathematical part is a second of	diss fit Dissolved / filte	red sample.		Depth (m)	0.10 - 0.20	2.70 - 2.80	1.10 - 1.20	1.80 - 1.90	0.90 - 1.00	2.60 - 2.70
Internal and any set of a set o			for							
Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	accreditation s	tatus.			18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
Image: Second					20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
n         n	compounds with									
intermediation metrics         Control formation metrics         Cont	Trigger brooch	confirmed		Lab Sample No.(s)						
DemokeowerhamN N ImageThis101101111711	WI Construction			AGS Reference	ES	ES	ES	ES	ES	ES
No.         Number of the second	Component		LOD/Units	Method						
Tatase d <sup>m</sup> s         Th116         996         996         100         101         999         611           Adamstancesser*         s         Th116         S13         97         911         S12         914         S85           Definitionserve         40.06         Th116         C40.6         C40.6         C40.6         C40.7	Dibromofluoromethan	e**		TM116	110	110	111	121	111	118
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			%							
Advancementance         Number         Part of the second s	Toluene-d8**			TM116	99.6	99.6	100	101	99.9	101
$s_{0}$ Number of the second se			%							
% $M16$ $0.06$	4-Bromofluorobenzen	e**		TM116	93.3	97	91.1	93 2	91,4	88 5
			%							
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Dichlorodifluorometha	ne	<0.006	TM116	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
Observative         ODD / TM 16         OD / M 16										
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Chloromethane			TM11C						
Ving/Denoise         O(0)6         TH16         O(0)8         O(0)6         O(0)6         O(0)6         O(0)6         O(0)6         O(0)6         M	Chioromethane			11/1110						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Vand Oblastid			7144.10	1	1				#
Benomenhame         -0,1	vinyl Chloride			FM116						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			mg/kg		1	î.	1			M
Oblew $-0,11$ $10,16$ $0,1$	Bromomethane			TM116	<0.1		<0.1			
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			mg/kg		M	M	М	M	M	M
Tride/order         CODE         MITE         CODE	Chloroethane		<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Interval $0.006$ TM116 $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.06$ $0.07$ $0.01$ $0.0$			mg/kg		M	M	M	M	M	м
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Trichlorofluorormetha	ne	< 0.006	TM116	<0.06	<0.06	<0.06		<0.06	
110-blockerse         0.01         M116         0.1										M
mg/gg         mmm         mm         mm <th< td=""><td>1.1-Dichloroethene</td><td></td><td></td><td>TM116</td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	1.1-Dichloroethene			TM116						
Cates Doughais         -0.07         TM16         -0.07	,									-0.1
rng kg         ·····         M <th< td=""><td>Carbon Disulahida</td><td></td><td></td><td>TM11C</td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	Carbon Disulahida			TM11C						
Delsementane         40.1         TM16         40.1         40.14         40.15         40.16         40.06         40.08         40.01         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1         40.1	Carbon Disulpride			TIVITIO						
mplag $ $	<b>2</b>									
Methyl Tentry Buryl Elver         40.01         TM116         40.1 <t< td=""><td>Dichloromethane</td><td></td><td></td><td>TM116</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Dichloromethane			TM116						
rngåg         min         min<										#
Pane-12-Debloosebare         (1)	Methyl Tertiary Butyl I	Ether	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			mg/kg		M	M	М	М	М	М
11-Dickloserhane         -0.08         TM116         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.01         <0.11         <0.11         <0.11         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01	trans-1,2-Dichloroethe	ene	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
mghg         Mill         Mill <th< td=""><td></td><td></td><td>mg/kg</td><td></td><td>М</td><td>м</td><td>М</td><td>М</td><td>М</td><td>М</td></th<>			mg/kg		М	м	М	М	М	М
cis-12 Dickloseftene         -0.06 mg/hg         TM116         <0.06 M         <0.01 M         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.008         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07	1,1-Dichloroethane		<0.008	TM116	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
cis-12 Dickloseftene         -0.06 mg/hg         TM116         <0.06 M         <0.01 M         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.008         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.08         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07			ma/ka		м	м	м	м	м	М
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	cis-1.2-Dichloroethen	e		TM116	1	1				
22-Dickloropropane         -0.01 mg/kg         TM116         <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         <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         <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         <0.1         <0.1         <0.1         <0.0         M	, i									
Image         Intel         Intel<	2.2-Dichloropropage			TM116	1	î.	1			
Bennochkionenthane         Q0,1 mg/kg         TM116 M         Q0,1 M	2,2 Districtopropulie			INTIO	-v.1	20.1	-V.1	-v.1	-v.1	-0.1
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Promoskloromothano			TMAAC	<0.4	-0.4	-0.4	<0.4	<0.4	<0.4
Chlordorn         Chlordorn         Chlordorn         M         Colla	bromochioromethane			10116						
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	011 (					1				
1,1-Tichloroethane         <0.07         TM116         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07 <td>Chloroform</td> <td></td> <td></td> <td>IM116</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Chloroform			IM116						
mg/kg         mg/kg <t< td=""><td></td><td></td><td>1</td><td></td><td>1</td><td></td><td></td><td></td><td></td><td>M</td></t<>			1		1					M
11-Dickloropropene         <0.01         TM116         <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         <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         <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         <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         <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         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.0         <0.0<	1,1,1-Trichloroethane			TM116		<0.07	<0.07	<0.07		<0.07
mgkg         mgkg <t< td=""><td></td><td></td><td>mg/kg</td><td></td><td></td><td></td><td></td><td>M</td><td></td><td>M</td></t<>			mg/kg					M		M
Carbontetrachloride         <0.01         TM116         <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         <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         <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         <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         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09	1,1-Dichloropropene		<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
mg/kg         mg/kg <t< td=""><td></td><td></td><td>mg/kg</td><td></td><td></td><td>M</td><td>М</td><td>M</td><td></td><td>М</td></t<>			mg/kg			M	М	M		М
12-Dickloroethane         <0.005 mg/kg         TM116 M         <0.05 M         <0.09 M         <0.07 M         <0.07 M         <0.07 M         <0.07 M         <0.07 M<	Carbontetrachloride		<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
12-Dickloroethane         <0.005 mg/kg         TM116 M         <0.05 M         <0.09 M         <0.07 M         <0.07 M         <0.07 M         <0.07 M         <0.07 M<			mg/kg		М	M	M	М	М	М
mg/kg         mg/kg <t< td=""><td>1,2-Dichloroethane</td><td></td><td></td><td>TM116</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	1,2-Dichloroethane			TM116						
Benzene         <0.009 mg/kg         TM116 M         <0.09 M         <0.07 M         <0.1         <0.1         <0.1         <0.1           1,12-Trichloroperhame         <0.01										М
mg/kg         M <td>Benzene</td> <td></td> <td></td> <td>TM116</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Benzene			TM116						
Trichloroethene         <0.09 mg/kg         TM116         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.01         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.01         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09										
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Trichloroethene			TM146						
1,2-Dichloropropane         <0.01         TM116         <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         <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         <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         <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         <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         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1	manorocurene			11/11/10						
mg/kg         mg/kg <th< td=""><td>12 Dichlorom</td><td></td><td></td><td>THEFT</td><td></td><td></td><td></td><td></td><td></td><td>#</td></th<>	12 Dichlorom			THEFT						#
Dibromomethane         <0.009 mg/kg         TM116 M         <0.09 M         TM16 M         <0.09 M         <0.07 M         <0.07 M         <0.07 M         <0.07 M         <0.07 M         <0.07 M         <0.01 M         <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         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1	1,2-Dichloropropane			TM116						
mg/kg         mg/kg <th< td=""><td></td><td></td><td></td><td><b></b></td><td>1</td><td>1</td><td></td><td></td><td></td><td>М</td></th<>				<b></b>	1	1				М
Bromodichloromethane         <0.007 mg/kg         TM116 M         <0.07 M         <0.01         <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         <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         <	Dibromomethane			TM116						
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$			1	L		1				М
cis-1,3-Dichloropropene         <0.01 mg/kg         TM116 M         <0.1 M         <0.1 M </td <td>Bromodichloromethar</td> <td>ie</td> <td>&lt;0.007</td> <td>TM116</td> <td>&lt;0.07</td> <td>&lt;0.07</td> <td>&lt;0.07</td> <td>&lt;0.07</td> <td>&lt;0.07</td> <td>&lt;0.07</td>	Bromodichloromethar	ie	<0.007	TM116	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
mg/kg         mg/kg <th< td=""><td></td><td></td><td>mg/kg</td><td></td><td>М</td><td>M</td><td>М</td><td>M</td><td>M</td><td>M</td></th<>			mg/kg		М	M	М	M	M	M
Toluene         <0.007 mg/kg         TM116 M         <0.07 M         <0.01         <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         <0.1         <0.1 <th< td=""><td>cis-1,3-Dichloroprope</td><td>ne</td><td>&lt;0.01</td><td>TM116</td><td>&lt;0.1</td><td>&lt;0.1</td><td>&lt;0.1</td><td>&lt;0.1</td><td>&lt;0.1</td><td>&lt;0.1</td></th<>	cis-1,3-Dichloroprope	ne	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene         <0.007 mg/kg         TM116 M         <0.07 M         <0.01         <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         <0.1         <0.1 <th< td=""><td></td><td></td><td>mg/kg</td><td></td><td>М</td><td>M</td><td>М</td><td>М</td><td>М</td><td>м</td></th<>			mg/kg		М	M	М	М	М	м
mg/kg         mg/kg         M	Toluene		1	TM116						
trans-1,3-Dichloropropene         <0.01 mg/kg         TM116         <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         <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         <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         <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         <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         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1										M
mg/kg         mg/kg <th< td=""><td>trans-1,3-Dichloropro</td><td>oene</td><td></td><td>TM116</td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	trans-1,3-Dichloropro	oene		TM116						
1,1,2-Trichloroethane <0.01 TM116 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1							- W. I	1944 H	·V.1	
	112-Trichloroethane			TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
<u> </u>	.,., in a nonorocularie			111110						
			mynxy	!	M	M	M	M	M	M

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SDG: 221020-66 Client Ref.: 70072063

# **CERTIFICATE OF ANALYSIS** Report Number: 667610

Location: Drax FCA

Superseded Report: 667193

Validated

VOC MS (S)	
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Voc					Location. Dra				
VOCI	Results Legend	0	ustomer Sample Ref.	TP01	TP01	TP02	TP02	TP03	TP03
	mCERTS accredited.	Ű	astonio campio noi.	IFUI	1991	1702	1702	1603	1003
diss.fit	Aqueous / settled sample. Dissolved / filtered sample.		Depth (m)	0.10 - 0.20	2.70 - 2.80	1.10 - 1.20	1.80 - 1.90	0.90 - 1.00	2.60 - 2.70
- COLUMNIC	Total / unfiltered sample. Subcontracted - refer to subcontractor report	for	Sample Type Date Sampled	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022	Soil/Solid (S) 18/10/2022
	accreditation status. % recovery of the surrogate standard to checi		Sampled Time						
	efficiency of the method. The results of indivi compounds within samples aren't corrected fi		Date Received SDG Ref	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66
	the recovery Trigger breach confirmed		Lab Sample No.(s)	27048472	27048493	27048497	27048509	27048517	27048524
1-4+6@	Sample deviation (see appendix)		AGS Reference	ES	ES	ES	ES	ES	ES
Compo 13-Dichlo	nent vropropane	LOD/Units <0.007	Method TM116	<0.07	<0.07	<0.07	<0.07	<0.07	<0.07
.,		mg/kg	INTIO	-0.07 M	M	-0.07 M	-0.07 M	-0.07 M	M
Tetrachlor	roethene	<0.005	TM116	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
		mg/kg		М	М	М	М	М	М
Dibromoc	hloromethane	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2-Dibror	noethane	mg/kg <0.01	TM116	M <0.1	M <0.1	<0.1	M <0.1	M <0.1	M <0.1
.,		mg/kg		M	M	M	M	M	M
Chlorober	izene	<0.005	TM116	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
		mg/kg		М	М	М	М	М	М
1,1,1,2-Te	etrachloroethane	<0.01 mg/kg	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenz	ene	<0.004	TM116	<0.04	M <0.04	M <0.04	M <0.04	M <0.04	<0.04
		mg/kg		M	M	M	M	M	M
p/m-Xylen	e	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg		#	#	#	#	#	#
o-Xylene		<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Styrene		mg/kg <0.01	TM116	M <0.1	M <0.1	M <0.1	M <0.1	M <0.1	<0.1
		mg/kg		#	#	#	#	#	#
Bromoform	n	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg		М	М	М	М	М	М
Isopropylk	benzene	<0.005 mg/kg	TM116	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Te	trachloroethane	<0.01	TM116	=======================================	# <0.1	# <0.1	# <0.1	# <0.1	# <0.1
		mg/kg		#	#	#	#	#	#
1,2,3-Tric	hloropropane	<0.016	TM116	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Bromober		mg/kg	Third	M	M	M	M	M	M
Bromober	Izene	<0.01 mg/kg	TM116	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Propylber	izene	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg		М	м	М	М	м	м
2-Chlorote	bluene	<0.009	TM116	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09
135-Trin	ethylbenzene	mg/kg <0.008	TM116	M <0.08	M <0.08	M <0.08	M <0.08	M <0.08	M <0.08
1,0,0 1111	Carywonzone	mg/kg	TWITTO	-0.00 M	-0.00 M	-0.00 M	-0.00 M	-0.00 M	-0.00 M
4-Chlorote	oluene	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg		М	М	М	М	м	М
tert-Butylk	benzene	<0.014 mg/kg	TM116	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
1,2,4-Trim	ethylbenzene	< 0.009	TM116	# <0.09	# <0.09	# <0.09	# <0.09	# <0.09	# <0.09
		mg/kg		#	#	#	#	#	#
sec-Butyl	benzene	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aleerse	utoluono	mg/kg	714440	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4
4-Isoprop	yitoidene	<0.01 mg/kg	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,3-Dichlo	robenzene	< 0.008	TM116	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
		mg/kg		М	м	М	М	м	М
1,4-Dichlo	robenzene	< 0.005	TM116	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Butylber	nzene	mg/kg <0.011	TM116	M <0.11	M <0.11	M <0.11	M <0.11	M <0.11	M <0.11
a Datyibel		<0.011 mg/kg	011101	50.11	SU.11	SV.11	SU. 11	N.11	N.11
1,2-Dichlo	robenzene	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4.0 - 0	2	mg/kg		M	M	M	M	M	M
1,2-Dibror	no-3-chloropropane	<0.014 mg/kg	TM116	<0.14	<0.14	<0.14	<0.14	<0.14 M	<0.14
Tert-amvl	methyl ether	<0.01	TM116	M <0.1	M <0.1	M <0.1	M <0.1	M <0.1	M <0.1
	-	mg/kg		#	#	#	#	#	#
1,2,4-Tric	hlorobenzene	<0.02	TM116	<0.2	<0 2	<0.2	<0 2	<0.2	<0 2
Havashler	robutadiene	mg/kg ∠0.02	THAT	-0.0	-0.0	-0.0	-0.0	-0.0	~0.0
riexachioi	onadalerie	<0.02 mg/kg	TM116	<0.2	<0 2	<0.2	<0 2	<0.2	<0 2
Naphthale	ene	< 0.013	TM116	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
		mg/kg							



SDG: 221020-66

# CERTIFICATE OF ANALYSIS Report Number: 667610

Validated

(ALS) SDG: 221020-66 Client Ref.: 70072063			Report Number: 66 Location: Dra		Superseded Report: 667193			
	onentra	en. 100/2003		Location. Die				
Results Legend		Customer Sample Ref.	TP01	TP01	TP02	TP02	TP03	TP03
M Incerts accredited.		oustonier oampie roi.	IFUI	IPVI	1602	1902	1603	11-03
aq Aqueous / settled sample. ss.fit Dissolved / filtered sample.		Depth (m)	0.10 - 0.20	2.70 - 2.80	1.10 - 1.20	1.80 - 1.90	0.90 - 1.00	2.60 - 2.70
tunfit Subcontracted - refer to subcontra	actor report for	Sample Type	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
accreditation status.		Date Sampled Sampled Time	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
% recovery of the surrogate standa efficiency of the method. The result	tard to check the uts of individual	Date Received	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
compounds within samples aren't the recovery		SDG Ref	221020-66	221020-66	221020-66	221020-66	221020-66	221020-66
(E) Trigger breach confirmed		Lab Sample No.(s)	27048472 ES	27048493 ES	27048497 ES	27048509 ES	27048517 ES	27048524 ES
Sample deviation (see appendix)	LOD/U	AGS Reference						
3-Trichlorobenzene	<0.0		<0.2	<0.2	<0.2	<0 2	<0.2	<0 2
	mg/k				#	* - #		
5-Trichlorobenzene	<0.0		<0.2	<0.2	<0.2	<0 2	<0.2	<0 2
	mg/k							
n of BTEX	<0.0		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	mg/k	g						
		_		+				l
	_							
		_						
				+				
								L
								<b></b>



#### **CERTIFICATE OF ANALYSIS**

Validated

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Image: Control         Image: Contro         Image: Contro <th< th=""><th>ALS</th><th colspan="7">SDG: 221020-66         Report Number: 667610         Superseded Report: 667193           Client Ref.: 70072063         Location: Drax FCA         Superseded Report: 667193</th></th<>	ALS	SDG: 221020-66         Report Number: 667610         Superseded Report: 667193           Client Ref.: 70072063         Location: Drax FCA         Superseded Report: 667193							
Image: Control         Image: Contro         Image: Contro <th< th=""><th>VOC MS (S)</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	VOC MS (S)								
····································	Results Legend	Cu	stomer Sample Ref.	TP04	TP04	TP05	TP05	TP06	TP06
Barry B	aq Aqueous / settled sample.		Death (a)						
and and any set of a	tot.unfit Total / unfittered sample.								
Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	accreditation status.			18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
Base of the second se				20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
Normal AlgebraNormal AlgebraNorma									
Comparing         Lothing         Hutts         Full	(F) Trigger breach confirmed								
Demokenomentaria         N         Tell         18         11         110        <	1-44-200	LOD/Units							
Interved <sup>20</sup> N         1011         99.9         99.8         101         97.8         100         97.7           Homolecondex         4,005         T0116         51         55.3         92.2         87.1         55.1         55.3           Saloudikoonstave         40.05         T0116         40.05         40.05         40.05         40.05         40.05         40.07         40.05         40.07         40.	Dibromofluoromethane**			109	118	112	110	110	110
S         During         S         During         During <thduring< th="">         During         During</thduring<>	Toluene-d8**	%	TM116	99.9	99.8	101	97.8	100	99.7
$s_{0}$ Number of the second se		%	THULD				27.4		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	-Bromofluorobenzene**	%	TM116	94.1	95	92.2	87.1	95.1	95 3
Disconstruine         0.007         TH16         0.07 <th0.07< th="">         0.07         <th0.07< th=""></th0.07<></th0.07<>	Dichlorodifluoromethane		TM116						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Chloromethare		TM446						<0.07
mind December         0.006         TH16         0.08         0.08         0.06         0.06         M         <	Chloromethane		10116						
mgbg         mgbg         mb         mb <t< td=""><td>Vinvl Chloride</td><td></td><td>TM116</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Vinvl Chloride		TM116						
Bioscientwise $-0.1$ <th< td=""><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	-								
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Bromomethane		TM116						
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$		mg/kg		N	1 м	М	м	М	N
Indicator         PADDE	Chloroethane		TM116						
13.000-0000000         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.011         0.017         0.007	Trichlorofluorormethane	<0.006	TM116	<0.06	<0.06	<0.06		<0.06	<0.06
mm         mg/g         mm         mm         m<	11 Disklassethana		TM44C						M
Cates Doubles         -0.07         TM16         -0.07	I, I-Dichloroethene		IM116						
rnglog         ····································	Carbon Disulphide		TM116	-					
Debiosonshaw         -0.01         TM16         -0.1         -0.1         -0.01         -0.1									M
Uderyl Terking Buryl Elver         <0.01         TM116         <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         <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         <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         <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         <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         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <	Dichloromethane	<0.01	TM116	<0.1	<0.1	<0.145	<0.1	<0.1	<0.1
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Methyd Tartiany Dutyd Ethan		TMAAC						#
Panel-12-Database         -0,1         M116         C0,1         M </td <td>Methyl Tertlary Butyl Ether</td> <td></td> <td>IM116</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Methyl Tertlary Butyl Ether		IM116						
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	trans-1,2-Dichloroethene		TM116						
mghg         mark         mark <t< td=""><td></td><td>mg/kg</td><td></td><td>N</td><td>1 M</td><td>м</td><td>М</td><td>м</td><td>N</td></t<>		mg/kg		N	1 M	м	М	м	N
sin 1.2 Dicklorestenee         -0.06 mg/kg         TM116         -0.06 M         -0.01 M         -0.01	1,1-Dichloroethane		TM116	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
mg/sg         Link         Link <thlink< th="">         Link         Link         <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>N</td></t<></thlink<>									N
22004borgspane $\circ$ 0.01 mg/kg         TM116 C $\circ$ 0.01 mg/kg         TM116 C $\circ$ 0.01 mg/kg         TM116 C $\circ$ 0.01 M         TM116 C $\circ$ 0.01 M         TM116 C $\circ$ 0.01 M         TM116 C $\circ$ 0.01 M	cis-1,2-Dichloroethene		TM116						
mg/g         - <td>22.Dickloropponane</td> <td></td> <td>TM116</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	22.Dickloropponane		TM116						
Bronzehlaromethane         Q0,1 mg/kg         TM116 K         Q0,1 K         Q0,08 K         Q0,08 K         Q0,07 K         Q0,1 K         Q0	2,2 Distribioproperto		TIVITIO	50.1	50.1	50.1	50.1	<b>~</b> 0.1	50.1
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	Bromochloromethane		TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$		mg/kg		N	1 M	М	м	м	Μ
1,1-Tichkhorsehane         <0.07         TM116         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.07         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01 <td>Chloroform</td> <td></td> <td>TM116</td> <td>&lt;0.08</td> <td>&lt;0.08</td> <td>&lt;0.08</td> <td>&lt;0.08</td> <td>&lt;0.08</td> <td>&lt;0.08</td>	Chloroform		TM116	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$									N
1,1-Dickloropropene         <0.01         TM116         <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         <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         <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         <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         <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         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1	1,1,1-Trichloroethane		TM116						
mg/kg         mg/kg <t< td=""><td>11 Dickloromono</td><td></td><td>TM116</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	11 Dickloromono		TM116						
Carbontetrachloide         < 0.01         TM116         < 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         < 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         < 0.1         < 0.1         < 0.1         < 0.1         < 0.1         < 0.1         < 0.1         < 0.1         < 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         < 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         < 0.05         < 0.05         < 0.05         < 0.05         < 0.05	1,1-Dichloropropene								
mg/kg         mg/kg <t< td=""><td>Carbontetrachloride</td><td></td><td>TM116</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Carbontetrachloride		TM116						
Image         Image <th< td=""><td></td><td></td><td></td><td></td><td>1 M</td><td>м</td><td>М</td><td></td><td>N</td></th<>					1 M	м	М		N
Benzene         <0.009 mg/kg         TM116 M         <0.09 M         <0.07 M         <0.01 M         <0.1         <0.1         <0.1             Iterar	1,2-Dichloroethane	<0.005	TM116	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
mg/kg         m         M <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>M</td>									M
Trichloroethene         <0.09 mg/kg         TM116 mg/kg         <0.09 #         <0.01 #         <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         <0.1         <0.1         <0.1         <0.1         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <0.09         <	Benzene		TM116						
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Trichloroethene		TM116						<0.09
1,2-Dichloropropane         <0.01         TM116         <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         <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         <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         <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         <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         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1			01110						
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	1,2-Dichloropropane		TM116						
Dibromomethane         <0.09 mg/kg         TM116         <0.09 M         <0.07 M         <0.01 M         <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         <0.1         <0.1         <0.1         <0.1 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>									
Bromodichloropropene         <0.007 mg/kg         TM116 M         <0.07 M         <0.01         <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         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1	Dibromomethane		TM116					<0.09	
mg/kg         mg/kg <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>									
Science         Science <t< td=""><td>Bromodichloromethane</td><td></td><td>TM116</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Bromodichloromethane		TM116						
mg/kg         mg/kg <th< td=""><td>ris-1 3-Dichloronronene</td><td></td><td>TM446</td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	ris-1 3-Dichloronronene		TM446						
Toluene         <0.007 mg/kg         TM116 M         <0.07 M         <0.01         <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         <0.1         <0.1         <0.1         <0.1         <0.1         <0.1 <td>as to brandoproperie</td> <td></td> <td>01110</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	as to brandoproperie		01110						
mg/kg         mg/kg         M	Toluene		TM116						
mg/kg         mg/kg <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>M</td></th<>									M
1,1,2-Trichloroethane <0.01 TM116 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1 <0.1	rans-1,3-Dichloropropene		TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
mg/kg M M M M M M	1,1,2-Trichloroethane	<0.01 mg/kg	TM116						<0.1 M

11:44:56 08/11/2022

AL

SDG: 221020-66 Client Ref.: 70072063

#### **CERTIFICATE OF ANALYSIS**

Report Number: 667610

Location: Drax FCA

Validated

VOC MS (S)	
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Vec			70072063		Location: Dra				
VOCI	MS (S) Results Legend								
2	Results Legend ISO17025 accreated. InCERTS accredited.	c	ustomer Sample Ref.	TP04	TP04	TP05	TP05	TP06	TP06
-	Aqueous / settled sample. Dissolved / filtered sample.		Depth (m)	0.90 - 1.00	2.20 - 2.30	0.70 - 0.80	1.20 - 1.30	0.20 - 0.30	1.50 - 1.60
fot unfilt	Total / unfittered sample. Subcontracted - refer to subcontractor report fo		Sample Type	Soil/Solid (S)					
	accreditation status. % recovery of the surrogate standard to check t		Date Sampled Sampled Time	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022	18/10/2022
	efficiency of the method. The results of individu compounds within samples aren't corrected for	al	Date Received	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022	20/10/2022
	the recovery		SDG Ref Lab Sample No.(s)	221020-66 27048531	221020-66 27048537	221020-66 27048545	221020-66 27048476	221020-66 27048480	221020-66 27048488
	Trigger breach confirmed Sample deviation (see appendix)		AGS Reference	ES	ES	ES	ES	ES	ES
Compo		LOD/Units							
1,3-Dichio	ropropane	<0.007 mg/kg	TM116	<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M	<0.07 M
Tetrachlor	oethene	< 0.005	TM116	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
		mg/kg		М	М	М	М	М	М
Dibromoc	hloromethane	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
10.01	4	mg/kg		M	M	M	M	M	M
1,2-Dibror	noethane	<0.01 mg/kg	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorober	izene	<0.005	TM116	<0.05	M <0.05	M <0.05	<0.05	M <0.05	<0.05
		mg/kg		-0.00 M	M	M	-0.00 M	-0.00 M	10.00 M
1,1,1,2-Te	trachloroethane	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg		М	М	М	М	М	М
Ethylbenz	ene	< 0.004	TM116	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
p/m-Xylen	e	mg/kg <0.01	TM116	M <0.1	M <0.1	M <0.1	<0.1	M <0.1	<0.1
	~	mg/kg		#	#	#	-0.1	#	#
o-Xylene		<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg		M	М	М	М	М	М
Styrene		<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromoform	n	mg/kg	TM116	# <0.1	# <0.1	# <0.1	# <0.1	# <0.1	# <0.1
bromoion	n	<0.01 mg/kg	INITO	M	N.1	<0.1 M	<0.1 M	<0.1 M	<0.1 M
Isopropylk	enzene	< 0.005	TM116	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
		mg/kg		#	#	#	#	#	#
1,1,2,2-Te	trachloroethane	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
102 T.J.	1	mg/kg	71440	#	#	#	#	#	#
1,2,3-1110	nloropropane	<0.016 mg/kg	TM116	<0.16 M	<0.16 M	<0.16 M	<0.16 M	<0.16 M	<0.16 M
Bromober	izene	< 0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg		М	м	м	М	м	м
Propylben	zene	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
0.011		mg/kg		M	M	М	M	М	M
2-Chloroto	bluene	<0.009 mg/kg	TM116	<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M	<0.09 M
1,3,5-Trim	ethylbenzene	< 0.008	TM116	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
		mg/kg		М	М	М	М	М	М
4-Chloroto	oluene	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg		M	M	М	M	М	M
tert-Butylk	enzene	<0.014 mg/kg	TM116	<0.14 #	<0.14 #	<0.14 #	<0.14 #	<0.14 #	<0.14
1,2,4-Trim	ethylbenzene	< 0.009	TM116	<0.09	* <0.09	* <0.09	<0.09	<0.09	# <0.09
		mg/kg		#		#	#	#	#
sec-Butylk	enzene	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
		mg/kg							
4-Isopropy	ltoluene	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1.3-Dichlo	robenzene	mg/kg <0.008	TM116	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
<i>'</i>		mg/kg		M	M	M	M	M	M
1,4-Dichlo	robenzene	<0.005	TM116	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
		mg/kg		М	М	М	М	М	М
n-Butylber	nzene	<0.011 mg/kg	TM116	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
12-Dichlo	robenzene	< 0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
.,		mg/kg	- INTIO	-0.1 M	50.1 M	чо.т М	-0.1 M	-0.1 M	~0.1 М
1,2-Dibror	no-3-chloropropane	<0.014	TM116	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14
		mg/kg		М	М	М	М	М	М
Tert-amyl	methyl ether	<0.01	TM116	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
12 <i>1</i>	nlorobenzene	mg/kg <0.02	TM116	# <0.2	# <0 2	# <0.2	# <0 2	# <0.2	<0 2
1,2,4°1 FICI	INTOWCILZENC	<0.02 mg/kg	011101	<u>~∪.∠</u>	<u>∼∪∠</u>	<u>&gt;∪.∠</u>	NU 2	<u><u></u>∿∪.∠</u>	NU 2
Hexachlor	obutadiene	<0.02	TM116	<0.2	<0 2	<0.2	<0 2	<0.2	<0 2
		mg/kg							
Naphthale	ne	<0.013	TM116	<0.13	<0.13	<0.13	0 211	<0.13	<0.13
		mg/kg		М	М	М	М	М	M



SDG: 221020-66

## CERTIFICATE OF ANALYSIS Report Number: 667610

Validated

(ALS) SDG: 221020-66 Client Ref.: 70072063		Report Number: 667610 Location: Drax FCA			Superseded Report: 667193			
	Chent Re	el 70072063		Location. Dia				
VOC MS (S)								
Results Legend		Customer Sample Ref.	TP04	TP04	TP05	TP05	TP06	TP06
M MCERTS accredited.								
diss.filt Dissolved / filtered sample.		Depth (m)	0.90 - 1.00	2.20 - 2.30	0.70 - 0.80	1.20 - 1.30	0.20 - 0.30	1.50 - 1.60
Subcontracted - refer to subcontractor	report for	Sample Type Date Sampled	Soil/Solid (S) 18/10/2022					
accreditation status. " % recovery of the surrogate standard b	o check the	Sampled Time						
efficiency of the method. The results of compounds within samples aren't corre		Date Received SDG Ref	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66	20/10/2022 221020-66
the recovery		Lab Sample No.(s)	27048531	27048537	27048545	27048476	27048480	27048488
(F) Ingger breach commed 1-448@ Sample deviation (see appendix)		AGS Reference	ES	ES	ES	ES	ES	ES
Component	LOD/U							
1,2,3-Trichlorobenzene	<0.0		<0.2	<0 2	<0.2	<0 2	<0.2	<0.2
1,3,5-Trichlorobenzene	mg/k		#	1	#	#	<i>4</i> 0.0	
1,0,0-meniorobenzene	<0.0 mg/kg		<0.2	<0 2	<0.2	<0 2	<0.2	<0 2
Sum of BTEX	<0.0		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
	mg/kg		·v.+	.0.4	-0.4	·v.+	-0.4	.0.4
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Report Number: 667610 Location: Drax FCA

Asbestos Identification	- Solid	Samples
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	ults Legend										
	accredited. accredited.								-		
* Subcontra		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White)	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre
	each commend eviation (see appendix)				Aspesius	Acuitoine	And opriying	Tremonte	Asbestos	(blue) Asbestus	Tible
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP01ES 0.10 - 0.20 SOLID 18/10/2022 00:00:00 20/10/2022 05:00:00 221020-66 27048472 TM048	31/10/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP01ES 2.70 - 2.80 SOLID 18/10/2022 00:000 20/10/2022 05:00:00 221020-66 27048493 TM048	31/10/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP02ES 1.10 - 1.20 SOLID 18/10/2022 00:00:00 20/10/2022 05:00:00 221020-66 27048497 TM048	31/10/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP02E5 1.80 - 1.90 SOLID 18/10/2022 00:00:00 20/10/2022 05:00:00 221020-66 27048509 TM048	31/10/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP03ES 0.90 - 1.00 SOLID 18/10/2022 00:00:00 20/10/2022 05:00:00 221020-66 27048517 TM048	31/10/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP04E5 2.20 - 2.30 SOLID 18/10/2022 00:000 20/10/2022 05:00:00 221020-66 27048537 TM048	31/10/2022	Emily Anderton	Loose fibre in soil	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP05ES 0.70 - 0.80 SOLID 18/10/2022 00:00:00 20/10/2022 05:00:00 221020-66 27048545 TM048	31/10/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP05E5 1.20 - 1.30 SOLID 18/10/2022 00:00:00 20/10/2022 05:00:00 221020-66 27048476 TM048	31/10/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected



Validated

ALS	SDG: 221020-66 Client Ref.: 70072063				Report Number: 667610 Location: Drax FCA				Superseded Report: 667193			
		Date of Analysis	Analysed By	Comments	Amosite (Brown) Asbestos	Asbestos Actinolite	Asbestos Anthophyllite	Asbestos Tremolite	Chrysotile (White) Asbestos	Crocidolite (Blue) Asbestos	Non-Asbestos Fibre	
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP06E5 0.20 - 0.30 SOLID 18/10/2022 00:00:00 20/10/2022 05:00:00 221020-66 27048480 TM048	31/10/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected	
Cust. Sample Ref. Depth (m) Sample Type Date Sampled Date Receieved SDG Original Sample Method Number	TP06ES 1.50 - 1.60 SOLID 18/10/2022 00:00:00 20/10/2022 05:00:00 221020-66 27048488 TM048	31/10/2022	Emily Anderton	-	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected (#)	Not Detected	

Superseded Report: 667193

Validated

Report Number: 667610 Location: Drax FCA

			A	sbestos	s Quan	tificatio	on - Fi
Res	ults Legend						
# ISO17025	accredited.						
	accredited.	Additional		Asbestos	Asbestos	Asbestos	1
<ul> <li>Subcontr</li> </ul>	acted test.		Analysts				
(F) Trigger b	reach confirmed	Asbestos	Comments	Quantification -	Quantification -	Quantification -	
1-5&+§@ Sample d	eviation (see appendix)	Components		Gravimetric - %	PCOM	Total - %	
Cust. Sample	TP04ES	None (#)	N/A	< 0.001 (#)	<0 001 (#)	<0.001 (#)	
Ref.	2.20 - 2.30						
Depth (m)	SOLID						
Sample Type	18/10/2022 00:00:00						
Date Sampled	20/10/2022 05:00:00						
Date Receieved	221020-66						
SDG	27048537						
Original Sample	TM304						
Mathad Number		1	1	1	1	1	



Superseded Report: 667193



SDG: 221020-66 Client Ref.: 70072063

#### **CEN 2:1 SINGLE STAGE LEACHATE TEST**

Location: Drax FCA

CEN ANALYTICAL RESU	JLTS					REF : BS EN 12457/1
Client Reference	:	Site Location		Drax F	CA	
Mass Sample taken (kg)	0.213	Natural Moisture Content (%)			22.7	
Mass of dry sample (kg)	0.175		Dry Matter Cont	tent (%)	81.5	
Particle Size <4mm	>95%					
Case						
SDG	221020-66					
Lab Sample Number(s)	27048476					
Sampled Date	18-Oct-2022					
-	TP05 ESZ					
Customer Sample Ref.						
Depth (m)	1.20 - 1.30					
						i i i i i i i i i i i i i i i i i i i
		n in 2:1		:ONC <sup>n</sup>		
Eluate Analysis	eiuate	e (mg/l)	leached	(mg/kg)		
	Result	Limit of Detection	Result	Limit of Detection		
Ammoniacal Nitrogen as N Chromium III	13.7	<0.2	27.4	<0.4		
Hexavalent Chromium	< 0.03	<0.03 <0.03	<0.06	<0.06		
Mercury Dissolved (CVAF)	<0.03	<0.03	<0.06 <0.00002	<0.06 <0.00002		
Total Cyanide (W)	<u>&lt;0.00001</u> <0.05	<0.0001	<0.00002	<0.00002		
Arsenic	0.0104	<0.005	0.0208	<0.001		
Free Cyanide (W)	<0.05	<0.05	<0.1	<0.001		
Barium	0.0446	< 0.0002	0.0892	<0.0004		
Complex Cyanide (W)	<0.05	< 0.05	<0.1	<0.1		
Phenol by HPLC (W)	0.02	< 0.002	0.04	< 0.004		
Beryllium	< 0.0001	<0.0001	<0.0002	< 0.0002		
Cresols by HPLC (W)	<0.006	<0.006	<0.012	<0.012		
Xylenols by HPLC (W)	<0.008	<0.008	<0.016	<0.016		
Boron	0.604	<0.01	1.21	<0.02		
Cadmium	<0.0008	<0.0008	<0.00016	<0.00016		
Total Monohydric Phenols (W)	0.02	<0.016	0.04	<0.032		
Chromium	0.00625	<0.001	0.0125	<0.002		
Copper	0.0312	< 0.0003	0.0624	<0.0006		
Lead	0.0102	< 0.0002	0.0204	< 0.0004		
Nickel Selenium	0.0103	< 0.0004	0.0206	<0.0008		
Zinc	0.00335	<0.001 <0.001	0.0067	< 0.002		
PAH Spec MS - Aqueous (W)	0.126	<0.001	0.252	<0.002		
Naphthalene by GCMS	0.0000164	<0.00001	0.0000228	<0.00002		
Acenaphthene by GCMS	0.0000164	<0.00001 <0.000005	0.0000328 <0.00001	<0.00002 <0.00001		
Acenaphthylene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Fluoranthene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Anthracene by GCMS	<0.000005	< 0.000005	<0.00001	<0.00001		
Phenanthrene by GCMS	0.00000979	< 0.000005	0.0000196	<0.00001		
Fluorene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Chrysene by GCMS	<0.000005	<0.000005	< 0.00001	< 0.00001		
Pyrene by GCMS	<0.000005	<0.000005	< 0.00001	< 0.00001		
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Benzo(b)fluoranthene by GCMS	0.0000077	<0.00005	0.0000154	<0.00001		
Benzo(k)fluoranthene by GCMS	<0.000005	<0.00005	<0.00001	<0.00001		
Benzo(a)pyrene by GCMS	<0.00002	<0.00002	<0.00004	<0.00004		
		1	1	1		

#### Leach Test Information

Date Prepared	26-Oct-2022
pH (pH Units)	8.31
Conductivity (µS/cm)	229
Volume Leachant (Litres)	0 312
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

	f.: 70072063		Location: Drax FCA	A	Superseded Repo	
	CEN	2:1 SINGLE	STAGE LEAC	HATE TEST		
CEN ANALYTICAL RESUL	TS				RE	F : BS EN 12457/
Client Reference		:	Site Location		Drax FCA	
Mass Sample taken (kg)	0.213	Natural Moisture Content (%)			22.7	
Mass of dry sample (kg)	0.175	Dry Matter Content (%)			81.5	
Particle Size <4mm	>95%					
Case						
SDG	221020-66					
	27048476					
Lab Sample Number(s)						
Sampled Date	18-Oct-2022					
Customer Sample Ref.	TP05 ESZ					
Depth (m)	1.20 - 1.30					
Eluate Analysis	Conc <sup>n</sup> in 2:1     2:1 conc <sup>n</sup> eluate (mg/l)     leached (mg/kg)			· · · · ·	·	
	Result	Limit of Detection	Result	Limit of Detection		
PAH Spec MS - Aqueous (W)						
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Benzo(ghi)perylene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Indeno(123cd)pyrene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
PAH 16 EPA Total by GCMS	<0.000082	<0.000082	<0.000164	<0.000164		
TPH CWG (W)						
Surrogate Recovery GRO TOT (C5-C12)	-	-	-	-		
Aliphatics C5-C6	<0.05 <0.01	<0.05 <0.01	<0.1 <0.02	<0.1 <0.02		
Aliphatics >C6-C8	<0.01	<0.01	<0.02	<0.02		
Aliphatics >C8-C10	< 0.01	< 0.01	< 0.02	< 0.02		
Aliphatics >C10-C12	< 0.01	<0.01	< 0.02	< 0.02		
Aliphatics >C12-C16	<0.05	<0.05	<0.1	<0.1		
Aliphatics >C16-C21	<0.05	<0.05	<0.1	<0.1		
Aliphatics >C21-C35	<0.05	<0.05	<0.1	<0.1		
Total Alipha ics >C12-C35	< 0.05	< 0.05	<0.1	<0.1		
Aromatics C6-C7 Aromatics >C7-C8	<0.01	<0.01	<0.02	<0.02		
Aromatics >EC8 -EC10	<0.01	<0.01	<0.02 <0.02	<0.02 <0.02		
Aromatics >EC10-EC12	<0.01	<0.01	<0.02	<0.02		
Aromatics >EC12-EC16	<0.05	<0.05	<0.1	<0.1		
Aromatics >EC16-EC21	< 0.05	< 0.05	<0.1	<0.1		
Aromatics >EC21-EC35	<0.05	<0.05	<0.1	<0.1		
Total Aromatics >EC12-EC35	<0.05	<0.05	<0.1	<0.1		
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.05	<0.05	<0.1	<0.1		
Aliphatics >C16-C35	<0.05	<0.05	<0.1	<0.1		
Aromatics >EC16-EC35	<0.05	<0.05	<0.1	<0.1		
VOC MS (W)						
Tert-butyl methyl ether	<0.001	<0.001	<0.002	<0.002		
Benzene	<0.001	< 0.001	<0.002	<0.002		
Toluene	<0.001	< 0.001	< 0.002	<0.002		
Ethylbenzene p/m-Xylene	<0.001	<0.001	<0.002	<0.002		
o-Xylene	<0.001	<0.001 <0.001	<0.002 <0.002	<0.002 <0.002		
Tert-amyl methyl ether	<0.001	<0.001	<0.002	<0.002		
Total Xylenes	<0.001	<0.001	<0.002	<0.002		
	0.002					

Report Number: 667610

SDG: 221020-66

Validated

Superseded Report: 667193

#### Leach Test Information

Date Prepared	26-Oct-2022
pH (pH Units)	8.31
Conductivity (µS/cm)	229
Volume Leachant (Litres)	0 312
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C) Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

Superseded Report: 667193

Validated



SDG: 221020-66 Client Ref.: 70072063

**CEN 2:1 SINGLE STAGE LEACHATE TEST** 

Location: Drax FCA

CEN ANALYTICAL RESU	JLIS					REF : BS EN 12457/
Client Reference	:	Site Location		Drax F	CA	
Mass Sample taken (kg)	0.206	Natural Moisture Content (%) Dry Matter Content (%)		17.2		
Mass of dry sample (kg)	0.175			85.3		
			Dry Matter Con		00.0	
Particle Size <4mm	>95%					
Case		_				
SDG	221020-66					
Lab Sample Number(s)	27048480					
Sampled Date	18-Oct-2022					
· · · · · · · · · · · · · · · · · · ·	TP06 ESZ					
Customer Sample Ref.						
Depth (m)	0.20 - 0.30					
	Conc	<sup>"</sup> in 2:1	2.1	conc <sup>n</sup>		
Elucto Analyzia		e (mg/l)		d (mg/kg)		
Eluate Analysis	Desult	Limit of Detection		Limit of Detection		
Ammoniacal Nitrogen as N	Result <0.2	<0.2	Result <0.4	<0.4		
Chromium III	<0.2	<0.03	<0.4	<0.06		
Hexavalent Chromium	<0.03	< 0.03	< 0.06	<0.06		
Mercury Dissolved (CVAF)	<0.0001	< 0.00001	<0.0002	< 0.0002		
Total Cyanide (W)	<0.05	<0.05	<0.1	<0.1		
Arsenic	0.000976	<0.0005	0.00195	<0.001		
Free Cyanide (W)	<0.05	< 0.05	<0.1	<0.1		
Barium	0.0354	<0.0002	0.0708	<0.0004		
Complex Cyanide (W)	<0.05	<0.05	<0.1	<0.1		
Phenol by HPLC (W)	<0.002	<0.002	<0.004	<0.004		
Beryllium	<0.0001	<0.0001	<0.0002	<0.0002		
Cresols by HPLC (W)	<0.006	<0.006	<0.012	<0.012		
Xylenols by HPLC (W)	<0.008	<0.008	<0.016	<0.016		
Boron	0.0534	<0.01	0.107	<0.02		
Cadmium	<0.0008	<0.00008	<0.00016	<0.00016		
Total Monohydric Phenols (W)	<0.016	<0.016	<0.032	<0.032		
Chromium	<0.001	<0.001	<0.002	<0.002		
Copper	0.00891	<0.0003	0.0178	<0.0006		
Lead	0.000462	<0.0002	0.000924	<0.0004		
Nickel	0.00207	< 0.0004	0.00414	<0.0008		
Selenium Zinc	< 0.001	< 0.001	< 0.002	< 0.002		
	0.00278	<0.001	0.00556	<0.002		
PAH Spec MS - Aqueous (W)		10,00000	10 000 10	10 00010		
Naphthalene by GCMS Acenaphthene by GCMS	<0.00006	<0.00006	<0.00012	<0.00012		
Acenaphthylene by GCMS	<0.00003	<0.00003 <0.00003	<0.00006	<0.00006		
Fluoranthene by GCMS	<0.00003 <0.00003	<0.00003	<0.00006	<0.00006 <0.00006		
Anthracene by GCMS	<0.00003	<0.00003	<0.00006 <0.00006	<0.00006		
Phenanthrene by GCMS	<0.00003	<0.00003	<0.00006	<0.00006		
Fluorene by GCMS	<0.00003	<0.00003	<0.00008	<0.00006		
Chrysene by GCMS	<0.00003	<0.00003	<0.00008	<0.00006		
Pyrene by GCMS	<0.00003	<0.00003	<0.00006	<0.00006		
Benz(a)anthracene by GCMS	<0.00003	< 0.00003	<0.00006	<0.00006		
Benzo(b)fluoranthene by GCMS	<0.00003	< 0.00003	< 0.00006	<0.00006		
Benzo(k)fluoranthene by GCMS	< 0.00003	<0.00003	< 0.00006	<0.00006		
Benzo(a)pyrene by GCMS	<0.000012	<0.000012	< 0.000024	<0.000024		

#### Leach Test Information

Date Prepared	26-Oct-2022
pH (pH Units)	8.34
Conductivity (µS/cm)	130
Volume Leachant (Litres)	0 319
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C) Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

11:44:56 08/11/2022

f.: 70072063			A	Superseded Report. 007195
CEN	2:1 SINGLE	STAGE LEAC	HATE TEST	
тѕ				REF : BS EN 1245
	Site Location			Drax FCA
0.206	Natural Moisture Content (%)			17.2
				85.3
	-	Dry Matter Con		00.0
>95%				
221020-66				
27048480				
0.20 - 0.30				
Result	Limit of Detection	Result	Limit of Detection	
<0.00003	<0.00003	<0.00006	<0.00006	
<0.000492	<0.000492	<0.000984	<0.000984	
	-			
	1			
<0.01	<0.01	< 0.02	< 0.02	
<0.01	<0.01	<0.02	<0.02	
<0.06	<0.06	<0.12	<0.12	
<0.06	<0.06	<0.12	<0.12	
	<0.06	<0.12	<0.12	
< 0.06	<0.06	<0.12	<0.12	
<0.06	<0.06	<0.12	<0.12	
<0.06	<0.06	<0.12	<0.12	
<0.06	<0.06	<0.12	<0.12	
<0.06	<0.06	<0.12	<0.12	
<0.06	<0.06	<0.12	<0.12	
	<0.01	<0.02	<0.02	
<0.01				
<u>&lt;0.01</u> <0.01				
<0.01 <0.01 <0.01	<0.01 <0.01 <0.01	<0.02	<0.02	
	F:: 70072063         CEN         CEN         D.206         0.175         >95%         Z21020-66         Z7048480         18-Oct-2022         TP06 ESZ         0.20 - 0.30         Result         Conceluation         0.00003         <0.0003         <0.0003         <0.0003         <0.000492         Result         Conceluation         <0.0003         <0.0003         <0.0003         <0.0003         <0.00103         <0.00103         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.01         <0.06         <0.06         <0.06         <0.06         <0.06         <0.06         <0.06         <0.06 <tr< td=""><td>f:: 70072063       CEN 2:1 SINGLE S         CEN 2:1 SINGLE S         0.206       0.175         &gt;95%       221020-66         27048480       18-Oct-2022         TP06 ESZ       0.20 - 0.30         Conc<sup>™</sup> in 2:1 eluate (mg/l)         Result         Limit of Detection            Conc<sup>™</sup> in 2:1 eluate (mg/l)         Result         Limit of Detection               &lt;0.00003</td>       &lt;0.00003</tr<>	f:: 70072063       CEN 2:1 SINGLE S         CEN 2:1 SINGLE S         0.206       0.175         >95%       221020-66         27048480       18-Oct-2022         TP06 ESZ       0.20 - 0.30         Conc <sup>™</sup> in 2:1 eluate (mg/l)         Result         Limit of Detection            Conc <sup>™</sup> in 2:1 eluate (mg/l)         Result         Limit of Detection               <0.00003	Contact       Drax FC/         CEN 2:1 SINGLE STAGE LEAC         TS       Site Location         0.206       Natural Moistur         0.175       Dry Matter Con         >95%       Dry Matter Con         221020-66       27048480         18-Oct-2022       TP06 ESZ         0.20 - 0.30       Conce in 2:1 eluate (mgl)         Result       Limit of Detection         Result       Limit of Detection         Result       Limit of Detection         <0.00003	f:: 70072063       Location: Drax FCA         CEN 2:1 SINGLE STAGE LEACHATE TEST         Site Location         0.206       Natural Moisture Content (%)         0.175       Dry Matter Content (%)         >95%       Dry Matter Content (%)         221020-66       Dry Matter Content (%)         27048480       Is-Oct-2022         TP06 ESZ       0.20 - 0.30         Result       Limit of Detection         Result       Limit of Detection             0.00003       <0.00006       <0.00006          0.00003       <0.00006       <0.00006       <0.00006          0.00003       <0.00003       <0.00006       <0.00006          0.00003       <0.00006       <0.00006       <0.00006          0.00003       <0.00006       <0.00006       <0.00006          0.00003       <0.00003       <0.00006       <0.00006          0.00003       <0.00006       <0.00006       <0.00006          0.00003       <0.00006       <0.00006       <0.00006          0.00003       <0.00006       <0.00006

Report Number: 667610

SDG: 221020-66

Validated

Superseded Report: 667193

#### Leach Test Information

Date Prepared	26-Oct-2022
pH (pH Units)	8.34
Conductivity (µS/cm)	130
Volume Leachant (Litres)	0 319
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C) Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

Validated



SDG: 221020-66 Client Ref.: 70072063

Report Number: 667610 Location: Drax FCA Superseded Report: 667193

## **CEN 2:1 SINGLE STAGE LEACHATE TEST**

CEN ANALYTICAL RESULTS						REF : BS EN 12457/1	
Client Reference		:	Site Location			Drax FCA	
Mass Sample taken (kg)	0.204	Natural Moisture Content (%) Dry Matter Content (%)			16.3		
Mass of dry sample (kg)	0.175				86		
			Dry Matter Con	tent (%)	00		
Particle Size <4mm	>95%						
Case							
SDG	221020-66						
Lab Sample Number(s)	27048493						
	18-Oct-2022						
Sampled Date							
Customer Sample Ref.	TP01 ESZ						
Depth (m)	2.70 - 2.80						
	Conc	n in 2·1	2:1 c	concil			
Eluato Analysia	Conc <sup>n</sup> in 2:1 2:1 conc <sup>n</sup> eluate (mg/l) leached (mg/kg)						
Eluate Analysis		Limit of Detection		Limit of Detection			
Ammoniacal Nitrogen as N	6.9	<0.2	Result 13.8	<0.4			
Chromium III	<0.03	<0.2	<0.06	<0.4			
Hexavalent Chromium	<0.03	<0.03	<0.06	<0.00			
Mercury Dissolved (CVAF)	<0.0001	<0.0001	<0.0002	<0.0002			
Total Cyanide (W)	<0.05	<0.05	<0.1	<0.1			
Arsenic	0.0084	<0.0005	0.0168	<0.001			
Free Cyanide (W)	< 0.05	< 0.05	<0.1	<0.1			
Barium	0.104	<0.0002	0.208	<0.0004			
Complex Cyanide (W)	< 0.05	<0.05	<0.1	<0.1			
Phenol by HPLC (W)	<0.002	<0.002	< 0.004	< 0.004			
Beryllium	< 0.0001	<0.0001	<0.0002	<0.0002			
Cresols by HPLC (W)	< 0.006	<0.006	<0.012	<0.012			
Xylenols by HPLC (W)	<0.008	<0.008	<0.016	<0.016			
Boron	0.581	<0.01	1.16	<0.02			
Cadmium	<0.0008	<0.00008	<0.00016	<0.00016			
Total Monohydric Phenols (W)	<0.016	<0.016	<0.032	<0.032			
Chromium	<0.001	<0.001	<0.002	<0.002			
Copper	0.00771	<0.0003	0.0154	<0.0006			
Lead	<0.0002	<0.0002	<0.0004	<0.0004			
Nickel	0.00412	<0.0004	0.00824	<0.0008			
Selenium	0.00213	<0.001	0.00426	<0.002			
Zinc	0.00258	<0.001	0.00516	<0.002			
PAH Spec MS - Aqueous (W)							
Naphthalene by GCMS	<0.00001	<0.00001	<0.00002	<0.00002			
Acenaphthene by GCMS	< 0.000005	<0.000005	<0.00001	<0.00001			
Acenaphthylene by GCMS	<0.000005	< 0.000005	< 0.00001	<0.00001			
Fluoranthene by GCMS Anthracene by GCMS	< 0.000005	<0.000005	< 0.00001	<0.00001			
Phenanthrene by GCMS	< 0.000005	<0.000005	<0.00001	<0.00001			
Fluorene by GCMS	0.0000837	<0.000005 <0.000005	0.0000167	<0.00001			
Chrysene by GCMS	<0.000005 <0.000005	<0.000005	<0.00001 <0.00001	<0.00001 <0.00001			
Pyrene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001			
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001			
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001			
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001			
Benzo(a)pyrene by GCMS	<0.000003	<0.000002	<0.00001	<0.00004			
	0.00002	5.55000L	-0.000004	-0.00004			

#### Leach Test Information

Date Prepared	26-Oct-2022
pH (pH Units)	7.59
Conductivity (µS/cm)	55
Volume Leachant (Litres)	0 321
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C) Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

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SDG: 221020-66         Report Number: 667610           Client Ref.: 70072063         Location: Drax FCA		Α	Superseded Report: 667193		
CEN	2:1 SINGLE S	STAGE LEAC	CHATE TEST		
S				<b>REF : BS EN 1245</b>	
	5	Site Location		Drax FCA	
0 204			ro Contont (%)	16.3	
		Dry Matter Con	itent (%)	86	
>95%					
	_				
221020-66					
27048493					
18-Oct-2022					
2.10 - 2.00					
Result	Limit of Detection	Result	Limit of Detection		
Result		Result			
<0.000005	<0.000005	<0.00001	<0.00001		
< 0.000005	<0.00005	<0.00001	<0.00001		
<0.000005	<0.000005	<0.00001	<0.00001		
<0.000082	<0.000082	<0.000164	<0.000164		
-	-	-	-		
<0.05	<0.05	<0.1	<0.1		
<0.01	<0.01	<0.02	<0.02		
<0.01	<0.01	<0.02	<0.02		
<0.01	<0.01	<0.02	<0.02		
<0.01	<0.01	<0.02			
	<0.02	< 0.04	< 0.04		
<0.02	<0.02	<0.04	<0.04		
<0.02	<0.02	<0.04	<0.04		
<0.02	<0.02	<0.04	<0.04		
<0.001	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
<0.001 <0.002	<0.001 <0.002	<0.002	<0.002 <0.004		
	POUT2063         CEN         COURD         O.204         0.204         0.175         >95%         Z21020-66         Z7048493         18-Oct-2022         TP01 ESZ         Z.70 - 2.80         Result         Conceluat         Result         Conceluat         Result         Conceluat         O.000005         O.001         O.001         O.001         O.001         O.001         O.001         O.001         O.001	Conto       Conto         0.204       0.175         >95%         221020-66         27048493         18-Oct-2022         TP01 ESZ         2.70 - 2.80         Conc <sup>n</sup> in 2:1 eluate (mg/l)         Result         Limit of Detection         <0.000005	Concernence         Cention: Drax PC.           CEN 2:1 SINGLE STAGE LEAC           S           0.204           0.175           >95%           221020-66           27048493           18-Oct-2022           TP01 ESZ           2.70 - 2.80           Conc <sup></sup> in 2:1 eluate (mg/l)           Result         Limit of Detection           Result         Limit of Detection           <0.00005	20072063 <th column="" loo<="" loop="" td=""></th>	

Validated

#### Leach Test Information

Date Prepared	26-Oct-2022
pH (pH Units)	7.59
Conductivity (µS/cm)	55
Volume Leachant (Litres)	0 321
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C) Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

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SDG:	221020-66
Client Ref.:	70072063

Report Number: 667610 Location: Drax FCA Superseded Report: 667193

CEN ANALYTICAL RESU						REF : BS EN 12457
	JLI 5					EF : DS EN 1245/
Client Reference			Site Location		Drax FCA	
Mass Sample taken (kg)	0.197	1	Natural Moistur	re Content (%)	12.5	
Mass of dry sample (kg)	0.175	ſ	Dry Matter Con	tent (%)	88.9	
Particle Size <4mm	>95%					
0						
Case	221020-66					
SDG				_		
Lab Sample Number(s)	27048497					
Sampled Date	18-Oct-2022					
Customer Sample Ref.	TP02 ESZ					
Depth (m)	1.10 - 1.20					
			• •			
		n in 2:1 ∌ (mg/l)		conc <sup>n</sup> I (mg/kg)		
Eluate Analysis						
Ammoniacal Nitrogen as N	Result	Limit of Detection	Result	Limit of Detection		
Chromium III	<u> </u>	<0.2 <0.03	<u> </u>	<0.4		
Hexavalent Chromium	<0.03	<0.03	<0.06	<0.06		
Mercury Dissolved (CVAF)	<0.0001	<0.0001	<0.0002	<0.0002		
Total Cyanide (W)	<0.05	<0.05	<0.1	<0.1		
Arsenic	0.00115	<0.0005	0.0023	<0.001		
Free Cyanide (W)	<0.05	<0.05	<0.1	<0.1		
Barium	0.093	<0.0002	0.186	<0.0004		
Complex Cyanide (W) Phenol by HPLC (W)	<0.05	< 0.05	<0.1	<0.1		
Beryllium	<0.002 0.000165	<0.002 <0.0001	<0.004 0.00033	<0.004 <0.0002		
Cresols by HPLC (W)	< 0.006	<0.0001	<0.012	<0.002		
Xylenols by HPLC (W)	<0.008	<0.008	< 0.016	< 0.016		
Boron	0.342	<0.01	0.684	<0.02		
Cadmium	0.00125	<0.0008	0.0025	<0.00016		
Total Monohydric Phenols (W)	<0.016	<0.016	<0.032	<0.032		
Chromium Copper	< 0.001	< 0.001	< 0.002	< 0.002		
Lead	0.0052	<0.0003 <0.0002	0.0104	<0.0006 <0.0004		
Nickel	0.0123	< 0.0002	0.0246	<0.0004		
Selenium	< 0.001	< 0.001	< 0.002	<0.002		
Zinc	0.0953	<0.001	0.191	<0.002		
PAH Spec MS - Aqueous (W)						
Naphthalene by GCMS	<0.00001	<0.00001	<0.00002	<0.00002		
Acenaphthene by GCMS	<0.000005	<0.000005	< 0.00001	<0.00001		
Acenaphthylene by GCMS Fluoranthene by GCMS	<0.000005	<0.000005 <0.000005	<0.00001 <0.00001	<0.00001 <0.00001		
Anthracene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Phenanthrene by GCMS	0.0000058	<0.000005	0.0000116	<0.00001		
Fluorene by GCMS	< 0.000005	<0.000005	< 0.00001	<0.00001		
Chrysene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Pyrene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Benz(a)anthracene by GCMS Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005 <0.000005	<0.00001 <0.00001	<0.00001 <0.00001		
Benzo(a)pyrene by GCMS	<0.000003	<0.000003	<0.00001	<0.00001		
Leach Test Information						
Date Prepared	26-Oct-2022					
pH (pH Units)	6.83					
Conductivity (µS/cm)	162					
Volume Leachant (Litres)	0 328					
Volume of Eluate VE1 (Litres)						
			olicable			

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ESULTS 0.197 0.175 >95% 221020-66 27048497 18-Oct-2022 TP02 ESZ 1.10 - 1.20 Cor eluz	ıc <sup>n</sup> in 2:1	Site Location Natural Moistu Dry Matter Con	re Content (%)	RE Drax FCA 12.5 88.9	EF : BS EN 12457/
0.197 0.175 >95% 221020-66 27048497 18-Oct-2022 TP02 ESZ 1.10 - 1.20 Cor eluz	ıc <sup>n</sup> in 2:1	Natural Moistu Dry Matter Con		Drax FCA 12.5	EF : BS EN 12457/
0.175 >95% 221020-66 27048497 18-Oct-2022 TP02 ESZ 1.10 - 1.20 Cor eluz	ıc <sup>n</sup> in 2:1	Natural Moistu Dry Matter Con		12.5	
0.175 >95% 221020-66 27048497 18-Oct-2022 TP02 ESZ 1.10 - 1.20 Cor eluz	ıc <sup>n</sup> in 2:1	Natural Moistu Dry Matter Con		12.5	
0.175 >95% 221020-66 27048497 18-Oct-2022 TP02 ESZ 1.10 - 1.20 Cor eluz	ıc <sup>n</sup> in 2:1	Dry Matter Con			
>95% 221020-66 27048497 18-Oct-2022 TP02 ESZ 1.10 - 1.20 Cor eluz	ıc <sup>n</sup> in 2:1		itent (%)	88.9	
221020-66 27048497 18-Oct-2022 TP02 ESZ 1.10 - 1.20 Cor eluz	• =		-		
27048497 18-Oct-2022 TP02 ESZ 1.10 - 1.20	• =		-		
27048497 18-Oct-2022 TP02 ESZ 1.10 - 1.20	• =				
18-Oct-2022 TP02 ESZ 1.10 - 1.20 Cor eluz	• =				
TP02 ESZ 1.10 - 1.20	• =				
TP02 ESZ 1.10 - 1.20	• =				
1.10 - 1.20 Cor eluz	• =				
Cor elua	• =				
elua	• =				
	Conc <sup>n</sup> in 2:1         2:1 conc <sup>n</sup> ysis         eluate (mg/l)         leached (mg/l)				
Result	Limit of Detection	Result	Limit of Detection		
rtoout		Hoodit			
< 0.000005	<0.00005	<0.00001	<0.00001		
<0.000005	<0.000005	<0.00001	<0.00001		
<0.00005	<0.00005	<0.00001	<0.00001		
<0.000082	<0.000082	<0.000164	<0.000164		
	-	-	-		
<0.05	< 0.05	<0.1	<0.1		
<0.01	<0.01	< 0.02	< 0.02		
<0.01	<0.01	< 0.02	<0.02		
	<0.02				
<0.01	<0.01	<0.02	<0.02		
<0.01	<0.01	<0.02	<0.02		
<0.01	<0.01	<0.02	<0.02		
<0.01	<0.01	<0.02	<0.02		
<0.02		<0.04	<0.04		
auco) <0.02	<0.02	<0.04	<0.04		
<0.02	<0.02	<0.04	<0.04		
	<0.02	<0.04	<0.04		
	· -				
<0.001	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
	<0.001	<0.002	<0.002		
<0.001	<0.001	<0.002	<0.002		
<0.001		~0.004	<0.004		
	<0.01	$\begin{array}{c c c c c c } & <0.01 & <0.01 & <0.01 \\ \hline < 0.01 & <0.01 & <0.01 \\ \hline < 0.02 & <0.02 & \\ \hline < 0.01 & <0.01 & \\ \hline & <0.02 & <0.02 & \\ \hline & \hline &$	$\begin{array}{ c c c c c c } & <0.01 & <0.01 & <0.02 \\ \hline < 0.01 & <0.01 & <0.02 \\ \hline < 0.02 & <0.02 & <0.04 \\ \hline < 0.01 & <0.01 & <0.02 \\ \hline & <0.01 & <0.01 & <0.02 \\ \hline & <0.01 & <0.01 & <0.02 \\ \hline & <0.01 & <0.01 & <0.02 \\ \hline & <0.02 & <0.02 & <0.04 \\ \hline & <0.01 & <0.001 & <0.002 \\ \hline & <0.001 & <0.001 & <0.002 \\ \hline & \hline & \\ \hline & \hline & \hline & \hline & \hline & \hline & \hline &$	$\begin{array}{ c c c c c c c } \hline < <0.01 & <0.01 & <0.02 & <0.02 \\ \hline < <0.01 & <0.01 & <0.02 & <0.02 \\ \hline < <0.02 & <0.02 & <0.04 & <0.04 \\ \hline < <0.02 & <0.02 & <0.04 & <0.04 \\ \hline < <0.02 & <0.02 & <0.04 & <0.04 \\ \hline < <0.02 & <0.02 & <0.04 & <0.04 \\ \hline < <0.02 & <0.02 & <0.04 & <0.04 \\ \hline < <0.01 & <0.01 & <0.02 & <0.02 \\ \hline < <0.01 & <0.01 & <0.02 & <0.02 \\ \hline < <0.01 & <0.01 & <0.02 & <0.02 \\ \hline < <0.01 & <0.01 & <0.02 & <0.02 \\ \hline < <0.01 & <0.01 & <0.02 & <0.02 \\ \hline < <0.01 & <0.01 & <0.02 & <0.02 \\ \hline < <0.02 & <0.02 & <0.04 & <0.04 \\ \hline \hline \\ < <0.02 & <0.02 & <0.02 & <0.02 \\ \hline \\ < <0.01 & <0.01 & <0.02 & <0.02 \\ \hline \\ < <0.02 & <0.02 & <0.04 & <0.04 \\ \hline \\ \hline \\ < 0.02 & <0.02 & <0.04 & <0.04 \\ \hline \\ \hline \\ < 0.02 & <0.02 & <0.04 & <0.04 \\ \hline \\ \hline \\ \hline \\ < 0.02 & <0.02 & <0.04 & <0.04 \\ \hline \\ $	$ \begin{array}{ c c c c c c } \hline < 0.01 & < 0.01 & < 0.02 & < 0.02 \\ \hline < 0.01 & < 0.01 & < 0.02 & < 0.02 \\ \hline < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline < 0.01 & < 0.01 & < 0.02 & < 0.02 \\ \hline & < 0.01 & < 0.01 & < 0.02 & < 0.02 \\ \hline & < 0.01 & < 0.01 & < 0.02 & < 0.02 \\ \hline & < 0.01 & < 0.01 & < 0.02 & < 0.02 \\ \hline & < 0.01 & < 0.01 & < 0.02 & < 0.02 \\ \hline & < 0.01 & < 0.01 & < 0.02 & < 0.02 \\ \hline & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & < 0.02 & < 0.02 & < 0.02 & < 0.02 \\ \hline & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & & & < 0.02 & < 0.02 & < 0.04 & < 0.04 \\ \hline & & & & & & & & & & & \\ \hline & & & & &$

Validated

#### Leach Test Information

Date Prepared	26-Oct-2022
pH (pH Units)	6.83
Conductivity (µS/cm)	162
Volume Leachant (Litres)	0 328
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C) Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation



SDG: 221020-66 Client Ref.: 70072063

Location: Drax FCA

Superseded Report: 667193

#### **CEN 2:1 SINGLE STAGE LEACHATE TEST CEN ANALYTICAL RESULTS** REF : BS EN 12457/1 **Client Reference** Site Location Drax FCA Mass Sample taken (kg) 0.202 Natural Moisture Content (%) 15.2 86.8 Mass of dry sample (kg) 0.175 **Dry Matter Content (%)** Particle Size <4mm >95% Case SDG 221020-66 27048509 Lab Sample Number(s) 18-Oct-2022 Sampled Date TP02 ESZ Customer Sample Ref. 1.80 - 1.90 Depth (m) Conc<sup>n</sup> in 2:1 2:1 conc<sup>n</sup> eluate (mg/l) leached (mg/kg) **Eluate Analysis** Limit of Detection Limit of Detection Result Result Ammoniacal Nitrogen as N <0.2 8.3 16.6 <0.4 Chromium III < 0.03 < 0.03 <0.06 < 0.06 Hexavalent Chromium <0.03 < 0.03 <0.06 < 0.06 Mercury Dissolved (CVAF) <0.00001 < 0.00001 < 0.00002 < 0.00002 Total Cyanide (W) < 0.05 < 0.05 < 0.1 < 0.1 Arsenic 0.00301 < 0 0005 0.00602 < 0.001 Free Cyanide (W) < 0.05 <0.05 <01 <0.1 Barium 0.0488 < 0.0002 0.0976 < 0.0004 Complex Cyanide (W) < 0.05 <0.05 < 0.1 < 0.1 Phenol by HPLC (W) <0.002 < 0.002 < 0.004 < 0.004 Beryllium < 0.0001 <0.0001 < 0.0002 < 0.0002 Cresols by HPLC (W) <0.006 < 0.006 <0.012 < 0.012 Xylenols by HPLC (W) <0.008 < 0.016 < 0.008 < 0.016 Boron 0.108 < 0.01 0.216 <0.02 Cadmium <0.00008 < 0.00016 0.00123 0.00246 Total Monohydric Phenols (W) <0.016 < 0.016 < 0.032 < 0.032 Chromium < 0.001 < 0.001 < 0.002 < 0.002 Copper 0.00999 < 0.0003 0.02 <0.0006 Lead 0.00583 <0.0002 0.0117 < 0.0004 Nickel 0.00353 < 0.0004 0.00706 <0.0008 Selenium 0.00174 <0.001 0.00348 < 0.002 Zinc 0.0299 < 0.001 0.0598 < 0.002 PAH Spec MS - Aqueous (W) Naphthalene by GCMS < 0.00003 <0.00003 <0.00006 <0.00006 Acenaphthene by GCMS <0.000015 < 0.000015 < 0.00003 < 0.00003 Acenaphthylene by GCMS < 0.000015 < 0.000015 < 0.00003 < 0.00003 Fluoranthene by GCMS <0 000015 0.0000234 0.0000468 < 0.00003 Anthracene by GCMS < 0.000015 < 0.000015 < 0.00003 < 0.00003 Phenanthrene by GCMS < 0.000015 0.0000175 0.000035 < 0.00003 Fluorene by GCMS < 0.000015 < 0.000015 < 0.00003 < 0.00003 Chrysene by GCMS < 0.000015 < 0.000015 < 0.00003 < 0.00003 Pyrene by GCMS < 0.000015 0.0000219 0.0000438 < 0.00003 Benz(a)anthracene by GCMS < 0.000015 < 0.000015 < 0.00003 < 0.00003 Benzo(b)fluoranthene by GCMS < 0.000015 <0.000015 < 0.00003 < 0.00003 Benzo(k)fluoranthene by GCMS <0 000015 <0.000015 < 0.00003 < 0.00003 Benzo(a)pyrene by GCMS <0.000006 < 0.000006 <0.000012 < 0.000012

#### Leach Test Information

Date Prepared	28-Oct-2022
pH (pH Units)	8.02
Conductivity (µS/cm)	139
	139
Volume Leachant (Litres)	0 324
	0.024
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C).

	SDG: 221020-66 Client Ref.: 70072063		Number: 667610 .ocation: Drax FC	A	Superseded Report: 667193		
	CEN	2:1 SINGLE	STAGE LEAG	CHATE TEST			
CEN ANALYTICAL RESU	ILTS				<b>REF : BS EN 1245</b>		
Client Reference		;	Site Location		Drax FCA		
Mass Sample taken (kg)	0.202			re Content (%)	15.2		
Mass of dry sample (kg)	0.175		Dry Matter Cor	itent (%)	86.8		
Particle Size <4mm	>95%						
Case		_					
SDG	221020-66						
Lab Sample Number(s)	27048509						
Sampled Date	18-Oct-2022						
Customer Sample Ref.	TP02 ESZ						
Depth (m)	1.80 - 1.90						
	1.00 - 1.00						
-		c <sup>n</sup> in 2:1 e (mg/l)		conc <sup>n</sup> d (mg/kg)			
Eluate Allalysis	Result	Limit of Detection	Result	Limit of Detection			
PAH Spec MS - Aqueous (W)	Result		Result				
Dibenzo(ah)anthracene by GCMS	<0.000015	<0.000015	<0.00003	<0.00003			
Benzo(ghi)perylene by GCMS	<0.000015	<0.000015	<0.00003	<0.00003			
Indeno(123cd)pyrene by GCMS	<0.000015	<0.000015	<0.00003	<0.00003			
PAH 16 EPA Total by GCMS	<0.000246	<0.000246	<0.000492	<0.000492			
TPH CWG (W)							
Surrogate Recovery	-	-	-	-			
GRO TOT (C5-C12)	<0.05	<0.05	<0.1	<0.1			
Aliphatics C5-C6	<0.01	<0.01	<0.02	<0.02			
Aliphatics >C6-C8	<0.01	<0.01	<0.02	<0.02			
Aliphatics >C8-C10	<0.01	<0.01	<0.02	<0.02			
Aliphatics >C10-C12	<0.01	<0.01	<0.02	<0.02			
Aliphatics >C12-C16	< 0.03	< 0.03	<0.06	<0.06			
Aliphatics >C16-C21	< 0.03	< 0.03	< 0.06	< 0.06			
Aliphatics >C21-C35 Total Alipha ics >C12-C35	<0.03	< 0.03	< 0.06	< 0.06			
Aromatics C6-C7	< 0.03	<0.03 <0.01	< 0.06	< 0.06			
Aromatics >C7-C8	<u>&lt;0.01</u> <0.01	<0.01	<0.02 <0.02	<0.02			
Aromatics >EC8 -EC10	<0.01	<0.01	<0.02	<0.02			
Aromatics >EC10-EC12	<0.01	<0.01	<0.02	<0.02			
Aromatics >EC12-EC16	<0.01	<0.03	<0.02	<0.02			
Aromatics >EC16-EC21	< 0.03	< 0.03	< 0.06	<0.06			
Aromatics >EC21-EC35	< 0.03	< 0.03	< 0.06	<0.06			
Total Aromatics >EC12-EC35	< 0.03	< 0.03	<0.06	<0.06			
TPH (Total Aliphatics + Total Aromatics >C5-C35		<0.01	<0.02	<0.02			
Aliphatics >C16-C35	<0.03	<0.03	<0.06	<0.06			
Aromatics >EC16-EC35	<0.03	<0.03	<0.06	<0.06			
VOC MS (W)							
Tert-butyl methyl ether	<0.01	<0.01	<0.02	<0.02			
Benzene	<0.01	<0.01	<0.02	<0.02			
Toluene	<0.01	<0.01	<0.02	<0.02			
Ethylbenzene	<0.01	<0.01	<0.02	<0.02			
p/m-Xylene	<0.01	<0.01	<0.02	<0.02			
o-Xylene	<0.01	<0.01	< 0.02	<0.02			
Tert-amyl methyl ether	< 0.01	< 0.01	< 0.02	< 0.02			
Total Xylenes	<0.02	<0.02	<0.04	<0.04			

Validated

#### Leach Test Information

Date Prepared	28-Oct-2022
pH (pH Units)	8.02
Conductivity (µS/cm)	139
Volume Leachant (Litres)	0 324
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C) Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

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SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

## CEN 2:1 SINGLE STAGE LEACHATE TEST

CEN ANALYTICAL RESU	JLTS					REF : BS EN 124
Client Reference		:	Site Location		Drax F	CA
Mass Sample taken (kg)	0.227		Natural Moistur	e Content (%)	30	
Mass of dry sample (kg)	0.175		Dry Matter Con		76.9	
			Dry Matter Con		10.5	
Particle Size <4mm	>95%					
Case						
SDG	221020-66					
Lab Sample Number(s)	27048537			-	I	
Sampled Date	18-Oct-2022					
-						
Customer Sample Ref.	TP04 ESZ					
Depth (m)	2.20 - 2.30					
	Conc	י in 2:1	2:1 c	conc <sup>n</sup>		
Eluate Analysis		e (mg/l)		l (mg/kg)		
Liquie Analysis	Result	Limit of Detection	Result	Limit of Detection		
Ammoniacal Nitrogen as N	16.5	<0.2	33	< 0.4		
Chromium III	< 0.03	<0.03	<0.06	<0.06		
Hexavalent Chromium	<0.03	<0.03	<0.06	<0.06		
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.00002	<0.00002		
Total Cyanide (W)	<0.05	<0.05	<0.1	<0.1		
Arsenic	0.00604	<0.0005	0.0121	<0.001		
Free Cyanide (W)	<0.05	<0.05	<0.1	<0.1		
Barium	0.0777	<0.0002	0.155	<0.0004		
Complex Cyanide (W)	<0.05	<0.05	<0.1	<0.1		
Phenol by HPLC (W)	<0.002	<0.002	<0.004	<0.004		
Beryllium	<0.0001	<0.0001	<0.0002	<0.0002		
Cresols by HPLC (W)	< 0.006	< 0.006	<0.012	<0.012		
Xylenols by HPLC (W)	<0.008	< 0.008	< 0.016	<0.016		
Boron Cadmium	0.235	< 0.01	0.47	<0.02		
Total Monohydric Phenols (W)	<0.00008	<0.00008	<0.00016	<0.00016		
Chromium	< 0.016	< 0.016	<0.032	< 0.032		
Copper	0.00109	< 0.001	0.00218	< 0.002		
Lead	0.0159	<0.0003 <0.0002	0.0318 <0.0004	<0.0006 <0.0004		
Nickel	0.00617	<0.0002	0.0123	<0.0004		
Selenium	0.00196	<0.0004	0.00392	<0.0008		
Zinc	0.00355	<0.001	0.0071	<0.002		
PAH Spec MS - Aqueous (W)	0.00000	0.001	0.0011	40.00Z		
Naphthalene by GCMS	<0.00001	<0.00001	<0.00002	<0.00002		
Acenaphthene by GCMS	0.0000608	<0.000005	0.0000122	<0.00002		
Acenaphthylene by GCMS	<0.0000005	< 0.000005	< 0.0000122	<0.00001		
Fluoranthene by GCMS	<0.000005	<0.000005	< 0.00001	<0.00001		
Anthracene by GCMS	< 0.000005	<0.000005	< 0.00001	<0.00001		
Phenanthrene by GCMS	0.00000604	<0.000005	0.0000121	<0.00001		
Fluorene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Chrysene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Pyrene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Benz(a)anthracene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Benzo(b)fluoranthene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Benzo(k)fluoranthene by GCMS	<0.000005	<0.000005	<0.00001	<0.00001		
Benzo(a)pyrene by GCMS	<0.00002	<0.00002	<0.000004	<0.000004		

#### Leach Test Information

Date Prepared	26-Oct-2022
pH (pH Units)	8.23
Conductivity (µS/cm)	215
Volume Leachant (Litres)	0 298
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C) Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

	•		Number: 667610 .ocation: Drax FC	A	Superseded Report: 667193		
	CEN	2:1 SINGLE S	STAGE LEAC	CHATE TEST			
CEN ANALYTICAL RESULT	S				REF : BS EN 12457/		
Client Reference		5	Site Location		Drax FCA		
Mass Sample taken (kg)	0.227			re Content (%)	30		
Mass of dry sample (kg)	0.175	_	Dry Matter Con	tent (%)	76.9		
Particle Size <4mm	>95%						
Case		_					
SDG	221020-66						
Lab Sample Number(s)	27048537						
Sampled Date	18-Oct-2022						
Customer Sample Ref.	TP04 ESZ						
Depth (m)	2.20 - 2.30						
	0	c <sup>n</sup> in 2:1	0.4				
		e (mg/l)		conc <sup>n</sup> d (mg/kg)			
,	Result	Limit of Detection	Result	Limit of Detection			
PAH Spec MS - Aqueous (W)							
Dibenzo(ah)anthracene by GCMS	<0.000005	<0.00005	<0.00001	<0.00001			
Benzo(ghi)perylene by GCMS	<0.000005	<0.00005	<0.00001	<0.00001			
Indeno(123cd)pyrene by GCMS	<0.000005	< 0.000005	<0.00001	<0.00001			
PAH 16 EPA Total by GCMS TPH CWG (W)	<0.000082	<0.000082	<0.000164	<0.000164			
Surrogate Recovery			_				
GRO TOT (C5-C12)	<0.05	- <0.05	- <0.1	<0.1			
Aliphatics C5-C6	<0.03	<0.03	<0.02	<0.02			
Aliphatics >C6-C8	< 0.01	<0.01	< 0.02	<0.02			
Aliphatics >C8-C10	< 0.01	<0.01	< 0.02	< 0.02			
Aliphatics >C10-C12	<0.01	<0.01	<0.02	<0.02			
Aliphatics >C12-C16	<0.02	<0.02	<0.04	<0.04			
Aliphatics >C16-C21	<0.02	<0.02	<0.04	<0.04			
Aliphatics >C21-C35	<0.02	<0.02	<0.04	<0.04			
Total Alipha ics >C12-C35	<0.02	<0.02	<0.04	<0.04			
Aromatics C6-C7	< 0.01	< 0.01	< 0.02	< 0.02			
Aromatics >C7-C8 Aromatics >EC8 -EC10	< 0.01	<0.01	< 0.02	<0.02			
Aromatics >EC10-EC12	<0.01 <0.01	<0.01 <0.01	<0.02 <0.02	<0.02			
Aromatics >EC12-EC16	<0.02	<0.01	<0.02	<0.02			
Aromatics >EC16-EC21	<0.02	<0.02	<0.04	<0.04			
Aromatics >EC21-EC35	< 0.02	<0.02	< 0.04	< 0.04			
Total Aromatics >EC12-EC35	<0.02	<0.02	<0.04	<0.04			
TPH (Total Aliphatics + Total Aromatics) >C5-C35	<0.01	<0.01	<0.02	<0.02			
Aliphatics >C16-C35	<0.02	<0.02	<0.04	<0.04			
Aromatics >EC16-EC35	<0.02	<0.02	<0.04	<0.04			
VOC MS (W)							
Tert-butyl methyl ether	<0.01	<0.01	<0.02	<0.02			
Benzene	<0.01	<0.01	<0.02	<0.02			
Toluene	<0.01	<0.01	<0.02	<0.02			
Ethylbenzene	<0.01	<0.01	<0.02	<0.02			
o/m-Xylene	< 0.01	< 0.01	< 0.02	<0.02			
o-Xylene	<0.01	<0.01	< 0.02	<0.02			
Tert-amyl methyl ether Total Xylenes	<0.01	<0.01 <0.02	<0.02 <0.04	<0.02			
IULAI AYICHICO	< 0.02						

Validated

#### Leach Test Information

Date Prepared	26-Oct-2022
pH (pH Units)	8.23
Conductivity (µS/cm)	215
Volume Leachant (Litres)	0 298
Volume of Eluate VE1 (Litres)	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C) Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

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110:1 eluate (mg/l)	Site Location Natural Moistu Dry Matter Cor		Inert Waste Landfill - 6 1 500 100 -	REF : BS FCA fill Waste Accept Criteria Limits Non-reactive Hazardous Waste in Non- Hazardous Landfill 5 - - -	otance
Limit of Detection <0.0005 <0.0002	A2 10:1 cor		14.7 87.2 Landf Inert Waste Landfill 3 - 6 1 500 100 -	FCA fill Waste Accept Criteria Limits Non-reactive Hazardous Waste in Non- Hazardous Landfill	Dtance Hazardous Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002	A2 10:1 cor		14.7 87.2 Landf Inert Waste Landfill 3 - 6 1 500 100 -	fill Waste Accep Criteria Limits Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill 5 - -	Hazardous Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002	Dry Matter Cor		87.2 Landi Inert Waste Landfill 3 - 6 1 500 100 -	Criteria Limits	Hazardous Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002	A2 10:1 cor	ntent (%)	Landf Inert Waste Landfill - 6 1 500 100 -	Criteria Limits	Hazardous Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002	A2 10:1 cor		Landf Inert Waste Landfill - 6 1 500 100 -	Criteria Limits	Hazardous Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002			Inert Waste Landfill - 6 1 500 100 -	Criteria Limits	Hazardous Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002			Landfill 6 1 500 100	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill 5 - - - - - -	Hazardous Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002			Landfill 6 1 500 100	Non-reactive Hazardous Waste in Non- Hazardous Landfill 5 - - - - - - - -	Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002			Landfill 6 1 500 100	Non-reactive Hazardous Waste in Non- Hazardous Landfill 5 - - - - - - - -	Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002			Landfill 6 1 500 100	Hazardous Waste in Non- Hazardous Landfill 5 - - - - - - - -	Waste Landfill 6 10
Limit of Detection <0.0005 <0.0002			3 - 6 1 500 100 -	in Non- Hazardous Landfill - - - - - - -	6 10
Limit of Detection <0.0005 <0.0002			- 6 1 500 100 -	5 - - - - -	10
Limit of Detection <0.0005 <0.0002			- 6 1 500 100 -	- - -	10
Limit of Detection <0.0005 <0.0002			1 500 100 -	- - -	
Limit of Detection <0.0005 <0.0002			1 500 100 -	-	
Limit of Detection <0.0005 <0.0002			500 100 -	-	-
Limit of Detection <0.0005 <0.0002			100 -		
Limit of Detection <0.0005 <0.0002			-		-
Limit of Detection <0.0005 <0.0002				>6	-
Limit of Detection <0.0005 <0.0002			-	-	-
Limit of Detection <0.0005 <0.0002			-	-	-
<0.0005 <0.0002	A 10:1 eluate (mg/l)     A2     10:1 conc <sup>n</sup> leached (mg/kg)       Limit of Detection     Result     Limit of Detection		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
<0.0002	<0.005	< 0.005	0.5	2	25
_	0.0454	<0.003	20	100	300
.0.00000	<0.0008	<0.002	0.04	1	5
<0.001	<0.01	<0.01	0.5	10	70
<0.0003	0.0365	< 0.003	2	50	100
<0.00001	< 0.0001	< 0.0001	0.01	0.2	2
<0.003	<0.03	<0.03	0.5	10	30
_					40
_	_	_			50
_					5
_	_	_			7
-	_	_			200
_	_	_			25000
	_				500
_	_		1000	20000	50000
<5	251	<50	4000	60000	100000
<0.016	<0.16	<0.16	1	-	-
	70	<30	500	800	1000
	<0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2 <5	<0.0004	<0.0004         0.0135         <0.004           <0.0002	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	<0.0004         0.0135         <0.004         0.4         10           <0.0002

Validated



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

CEN 10:1 SINGLE STAGE LEACHATE TEST
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CEN ANALYTICAL RESU						NEF . DO	EN 12457
Client Reference			Site Location		Drax I	FCA	
Mass Sample taken (kg)	0.213		Natural Moistur	e Content (%)	22.7		
Mass of dry sample (kg)	0.090		Dry Matter Cont	tent (%)	81.5		
Particle Size <4mm	>95%		-	. ,			
Case					Landf	ill Waste Acce	otance
SDG	221020-66					Criteria Limits	
Lab Sample Number(s)	27048476						
Sampled Date	18-Oct-2022					Stable	
-	TP05 ESZ				Inert Waste	Non-reactive Hazardous Waste	Hazardous
Customer Sample Ref.					Landfill	in Non-	Waste Landfil
Depth (m)	1.20 - 1.30					Hazardous Landfill	
Solid Waste Analysis	Result						
Total Organic Carbon (%)	0.778				3	5	6
Loss on Ignition (%)	4.28				-	-	10
Sum of BTEX (mg/kg)	<0.4				6	-	-
Sum of 7 PCBs (mg/kg)	<0 021				1	-	-
Mineral Oil (mg/kg) (EH_2D_AL)	42.4				500	-	-
PAH Sum of 17 (mg/kg) bH (pH Units)	<10 7.81				100 -	>6	-
ANC to pH 6 (mol/kg)	0.0423				-	-	-
ANC to pH 4 (mol/kg)	0 068				-	-	-
Eluate Analysis	C2 Conc <sup>n</sup> in 1 Result	0:1 eluate (mg/l) Limit of Detection	A2 10:1 cond Result	<sup>In</sup> leached (mg/kg)		es for compliance lea 3S EN 12457-3 at L/S	-
Arsenic	0.00453	<0.0005	0.0453	<0.005	0.5	2	25
Barium	0.0301	<0.0002	0.301	<0.002	20	100	300
Cadmium	<0.0008	<0.0008	<0.0008	<0.0008	0.04	1	5
Chromium	0.00121	<0.001	0.0121	<0.01	0.5	10	70
Copper	0.0104	<0.0003	0.104	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	0.0146	<0.003	0.146	<0.03	0.5	10	30
Nickel	0.00322	<0.0004	0.0322	<0.004	0.4	10	40
Lead	0.00117	<0.0002	0.0117	<0.002	0.5	10	50
Antimony	0.00246	<0.001	0.0246	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.0119	<0.001	0.119	<0.01	4	50	200
Chloride	2.7	<2	27	<20	800	15000	25000
Fluoride	0.695	<0.5	6.95	<5	10	150	500
Sulphate (soluble)	2	<2	20	<20	1000	20000	50000
Total Dissolved Solids	175	<5	1750	<50	4000	60000	100000
Total Monohydric Phenols (W)	<0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	31.3	<3	313	<30	500	800	1000

#### Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	8.31
Conductivity (µS/cm)	229
Volume Leachant (Litres)	0 880

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

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Validated



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

CEN 10:1 SINGLE STAGE LEACHATE TE	ST
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	LTS					REF : BS	EN 12457
Client Reference			Site Location		Drax F	=CA	
Mass Sample taken (kg)	0.206		Natural Moisture	Content (%)	17.2		
Mass of dry sample (kg)	0.090		Dry Matter Conte		85.3		
Particle Size <4mm	>95%			(/0)			
	- 56 / 6						
Case					Landf	ill Waste Accep	
SDG	221020-66					Criteria Limits	
Lab Sample Number(s)	27048480						
Sampled Date	18-Oct-2022					Stable	
Customer Sample Ref.	TP06 ESZ				Inert Waste	Non-reactive Hazardous Waste	Hazardous
Depth (m)	0.20 - 0.30				Landfill	in Non-	Waste Landfil
	0.20 - 0.30					Hazardous Landfill	
Solid Waste Analysis	Result						
Total Organic Carbon (%)	1.41				3	5	6
Loss on Ignition (%)	6.92				-	-	10
Sum of BTEX (mg/kg)	<0.4				6	-	-
Sum of 7 PCBs (mg/kg) Mineral Oil (mg/kg) (EH_2D_AL)	<0 021 5.95				1 500	-	-
PAH Sum of 17 (mg/kg)	<10				100	-	-
pH (pH Units)	7.72				-	>6	-
ANC to pH 6 (mol/kg)	<0.03				-	-	-
	0.0007					-	-
ANC to pH 4 (mol/kg)	0.0697				-		
ANC to pH 4 (mol/kg) Eluate Analysis		0:1 eluate (mg/l) Limit of Detection	A2 10:1 conc <sup>n</sup> Result	leached (mg/kg) Limit of Detection	Limit valu	es for compliance lea SS EN 12457-3 at L/S	-
Eluate Analysis	C <sub>2</sub> Conc <sup>n</sup> in 1		112		Limit valu	es for compliance lea	-
Eluate Analysis	C2 Conc <sup>n</sup> in 1 Result	Limit of Detection	Result	Limit of Detection	Limit valu using B	es for compliance lea IS EN 12457-3 at L/S	10 l/kg
Eluate Analysis Arsenic Barium	C2 Conc <sup>n</sup> in 1 Result 0.00154	Limit of Detection <0.0005	Result 0.0154	Limit of Detection <0.005	Limit valu using E 0.5	es for compliance lea SS EN 12457-3 at L/S 2	10 l/kg 25
Eluate Analysis Arsenic Barium Cadmium	C2 Conc <sup>n</sup> in 1 Result 0.00154 0.0188	Limit of Detection <0.0005 <0.0002	Result           0.0154           0.188	Limit of Detection <0.005 <0.002	Limit valu using B 0.5 20	es for compliance lea SS EN 12457-3 at L/S 2 100	10 l/kg 25 300
Eluate Analysis Arsenic Barium Cadmium Chromium	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0188            <0.00008	Limit of Detection <0.0005 <0.0002 <0.00008	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008	Limit valu using B 0.5 20 0.04	es for compliance lea IS EN 12457-3 at L/S 2 100 1	10 l/kg 25 300 5
Eluate Analysis Arsenic Barium Cadmium Chromium Copper	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0188         <0.00008	Limit of Detection <0.0005 <0.0002 <0.00008 <0.001	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01	Limit valu using B 0.5 20 0.04 0.5	es for compliance lea SS EN 12457-3 at L/S 2 100 1 10	10  /kg 25 300 5 70
Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF)	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0188            <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003	Limit valu using E 0.5 20 0.04 0.5 2	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50	10 J/kg 25 300 5 70 100
Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0188            <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001	Limit valu using E 0.5 20 0.04 0.5 2 0.01	es for compliance lea SS EN 12457-3 at L/S 2 100 1 10 50 0.2	10 J/kg 25 300 5 70 100 2
Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0188            <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.003	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5	es for compliance lea SS EN 12457-3 at L/S 2 100 1 10 50 0.2 10	10 J/kg 25 300 5 70 100 2 30
Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0154         0.0188           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.003 <0.0004	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004	Limit valu using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10	10 J/kg 25 300 5 70 100 2 30 40
Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0154         0.0188           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002	Limit valu using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 0.7 0.5	10 l/kg 25 300 5 70 100 2 30 40 50
Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0154         0.0188           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.003 <0.0004 <0.0002 <0.001	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.001 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01	Limit valu using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 0.7	10 l/kg 25 300 5 70 100 2 30 40 50 5
Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0188         0.0188           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2.0001 <22	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <20	Limit valu using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 10 10 0.7 0.5 50 15000	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000
Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0188         0.0008           <0.0001	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5	Limit valu using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800 10	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 10 10 0.7 0.5 50 50 15000 150	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500
Eluate Analysis  Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble)	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0188         0.00188           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <2 <0.001 <2 <0.5 <2	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20	Limit valu using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800 10	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 50 0.2 10 10 10 10 10 0.7 0.5 50 15000 150 20000	10 J/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500 500
Eluate Analysis  Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble) Total Dissolved Solids	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0154         0.0188           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.0003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2 <5	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <0.01 <20 <5 <20 <50	Limit valu using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000 4000	es for compliance lea SS EN 12457-3 at L/S 2 100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000 150 20000 60000	10 J/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500 5000 100000
	C2         Conc <sup>n</sup> in 1           Result         0.00154           0.0188         0.00188           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <2 <0.001 <2 <0.5 <2	Result           0.0154           0.188           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <1 <20 <5 <20	Limit valu using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800 10	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 50 0.2 10 10 10 10 10 0.7 0.5 50 15000 150 20000	10 1/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500 500

#### Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	8.34
Conductivity (µS/cm)	130
Volume Leachant (Litres)	0 884

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

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Validated



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

## CEN 10:1 SINGLE STAGE LEACHATE TEST

<b>CEN ANALYTICAL RESU</b>	LTS					REF : BS	EN 12457/
Client Reference			Site Location		Drax I	-CA	
Mass Sample taken (kg)	0.106		Natural Moistur	e Content (%)	18.3		
Mass of dry sample (kg)	0.090		Dry Matter Cont		84.5		
Particle Size <4mm	>95%		Bry matter cont		01.0		
	~90 %						
Case					Landf	ill Waste Acce	
SDG	221020-66					Criteria Limits	
Lab Sample Number(s)	27048488						
Sampled Date	18-Oct-2022					Stable	
Customer Sample Ref.	TP06 ESZ				Inert Waste	Non-reactive Hazardous Waste	Hazardous
Depth (m)	1.50 - 1.60				Landfill	in Non- Hazardous	Waste Landfill
Solid Waste Analysis	Result					Landfill	
Total Organic Carbon (%)	1.22		l		3	5	6
Loss on Ignition (%)	4.9				-	-	10
Sum of BTEX (mg/kg)	<0.4				6	-	-
Sum of 7 PCBs (mg/kg)	<0 021				1	-	-
Mineral Oil (mg/kg) (EH_2D_AL)	6.1				500	-	-
PAH Sum of 17 (mg/kg) bH (pH Units)	<10 6.71				100	- >6	-
ANC to pH 6 (mol/kg)	<0.03				-	-	-
ANC to pH 4 (mol/kg)	0.0692				-	-	-
Eluate Analysis	C <sub>2</sub> Conc <sup>n</sup> in 1 Result	0:1 eluate (mg/l)	A2 10:1 conc Result	<sup>n</sup> leached (mg/kg) Limit of Detection	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
Arsenic	0.00529	<0.0005	0.0529	<0.005	0.5	2	25
Barium	0.0279	<0.0002	0.279	<0.002	20	100	300
Cadmium	<0.0008	<0.0008	<0.0008	<0.0008	0.04	1	5
Chromium	<0.001	<0.001	<0.01	<0.01	0.5	10	70
Copper	0.00204	<0.0003	0.0204	<0.003	2	50	100
Mercury Dissolved (CVAF)	<0.00001	<0.00001	<0.0001	<0.0001	0.01	0.2	2
Molybdenum	0.00674	<0.003	0.0674	<0.03	0.5	10	30
Nickel	0.0016	<0.0004	0.016	<0.004	0.4	10	40
ead	0.000237	<0.0002	0.00237	<0.002	0.5	10	50
Antimony	0.00186	<0.001	0.0186	<0.01	0.06	0.7	5
Selenium	<0.001	<0.001	<0.01	<0.01	0.1	0.5	7
Zinc	0.00163	<0.001	0.0163	<0.01	4	50	200
Chloride	<2	<2	<20	<20	800	15000	25000
Fluoride	0.865	<0.5	8.65	<5	10	150	500
Sulphate (soluble)	53.9	<2	539	<20	1000	20000	50000
Fotal Dissolved Solids	125	<5	1250	<50	4000	60000	100000
Total Monohydric Phenols (W)	< 0.016	<0.016	<0.16	<0.16	1	-	-
Dissolved Organic Carbon	9.25	<3	92.5	<30	500	800	1000

#### Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	7.85
Conductivity (µS/cm)	162
Volume Leachant (Litres)	0 884

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

## CEN 10:1 SINGLE STAGE LEACHATE TEST

-66 93 2022 SZ .80 sult 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) sult Limit of Detect	Dry Matter Con	re Content (%) ntent (%)	Drax 16.3 86 Land	FCA fill Waste Accep Criteria Limits Non-reactive Hazardous Waste in Non- Hazardous Landfill 5 - - - - - - - - - - -	
93 2022 SZ .80 sult 12 .4 021 5 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) ssult Limit of Detect	Dry Matter Con		86 Land	Criteria Limits	Hazardous Waste Landfil 6 10 -
93 2022 SZ .80 sult 12 .4 021 5 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) ssult Limit of Detect		ntent (%)	Land Inert Waste Landfill - 6 1 500 100	Criteria Limits	Hazardous Waste Landfil 6 10 -
93 2022 SZ .80 sult 12 .4 021 5 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) ssult Limit of Detect			Inert Waste Landfill - 6 1 500 100	Criteria Limits	Hazardous Waste Landfil 6 10 -
93 2022 SZ .80 sult 12 .4 021 5 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) ssult Limit of Detect	Δ. 10:1 cm		Inert Waste Landfill - 6 1 500 100	Criteria Limits	Hazardous Waste Landfi 6 10 - -
93 2022 SZ .80 sult 12 .4 021 5 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) ssult Limit of Detect	<b>A</b> _2 10:1 cm		Inert Waste Landfill - 6 1 500 100	Criteria Limits	Hazardous Waste Landfil 6 10 -
93 2022 SZ .80 sult 12 .4 021 5 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) ssult Limit of Detect	<b>A</b> _2 10:1 cm		Landfill - 6 1 500 100	Stable Non-reactive Hazardous Waste in Non- Hazardous Landfill 5 - - - - - - - -	Hazardous Waste Landfil 6 10 - -
2022 SZ .80 sult .996 .12 .04 021 .5 .10 .48 .03 .794 Conc <sup>n</sup> in 10:1 eluate (mg/l) sult Limit of Detect	<b>A</b> _2 10:1 cm		Landfill - 6 1 500 100	Non-reactive Hazardous Waste in Non- Hazardous Landfill 5 - - - - - - - -	Waste Landfil 6 10 - -
SZ .80 sult .96 .12 .4 .021 .5 .10 .48 .03 .794 Conc <sup>n</sup> in 10:1 eluate (mg/l) esult Limit of Detect	<b>A</b> _2 10:1 cm		Landfill - 6 1 500 100	Non-reactive Hazardous Waste in Non- Hazardous Landfill 5 - - - - - - - -	Waste Landfi 6 10 - -
.80 sult 996 12 14 12 14 12 15 10 48 103 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) esult Limit of Detect	<b>A</b> _2 10:1 cm		Landfill - 6 1 500 100	in Non- Hazardous Landfill 5 - - - - - - - - - - -	Waste Landfi 6 10 - -
sult  996  12  14  021  5  10  48  03  794  Conc <sup>n</sup> in 10:1 eluate (mg/l)  esult Limit of Detect	<b>A</b> _2 10:1 cm		- 6 1 500 100	Hazardous Landfill 5 - - - - - - - - - -	10 - -
1996 12 14 12 10 15 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) sult Limit of Detect	<b>A</b> _2 10:1 cm		- 6 1 500 100	5 - - - - -	10 - -
12 0.4 021 5 10 48 03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) esult Limit of Detect	<b>A</b> 10:1 co		- 6 1 500 100	- - - -	10 - -
0.4 021 5 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) esuit Limit of Detect	<b>A</b> -2 10:1 cm		1 500 100	-	-
021 5 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) esult Limit of Detect	<b>A</b> 10:1 co		1 500 100	-	-
5 10 48 .03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) esult Limit of Detect	<b>A</b> 10:1 co		500 100	-	
10 48 03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) esult Limit of Detect	<b>A</b> 10:1 co		100		
48 03 794 Conc <sup>n</sup> in 10:1 eluate (mg/l) esult Limit of Detect	<b>A</b> a 10:1 co				-
794 Conc <sup>n</sup> in 10:1 eluate (mg/l) esult Limit of Detect	<b>A</b> a 10:1 co		-	>6	-
Conc <sup>n</sup> in 10:1 eluate (mg/l) esult Limit of Detect	<b>A</b> 2 10:1 co		-	-	-
esult Limit of Detect	<b>A</b> a 10:1 co		-	-	-
	<b>A</b> 2 -0.1 00.	nc <sup>n</sup> leached (mg/kg)	Limit values for compliance leaching te using BS EN 12457-3 at L/S 10 l/kg		
		Limit of Detection			
0317 <0.0005	0.0317	<0.005	0.5	2	25
0651 <0.0002	0.0651	<0.002	20	100	300
					5
					70
					100
					2
					30
		_			40
					50
					5
					7
					200
					25000
	0.07		1000	20000	500 50000
987 <0.5		-00	1000	20000	
987 <0.5 <2 <2	<20	<20		60000	100000
987 <0.5		<20 <50 <0.16	4000	60000 -	100000
0008 001 0891 0529 0202 0586 0209 001 027	<0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.004 <0.0004 <0.001 <0.001 <0.001 <2	<0.001	<0.001         <0.01         <0.01           <0.0003	<0.001         <0.01         <0.01         0.5           <0.003	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$

#### Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	7.59
Conductivity (µS/cm)	55
Volume Leachant (Litres)	0 885

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Validated



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

	ILTS					REF : BS	EN 12457
Client Reference	t Reference Site Location				Drax	FCA	
Mass Sample taken (kg)	0.197		Natural Moistur	e Content (%)	12.5		
Mass of dry sample (kg)	0.090		Dry Matter Cont	ent (%)	88.9		
Particle Size <4mm	>95%						
Case					Land	fill Waste Acce	otance
SDG	221020-66					<b>Criteria Limits</b>	
Lab Sample Number(s)	27048497						
Sampled Date	18-Oct-2022					Stable	
Customer Sample Ref.	TP02 ESZ				Inert Waste	Non-reactive Hazardous Waste	Hazardous
-	1.10 - 1.20				Landfill	in Non-	Waste Landfil
Depth (m)	1.10 - 1.20					Hazardous Landfill	
Solid Waste Analysis	Result						
otal Organic Carbon (%)	0 542				3	5	6
oss on Ignition (%)	3.31				-	-	10
Sum of BTEX (mg/kg)	<0.4				6	-	-
Sum of 7 PCBs (mg/kg) Vineral Oil (mg/kg) (EH_2D_AL)	<0 021				1 500	-	-
PAH Sum of 17 (mg/kg)	<10				100	-	-
bH (pH Units)	5.61				-	>6	-
NC to pH 6 (mol/kg)	<0.03				-	-	-
NC to pH 4 (mol/kg)	0.0457				-	-	-
Eluate Analysis		0:1 eluate (mg/l)	A2 10:1 conc	<sup>n</sup> leached (mg/kg)	Limit values for compliance leaching using BS EN 12457-3 at L/S 10 l/k		-
	Result	Limit of Detection	Result	Limit of Detection			
Arsenic	0.000619	< 0.0005	0.00619	-0.005			
		<0.0005	0.00019	<0.005	0.5	2	25
Barium	0.0338	<0.0002	0.338	<0.002	20	100	300
Barium Cadmium					20 0.04	100 1	
Barium Cadmium	0.0338 0.000152 <0.001	<0.0002 <0.00008 <0.001	0.338 0.00152 <0.01	<0.002 <0.0008 <0.01	20 0.04 0.5	100 1 10	300
Barium Cadmium Chromium Copper	0.0338 0.000152	<0.0002 <0.00008 <0.001 <0.0003	0.338 0.00152	<0.002 <0.0008	20 0.04 0.5 2	100 1 10 50	300 5 70 100
Barium Cadmium Chromium Copper Mercury Dissolved (CVAF)	0.0338 0.000152 <0.001 0.00114 <0.00001	<0.0002 <0.00008 <0.001 <0.0003 <0.00001	0.338 0.00152 <0.01 0.0114 <0.0001	<0.002 <0.0008 <0.01 <0.003 <0.0001	20 0.04 0.5 2 0.01	100 1 10 50 0.2	300 5 70 100 2
Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum	0.0338 0.000152 <0.001 0.00114 <0.00001 <0.003	<0.0002 <0.00008 <0.001 <0.0003	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03	20 0.04 0.5 2 0.01 0.5	100 1 10 50 0.2 10	300 5 70 100 2 30
Barium Cadmium Chromium Copper Aercury Dissolved (CVAF) Aolybdenum lickel	0.0338 0.000152 <0.001 0.00114 <0.00001 <0.003 0.00185	<0.0002 <0.00008 <0.001 <0.0003 <0.00001 <0.003 <0.0004	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03 0.0185	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004	20 0.04 0.5 2 0.01 0.5 0.4	100 1 10 50 0.2 10 10	300 5 70 100 2 30 40
Barium Cadmium Chromium Copper Aercury Dissolved (CVAF) Aolybdenum lickel	0.0338 0.000152 <0.001 0.00114 <0.00001 <0.003	<0.0002 <0.00008 <0.001 <0.0003 <0.00001 <0.0003	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03	20 0.04 0.5 2 0.01 0.5 0.4 0.5	100 1 10 50 0.2 10	300 5 70 100 2 30
Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Lickel Lickel Lead	0.0338           0.000152           <0.001	<0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.003 <0.0004 <0.0002 <0.001	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03 0.0185 <0.002 <0.01	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01	20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06	100 1 10 50 0.2 10 10 10 10 0.7	300 5 70 100 2 30 40 50 5
Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Jickel Jickel Jickel Jickel Selenium	0.0338           0.000152           <0.001	<0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03 0.0185 <0.002 <0.01 <0.01	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01	20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1	100 1 10 50 0.2 10 10 10 0.7 0.5	300 5 70 100 2 30 40 50 5 5 7
aarium Sadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel ead antimony Selenium Sinc	0.0338           0.000152           <0.001	<0.0002 <0.00008 <0.001 <0.0003 <0.00001 <0.0003 <0.0004 <0.0002 <0.001 <0.001 <0.001	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03 0.0185 <0.002 <0.01 <0.01 0.0977	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01	20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4	100 1 10 50 0.2 10 10 10 10 0.7 0.5 50	300 5 70 100 2 30 40 50 5 5 7 200
Barium Cadmium Chromium Copper Aercury Dissolved (CVAF) Aolybdenum Nickel ead watimony Selenium Cinc Chloride	0.0338           0.000152           <0.001	<0.0002 <0.00008 <0.001 <0.0003 <0.00001 <0.0003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03 0.0185 <0.002 <0.01 <0.01 0.0977 <20	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20	20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800	100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000	300 5 70 100 2 30 40 50 5 5 7 200 25000
arium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum lickel ead antimony Selenium Selenium Chloride	0.0338           0.000152           <0.001	<0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03 0.0185 <0.002 <0.01 0.0977 <20 <5	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5	20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10	100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000	300 5 70 100 2 30 40 50 5 5 7 200 25000 500
arium cadmium chromium copper Mercury Dissolved (CVAF) Molybdenum lickel ead .ntimony celenium celenium inc chloride luoride sulphate (soluble)	0.0338           0.000152           <0.001	<0.0002 <0.00008 <0.001 <0.0003 <0.0001 <0.0003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03 0.0185 <0.002 <0.01 <0.01 <0.01 0.0977 <20 <5 672	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20	20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000 150 20000	300 5 70 100 2 30 40 50 5 5 7 200 25000 500 5000
aarium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Iickel ead antimony Selenium Cinc Chloride Chloride Sulphate (soluble) otal Dissolved Solids	0.0338           0.000152           <0.001	<0.0002 <0.00008 <0.001 <0.0003 <0.00001 <0.0003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2 <5	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03 0.0185 <0.002 <0.01 <0.01 <0.01 <0.01 <0.01 <0.0977 <20 <5 672 1240	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <0.01 <20 <5 <20 <55 <20 <50	20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000 4000	100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000	300 5 70 100 2 30 40 50 5 5 7 200 25000 500
Barium	0.0338           0.000152           <0.001	<0.0002 <0.00008 <0.001 <0.0003 <0.0001 <0.0003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2	0.338 0.00152 <0.01 0.0114 <0.0001 <0.03 0.0185 <0.002 <0.01 <0.01 <0.01 0.0977 <20 <5 672	<0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20	20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000 150 20000	300 5 70 100 2 30 40 50 5 5 7 200 25000 5000

#### Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	6.83
Conductivity (µS/cm)	162
Volume Leachant (Litres)	0 889

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

## CEN 10:1 SINGLE STAGE LEACHATE TEST

	LTS					REF : BS	EN 1245//
Client Reference	t Reference Site Location			Drax I	FCA		
Mass Sample taken (kg)	0.202		Natural Moisture	e Content (%)	15.2		
Mass of dry sample (kg)	0.090		Dry Matter Conte	ent (%)	86.8		
Particle Size <4mm	>95%			. ,			
Case					Land	ill Waste Acce	
SDG	221020-66					Criteria Limits	
Lab Sample Number(s)	27048509						
Sampled Date	18-Oct-2022					Stable Non-reactive	
Customer Sample Ref.	TP02 ESZ				Inert Waste	Hazardous Waste	Hazardous
Depth (m)	1.80 - 1.90				Landfill	in Non- Hazardous	Waste Landfill
Solid Waste Analysis	Result					Landfill	
Total Organic Carbon (%)	0 627				3	5	6
Loss on Ignition (%)	3.42				-	-	10
Sum of BTEX (mg/kg)	<0.4				6	-	-
Sum of 7 PCBs (mg/kg)	<0 021				1	-	-
Mineral Oil (mg/kg) (EH_2D_AL)	10.5				500	-	-
PAH Sum of 17 (mg/kg)	<10				100	-	-
oH (pH Units) ANC to pH 6 (mol/kg)	7.28				-	>6 -	-
ANC to pH 4 (mol/kg)	0.0405				-	-	-
Eluate Analysis	C <sub>2</sub> Conc <sup>n</sup> in 1	0:1 eluate (mg/l)	A2 10:1 conc <sup>n</sup>	leached (mg/kg)	Limit values for compliance leaching using BS EN 12457-3 at L/S 10 I/I		
	Result	Limit of Detection	Result	Limit of Detection	using E	3S EN 12457-3 at L/S	5 10 l/kg
	<b>Result</b> 0.0039	Limit of Detection <0.0005	<b>Result</b> 0.039	Limit of Detection <0.005	0.5	3S EN 12457-3 at L/S	25
Arsenic						-	
Arsenic Barium	0.0039	<0.0005	0.039	<0.005	0.5	2	25
Arsenic Barium Cadmium	0.0039 0.00378	<0.0005 <0.0002	0.039 0.0378	<0.005 <0.002	0.5	2 100	25 300
Arsenic Barium Cadmium Chromium	0.0039 0.00378 <0.00008	<0.0005 <0.0002 <0.00008	0.039 0.0378 <0.0008	<0.005 <0.002 <0.0008	0.5 20 0.04	2 100 1	25 300 5
Arsenic Barium Cadmium Chromium Copper	0.0039 0.00378 <0.00008 <0.001	<0.0005 <0.0002 <0.0008 <0.001	0.039 0.0378 <0.0008 <0.01	<0.005 <0.002 <0.0008 <0.01	0.5 20 0.04 0.5	2 100 1 10	25 300 5 70
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF)	0.0039 0.00378 <0.00008 <0.001 0.00766	<0.0005 <0.0002 <0.0008 <0.001 <0.0003	0.039 0.0378 <0.0008 <0.01 0.0766	<0.005 <0.002 <0.0008 <0.01 <0.003	0.5 20 0.04 0.5 2	2 100 1 10 50	25 300 5 70 100
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum	0.0039 0.00378 <0.0008 <0.001 0.00766 <0.0001	<0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001	0.5 20 0.04 0.5 2 0.01	2 100 1 10 50 0.2	25 300 5 70 100 2
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Vickel	0.0039 0.00378 <0.0008 <0.001 0.00766 <0.00001 0.00584	<0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.003	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001 0.0584	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03	0.5 20 0.04 0.5 2 0.01 0.5	2 100 1 10 50 0.2 10	25 300 5 70 100 2 30
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead	0.0039 0.00378 <0.0008 <0.001 0.00766 <0.00001 0.00584 0.00146	<0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.003 <0.0004	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001 0.0584 0.0146	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004	0.5 20 0.04 0.5 2 0.01 0.5 0.4	2 100 1 10 50 0.2 10 10	25 300 5 70 100 2 30 40
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony	0.0039           0.00378           <0.0008	<0.0005 <0.0002 <0.00008 <0.001 <0.0003 <0.00001 <0.003 <0.0004 <0.0002	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001 0.0584 0.0146 0.00877	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002	0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5	2 100 1 10 50 0.2 10 10 10	25 300 5 70 100 2 30 40 50
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc	0.0039           0.00378           <0.00008	<0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001 0.0584 0.0146 0.00877 0.0172	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01	0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06	2 100 1 10 50 0.2 10 10 10 10 0.7	25 300 5 70 100 2 30 40 50 5
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride	0.0039           0.00378           <0.0008	<0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001 0.0584 0.0146 0.00877 0.0172 <0.01	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20	0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1	2 100 1 10 50 0.2 10 10 10 10 0.7 0.5	25 300 5 70 100 2 30 40 50 5 5 7
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Vickel Lead Antimony Selenium Zinc Chloride	0.0039           0.00378           <0.0008	<0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.001 <2 <0.5	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001 0.0584 0.0146 0.00877 0.0172 <0.01 0.0286 <20 11.9	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5	0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10	2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50 15000 150	25 300 5 70 100 2 30 40 50 5 5 7 200 25000 500
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Vickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble)	0.0039           0.00378           <0.0008	<0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001 0.0584 0.0146 0.00877 0.0172 <0.01 0.0286 <20 11.9 <20	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20	0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	2 100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000 150 20000	25 300 5 70 100 2 30 40 50 50 5 7 200 25000 5000 50000
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Vickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble) Fotal Dissolved Solids	0.0039           0.00378           <0.0008	<0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2 <5	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001 0.0584 0.0146 0.00877 0.0172 <0.01 0.0286 <20 11.9 <20 393	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <0.01 <20 <5 <20 <50	0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000 4000	2 100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000 150 20000 60000	25 300 5 70 100 2 30 40 50 5 5 7 200 25000 5000 50000 100000
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble) Fotal Dissolved Solids Fotal Monohydric Phenols (W) Dissolved Organic Carbon	0.0039           0.00378           <0.0008	<0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2	0.039 0.0378 <0.0008 <0.01 0.0766 <0.0001 0.0584 0.0146 0.00877 0.0172 <0.01 0.0286 <20 11.9 <20	<0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20	0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	2 100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000 150 20000	25 300 5 70 100 2 30 40 50 50 5 7 200 25000 5000 50000

#### Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	7.77
Conductivity (µS/cm)	51
Volume Leachant (Litres)	0 887

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

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Validated



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

CEN 10:1 SINGLE STAGE LEACHATE TEST
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	ILTS					REF : BS	EN 12457/
Client Reference			Site Location		Drax I	=CA	
Mass Sample taken (kg)	0.101		Natural Moisture	e Content (%)	11.9		
Mass of dry sample (kg)	0.090		Dry Matter Cont		89.3		
Particle Size <4mm	>95%			(,,,			
Case					Landf	ill Waste Acce	
SDG	221020-66					Criteria Limits	i i
Lab Sample Number(s)	27048517						
Sampled Date	18-Oct-2022					Stable	
Customer Sample Ref.	TP03 ESZ				Inert Waste	Non-reactive Hazardous Waste	Hazardous
Depth (m)	0.90 - 1.00				Landfill	in Non- Hazardous	Waste Landfil
						Landfill	
Solid Waste Analysis	Result						
Total Organic Carbon (%)	0.712				3	5	6
Loss on Ignition (%)	3.9				-	-	10
Sum of BTEX (mg/kg)	<0.4				6	-	-
Sum of 7 PCBs (mg/kg)	<0 021				1 500	-	-
Mineral Oil (mg/kg) (EH_2D_AL) PAH Sum of 17 (mg/kg)	15.6 <10				100	-	-
pH (pH Units)	6.7				-	>6	-
ANC to pH 6 (mol/kg)	<0.03				-	-	-
ANG to pri o (monky)							
	0.0539	Ort chusts (mg/l)	<b>1</b> 01 and		-	-	-
ANC to pH 4 (mol/kg)	0.0539	0:1 eluate (mg/l) Limit of Detection	A2 10:1 conc <sup>1</sup> Result	<sup>n</sup> leached (mg/kg) Limit of Detection	Limit valu	- es for compliance lea SS EN 12457-3 at L/S	ching test
ANC to pH 4 (mol/kg) Eluate Analysis	0.0539 C2 Conc <sup>n</sup> in 1		712		Limit valu	-	ching test
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium	0.0539 C2 Conc <sup>n</sup> in 1 Result	Limit of Detection	Result	Limit of Detection	Limit valu using E	3S EN 12457-3 at L/S	iching test 10 l/kg
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium	0.0539 C2 Conc <sup>n</sup> in 1 Result 0.00124	Limit of Detection	Result 0.0124	Limit of Detection <0.005	Limit valu using E 0.5	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	ching test 10 l/kg 25
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium	0.0539 C2 Conc <sup>n</sup> in 1 Result 0.00124 0.0122	Limit of Detection <0.0005 <0.0002	Result           0.0124           0.122	Limit of Detection <0.005 <0.002	Limit valu using E 0.5 20	2 100	iching test 10 l/kg 25 300
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium	0.0539  C2 Conc <sup>n</sup> in 1  Result  0.0122  <0.0122  <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008	Limit valu using E 0.5 20 0.04	2 100 100	10 I/kg 25 300 5
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper	0.0539  C2 Conc" in 1  Result  0.00124  0.0122  <0.0008  <0.001	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01	Limit valu using E 0.5 20 0.04 0.5	2 100 10 10	10 I/kg 25 300 5 70
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF)	0.0539  C2 Conc <sup>n</sup> in 1  Result  0.00124  0.0122  <0.00008  <0.001  0.00433	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003	Limit valu using E 0.5 20 0.04 0.5 2	2 100 10 10 50	25 300 5 70 100
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum	0.0539  C2 Conc <sup>n</sup> in 1  Result 0.0124 0.0122 0.0122 0.00008 <0.001 0.00433 <0.00001	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001	Limit valu using E 0.5 20 0.04 0.5 2 0.01	2 100 1 10 50 0.2	25 300 5 70 100 2
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel	0.0539  C2 Conc <sup>n</sup> in 1  Result 0.00124 0.0122 0.00124 0.0012 0.0008 0.001 0.00433 <0.00001 0.000433 <0.0001 0.003	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.0003	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5	2 100 1 100 50 0.2 10 10 10 10 10	25 300 5 70 100 2 30
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead	0.0539           C2         Conc <sup>n</sup> in 1           Result         0.00124           0.0122         <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.003 <0.003 <0.0004	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06	2 100 1 100 50 0.2 10 10	25 300 5 70 100 2 30 40
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony	0.0539  C2 Conc <sup>n</sup> in 1  Result  0.00124  0.0122  <0.00008  <0.001  0.00433  <0.0001  <0.003  0.00104  0.00102  0.0010 0.00102  0.0010 0.0010 0.0010 0.0010 0.0010 0.0010 0.0010 0.0010 0.0010 0.0010 0.0010 0.001	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5	2 100 1 10 50 0.2 10 10 10 10 0.7 0.5	25 300 5 70 100 2 30 40 5
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium	0.0539  C2 Conc <sup>n</sup> in 1  Result 0.00124 0.0122 0.0122 0.00008 0.001 0.00433 0.00433 0.00001 0.003 0.00104 0.00102 0.00102 0.001 0.00102 0.001	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4	2 100 1 10 50 0.2 10 10 10 10 0.7	25 300 5 70 100 2 30 40 50 5
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride	0.0539           C2         Conc <sup>n</sup> in 1           Result         0.00124           0.00124         0.0122           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <0.01 <20	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800	2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50 15000	25 300 5 70 100 2 30 40 50 5 5 7
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride	0.0539           C2         Conc <sup>n</sup> in 1           Result         0.00124           0.00124         0.0122           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <2 <0.5	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800 10	2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50 15000 150	Aching test 10 l/kg           25           300           5           70           100           2           30           40           50           5           7           200
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble)	0.0539           C2         Conc <sup>n</sup> in 1           Result         0.00124           0.0122         0.0122           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50 15000	25           300           5           70           100           2           300           2           30           40           50           7           200           25000
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble) Total Dissolved Solids	C2         Conc <sup>n</sup> in 1           Result         0.00124           0.0122         0.0122           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2 <5	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20 <50	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000 4000	2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50 15000 150	25 300 5 70 100 2 30 40 50 50 5 7 200 25000 500
ANC to pH 4 (mol/kg)  Eluate Analysis  Arsenic Barium Cadmium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble)	0.0539           C2         Conc <sup>n</sup> in 1           Result         0.00124           0.0122         0.0122           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2	Result           0.0124           0.122           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	2 100 1 100 50 0.2 10 10 10 10 10 0.7 0.5 50 15000 150 20000	25         300         5         70         100         2         30         40         50         7         200         25000         500         500         500

#### Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	7.44
Conductivity (µS/cm)	102
Volume Leachant (Litres)	0 889

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

08/11/2022 11:45:46

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Validated



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

## CEN 10:1 SINGLE STAGE LEACHATE TEST

09 90 ;% 020-66 ;48524 Oct-2022		Site Location Natural Moistur Dry Matter Cont		Drax F 22.7 81.5	FCA	
90 5% 020-66 048524 Oct-2022				81.5		
020-66 048524 Oct-2022						
020-66 048524 Oct-2022		,		Londf		
020-66 148524 Oct-2022				L a walf		
948524 Oct-2022				م او مرد ا		
948524 Oct-2022				Landi	ill Waste Accep	
Oct-2022					Criteria Limits	
					Stable Non-reactive	
)3 ESZ				Inert Waste	Hazardous Waste	Hazardous
0 - 2.70				Landfill	in Non- Hazardous	Waste Landfil
Result					Landfill	
0 656				3	5	6
7.61				-	-	10
<0.4				6	-	-
<0 021				1	-	-
						-
				-		-
<0.03				-	-	-
0.0654				-	-	-
2 Conc <sup>n</sup> in 1		A2 10:1 conc		Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg		
Result	Limit of Detection	Result	Limit of Detection			
	<0.0005					25
				20	100	300
	<0.00008	<0.0008				
			<0.0008	0.04	1	5
<0.001	<0.001	<0.01	<0.01	0.5	1 10	5 70
0.000498	<0.0003	0.00498	<0.01 <0.003	0.5	1 10 50	5 70 100
0.000498 <0.00001	<0.0003 <0.00001	0.00498 <0.0001	<0.01 <0.003 <0.0001	0.5 2 0.01	1 10 50 0.2	5 70 100 2
0.000498 <0.00001 <0.003	<0.0003 <0.00001 <0.003	0.00498 <0.0001 <0.03	<0.01 <0.003 <0.0001 <0.03	0.5 2 0.01 0.5	1 10 50 0.2 10	5 70 100 2 30
0.000498 <0.00001 <0.003 0.000547	<0.0003 <0.00001 <0.003 <0.0004	0.00498 <0.0001 <0.03 0.00547	<0.01 <0.003 <0.0001 <0.03 <0.004	0.5 2 0.01 0.5 0.4	1 10 50 0.2 10 10	5 70 100 2 30 40
0.000498 <0.00001 <0.003 0.000547 <0.0002	<0.0003 <0.00001 <0.003 <0.0004 <0.0002	0.00498 <0.0001 <0.03 0.00547 <0.002	<0.01 <0.003 <0.0001 <0.03 <0.004 <0.002	0.5 2 0.01 0.5 0.4 0.5	1 10 50 0.2 10 10 10	5 70 100 2 30 40 50
0.000498 <0.0001 <0.003 0.000547 <0.0002 <0.001	<0.0003 <0.00001 <0.003 <0.0004 <0.0002 <0.001	0.00498 <0.0001 <0.03 0.00547 <0.002 <0.01	<0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01	0.5 2 0.01 0.5 0.4 0.5 0.06	1 10 50 0.2 10 10 10 0.7	5 70 100 2 30 40 50 5
0.000498 <0.0001 <0.003 0.000547 <0.0002 <0.001 <0.001	<0.0003 <0.00001 <0.003 <0.0004 <0.0002 <0.001 <0.001	0.00498 <0.0001 <0.03 0.00547 <0.002 <0.01 <0.01	<0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01	0.5 2 0.01 0.5 0.4 0.5 0.06 0.1	1 10 50 0.2 10 10 10 0.7 0.5	5 70 100 2 30 40 50 5 5 7
0.000498 <0.0001 <0.003 0.000547 <0.0002 <0.001 <0.001 0.00132	<0.0003 <0.00001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001	0.00498 <0.0001 <0.03 0.00547 <0.002 <0.01 <0.01 0.0132	<0.01	0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4	1 10 50 0.2 10 10 10 0.7 0.5 50	5 70 100 2 30 40 50 5 7 7 200
0.000498 <0.0001 <0.003 0.000547 <0.0002 <0.001 <0.001 0.00132 2.8	<0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2	0.00498 <0.0001 <0.03 0.00547 <0.002 <0.01 <0.01 0.0132 28	<0.01	0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800	1 10 50 0.2 10 10 10 0.7 0.5 50 15000	5 70 100 2 30 40 50 5 7 7 200 25000
0.000498 <0.0001 <0.003 0.000547 <0.0002 <0.001 <0.001 0.00132 2.8 0.799	<0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5	0.00498 <0.0001 <0.03 0.00547 <0.002 <0.01 <0.01 0.0132 28 7.99	<0.01	0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10	1 10 50 0.2 10 10 10 0.7 0.5 50 15000 150	5 70 100 2 30 40 50 5 7 7 200 25000 500
0.000498 <0.0001 <0.003 0.000547 <0.0002 <0.001 <0.001 0.00132 2.8 0.799 31.1	<0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2	0.00498 <0.0001 <0.03 0.00547 <0.002 <0.01 <0.01 0.0132 28 7.99 311	<0.01	0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	1 10 50 0.2 10 10 10 0.7 0.5 50 15000 150 20000	5 70 100 2 30 40 50 5 7 200 25000 500 5000
0.000498 <0.0001 <0.003 0.000547 <0.0002 <0.001 <0.001 0.00132 2.8 0.799	<0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5	0.00498 <0.0001 <0.03 0.00547 <0.002 <0.01 <0.01 0.0132 28 7.99	<0.01	0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10	1 10 50 0.2 10 10 10 0.7 0.5 50 15000 150	5 70 100 2 30 40 50 5 7 7 200 25000 500
2	0 656 7.61 <0.4 <0 021 <5 <10 7.87 <0.03 0.0654	0 656 7.61 <0.4 <0 021 <5 <10 7.87 <0.03 0.0654 2 Conc <sup>n</sup> in ↓∪: eluate (mg/l) Result Limit of Detection <0.0005 <0.0005 0.00936 <0.0002	0 656         7.61         <0.4	0 656         7.61         <0.4	0 656       3         7.61       -         <0.4	Result         3         5           0.656         - <td< td=""></td<>

#### Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	7.94
Conductivity (µS/cm)	123
Volume Leachant (Litres)	0 880

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

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Validated



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

CEN 10:1 SINGLE STAGE LEACHATE TEST
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	LTS					REF : BS	EN 12457/
Client Reference			Site Location		Drax F	=CA	
Mass Sample taken (kg)	0.101		Natural Moisture	Content (%)	12.4		
Mass of dry sample (kg)	0.090		Dry Matter Conter		89		
Particle Size <4mm	>95%			(/0)			
	1 00 /0						
Case					Landf	ill Waste Accep	otance
SDG	221020-66					Criteria Limits	
Lab Sample Number(s)	27048531						
Sampled Date	18-Oct-2022					Stable	
Customer Sample Ref.	TP04 ESZ				Inert Waste	Non-reactive Hazardous Waste	Hazardous
Depth (m)	0.90 - 1.00				Landfill	in Non- Hazardous	Waste Landfil
	0.00 1.00					Landfill	
Solid Waste Analysis	Result						
Total Organic Carbon (%)	1.27				3	5	6
Loss on Ignition (%)	5.33				-	-	10
Sum of BTEX (mg/kg)	<0.4				6	-	-
Sum of 7 PCBs (mg/kg)	<0 021				1	-	-
Mineral Oil (mg/kg) (EH_2D_AL) PAH Sum of 17 (mg/kg)	11.7 <10				500 100	-	-
pH (pH Units)	7.63				-	>6	-
ANC to pH 6 (mol/kg)	<0.03				-	-	-
ANC to pH 4 (mol/kg)	0.0594				-	-	-
Eluate Analysis	C2 Conc <sup>n</sup> in 1 Result	0:1 eluate (mg/l) Limit of Detection	71	eached (mg/kg) Limit of Detection		es for compliance lea IS EN 12457-3 at L/S	-
-			712			-	-
Arsenic	Result	Limit of Detection	Result	Limit of Detection	using B	3S EN 12457-3 at L/S	10 l/kg
Eluate Analysis Arsenic Barium Cadmium	<b>Result</b> 0.00118	Limit of Detection	Result           0.0118	Limit of Detection	using E	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	10 l/kg 25
Arsenic Barium Cadmium	Result           0.00118           0.0193	Limit of Detection <0.0005 <0.0002	Result           0.0118           0.193	Limit of Detection <0.005 <0.002	using E 0.5 20	2 100	10 l/kg 25 300
Arsenic Barium Cadmium Chromium	Result           0.00118           0.0193           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008	Result           0.0118           0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008	using E 0.5 20 0.04	2 100 100	10 l/kg 25 300 5
Arsenic Barium Cadmium Chromium Copper	Result           0.00118           0.0193           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001	Result           0.0118           0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01	using E 0.5 20 0.04 0.5	2 100 10 10 10	10  /kg 25 300 5 70
Arsenic Barium	Result           0.00118           0.0193           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003	Result         0.0118           0.193         0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003	using E 0.5 20 0.04 0.5 2	2 100 1 10 50	10 I/kg 25 300 5 70 100
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum	Result           0.00118           0.0193           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001	Result           0.0118           0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001	using E 0.5 20 0.04 0.5 2 0.01	2 100 1 10 50 0.2	10 I/kg 25 300 5 70 100 2
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel	Result           0.00118           0.0193           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.0003	Result         0.0118           0.193            <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03	using E 0.5 20 0.04 0.5 2 0.01 0.5	2 100 1 100 50 0.2 10	10 I/kg 25 300 5 70 100 2 30
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead	Result           0.00118           0.0193           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.003 <0.0004	Result           0.0118           0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004	using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4	2 100 1 100 50 0.2 10 10	10 //kg 25 300 5 70 100 2 30 40
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony	Result           0.00118           0.0193           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002	Result         0.0118           0.193            <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002	using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5	2 100 1 100 50 0.2 10 10 10 10	10 l/kg 25 300 5 70 100 2 30 40 50
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium	Result           0.00118           0.0193           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001	Result           0.0118           0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01	using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06	2 100 1 10 50 0.2 10 10 10 10 0.7	10 l/kg 25 300 5 70 100 2 30 40 50 5
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc	Result           0.00118           0.0193           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001	Result           0.0118           0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01	using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1	2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 7
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride	Result           0.00118           0.0193           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001	Result           0.0118           0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <0.01	using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4	2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 7 200
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride	Result           0.00118           0.0193           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2	Result           0.0118           0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <0.01 <20	using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800	2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50 15000	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF)	Result           0.00118           0.0193           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5	Result           0.0118           0.193           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5	using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10	2 100 1 10 50 0.2 10 10 10 10 10 10 0.7 0.5 50 15000 150	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble)	Result           0.00118           0.0193           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2	Result         0.0118           0.0193            <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <0.01 <20 <5 <20	using E 0.5 20 0.04 0.5 2 0.01 0.5 0.04 0.5 0.06 0.1 4 800 10 1000	2 100 1 100 50 0.2 10 10 10 10 10 0.7 0.5 50 1500 150 20000	10 1/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500 5000

#### Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	8.35
Conductivity (µS/cm)	154
Volume Leachant (Litres)	0 889

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

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Superseded Report: 667193

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SDG: 221020-66 Client Ref.: 70072063

## CEN 10:1 SINGLE STAGE LEACHATE TEST

Location: Drax FCA

	LTS					REF : BS	EN 12457/
Client Reference			Site Location		Drax F	CA	
Mass Sample taken (kg)	0.227		Natural Moisture	e Content (%)	30		
Mass of dry sample (kg)	0.090		Dry Matter Conte		76.9		
Particle Size <4mm	>95%		Dig matter conte				
	~95 %						
Case					Landfi	ill Waste Acce	otance
SDG	221020-66					Criteria Limits	i
Lab Sample Number(s)	27048537						
Sampled Date	18-Oct-2022					Stable	
Customer Sample Ref.	TP04 ESZ				Inert Waste	Non-reactive Hazardous Waste	Hazardous
	2.20 - 2.30				Landfill	in Non-	Waste Landfill
Depth (m)	2.20 - 2.30					Hazardous Landfill	
Solid Waste Analysis	Result						
Total Organic Carbon (%)	2.02		I		3	5	6
Loss on Ignition (%)	6.24				-	-	10
Sum of BTEX (mg/kg)	<0.4				6	-	-
Sum of 7 PCBs (mg/kg)	<0 021				1	-	-
Mineral Oil (mg/kg) (EH_2D_AL)	15.5 <10				500 100	-	-
PAH Sum of 17 (mg/kg) pH (pH Units)	7.69				-	>6	-
ANC to pH 6 (mol/kg)	0.0359				-	-	-
ANC to pH 4 (mol/kg)	0.0607				-	-	-
	C Comentin d	0.1			1 1		
Eluate Analysis	C <sub>2</sub> Conc <sup>n</sup> in 1 Result	0:1 eluate (mg/l) Limit of Detection	A2 10:1 conc <sup>n</sup> Result	leached (mg/kg) Limit of Detection		es for compliance lea S EN 12457-3 at L/S	-
			772			-	-
Eluate Analysis Arsenic Barium	Result	Limit of Detection	Result	Limit of Detection	using B	S EN 12457-3 at L/S	10 l/kg
Arsenic	Result           0.00467	Limit of Detection	Result 0.0467	Limit of Detection	using B	S EN 12457-3 at L/S	10 l/kg 25
Arsenic Barium	Result           0.00467           0.0321	Limit of Detection <0.0005 <0.0002	Result           0.0467           0.321	Limit of Detection <0.005 <0.002	using B 0.5 20	S EN 12457-3 at L/S	10  /kg 25 300
Arsenic Barium Cadmium	Result           0.00467           0.0321           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008	using B 0.5 20 0.04	S EN 12457-3 at L/S 2 100 1	10 l/kg 25 300 5
Arsenic Barium Cadmium Chromium Copper	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01	using B 0.5 20 0.04 0.5	S EN 12457-3 at L/S 2 100 1 10	10 l/kg 25 300 5 70
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF)	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003	using B 0.5 20 0.04 0.5 2	S EN 12457-3 at L/S 2 100 1 10 50	10 I/kg 25 300 5 70 100
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum	Result           0.00467           0.0321           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001	using B 0.5 20 0.04 0.5 2 0.01	S EN 12457-3 at L/S 2 100 1 10 50 0.2	10 I/kg 25 300 5 70 100 2
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel	Result           0.00467           0.0321           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.0003	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03	using B 0.5 20 0.04 0.5 2 0.01 0.5	S EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10	10 I/kg 25 300 5 70 100 2 30
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.003 <0.0004	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004	using B 0.5 20 0.04 0.5 2 0.01 0.5 0.5 0.4	2 100 1 100 50 0.2 10 10	10 I/kg 25 300 5 70 100 2 30 40 50 5
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.0003 <0.0004 <0.0002 <0.001 <0.001	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01	using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5	S EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 0.7 0.5	10 I/kg 25 300 5 70 100 2 30 40 50 5 5 7
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <0.01	using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4	S EN 12457-3 at L/S 2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50	10 I/kg 25 300 5 70 100 2 30 40 50 5
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.0003 <0.0004 <0.0002 <0.001 <0.001	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <20	using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800	S EN 12457-3 at L/S 2 100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000	10 J/kg 25 300 5 70 100 2 30 40 50 5 5 7
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <2 <0.5	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5	using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10	S EN 12457-3 at L/S 2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50 15000 150	10 1/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble)	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <2 <0.5 <2	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20	using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	S EN 12457-3 at L/S 2 100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000 150 20000	10 1/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500 5000
Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Zinc Chloride Fluoride Sulphate (soluble) Total Dissolved Solids	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0008 <0.0003 <0.0001 <0.0003 <0.0001 <0.0002 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2 <5	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <0.01 <20 <5 <20 <50	using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800 10 1000 4000	S EN 12457-3 at L/S 2 100 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50 15000 150 20000 60000	10 J/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500 500 0 50000 100000
Arsenic Barium Cadmium Chromium	Result           0.00467           0.0321           <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <2 <0.5 <2	Result           0.0467           0.321           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.003 <0.004 <0.002 <0.01 <0.01 <0.01 <20 <5 <20	using B 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	S EN 12457-3 at L/S 2 100 1 10 50 0.2 10 10 10 10 0.7 0.5 50 15000 150 20000	10 1/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500 500

## Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	8.23
Conductivity (µS/cm)	215
Volume Leachant (Litres)	0 873

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Stated limits are for guidance only and ALS Laboratories (UK) Limited cannot be held responsible for any discrepancies with current legislation

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SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

## CEN 10:1 SINGLE STAGE LEACHATE TEST

	ILTS					REF. DO	EN 12457/
Client Reference		:	Site Location		Drax I	-CA	
Mass Sample taken (kg)	0.112		Natural Moistur	e Content (%)	25.4		
Mass of dry sample (kg)	0.090		Dry Matter Con		79.7		
Particle Size <4mm	>95%			(70)			
Case					Landf	ill Waste Acce	
SDG	221020-66					Criteria Limits	
Lab Sample Number(s)	27048545						
Sampled Date	18-Oct-2022					Stable Non-reactive	
Customer Sample Ref.	TP05 ESZ				Inert Waste	Hazardous Waste	Hazardous
Depth (m)	0.70 - 0.80				Landfill	in Non- Hazardous	Waste Landfil
						Landfill	
Solid Waste Analysis	Result						
otal Organic Carbon (%)	0.476				3	5	6
Loss on Ignition (%)	7.58				-	-	10
Sum of BTEX (mg/kg)	<0.4				6	-	-
Sum of 7 PCBs (mg/kg)	<0 021				1 500	-	-
/lineral Oil (mg/kg) (EH_2D_AL) PAH Sum of 17 (mg/kg)	15.8				100	-	-
bH (pH Units)	7.49				-	>6	-
ANC to pH 6 (mol/kg)	<0.03				-	-	-
					-	-	-
	0 061				-		
Eluate Analysis	C <sub>2</sub> Conc <sup>n</sup> in 1	L0:1 eluate (mg/l)	7.12	c <sup>n</sup> leached (mg/kg)	Limit valu	es for compliance lea S EN 12457-3 at L/S	
ANC to pH 4 (mol/kg)	C <sub>2</sub> Conc <sup>n</sup> in 2 Result	Limit of Detection	Result	Limit of Detection	Limit valu using E	es for compliance lea IS EN 12457-3 at L/S	10 l/kg
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic	C2 Conc <sup>n</sup> in 2 Result 0.00126	Limit of Detection <0.0005	Result 0.0126	Limit of Detection <0.005	Limit valu using E 0.5	es for compliance lea SS EN 12457-3 at L/S 2	10 l/kg 25
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.00485	Limit of Detection <0.0005 <0.0002	Result           0.0126           0.0485	Limit of Detection <0.005 <0.002	Limit valu using E 0.5 20	es for compliance lea SS EN 12457-3 at L/S 2 100	10 l/kg 25 300
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008	Result           0.0126           0.0485           <0.0008	Limit of Detection <0.005 <0.002 <0.0008	Limit valu using E 0.5 20 0.04	es for compliance lea IS EN 12457-3 at L/S 2 100 1	10 l/kg 25 300 5
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001	Result           0.0126           0.0485           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01	Limit valu using E 0.5 20 0.04 0.5	es for compliance lea SS EN 12457-3 at L/S 2 100 1 10	10 l/kg 25 300 5 70
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper	C2         Conc <sup>n</sup> in 3           Result         0.00126           0.00485         <0.0008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003	Result           0.0126           0.0485           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003	Limit valu using E 0.5 20 0.04 0.5 2	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50	10 l/kg 25 300 5 70 100
Eluate Analysis Eluate Analysi	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.00088           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001	Result           0.0126           0.0485           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001	Limit valu using E 0.5 20 0.04 0.5 2 0.01	es for compliance lea SS EN 12457-3 at L/S 2 100 1 10 50 0.2	10 l/kg 25 300 5 70 100 2
Eluate Analysis Eluate Analysi	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.000485           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.00001 <0.0003	Result           0.0126           0.0485           <0.0008	Limit of Detection <0.005 <0.002 <0.008 <0.01 <0.003 <0.0001 <0.03	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5	es for compliance lea SS EN 12457-3 at L/S 2 100 1 10 50 0.2 10	10 l/kg 25 300 5 70 100 2 30
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.00485           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.003 <0.003 <0.0004	Result           0.0126           0.0485           <0.0008	Limit of Detection <0.005 <0.002 <0.0008 <0.01 <0.003 <0.0001 <0.03 <0.004	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10	10 l/kg 25 300 5 70 100 2 30 40
Eluate Analysis Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Lickel	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.00485           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002	Result           0.0126           0.0485           <0.0008	Limit of Detection <ul> <li>&lt;0.005</li> <li>&lt;0.002</li> <li>&lt;0.008</li> <li>&lt;0.01</li> <li>&lt;0.003</li> <li>&lt;0.0001</li> <li>&lt;0.03</li> <li>&lt;0.004</li> <li>&lt;0.002</li> </ul>	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10	10 l/kg 25 300 5 70 100 2 30 40 50
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum lickel Lead Antimony	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.00008           0.00132         0.00523           0.000523         <0.00001	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.0002 <0.001	Result           0.0126           0.0485           <0.0008	Limit of Detection <ul> <li>&lt;0.005</li> <li>&lt;0.002</li> <li>&lt;0.008</li> <li>&lt;0.01</li> <li>&lt;0.003</li> <li>&lt;0.0001</li> <li>&lt;0.03</li> <li>&lt;0.004</li> <li>&lt;0.002</li> <li>&lt;0.01</li> </ul>	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 0.7	10 l/kg 25 300 5 70 100 2 30 40 50 5
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Vickel Lead Antimony Selenium	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.00485           0.00132         0.00523           0.000523         <0.00001	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.0003 <0.0004 <0.0002 <0.001 <0.001 <0.001	Result           0.0126           0.0485           <0.0008	Limit of Detection <ul> <li>&lt;0.005</li> <li>&lt;0.002</li> <li>&lt;0.008</li> <li>&lt;0.01</li> <li>&lt;0.003</li> <li>&lt;0.0001</li> <li>&lt;0.03</li> <li>&lt;0.004</li> <li>&lt;0.002</li> <li>&lt;0.01</li> <li>&lt;0.01</li> <li>&lt;0.01</li> </ul>	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 0.7 0.5	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 7
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Cinc	C2         Conc <sup>n</sup> in 3           Result         0.00126           0.00485         0.00485           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <0.001	Result           0.0126           0.0485           <0.0008	Limit of Detection <ul> <li>&lt;0.005</li> <li>&lt;0.002</li> <li>&lt;0.008</li> <li>&lt;0.01</li> <li>&lt;0.003</li> <li>&lt;0.001</li> <li>&lt;0.03</li> <li>&lt;0.004</li> <li>&lt;0.002</li> <li>&lt;0.01</li> <li>&lt;0.01</li> <li>&lt;0.01</li> <li>&lt;0.01</li> </ul>	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 0.7 0.5 50	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 7 200
ANC to pH 4 (mol/kg) Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Cinc Chloride	C2         Conc <sup>n</sup> in 3           Result         0.00126           0.00485         0.00485           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2	Result           0.0126           0.0485           <0.0008	Limit of Detection           <0.005	Limit value using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 10 10 0.7 0.5 50 15000	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000
Eluate Analysis Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Cinc Chloride Eluoride	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.00485           0.00132         0.00523           0.00523         0.00001           0.00164         0.00164           0.00102         <0.001	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5	Result           0.0126           0.0485           <0.0008	Limit of Detection           <0.005	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800 10	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 10 10 0.7 0.5 50 15000 150	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500
Eluate Analysis Eluate Analysis Arsenic Barium Cadmium Chromium Copper Mercury Dissolved (CVAF) Molybdenum Nickel Lead Antimony Selenium Cinc Chloride Eluoride Sulphate (soluble)	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.00485           <0.00008	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5 <2	Result           0.0126           0.0485           <0.0008	Limit of Detection <ul> <li>&lt;0.005</li> <li>&lt;0.002</li> <li>&lt;0.003</li> <li>&lt;0.001</li> <li>&lt;0.003</li> <li>&lt;0.004</li> <li>&lt;0.002</li> <li>&lt;0.01</li> <li>&lt;0.01</li> <li>&lt;0.01</li> <li>&lt;20</li> <li>&lt;5</li> <li>&lt;20</li> </ul>	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.06 0.1 4 800 10 1000	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 10 0.7 0.5 50 15000 150 20000	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500 5000
NC to pH 4 (mol/kg) Eluate Analysis arsenic arium Cadmium Chromium Copper Aercury Dissolved (CVAF) Aolybdenum Lickel ead antimony Selenium Cinc Chloride Luoride	C2         Conc <sup>n</sup> in 1           Result         0.00126           0.00485         0.00485           0.00132         0.00523           0.00523         0.00001           0.00164         0.00164           0.00102         <0.001	Limit of Detection <0.0005 <0.0002 <0.0008 <0.001 <0.0003 <0.0001 <0.003 <0.0004 <0.0002 <0.001 <0.001 <0.001 <2 <0.5	Result           0.0126           0.0485           <0.0008	Limit of Detection           <0.005	Limit valu using E 0.5 20 0.04 0.5 2 0.01 0.5 0.4 0.5 0.4 0.5 0.06 0.1 4 800 10	es for compliance lea SS EN 12457-3 at L/S 2 100 1 1 10 50 0.2 10 10 10 10 10 10 0.7 0.5 50 15000 150	10 l/kg 25 300 5 70 100 2 30 40 50 5 7 200 25000 500

## Leach Test Information

Date Prepared	24-Oct-2022
pH (pH Units)	7.50
Conductivity (µS/cm)	46
Volume Leachant (Litres)	0 878

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Leachates prepared in accordance with BS EN 12457 will be carried out at room temperature (20±5°C)

Validated



SDG: 221020-66 Client Ref.: 70072063 Report Number: 667610 Location: Drax FCA Superseded Report: 667193

## **Table of Results - Appendix**

lethod No	Reference	Description
PM024	Modified BS 1377	Soil preparation including homogenisation, moisture screens of soils for Asbestos Containing Material
PM115		Leaching Procedure for CEN One Stage Leach Test 2:1 & 10:1 1 Step
TM018	BS 1377: Part 3 1990	Determination of Loss on Ignition
TM048	HSG 248, Asbestos: The analysts' guide for sampling, analysis and clearance procedures	Identification of Asbestos in Bulk Material
TM072	Modified: US EPA Method 8141A	Determination of Phenols by GC-MS
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) by Headspace GC-FID (C4-C12)
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser
TM104	Method 4500F, AWWA/APHA, 20th Ed., 1999	Determination of Fluoride using the Kone Analyser
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS
TM132	In - house Method	ELTRA CS800 Operators Guide
TM133	BS 1377: Part 3 1990;BS 6068-2 5	Determination of pH in Soil and Water using the GLpH pH Meter
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser
TM152	ISO 17294-2 2016 Water quality - Application of inductively coupled plasma mass spectrometry (ICP-MS)	Analysis of Aqueous Samples by ICP-MS
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the Skalar SANS+ System Segmented Flow Analyser
TM157	HP 6890 Gas Chromatograph (GC) system and HP 5973 Mass Selective Detector (MSD).	Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone
TM168	EPA Method 8082, Polychlorinated Biphenyls by Gas Chromatography	Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils
TM174	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters
TM181	US EPA Method 6010B	Determination of Routine Metals in Soil by iCap 6500 Duo ICP-OES
TM182	CEN/TC 292 - WI 292046-chacterization of waste-leaching Behaviour Tests- Acid and Base Neutralization Capacity Test	Determination of Acid Neutralisation Capacity (ANC) Using Autotitration in Soils
TM183	BS EN 23506 2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry
TM184	EPA Methods 325.1 & 325 2,	The Determination of Anions in Aqueous Matrices using the Kone Spectrophotometric Analysers
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters
TM218	Shaker extraction - EPA method 3546.	The determination of PAH in soil samples by GC-MS
TM222	In-House Method	Determination of Hot Water Soluble Boron in Soils (10:1 Water: Soil) by ICP OES.
TM227	Standard methods for the examination of waters and wastewaters 20th Edition, AWWA/APHA Method 4500.	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate
TM241	Methods for the Examination of Waters and Associated Materials; Chromium in Raw and Potable Waters and Sewage Effluents 1980.	The Determination of Hexavalent Chromium in Waters and Leachates using the Kone Analyser
TM243	<b>v</b>	Mixed Anions In Soils By Kone
TM245	By GC-FID	Determination of GRO by Headspace in waters
TM248	In-House Method	Determination of Ammonium BRE (2:1 Extract) on solids
TM256	The measurement of Electrical Conductivity and the Laboratory determination of pH Value of Natural, Treated and Wastewaters. HMSO, 1978. ISBN 011 751428 4, Standard Methods for the examination of waters and wastewaters 20th Edition, PHA, Washington DC, USA. ISBN 0-87553-235-7 and The Determination of Alkalinity and Acidity in water HMSO, 1981, ISBN 0 11 751601 5.	Determination of pH, EC, TDS and Alkalinity in Aqueous samples
TM259	by HPLC	Determination of Phenols in Waters and Leachates by HPLC
TM304	HSE Contract research Report no 83/1996	Asbestos Quantification in Soil: Fibres identified by morphology only
TM410	Shaker extraction-In house coronene method	Determination of Coronene in soils by GCMS
TM414	Analysis of Petroleum Hydrocarbons in Environmental Media – Total Petroleum Hydrocarbon Criteria	Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GCxGC-F D
	<b>,</b>	

NA = not applicable.

Chemical testing (unless subcontracted) performed at ALS Laboratories (UK) Limited Hawarden (Method codes TM).



SDG: 221020-66

Client Ref.: 70072063

Report Number: 667610

Location: Drax FCA

	_	Tes	t Com	pletior	n Dates	S				
Lab Sample No(s)	27048472	27048493	27048497	27048509	27048517	27048524	27048531	27048537	27048476	27048545
Cu tomer Sample Ref	TPO	P0	TP02	TP02	TP03	TP03	P0	TP0	TP05	TP05
AGS Ref.	ES	ES	ES	ES	ES	ES	ES	ES	ES	ES
Depth	0.10 - 0.20	2.70 - 2.80	1.10 - 1 20	1.80 - 1.90	0.90 - 1.00	2.60 - 2.70	0.90 - 1.00	2 20 - 2 30	1.20 - 1.30	0.70 - 0.80
Туре	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)	Soil/Solid (S)
Ammoniacal N as NH4 in 2:1 extract	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022
Ammoniacal Nitrogen		31-Oct-2022	31-Oct-2022	02-Nov-2022				31-Oct-2022	01-Nov-2022	
ANC at pH4 and ANC at pH 6	25-Oct-2022	25-Oct-2022	24-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022
Anions by Kone (soil)	26 Oct 2022	26 Oct 2022	24 Oct 2022	26 Oct 2022	26 Oct 2022	26 Oct 2022	26 Oct 2022	26 Oct 2022	26 Oct 2022	26 Oct 2022
Anions by Kone (w)	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022
Asbestos ID in Solid Samples	31-Oct-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022	21-00-2022	21-04-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022
Asbestos Quantification - Full	31-001-2022	31-00-2022	31-00/2022	31-001-2022	31-00/2022			08-Nov-2022	31-001-2022	31-00-2022
Boron Water Soluble	25-Oct-2022	25-Oct-2022	24-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022
	23-0ct-2022 24-Oct-2022	23-0d-2022 24-0d-2022	24-Oct-2022 24-Oct-2022	23-0ct-2022 24-Oct-2022	23-Oct-2022 24-Oct-2022	23-0ct-2022 24-Oct-2022	23-0d-2022 24-0d-2022	23-Oct-2022 24-Oct-2022	23-Oct-2022 24-Oct-2022	23-Oct-2022 24-Oct-2022
CEN 10:1 Leachate (1 Stage) CEN 2:1 Leachate (1 Stage)	24-001-2022	24-0ct-2022 27-0ct-2022	24-Oct-2022 27-Oct-2022	24-Oct-2022 28-Oct-2022	24-001-2022	24-001-2022	24-00-2022	24-Oct-2022 27-Oct-2022	24-Oct-2022 27-Oct-2022	24-001-2022
	26-Oct-2022	26-Oct-2022	26-Oct-2022	02-Nov-2022	26-Oct-2022	26-Oct-2022	00.0 + 0000	27-Oct-2022 26-Oct-2022	27-Oct-2022 26-Oct-2022	26-Oct-2022
CEN Readings	26-Oct-2022				26-Oct-2022	26-Oct-2022	26-Oct-2022			26-Oct-2022
Chromium III		01-Nov-2022	01-Nov-2022	02-Nov-2022		00.0.0000		01-Nov-2022	01-Nov-2022	
Coronene	24-Oct-2022	24-Oct-2022	24-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	26-Oct-2022
Cyanide Comp/Free/Total/Thiocyanate	25-Oct-2022	02-Nov-2022	02-Nov-2022	04-Nov-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	02-Nov-2022	02-Nov-2022	25-Oct-2022
Dissolved Metals by ICP MS	27-Oct-2022	01-Nov-2022	01-Nov-2022	03-Nov-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	01-Nov-2022	01-Nov-2022	27-Oct-2022
Dissolved Organic/Inorganic Carbon	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022
EPH by GCxGC-FID	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022
EPH CWG (Aliphatic) Aqueous GC (W)		01-Nov-2022	01-Nov-2022	02-Nov-2022				01-Nov-2022	01-Nov-2022	
EPH CWG (Aromatic) Aqueous GC (W)		01-Nov-2022	01-Nov-2022	02-Nov-2022				01-Nov-2022	01-Nov-2022	
EPH CWG GC (S)	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022
Fluoride	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022
GRO by GC-FID (S)	24-Oct-2022	24-Oct-2022	21-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	24-Oct-2022	25-Oct-2022	24-Oct-2022	26-Oct-2022
GRO by GC-FID (W)		01-Nov-2022	01-Nov-2022	01-Nov-2022				01-Nov-2022	01-Nov-2022	
Hexavalent Chromium (s)	24 Oct 2022	24 Oct 2022	24 Oct 2022	24 Oct 2022	24 Oct 2022	24 Oct 2022	24 Oct 2022	24 Oct 2022	24 Oct 2022	24 Oct 2022
Hexavalent Chromium (w)		01-Nov-2022	01-Nov-2022	02-Nov-2022				01-Nov-2022	01-Nov-2022	
Loss on Ignition in soils	25-Oct-2022	25-Oct-2022	26-Oct-2022	26-Oct-2022	25-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022
Mercury Dissolved	27-Oct-2022	31-Oct-2022	31-Oct-2022	03-Nov-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	31-Oct-2022	31-Oct-2022	27-Oct-2022
Metals in solid samples by OES	25-Oct-2022	25-Oct-2022	24-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022
Moisture at 105C	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022
PAH 16 & 17 Calc	26-Oct-2022	24-Oct-2022	24-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	26-Oct-2022
PAH by GCMS	26-Oct-2022	24-Oct-2022	24-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	25-Oct-2022
PAH Spec MS - Aqueous (W)	20-001-2022	31-Oct-2022	31-Oct-2022	02-Nov-2022	23-001-2022	23-001-2022	24-04-2022	31-Oct-2022	31-Oct-2022	25-00-2022
PCBs by GCMS	24-Oct-2022	24-Oct-2022	24-Oct-2022	02-INOV-2022 25-Oct-2022	25-Oct-2022	25-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	25-Oct-2022
PCBs by GCMS pH	24-0ct-2022 25-Oct-2022	24-0ct-2022 25-0ct-2022	24-Oct-2022 25-Oct-2022	25-Oct-2022 25-Oct-2022	25-Oct-2022 25-Oct-2022	25-Oct-2022 25-Oct-2022	24-0ct-2022 25-0ct-2022	24-Oct-2022 25-Oct-2022	24-Oct-2022 25-Oct-2022	25-Oct-2022 25-Oct-2022
	25-Oct-2022 26-Oct-2022	25-Oct-2022 01-Nov-2022	20-Oct-2022 01-Nov-2022	25-Oct-2022 02-Nov-2022	25-Oct-2022 26-Oct-2022	25-Oct-2022 26-Oct-2022	25-Oct-2022 26-Oct-2022	23-Oct-2022 01-Nov-2022	25-Oct-2022 01-Nov-2022	25-Oct-2022 26-Oct-2022
pH Value of Filtered Water		01-Nov-2022 01-Nov-2022	01-Nov-2022 01-Nov-2022						01-Nov-2022 01-Nov-2022	
Phenols by HPLC (W)	27-Oct-2022			02-Nov-2022	27-Oct-2022	27-Oct-2022	27-Oct-2022	01-Nov-2022		27-Oct-2022
Phenols Spec MS (S)	31-Oct-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022	31-Oct-2022
Sample description	21-Oct-2022	21-Oct-2022	20-Oct-2022	21-Oct-2022	21-Oct-2022	21-Oct-2022	20-Oct-2022	20-Oct-2022	20-Oct-2022	21-Oct-2022
Semi Volatile Organic Compounds	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022
Total Organic Carbon	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022
TPH CWG (W)		01-Nov-2022	01-Nov-2022	02-Nov-2022				01-Nov-2022	01-Nov-2022	
TPH CWG GC (S)	25-Oct-2022	25-Oct-2022	25-Oct-2022	26-Oct-2022	26-Oct-2022	26-Oct-2022	25-Oct-2022	25-Oct-2022	25-Oct-2022	26-Oct-2022
VOC MS (S)	24-Oct-2022	24-Oct-2022	21-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022	24-Oct-2022
VOC MS (W)		31 Oct 2022	31 Oct 2022	01 Nov 2022				31 Oct 2022	31 Oct 2022	

# ALS

#### SDG: 221020-66 Client Ref.: 70072063

CERTIFICATE OF	ANALYSIS
Report Number:	667610

Location: Drax FCA

Lab Sample No(s)	27048480	27048488
Customer Sample Ref.	TP06	P06
AGS Ref.	ES	ES
Depth	0 20 - 0.30	1.50 - 1.60
Туре		Soil/Solid (S)
Ammoniacal N as NH4 in 2:1 extract	24-Oct-2022	24-Oct-2022
		24-0ct-2022
Ammoniacal Nitrogen	31-Oct-2022 25-Oct-2022	25-Oct-2022
ANC at pH4 and ANC at pH 6 Anions by Kone (soil)	25-Oct-2022 26-Oct-2022	25-0ct-2022 26-Oct-2022
Anions by Kone (soil) Anions by Kone (w)	26-0ct-2022 27-0ct-2022	26-0d-2022 27-0d-2022
Asbestos ID in Solid Samples	31-Oct-2022	31-Oct-2022
Aspestos ID in Solid Samples Boron Water Soluble	25-Oct-2022	25-Oct-2022
	23-0ct-2022 24 Oct 2022	23-0d-2022 24 Oct 2022
CEN 10:1 Leachate (1 Stage)	24 Oct 2022 27-Oct-2022	24 UCt 2022
CEN 2:1 Leachate (1 Stage)	27-Oct-2022 26-Oct-2022	26-Oct-2022
CEN Readings Chromium III	26-Oct-2022 01-Nov-2022	20-0ct-2022
	26-Oct-2022	00.0.0000
Coronene	26-Oct-2022 02-Nov-2022	26-Oct-2022 25-Oct-2022
Cyanide Comp/Free/Total/Thiocyanate	02-Nov-2022 01-Nov-2022	25-0ct-2022 27-0ct-2022
Dissolved Metals by ICP-MS		
Dissolved Organic/Inorganic Carbon	27-Oct-2022	27-Oct-2022
EPH by GCxGC-FID	24-Oct-2022	24-Oct-2022
EPH CWG (Aliphatic) Aqueous GC (W)	01-Nov-2022	
EPH CWG (Aromatic) Aqueous GC (W)	01-Nov-2022	
EPH CWG GC (S)	25-Oct-2022	25-Oct-2022
Fluoride	27-Oct-2022	27-Oct-2022
GRO by GC-FID (S)	24-Oct-2022	24-Oct-2022
GRO by GC-FID (W)	01-Nov-2022	
Hexavalent Chromium (s)	24-Oct-2022	24-Oct-2022
Hexavalent Chromium (w)	01-Nov-2022	
Loss on Ignition in soils	26-Oct-2022	25-Oct-2022
Mercury Dissolved	31-Oct-2022	27-Oct-2022
Metals in solid samples by OES	25-Oct-2022	25-Oct-2022
Moisture at 105C	24 Oct 2022	24 Oct 2022
PAH 16 & 17 Calc	26-Oct-2022	26-Oct-2022
PAH by GCMS	25-Oct-2022	25-Oct-2022
PAH Spec MS - Aqueous (W)	01-Nov-2022	
PCBs by GCMS	25-Oct-2022	25-Oct-2022
pH	25-Oct-2022	25-Oct-2022
pH Value of Filtered Water	01-Nov-2022	26-Oct-2022
Phenols by HPLC (W)	01-Nov-2022	27-Oct-2022
Phenols Spec MS (S)	31-Oct-2022	31-Oct-2022
Sample description	21-Oct-2022	21-Oct-2022
Semi Volatile Organic Compounds	25-Oct-2022	25-Oct-2022
Total Organic Carbon	25-Oct-2022	25-Oct-2022
TPH CWG (W)	01-Nov-2022	
TPH CWG GC (S)	25-Oct-2022	25-Oct-2022
VOC MS (S)	24-Oct-2022	24-Oct-2022
VOC MS (W)	31-Oct-2022	

Validated



SDG: 221020-66 Client Ref.: 70072063

Chromatogram

Location: Drax FCA

Analysis: EPH CWG (Aliphatic) Aqueous GC (W)

Sample No : 27091499

Depth: 0.20 - 0.30

Sample ID : <sub>TP06</sub>	
Speciated TPH - SATS (C12 - C40) Sample Identity: 25200439- Date Acquired : 01/11/2022 15:04:57 PM Units : ppb Dilution : CF : 1 Multiplier : 0.150	
# Compound Name Main Peak Area Amount	
1 C10-C12 Sat       0.0       0.000         2 Surrogate H       205.6       1.316         3 C12-C16 Sat       0.0       0.000         4 C16-C21 Sat       0.0       0.000         5 Int. Std. S       211.3       1.500         6 C21-C35 Sat       0.0       0.000         7 C35-C40 Sat       0.0       0.000         Total Peak Area       417.0	
FID2 B, (103122\BC480058.D)	
200 -	
150	
C2-C35 Sat 24 C2-C35 Sat 24 C2-C35 Sat 24 C35 C40 Sat 25 C35 C40 Sat 24 C35 C40 Sat 25 C35 C40 Sat 25 C35 C40 Sat 26 C35 C40 Sat 26 C40 Sat 26 C4	

Validated

Superseded Report: 667193

ALS	

SDG: 221020-66 Client Ref.: 70072063

Chromatogram

Location: Drax FCA

Analysis:	EPH CWG (Aliphatic) Aqueous	GC (W) Sample No : 27094276 Sample ID : TP01	<b>Depth</b> : 2.70 - 2.80
		Speciated TPH - SATS ( Cl2 - C40 )	
		Sample Identity: 25200468- Date Acquired : 31/10/2022 19:36:13 PM Units : ppb Dilution : CEN 2 1	->
		CF : 1 Multiplier : 0.050	
	# Compound Nam	me Main Peak Area Amount	
	1 ClO-Cl2 Sat 2 Surrogate H	0.0 0.000 205.5 0.471	
	3 C12-C16 Sat 4 C16-C21 Sat 5 Int. Std. S	0.0 0.000 0.0 0.000 200.3 0.500	
	6 C21-C35 Sat 7 C35-C40 Sat Total Peak .	0.0 0.000 0.0 0.000 Area 405.8	
	FID2 B, (103122		
	PA 1 300 -	Surrogate H Int. Std. c	
	250-	- ω	
	200		
	150-		
	100-	דר בד בד בד בד סי טי טי טי טי בד בי סי טי	17 0
	50	C10-C12 C18-C21 C18-C21	2 2 2 2 2 2
			10 12 min

Validated

Superseded Report: 667193

Depth: 2.20 - 2.30

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SDG: 221020-66 Client Ref.: 70072063

Chromatogram

27094286

Location: Drax FCA

Analysis: EPH CWG (Aliphatic) Aqueous GC (W) Sample No : Sample ID :

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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
2 Surrogate H 193.7 0.457 3 C12-C16 Sat 0.0 0.000 4 C16-C21 Sat 0.0 0.000 5 Int. Std. S 194.6 0.500 6 C21-C35 Sat 0.0 0.000 7 C35-C40 Sat 0.0 0.000 Total Peak Area 388.3 FID2 B. (103122\BC480019.D) PA 1 9 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
PA 250 200 100 0 100 100 100 100 100	
pA     1 </td <td></td>	
C23-C30 C15 C19	
	min

Validated

Superseded Report: 667193

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ALS	_

SDG: 221020-66 Client Ref.: 70072063

Chromatogram

Location: Drax FCA

10

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Analysis: EPH CWG (Aliphatic) Aqueous GC (W) Sample No : Depth : 1.20 - 1.30 27094287 Sample ID : TP05 Speciated TPH - SATS ( C12 - C40 ) Sample Identity: 25200405-Date Acquired : 31/10/2022 18:50:04 PM : ppb : CEN 2 1 Units Dilution CF -> : 1 Multiplier : 0.125 # Compound Name Main Peak Area Amount 1 C10-C12 Sat 2 Surrogate H 3 C12-C16 Sat 4 C16-C21 Sat 5 Int. Std. S 6 C21-C35 Sat 7 C35-C40 Sat Total Peak Area 0.000 1.201 0.000 0.0 206.6 0.0 0.000 1.250 197.3 0.0 0.0 403.9 0.000 FID2 B; (103122\BC480020.D) ω, pA 1 Surrogate Std Ĕ 250 -200 -150 -100 -C10-C12 Sat C12-C16. Sat ちの te s ъs C18-C21 C36-C40 C21-C35 50 0 -

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SDG: 221020-66 Client Ref.: 70072063

Chromatogram

Location: Drax FCA

Analysis: EPH CWG (Aliphatic) Aqueous GC (W)

 Sample No :
 27094289

 Sample ID :
 TP02

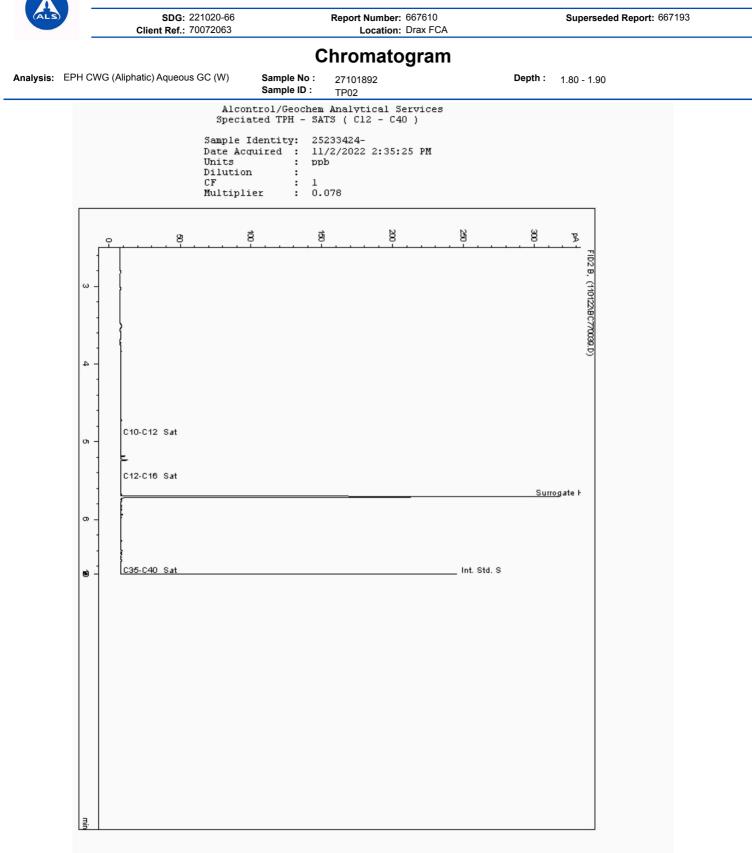
Depth: 1.10 - 1.20

min

12

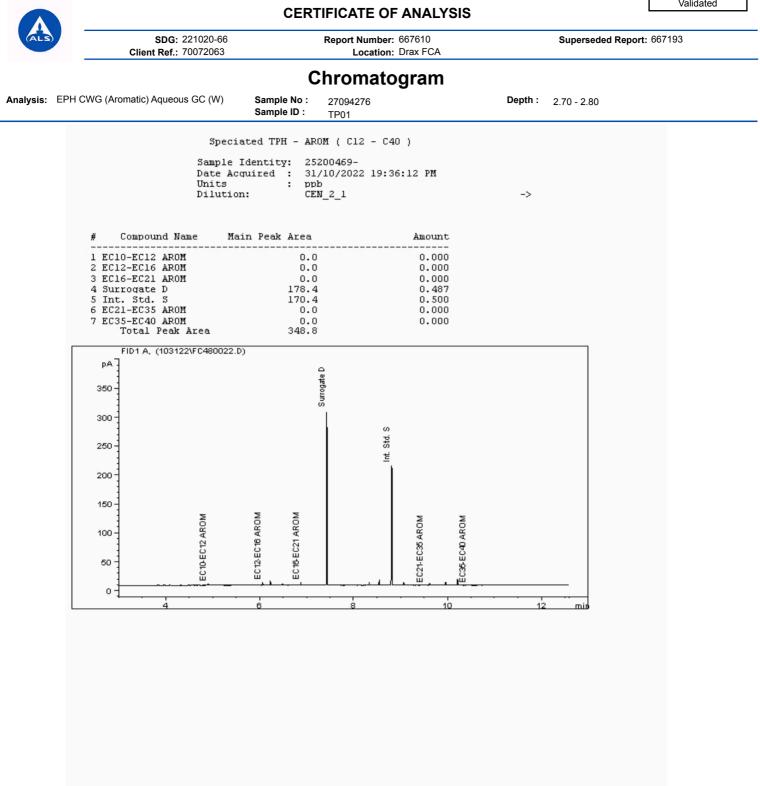
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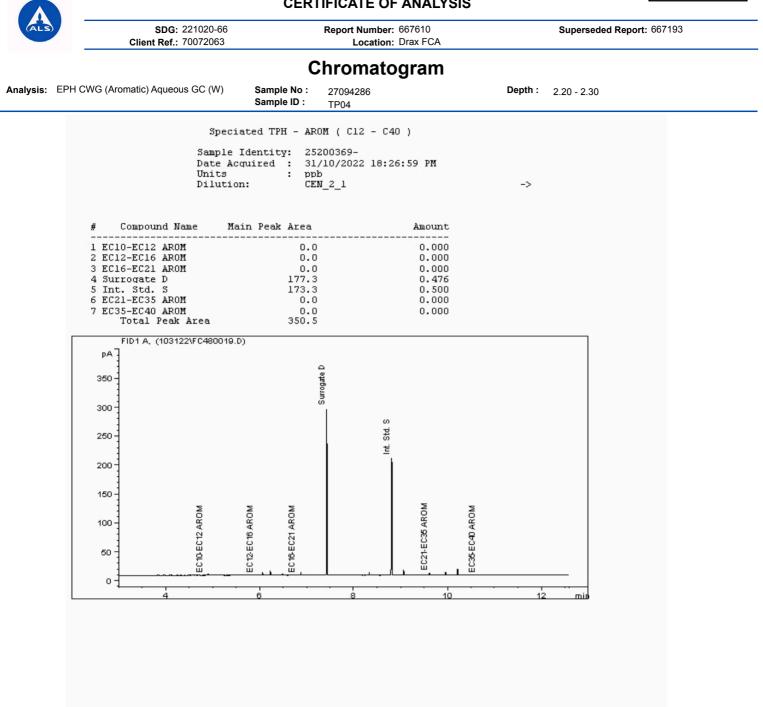
			-	11.02				
		speciated			- C40 )			
	Dat Uni Dil CF	te Acquire ts ution	d : 31 : pr : CE : 1	/10/2022 b N 2 1	19:12:54	РМ	->	
# Co	ompound Name	Main Pe	ak Area		A	mount		
2 Surro 3 C12-0	Cl2 Sat Ogate H Cl6 Sat		0.0 196.7 0.0	, )		0.000 0.458 0.000		
5 Int. 6 C21-0	21 Sat Std. S 235 Sat 240 Sat		0.0 197.1 0.0 0.0			0.000 0.500 0.000 0.000		
	otal Peak Area		393.8			0.000		
FI pA 1	D2 B, (103122\BC48				U.			
250		Surrogate			Int. Std.			
200-								
150-								
100		т <del>ы</del> s	н s	te S		ti S	at so	
50 -		C10-C12	C12-C16	C16.C21		C21-C35	C36 C40	

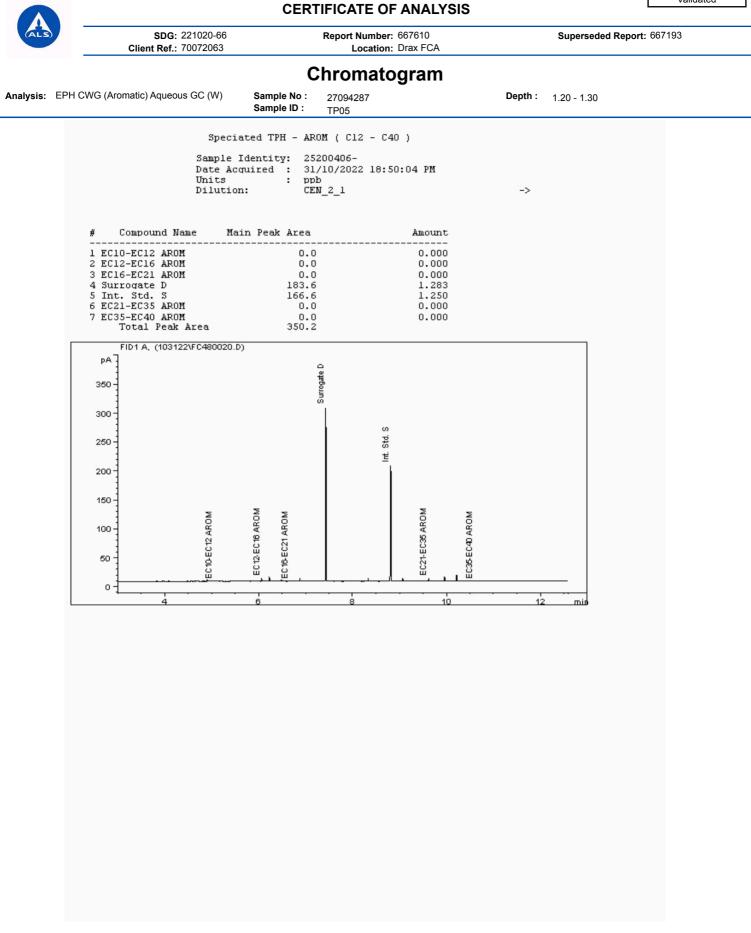


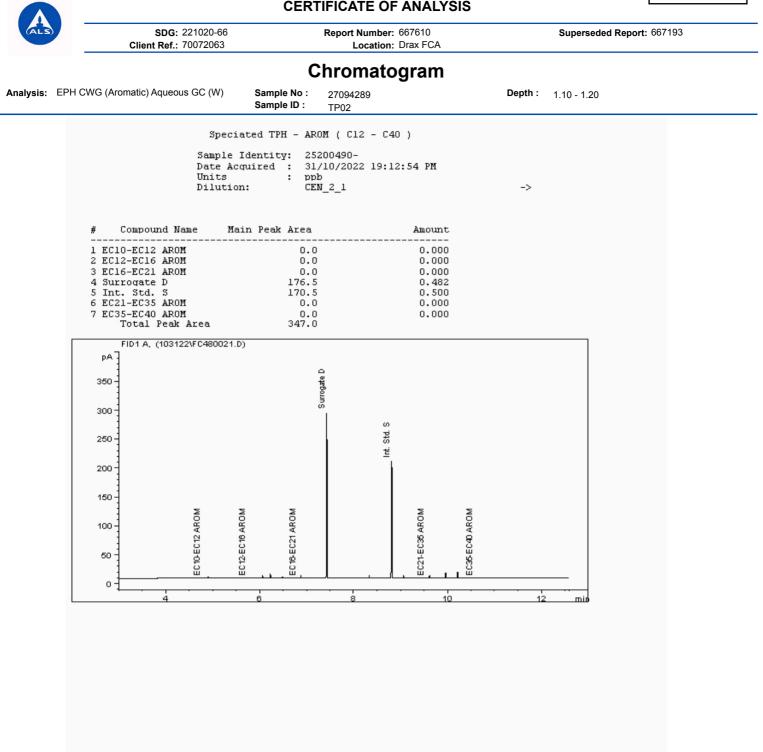
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			CERT	FICATE OF ANA	LYSIS			Valid		
ALS	Cli	SDG: 221020-66 Client Ref.: 70072063		Report Number: 667610 Location: Drax FCA			Superseded Report: 667193			
			С	hromatograr	n					
alysis:	EPH CWG (Aromati	c) Aqueous GC (W)	Sample No : Sample ID :	27091499 TP06		Depth :	0.20 - 0.30			
		Spe	ciated TPH - ARO	M ( C12 - C40 )						
			Acquired : 01/ : ppb	00440- 11/2022 15:04:57 PM	1					
	# Comp	oound Name	Main Peak Area	Amou	int					
	1 EC10-E0 2 EC12-E0		0.0 0.0		 000 000					
	3 EC16-E0 4 Surrogs	C21 AROM	0.0 177.2	0.0	000 368					
	5 Int. St 6 EC21-EC	td. S	171.2	1.	500 000					
	7 EC35-E0		0.0 348.4		000					
		A, (103122\FC48005	i8.D)							
	pA -			~						
	350-			o unogate o						
	300									
	250 -			Std. S						
	2007			별						
	200									
	150 -									
		M O	W W O W O V	WO	M O					
	100-	12 AR	C10 AI	8 AR	40 AR					
	50	EC10-EC12 AROM	EC12:EC18 AROM EC18:EC21 AROM	EC2+EC35 AROM	EC35EC40 AROM					
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	۰ L	4	6	8	10	12	2 min			



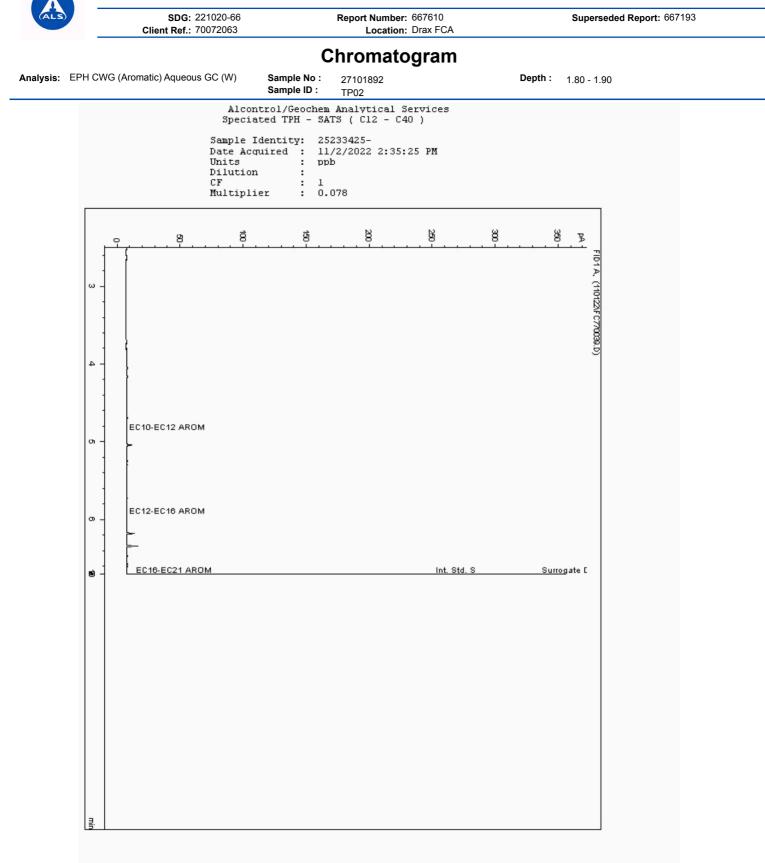


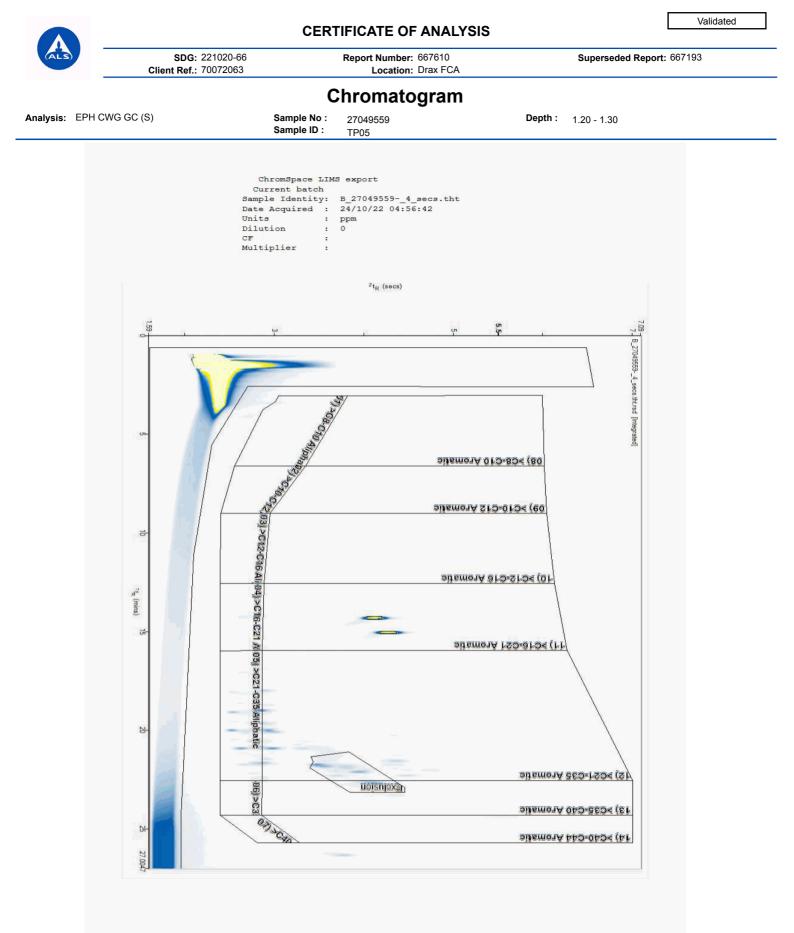


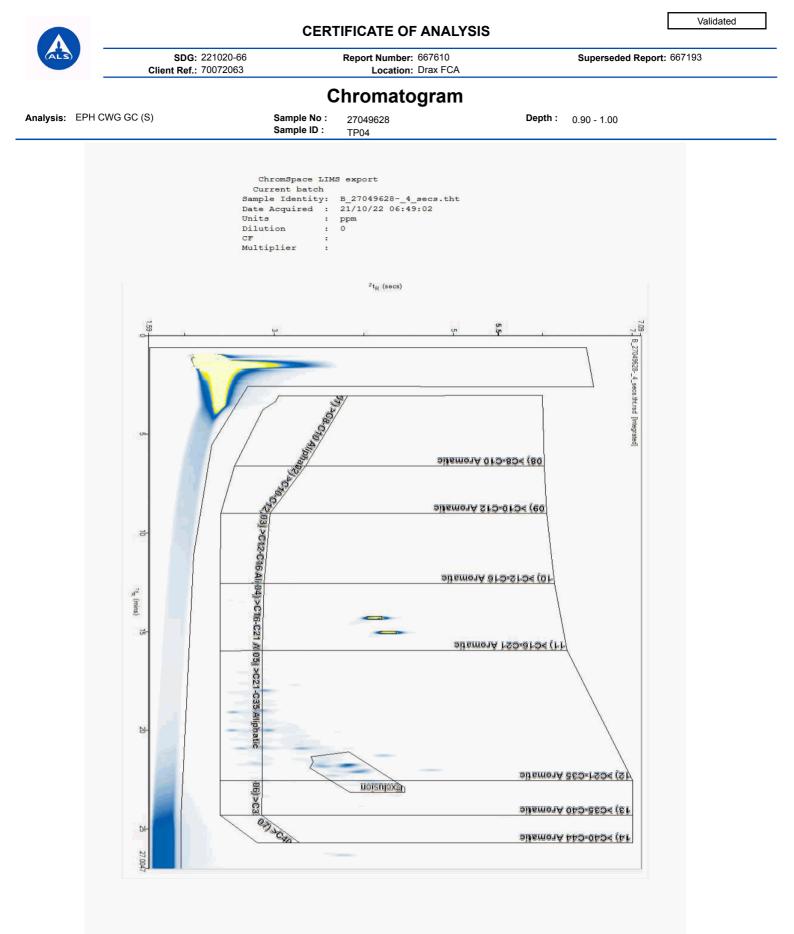


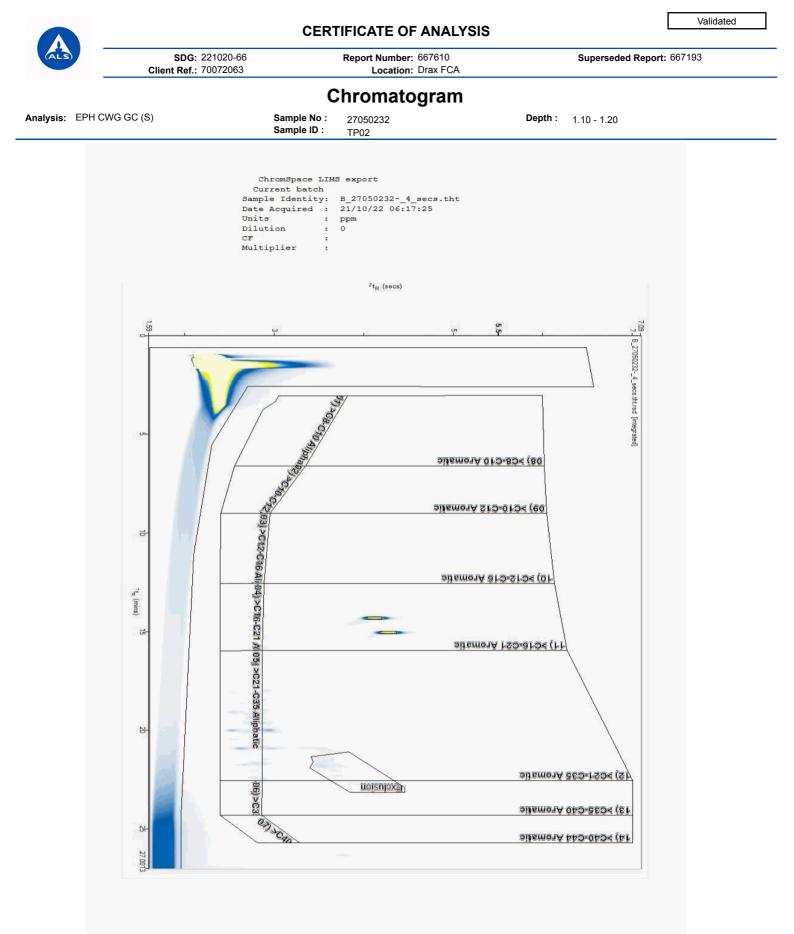
## **CERTIFICATE OF ANALYSIS**

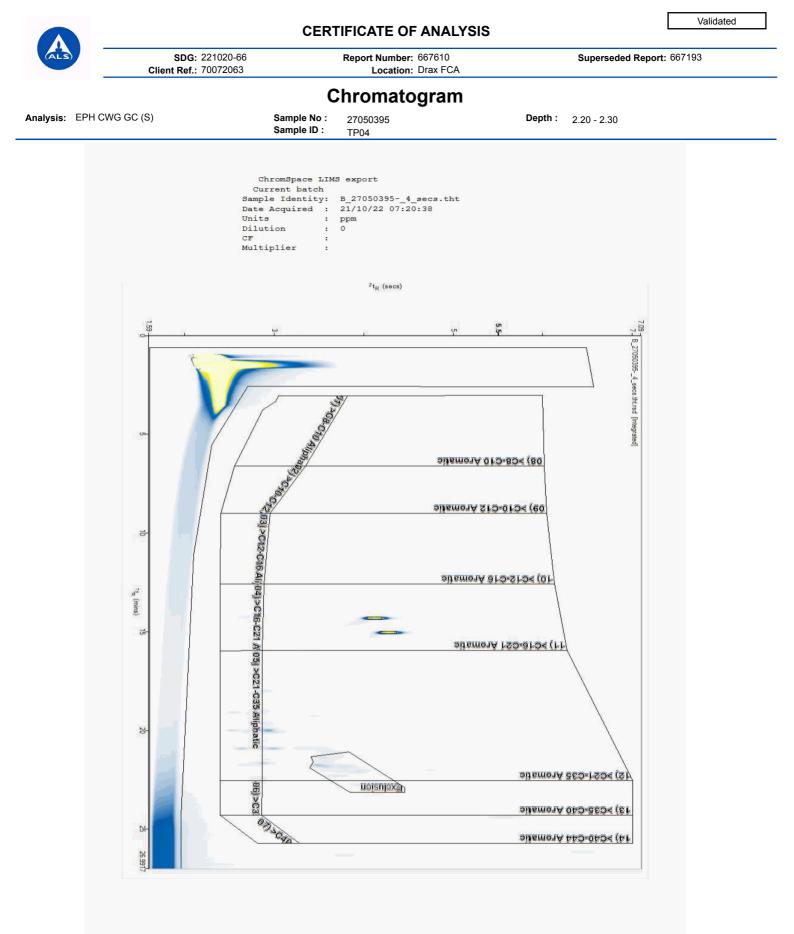
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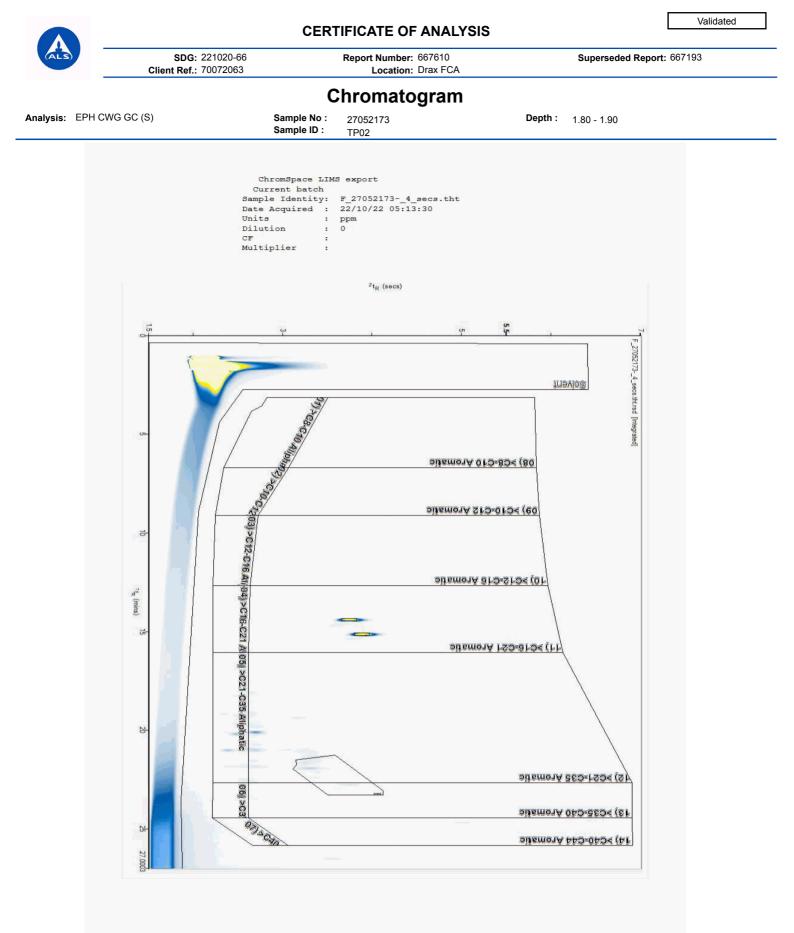


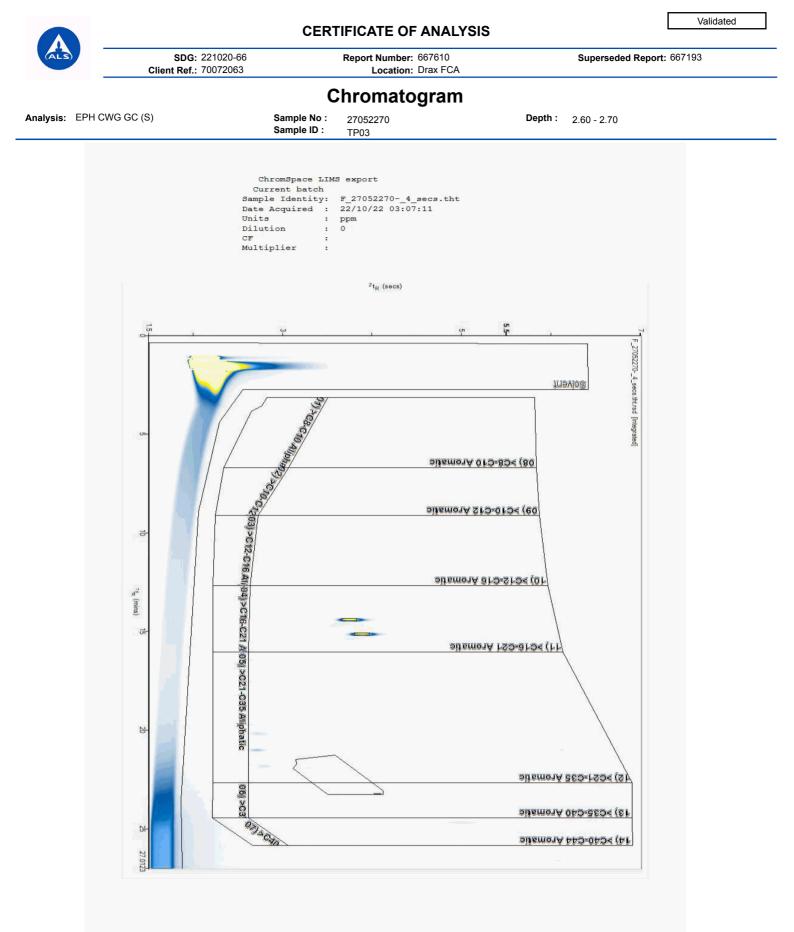


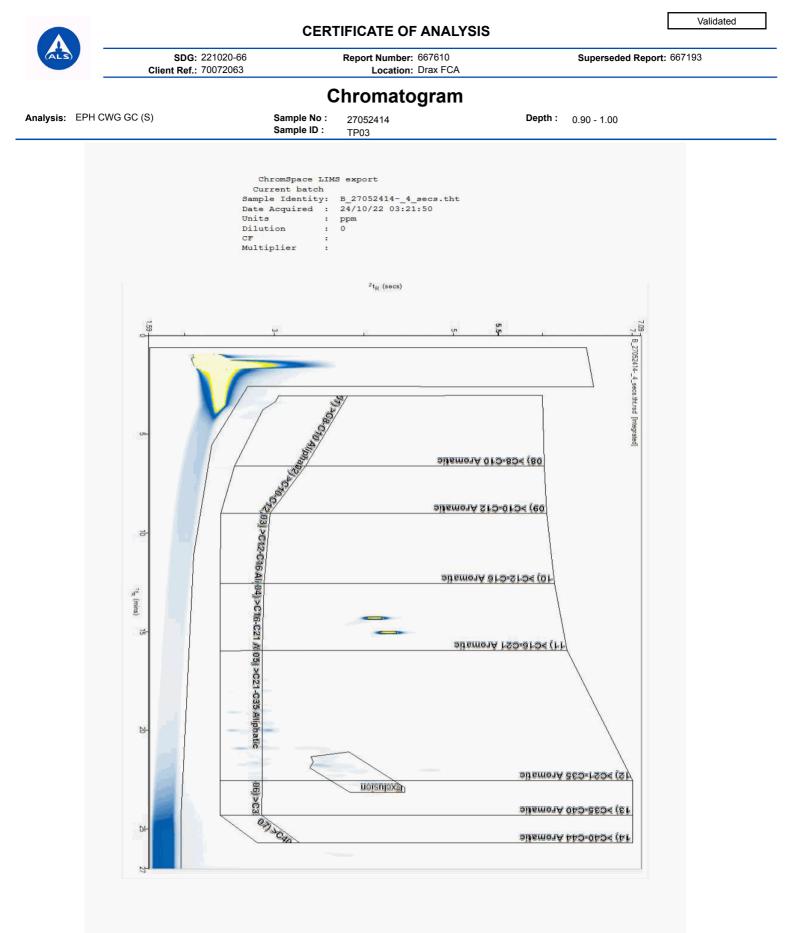


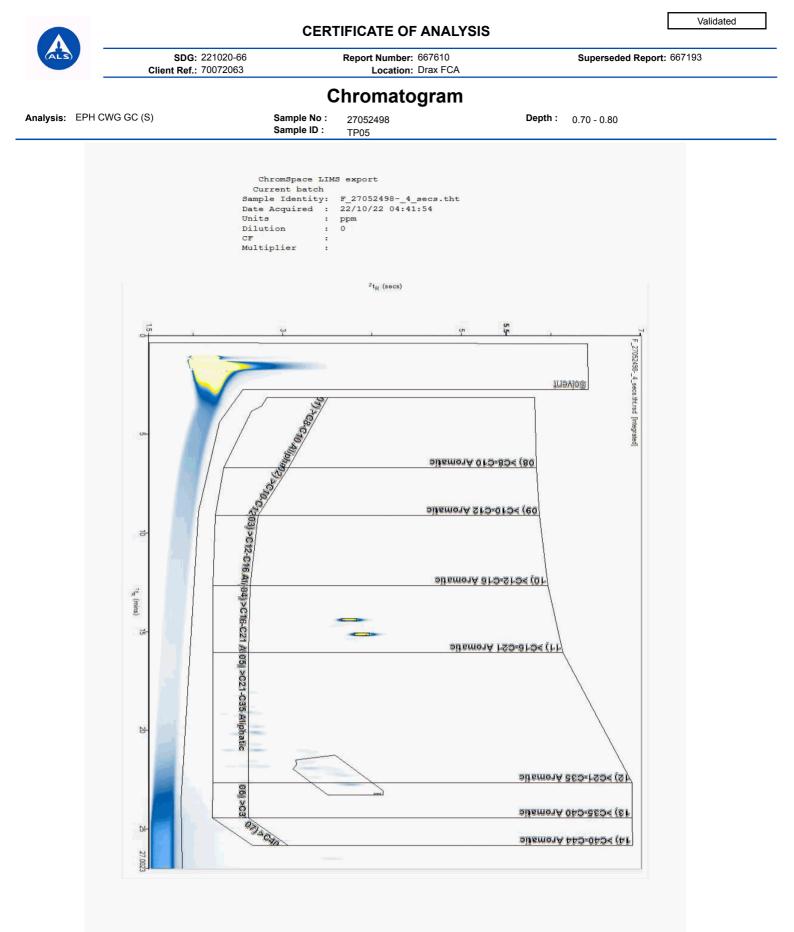


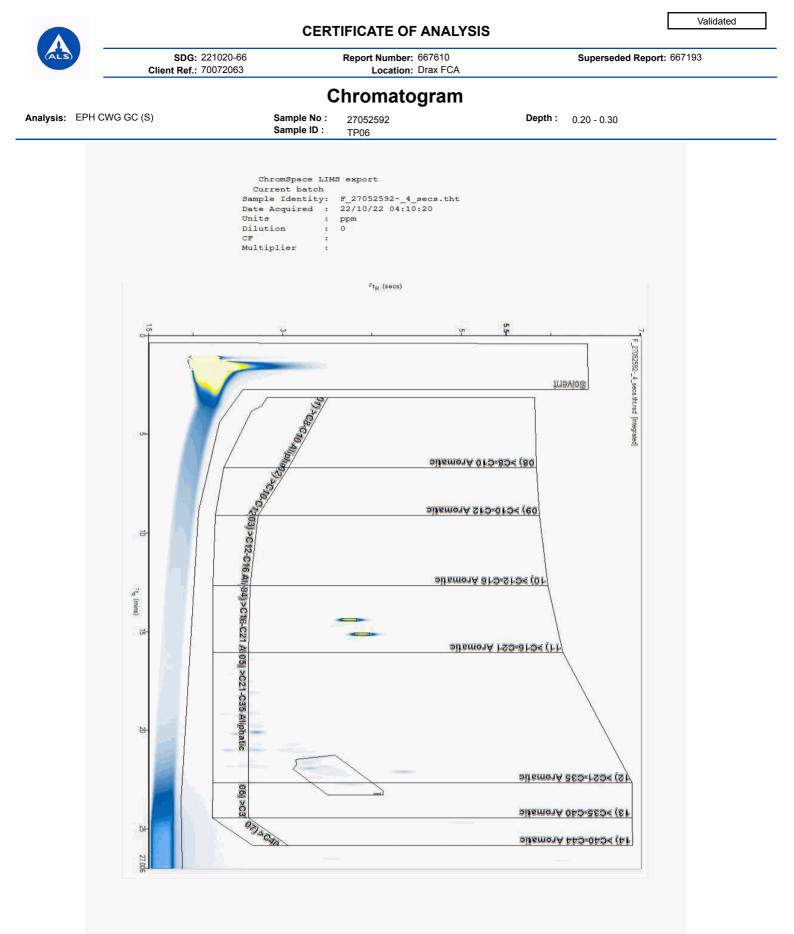


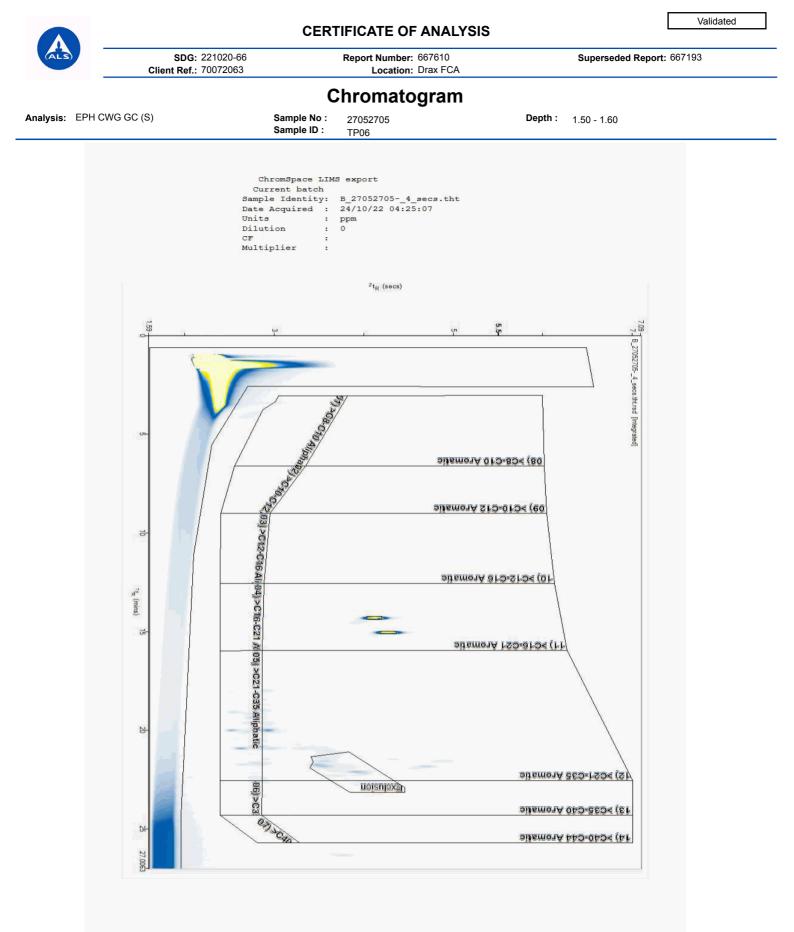


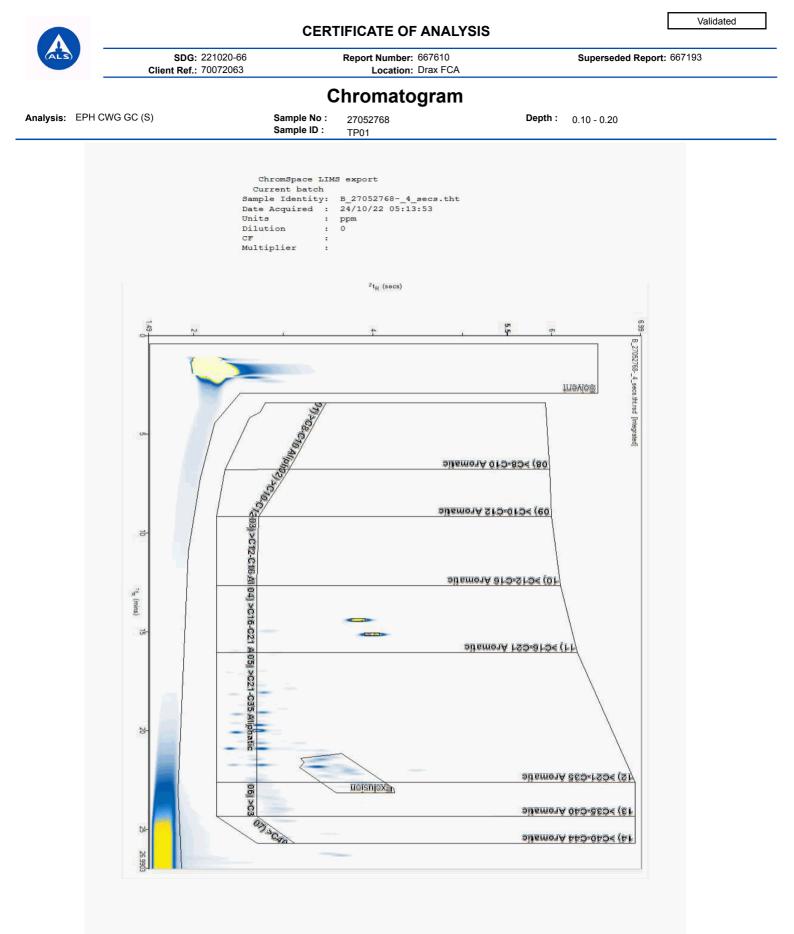


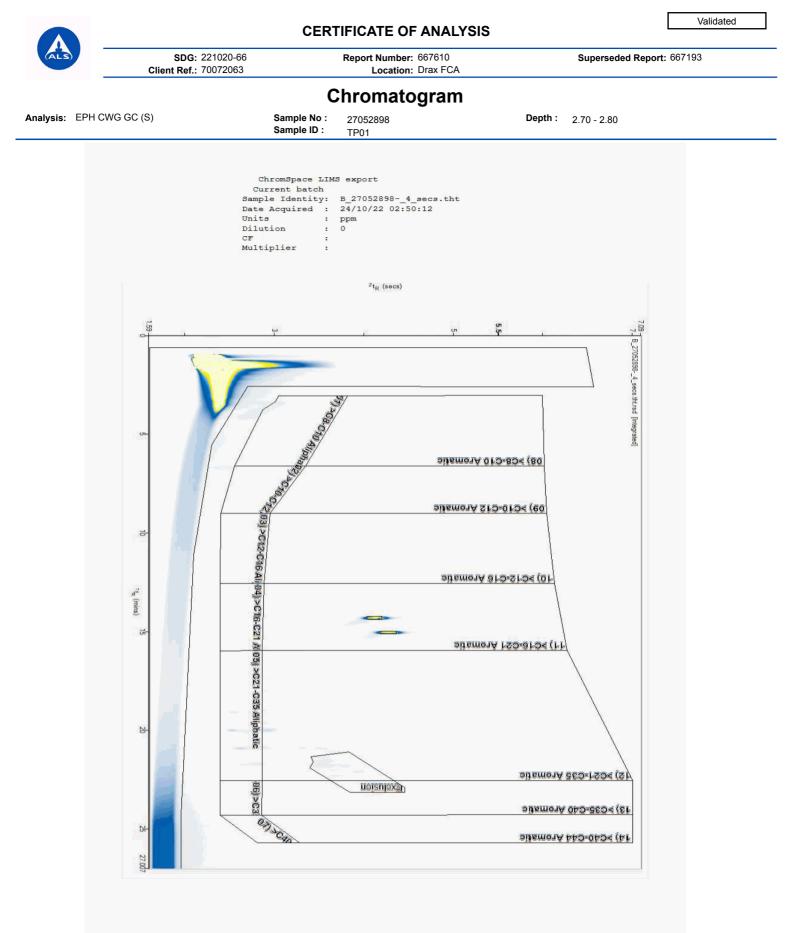


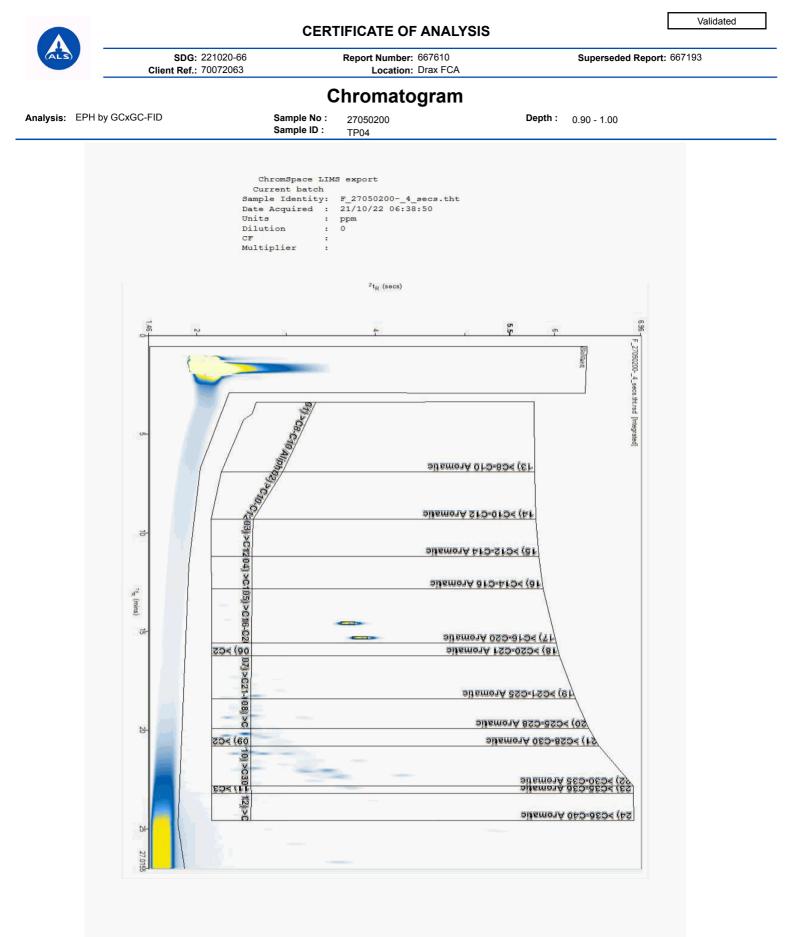


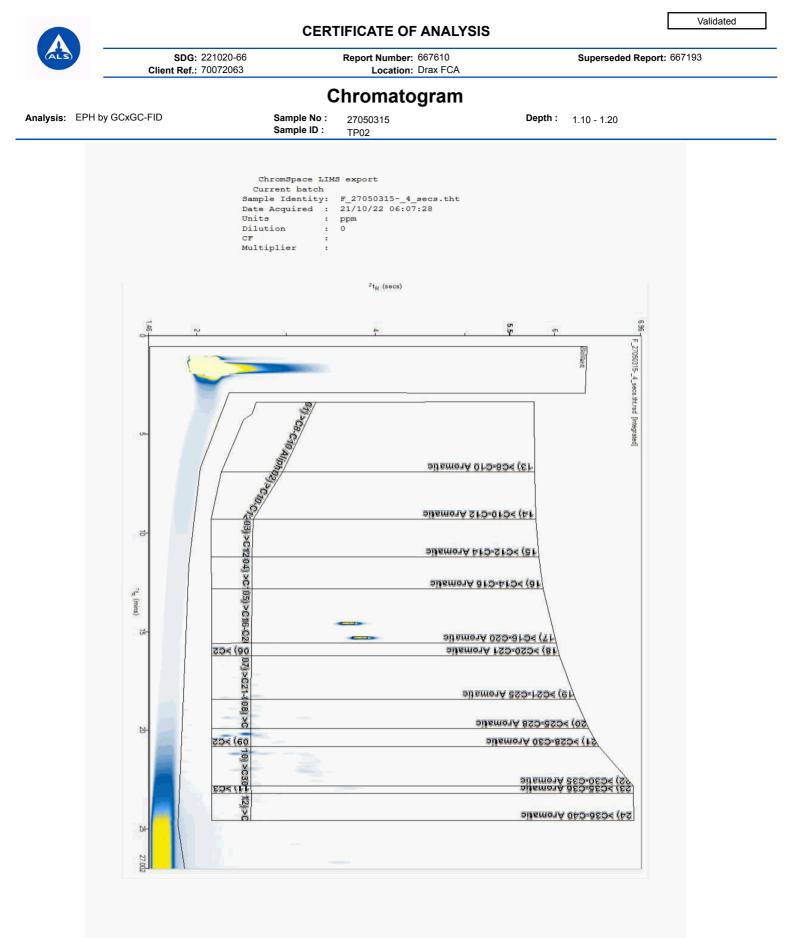


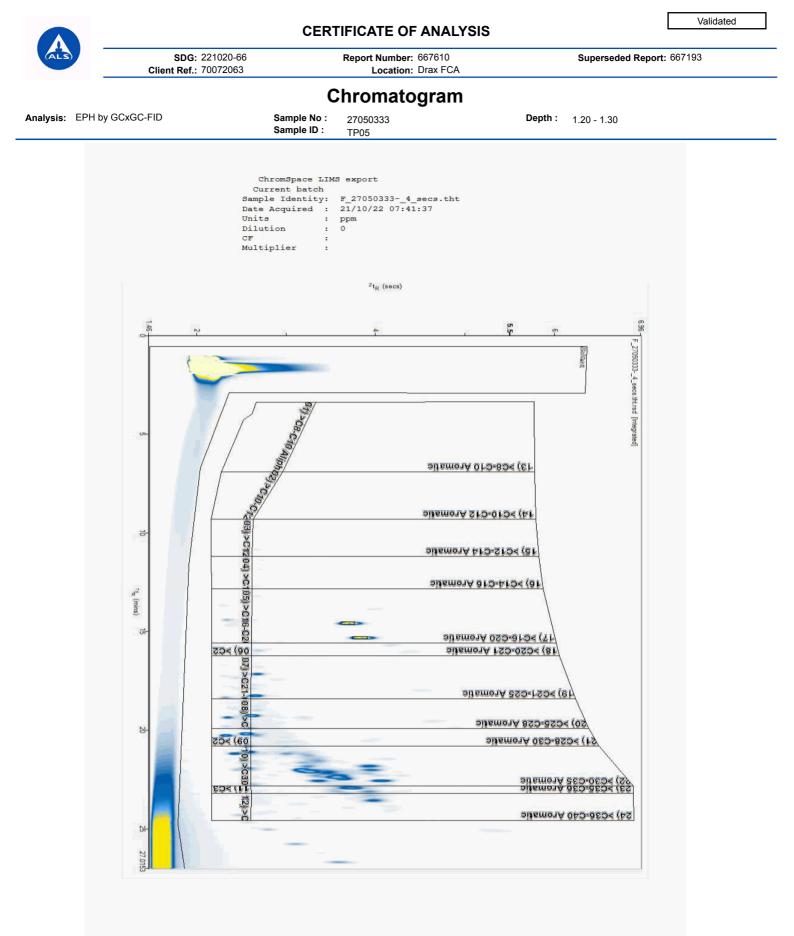


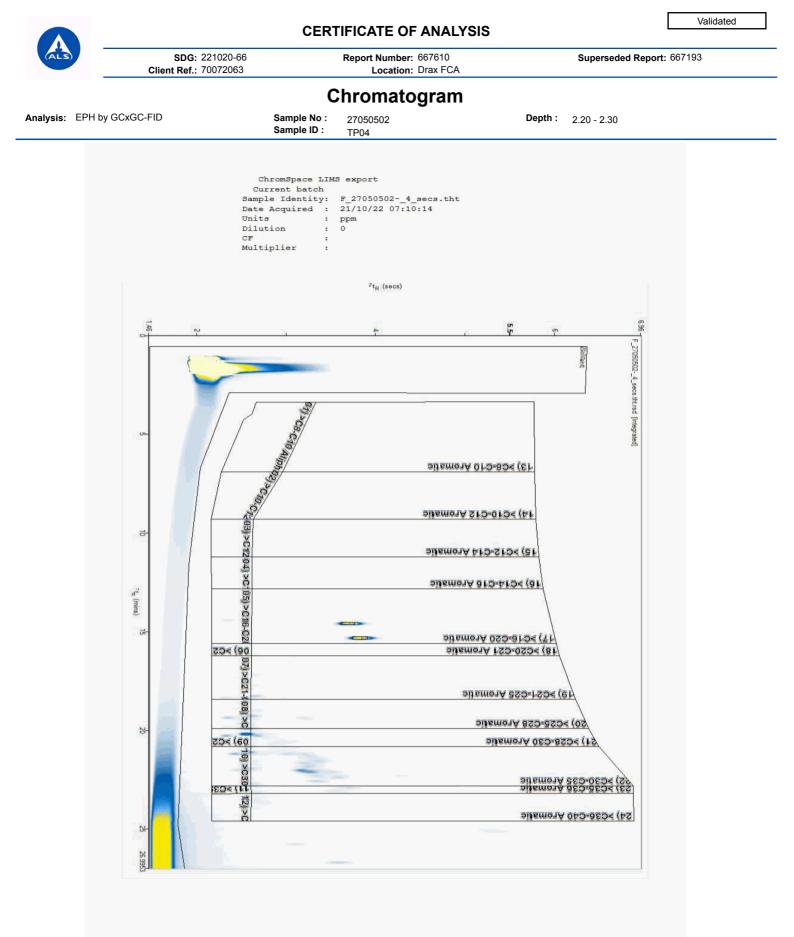


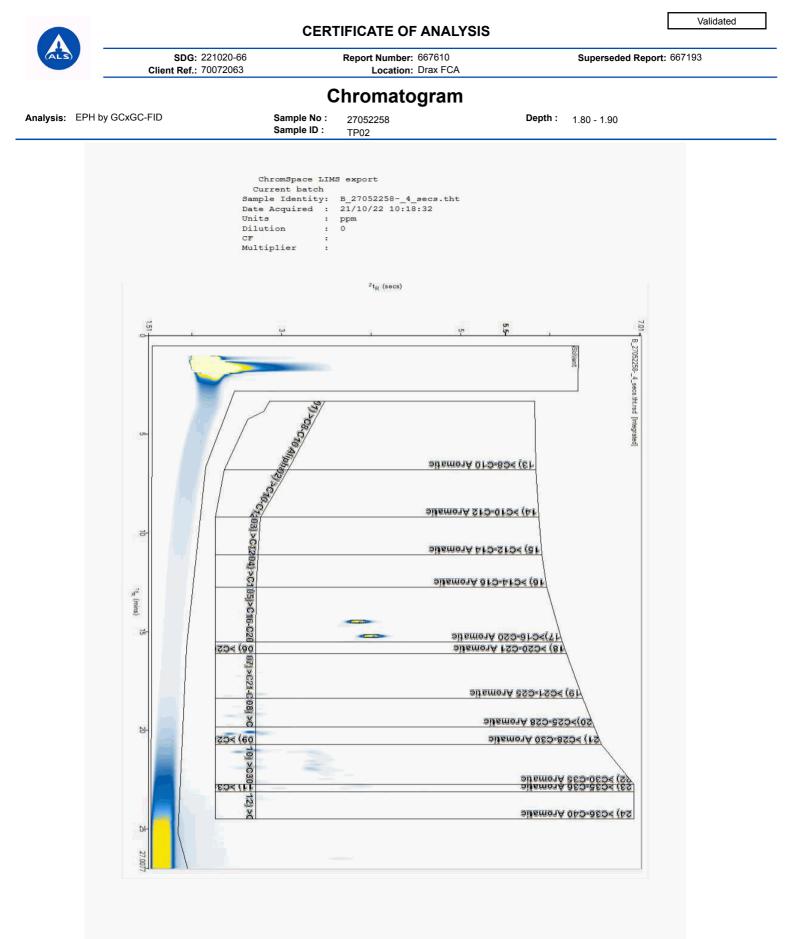


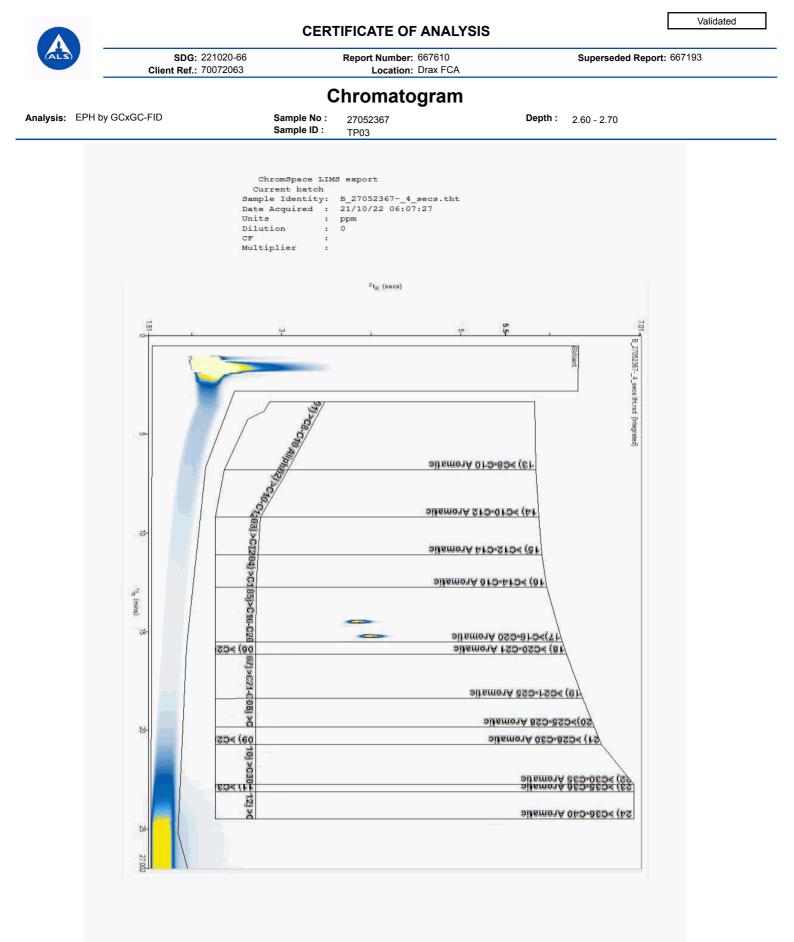


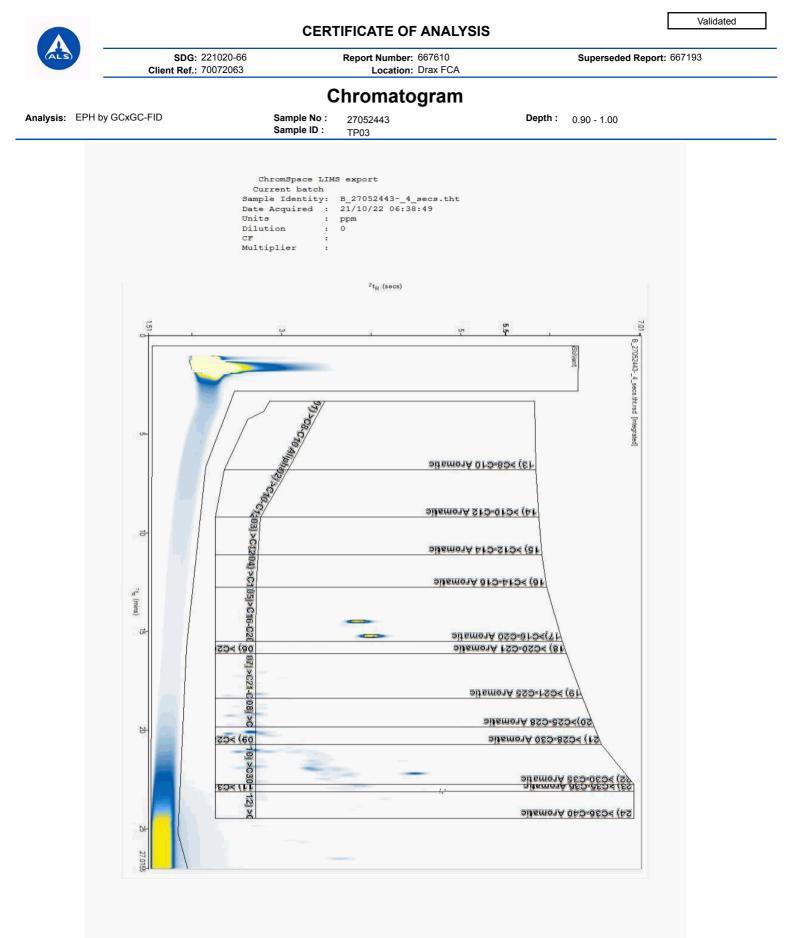


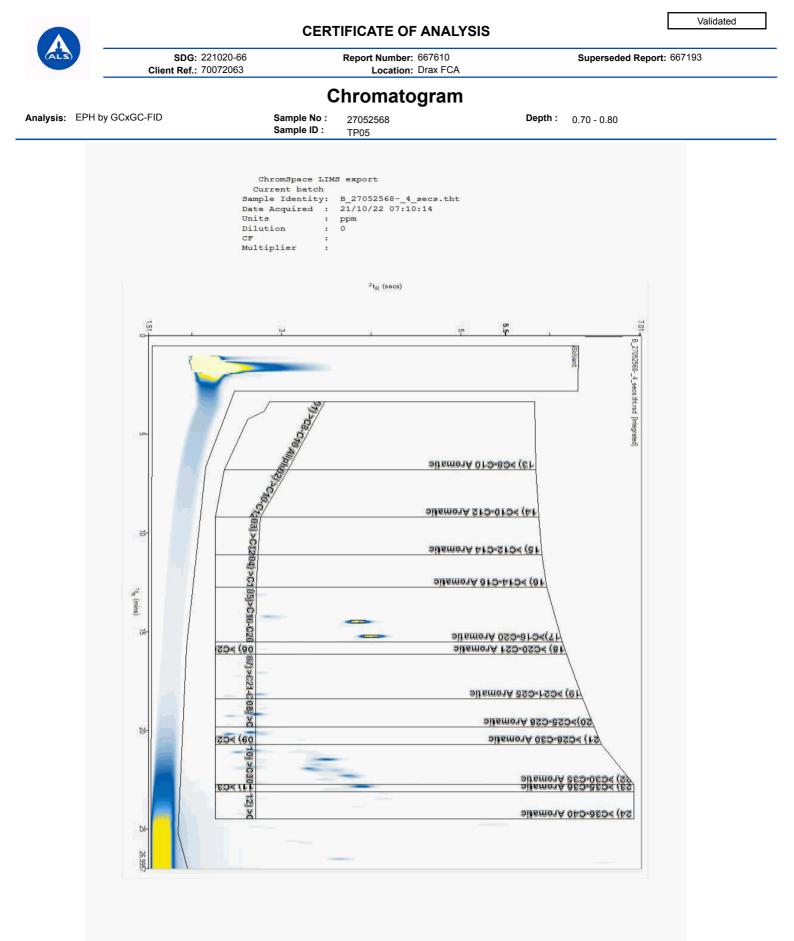


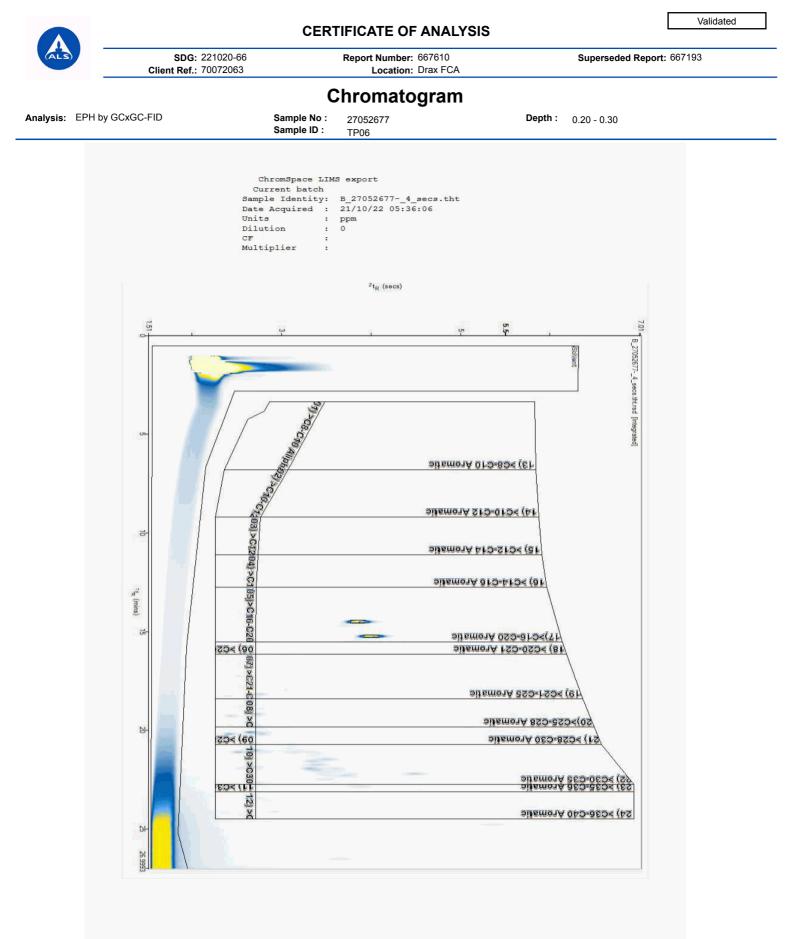


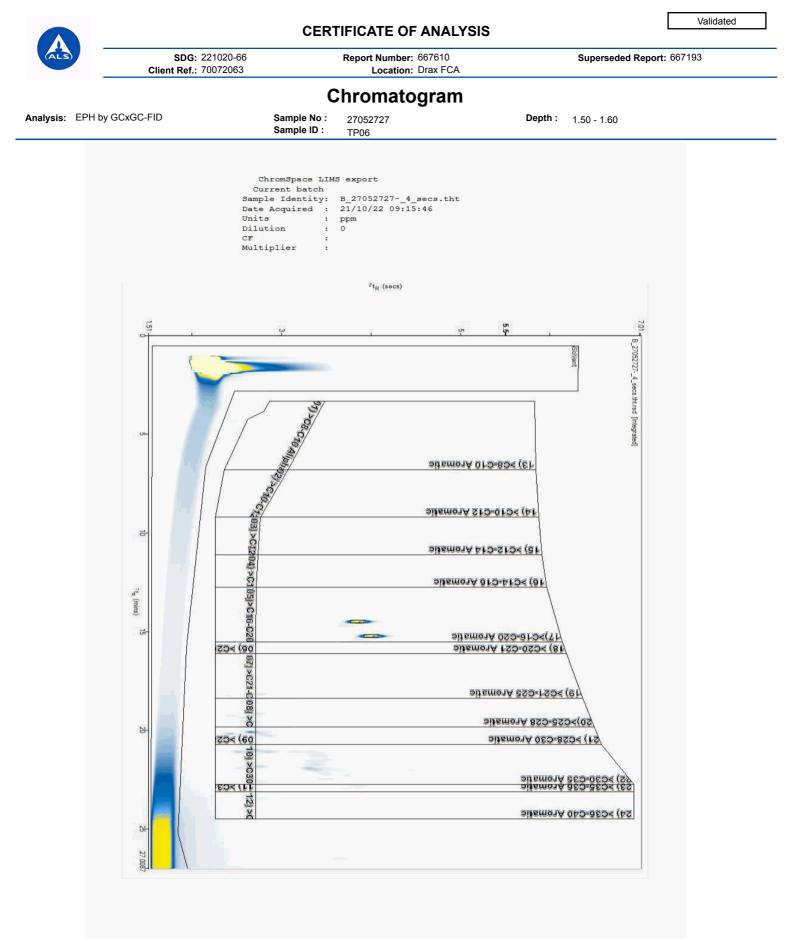


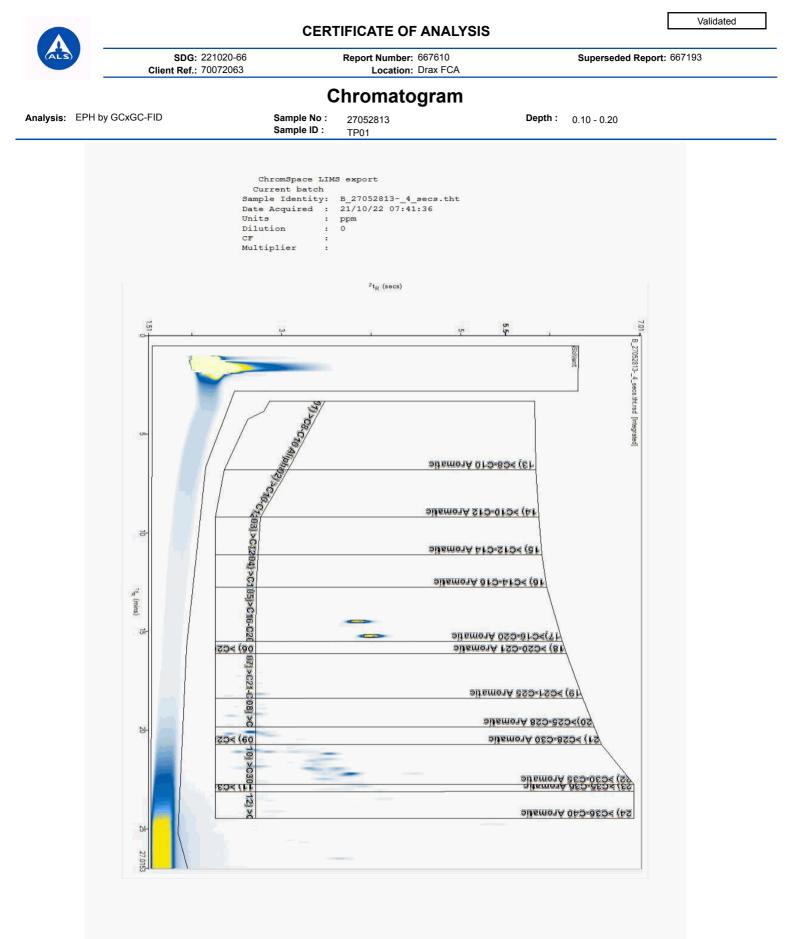


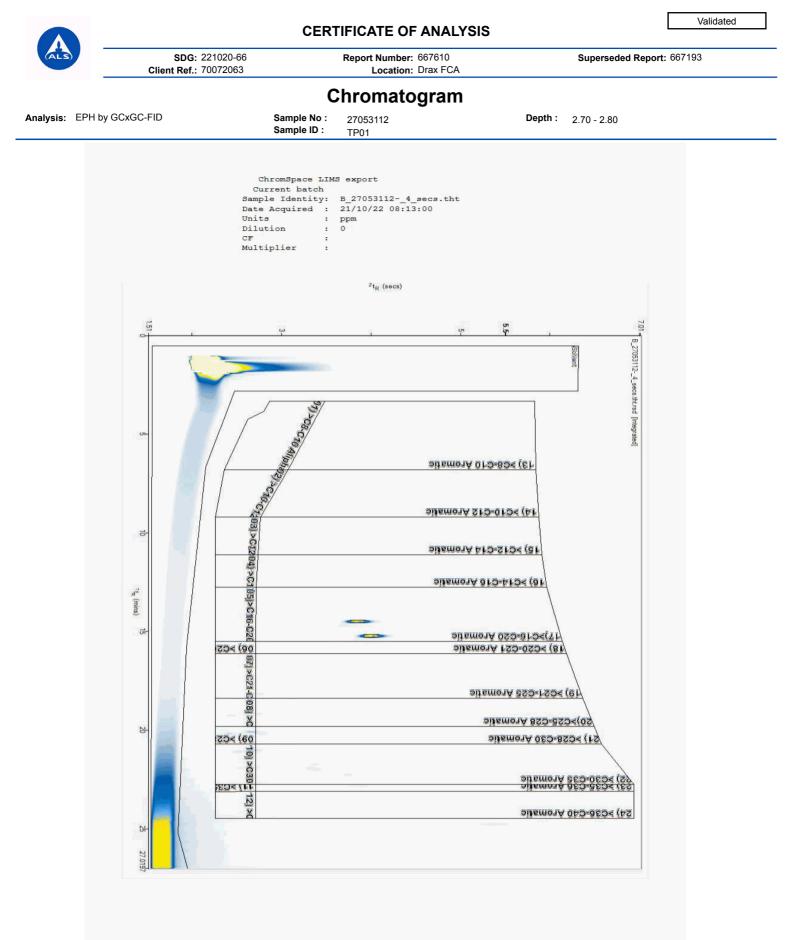


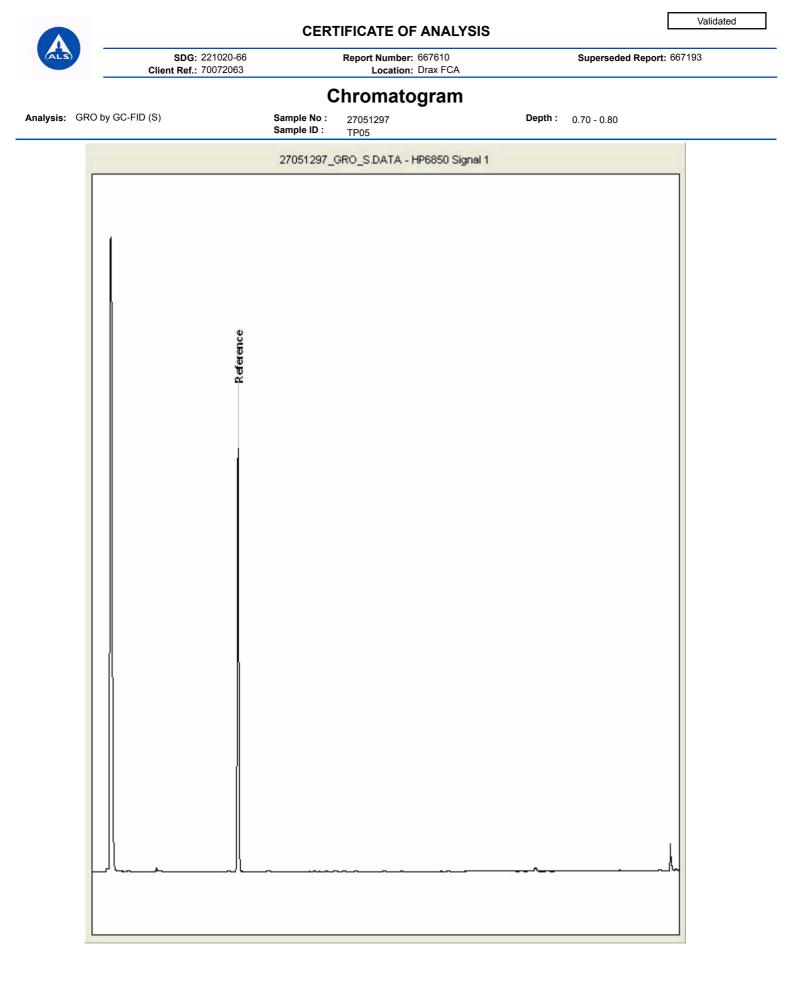


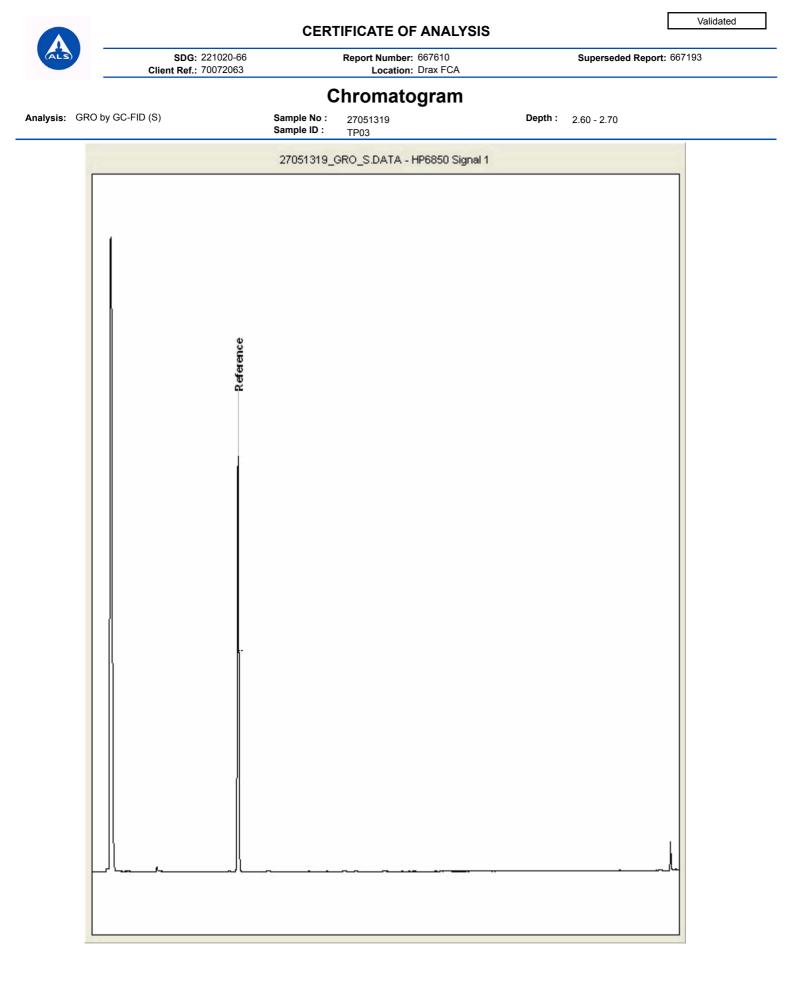


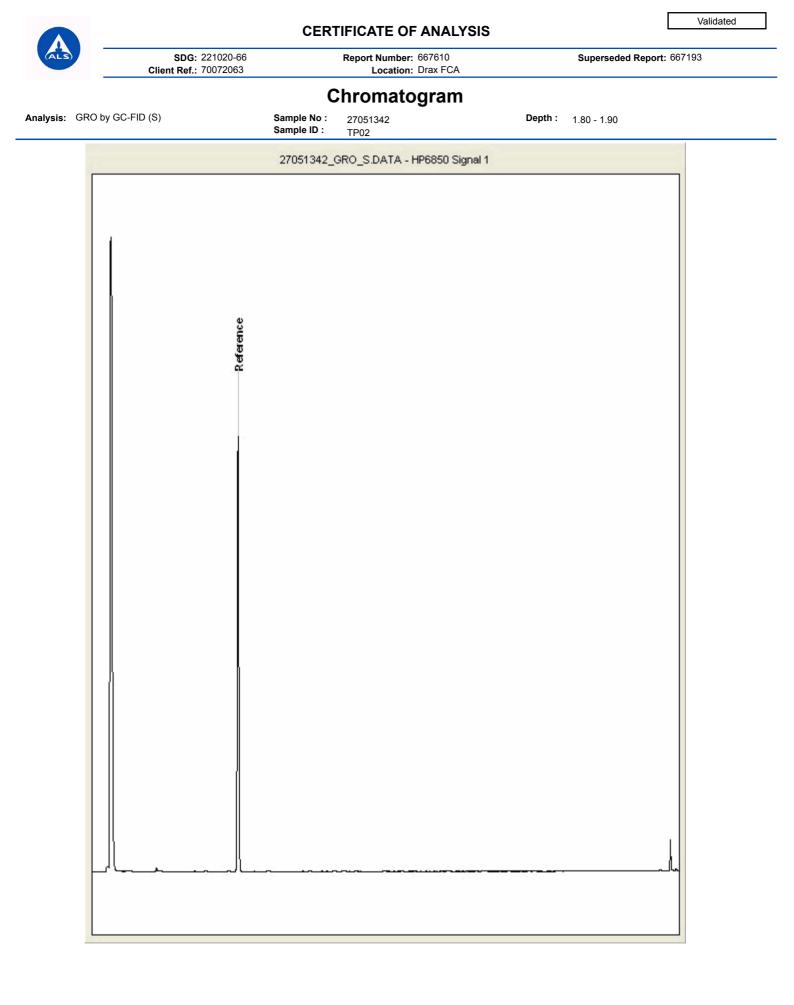


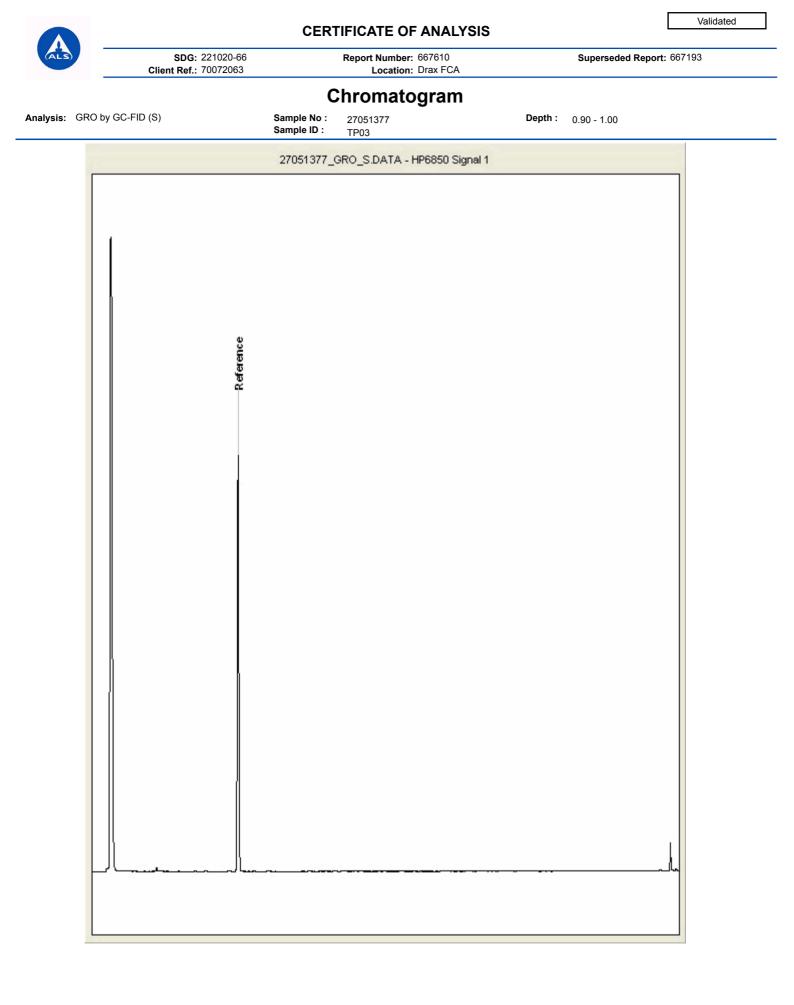


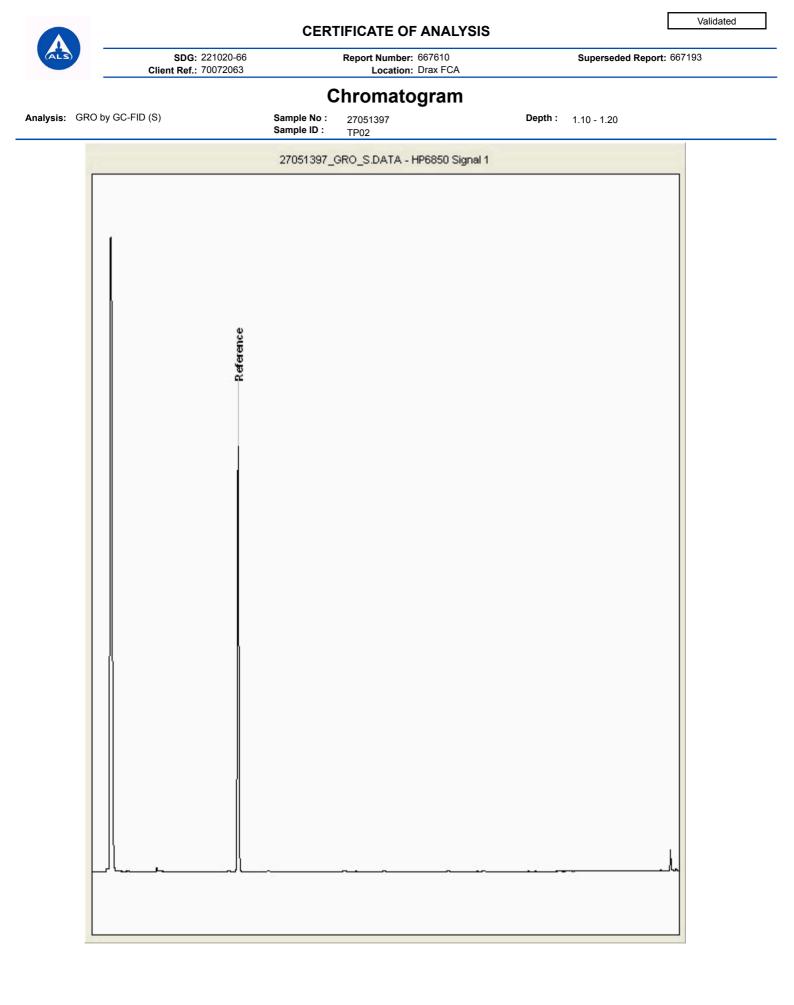


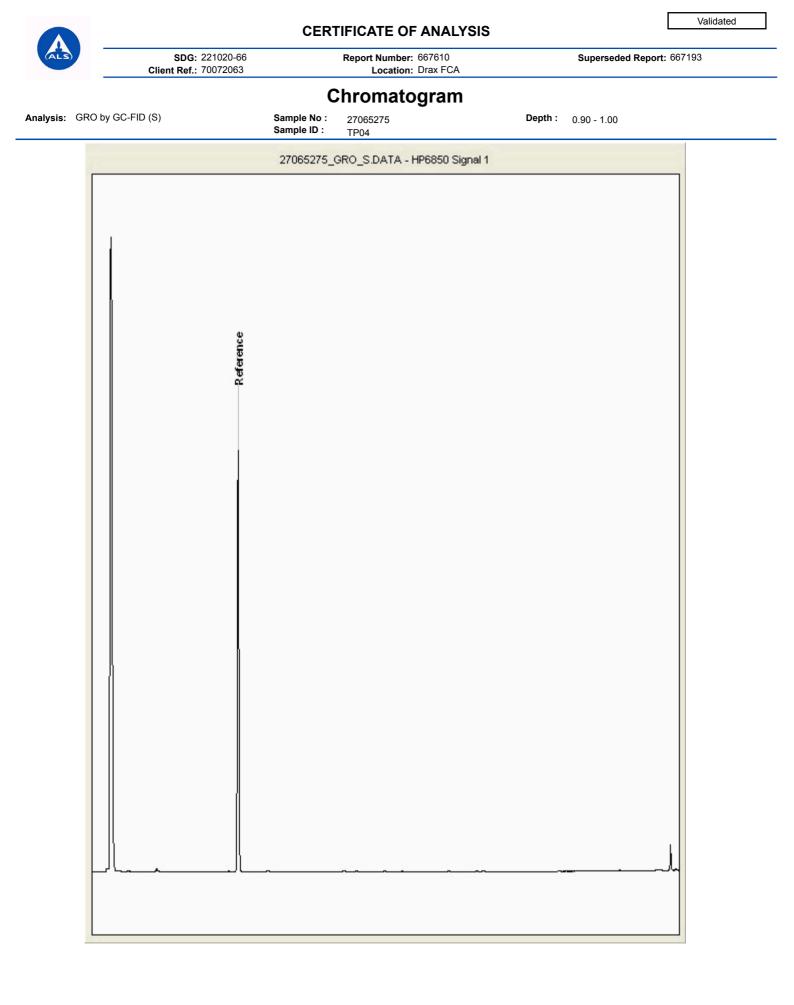


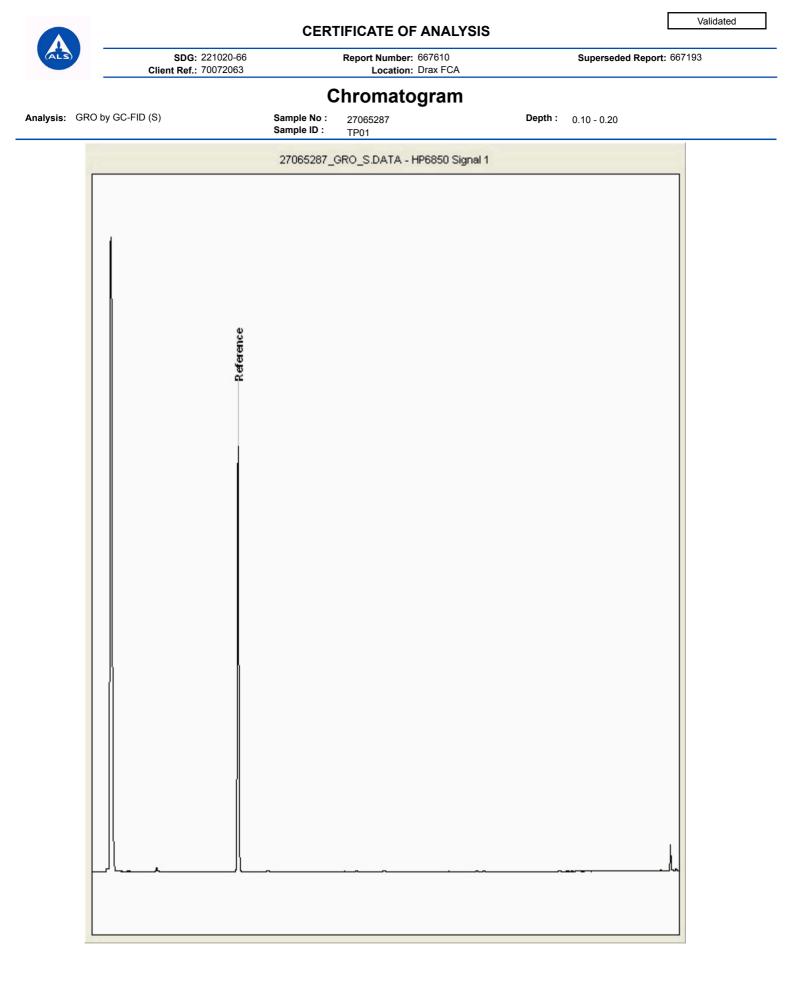


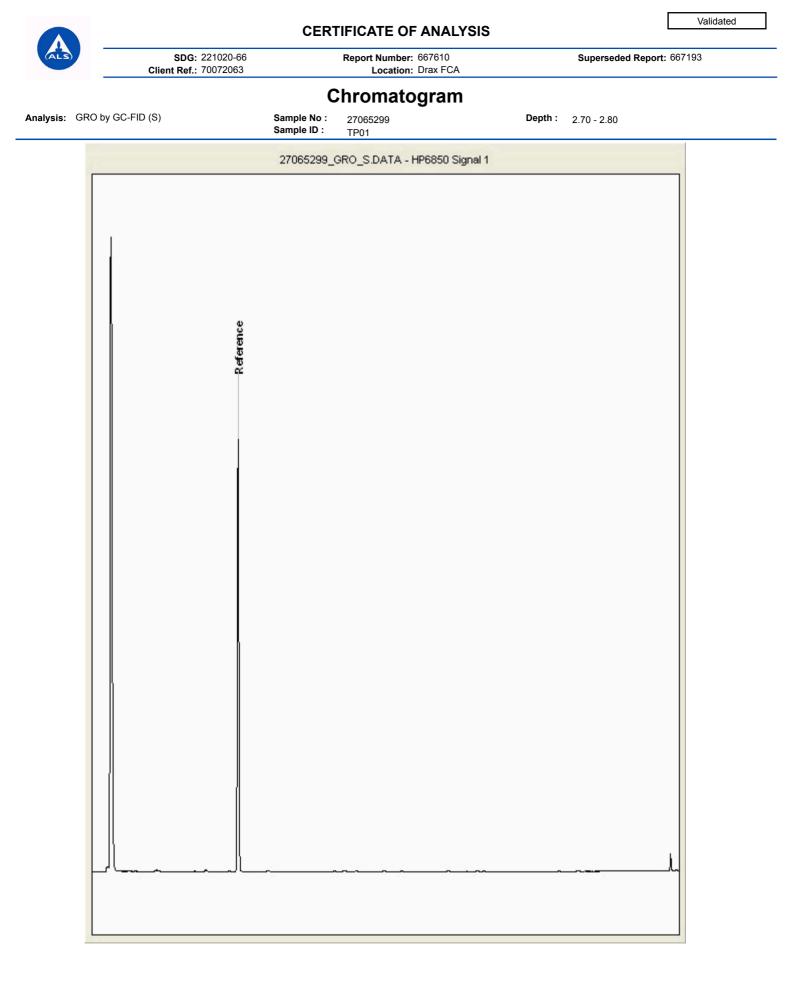


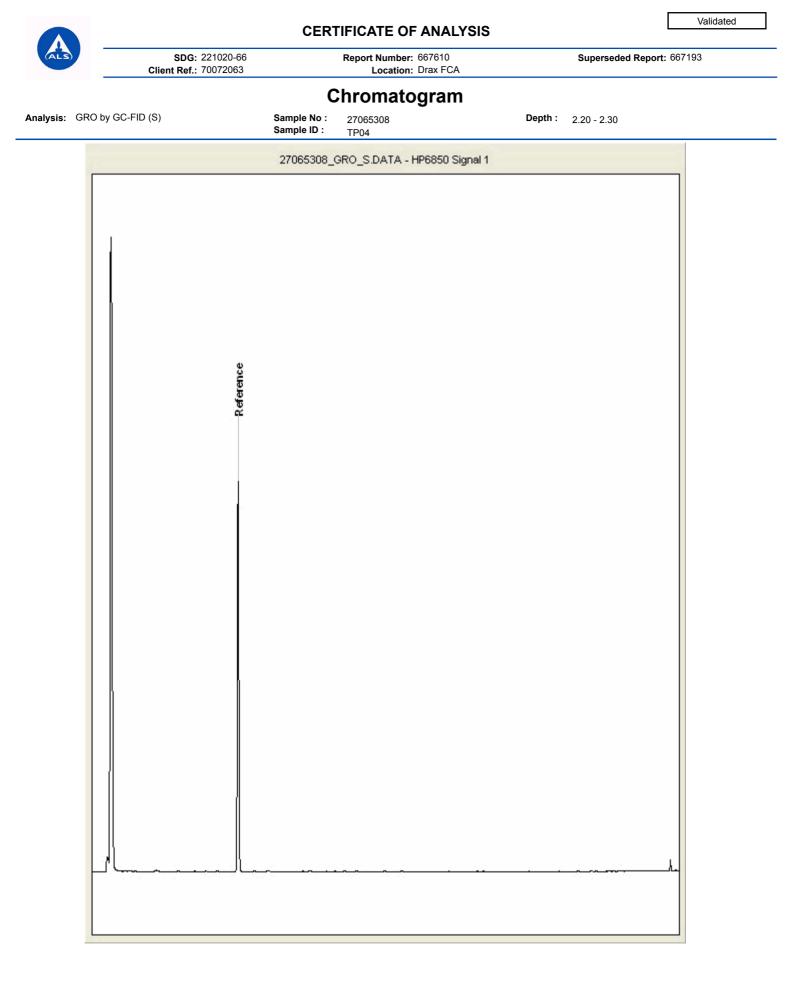


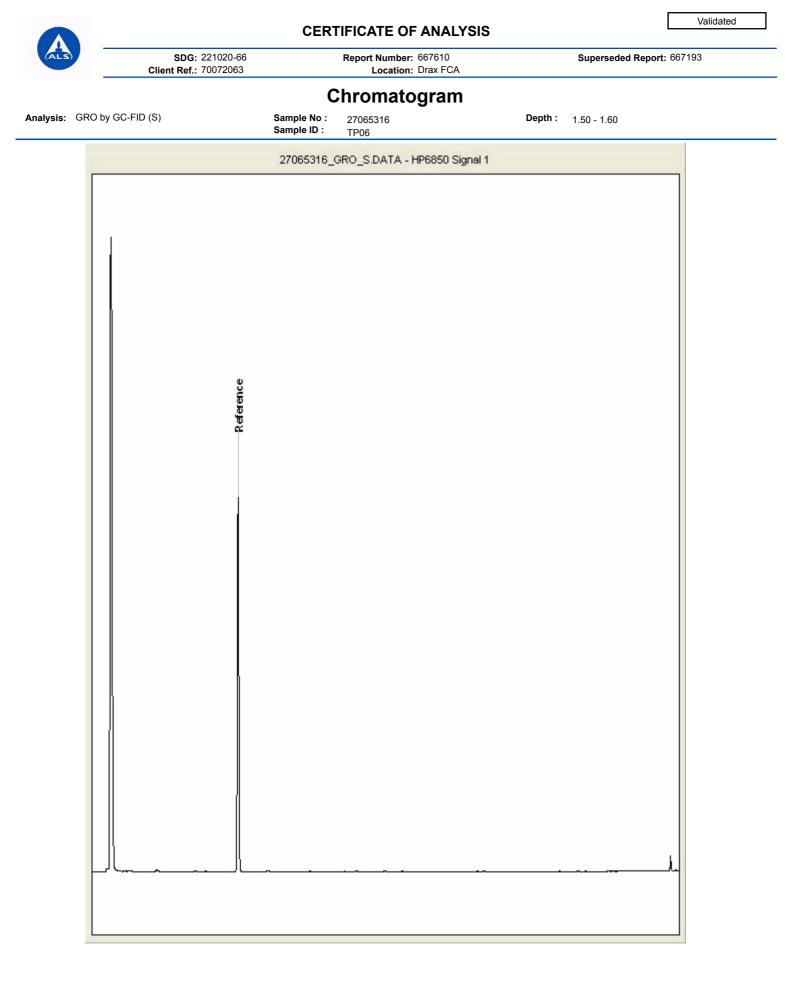


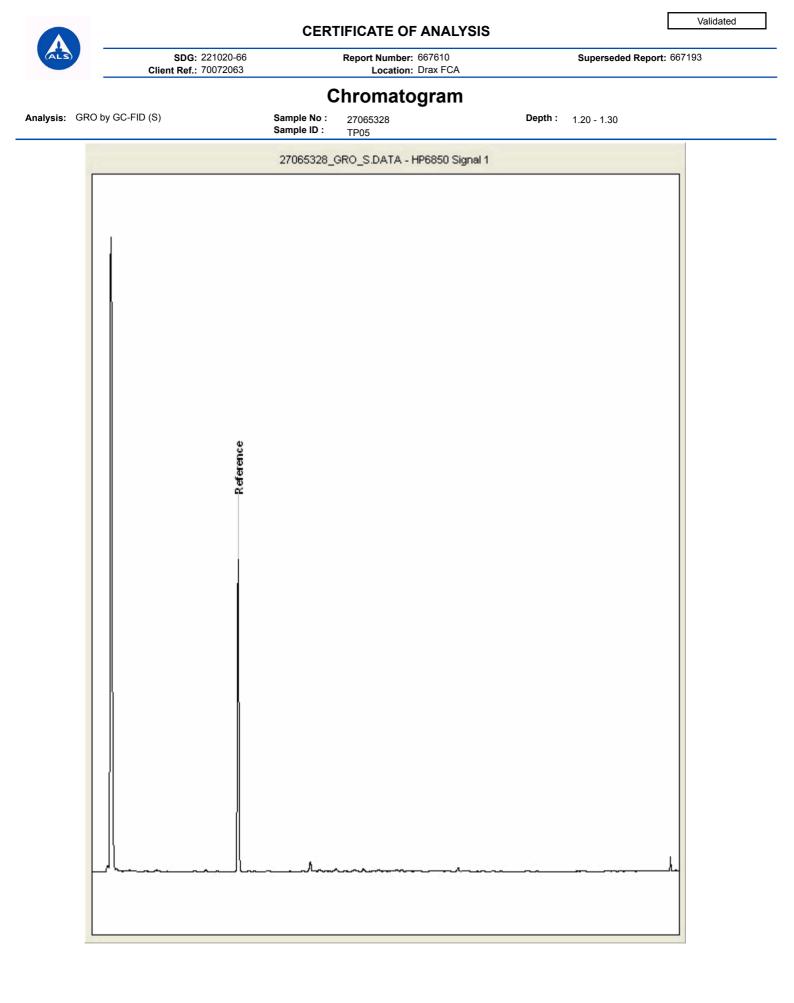


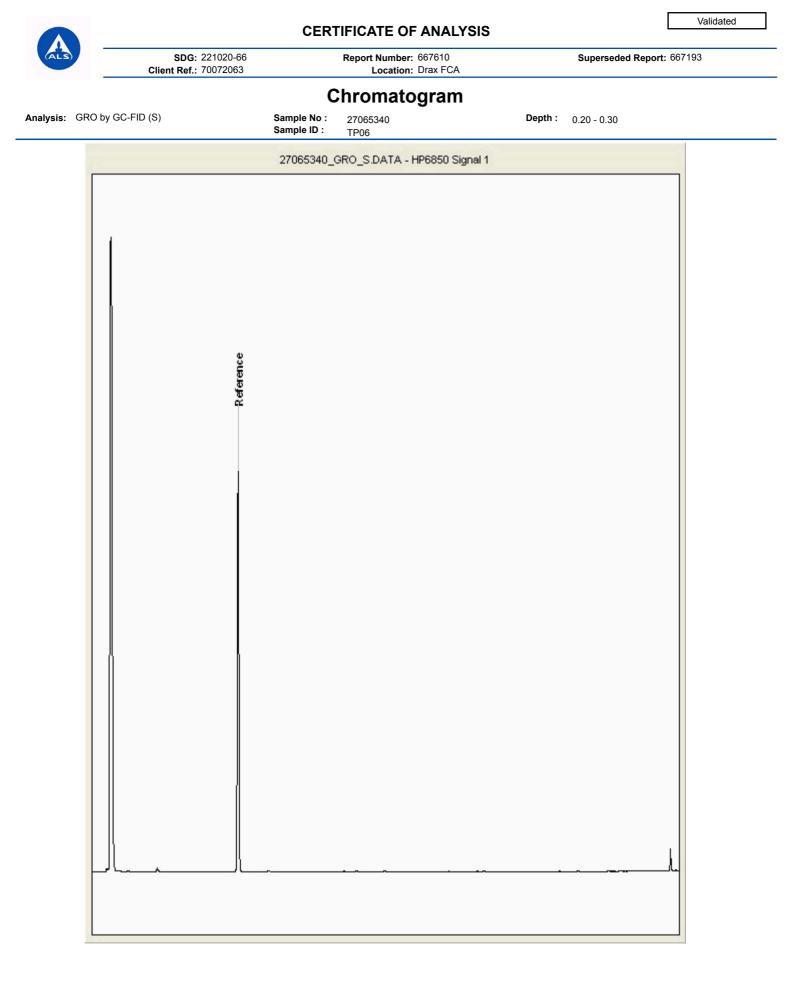


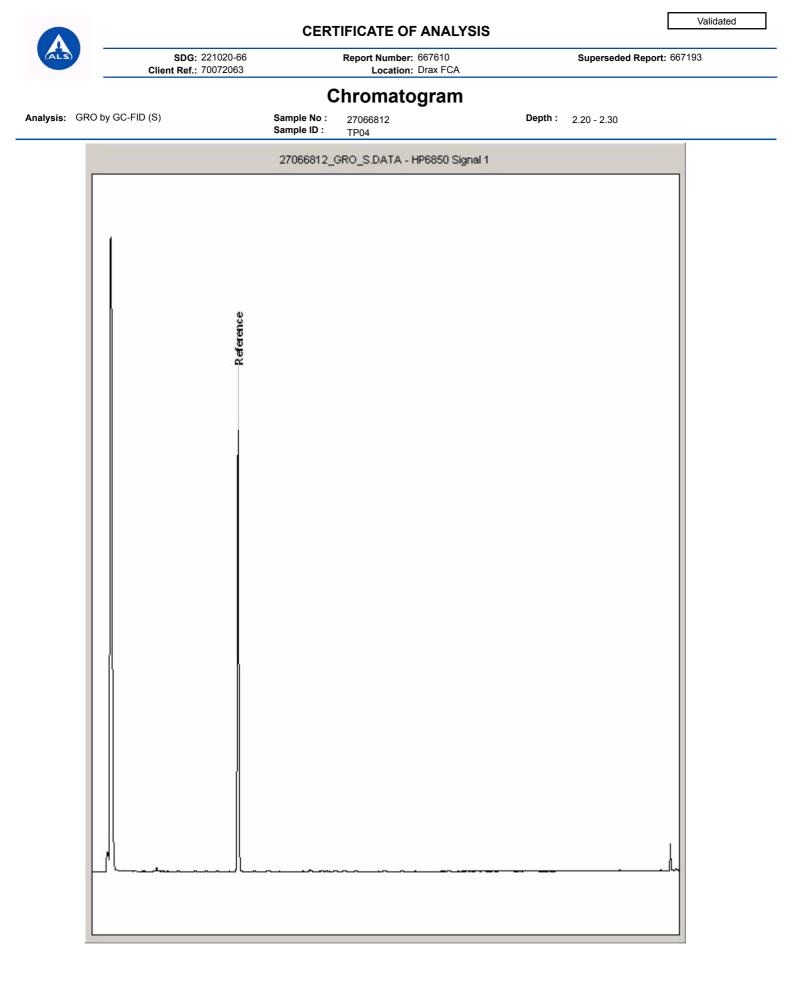


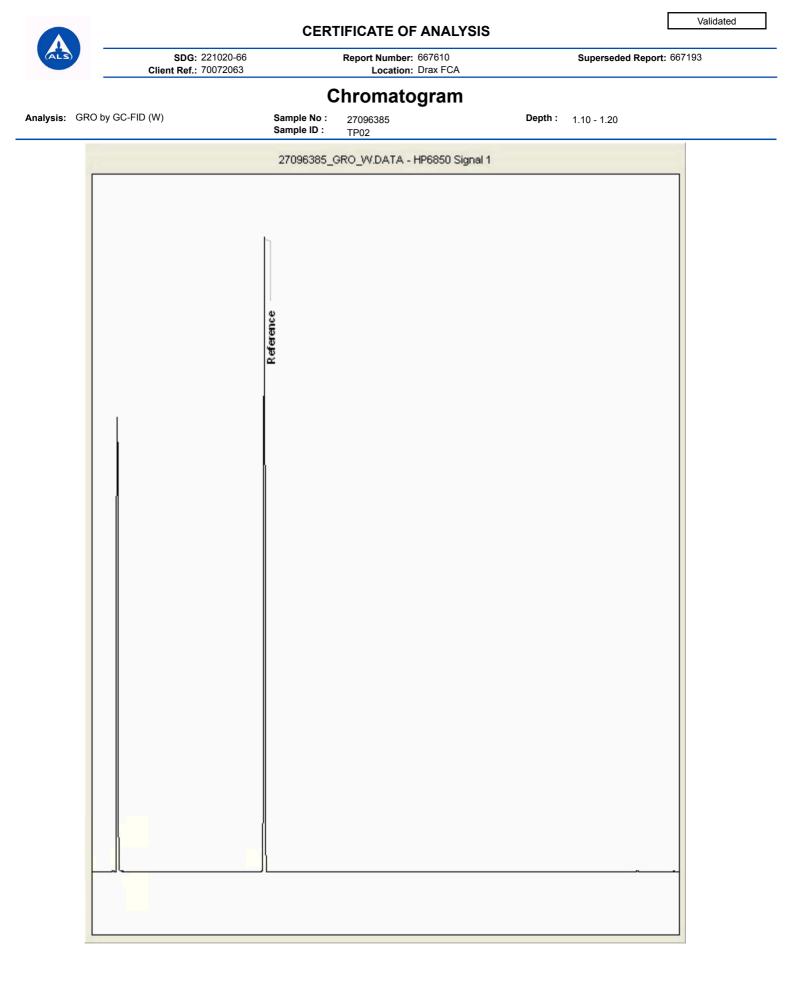


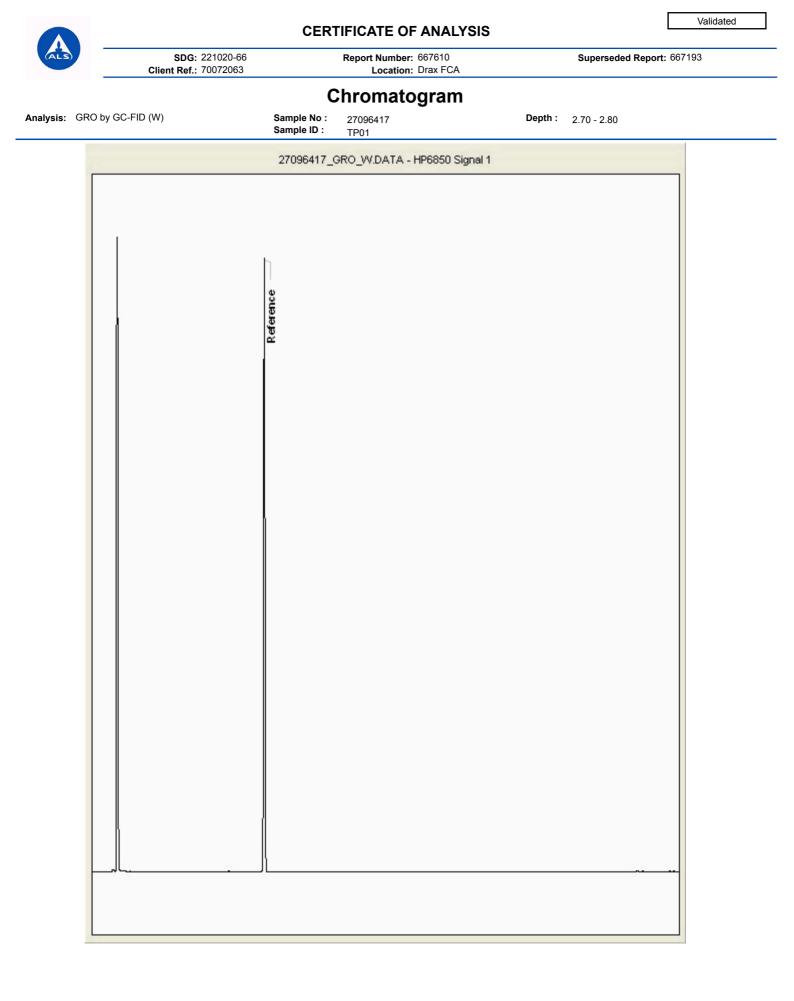


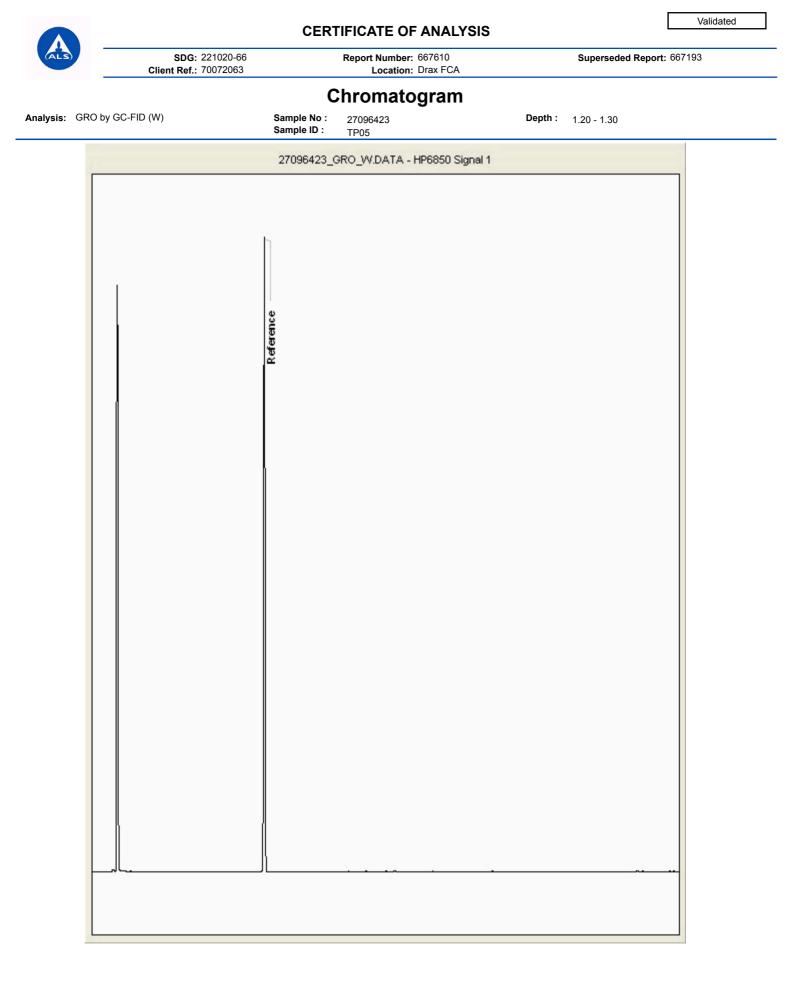


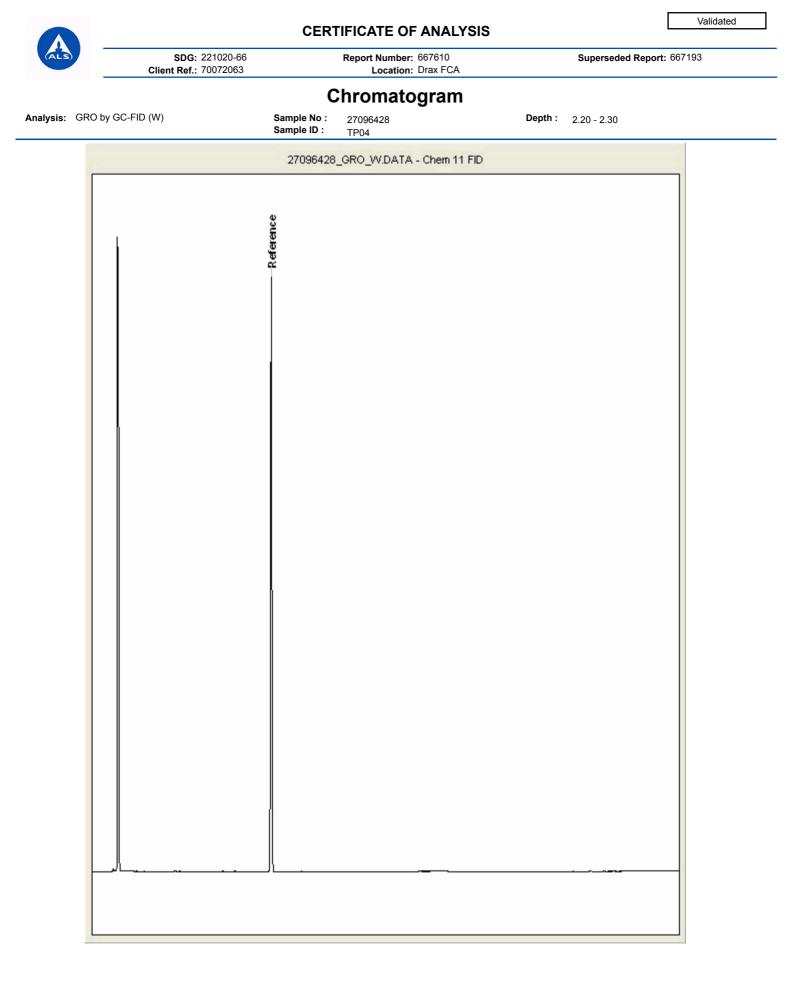


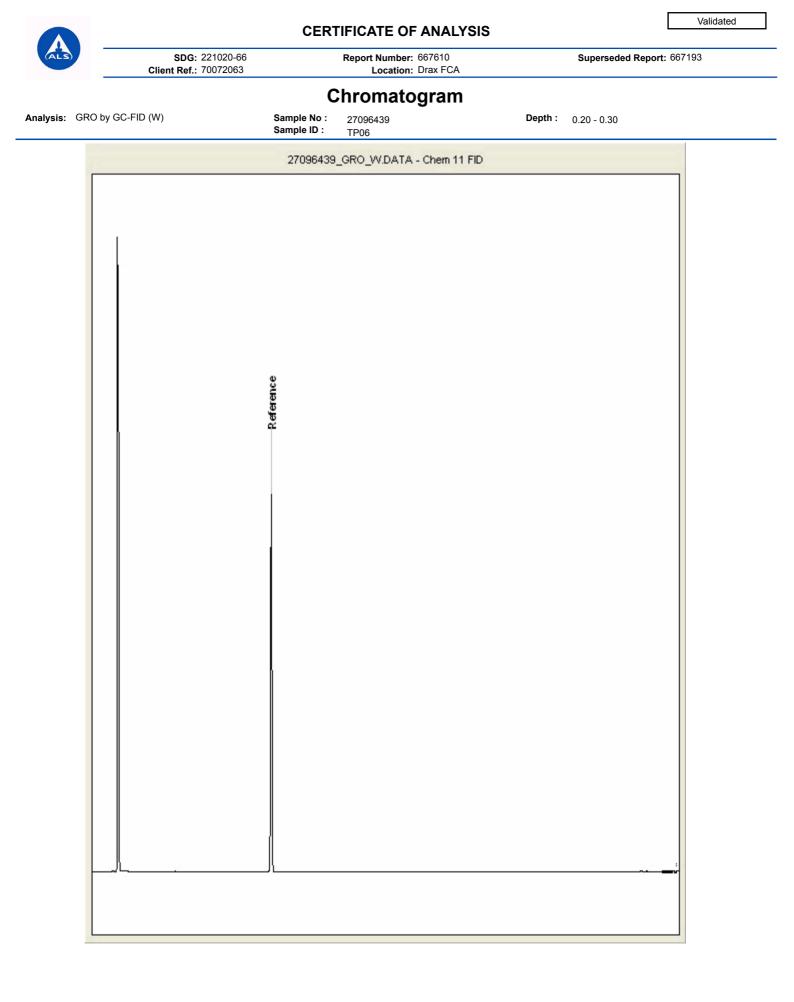












		CE	RTIFICATE OF ANALYSI	S		Validated
ALS	SDG Client Ref	: 221020-66 : 70072063	Report Number: 667610 Location: Drax FCA	Supe	rseded Report: 667	7193
			Chromatogram			
Analysis:	GRO by GC-FID (W)	Sample No Sample ID :	: 27097139	<b>Depth :</b> 1.80 -	1.90	
		27097139	9_GRO_W.DATA - HP6850 Signa	11		
		eou				
		Reference				
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#### **CERTIFICATE OF ANALYSIS**



221020-66

Report Number: 667610 Location: Drax FCA

#### Appendix

#### General

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following: NRA and CEN Leach tests, flash point LOI, pH, ammonium as NH4 by the BRE method, VOC TICs and SVOC TICs.

2. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for all sample types unless the sample is destroyed on testing. The prepared soil sub sample that is analysed for asbestos will be retained for a period of 6 months after the analysis date. All bulk samples will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALS reserve the right to charge for samples received and stored but not analysed.

With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.

4. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.

5. If no separate volatile sample is supplied by the client, or if a headspace or sediment is present in the volatile sample, the integrity of the data may be compromised. This will be flagged up as an invalid VOC on the test schedule and the result marked as deviating on the test certificate.

6. NDP - No determination possible due to insufficient/unsuitable sample.

7. Results relate only to the items tested.

8. LoDs (Limit of Detection) for wet tests reported on a dry weight basis are not corrected for moisture content.

9. Surrogate recoveries - Surrogates are added to your sample to monitor recovery of the test requested. A % recovery is reported, results are not corrected for the recovery measured. Typical recoveries for organics tests are 70-130%. Recoveries in soils are affected by organic rich or clay rich matrices. Waters can be affected by remediation fluids or high amounts of sediment. Test results are only ever reported if all of the associated quality checks pass; it is assumed that all recoveries outside of the values above are due to matrix affect.

10. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.

11. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.

12. For dried and crushed preparations of soils volatile loss may occur e.g volatile mercury.

13. For leachate preparations other than Zero Headspace Extraction (ZHE) volatile loss may occur.

14. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.

15. Analysis and identification of specific compounds using GCFID is by retention time only, and we routinely calibrate and quantify for benzene, toluene, ethylbenzenes and xylenes (BTEX). For total volatiles in the C5-C12 range, the total area of the chromatogram is integrated and expressed as ug/kg or ug/l. Although this analysis is commonly used for the quantification of gasoline range organics (GRO), the system will also detect other compounds such as chlorinated solvents, and this may lead to a falsely high result with respect to hydrocarbons only. It is not possible to specifically identify these non-hydrocarbons, as standards are not routinely run for any other compounds, and for more definitive identification, volatiles by GCMS should be utilised.

16. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials - whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

17 Data retention. All records, communications and reports pertaining to the analysis are archived for seven years from the date of issue of the final report. 18. Tentatively Identified Compounds (TICs) are non-target peaks in VOC and SVOC analysis. All non-target peaks detected with a concentration above the LoD are subjected to a mass spectral library search. Non-target peaks with a library search confidence of >75% are reported based on the best mass spectral library match. When a non-target peak with a library search confidence of <75% is detected it is reported as "mixed hydrocarbons". Non-target compounds identified from the scan data are semi-quantified relative to one of the deuterated internal standards, under the same chromatographic conditions as the target compounds. This result is reported as a semi-quantitative value and reported as Tentatively Identified Compounds (TICs). TICs are outside the scope of UKAS accreditation and are not moisture corrected.</p>

#### 19. Sample Deviations

If a sample is classed as deviated then the associated results may be compromised.

1	Container with Headspace provided for volatiles analysis
2	Incorrect container received
3	Deviation from method
4	Matrix interference
•	Sample holding time exceeded in laboratory
@	Sample holding time exceeded due to late arrival of instructions or samples
§	Sampled on date not provided

#### 20. Asbestos

When requested, the individual sub sample scheduled will be analysed in house for the presence of asbestos fibres and asbestos containing material by our documented in house method TM048 based on HSG 248 (2021), which is accredited to ISO17025. If a specific asbestos fibre type is not found this will be reported as "Not detected". If no asbestos fibre types are found all will be reported as "Not detected" and the sub sample analysed deemed to be clear of asbestos. If an asbestos fibre type is found it will be reported as detected (for each fibre type found). Testing can be carried out on asbestos positive samples, but, due to Health and Safety considerations, may be replaced by alternative tests or reported as No Determination Possible (NDP). The quantity of asbestos present is not determined unless specifically requested.

#### Identification of Asbestos in Bulk Materials & Soils

The results for identification of asbestos in bulk materials and soils are obtained from supplied bulk materials and soils which have been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining, based on HSG 248 (2021).

The results for identification of asbestos in soils are obtained from a homogenised sub sample which has been examined to determine the presence of asbestos fibres using ALS (Hawarden) in-house method of transmitted/polarised light microscopy and central stop dispersion staining.

Asbe stoe Type	Common Name
Chrysoile	White Asbestos
Anosite	BrownAsbestos
Cro á dolite	Blue Advestos
Fibrous Acinolite	-
Fibrous Anhophyllite	-
Fibrous Tremolite	-

#### Visual Estimation Of Fibre Content

Estimation of fibre content is not permitted as part of our UKAS accredited test other than: - Trace - Where only one or two asbestos fibres were identified.

#### Respirable Fibres

Respirable fibres are defined as fibres of <3  $\mu$ m diameter, longer than 5  $\mu$ m and with aspect ratios of at least 3:1 that can be inhaled into the lower regions of the lung and are generally acknowledged to be most important predictor of hazard and risk for cancers of the lung.

Further guidance on typical asbestos fibre content of manufactured products can be found in HSG 264.

The identification of asbestos containing materials and soils falls within our schedule of tests for which we hold UKAS accreditation, however opinions, interpretations and all other information contained in the report are outside the scope of UKAS accreditation.

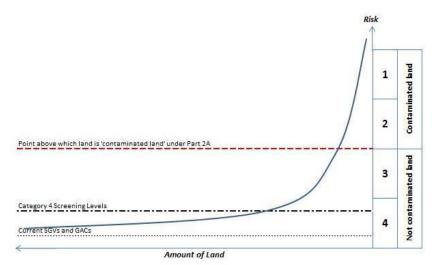
# vsp

# METHODOLOGY FOR THE DERIVATION OF GENERIC QUANTITATIVE ASSESSMENT CRITERIA TO EVALUATE RISKS TO HUMAN HEALTH FROM SOIL & GROUNDWATER CONTAMINATION

# UK APPROACH

In the UK, the potential risks to human health from contamination in the ground are usually evaluated through a generic quantitative risk assessment (GQRA) approach. This allows generic and conservative exposure assumptions to be readily applied to risk assessments, and can be a useful tool for rapidly screening data and to identify those contaminants or scenarios that could benefit from further investigation and/or site-specific detailed quantitative risk assessment (DQRA). Current industry good practice is to use the approach presented in the Environment Agency (EA) publications SR2<sup>1</sup> and SR3<sup>2</sup>. This approach allows the derivation of Generic Assessment Criteria (GACs), primarily for chronic exposure.

In April 2012, the Department of Environment, Food and Rural Affairs (Defra) published updated statutory guidance<sup>3</sup> which introduced a four category approach to determining whether land <u>in</u> <u>England and Wales</u> is contaminated or not on the grounds of significant possibility of significant harm (SPOSH). **Figure 1** presents a graphical representation of the categories.



#### Figure 1: Four Categories for Determining if Land Represent a SPOSH

Cases classified as Category 1 are considered to be SPOSH based on actual evidence or an unacceptably high probability of harm existing. Category 4 cases are those where there is no risk, or a low risk of SPOSH.

<sup>&</sup>lt;sup>1</sup> Environment Agency '*Human Health Toxicological Assessment of Contaminants in Soil*', Report SC050021/SR2. January 2009.

<sup>&</sup>lt;sup>2</sup> Environment Agency 'Updated Technical Background to the CLEA Model,' Report SC050021/SR3. January 2009.

<sup>&</sup>lt;sup>3</sup> Defra 'Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance'. April 2012.



GACs represent a minimal risk level, well within Category 4. A 2014 publication by Contaminated Land: Applicatons in Real Environments (CL:AIRE),SP1010<sup>4</sup> and endorsed by Defra<sup>5</sup> provided an approach to determine Category 4 Screening Levels (C4SLs) which are higher than the GACs whilst being "more pragmatic but still strongly precautionary". It also provided C4SLs for six contaminants of concern. Although the C4SLs were designed to support Part 2A assessments to determine 'contaminated land' they are specifically mentioned, along with reference to the Part 2A statutory guidance, by the Department for Communities and Local Government (DCLG) for use in a planning context<sup>6</sup>.

An updated version the Contaminated Land Exposure Assessment (CLEA) Workbook (v1.071) was released by the EA in September 2015 to take into account the publication of SP1010. The updates comprised: additional toxicity data for the six chemicals for which C4SLs were derived; two new public open space land use scenarios; updated exposure parameters; options to run the model using C4SL exposure assumptions; and increased functionality. There were no changes to algorithms, so it is still possible to replicate the withdrawn SGVs using the input parameters held within v1.071.

It should be noted that the four category approach has not been adopted in Scotland under Part 2A or the planning regime. The Part 2A statutory guidance applicable in Scotland (Paper SE/2006/44 dated May 2006) does not reflect the changes introduced by Defra in April 2012 which allow for the use of C4SLs within Part 2A risk assessments. Additionally, it is considered that the principal of 'minimal risk' should still apply under planning in Scotland, based on current guidance.

## WSP APPROACH

Following the withdrawal of the SGVs, and in the absence of an industry-wide, accepted set of GACs it is down to individual practitioners to derive their own soil assessment criteria. WSP has used the approach provided within SR2, SR3, SP1010, CLEA Workbook v1.071 and SR4<sup>7</sup> to produce a set of minimal risk GACs. The chemical-specific data within two key publications were considered during their production: CL:AIRE 2010<sup>8</sup> and LQM 2015<sup>9</sup>. Both documents provide comprehensive sets of GACs for different contaminants of concern.

The LQM Suitable For Use Levels (S4ULs) have selected exposure parameters consistent with the C4SL exposure scenarios. This approach was rejected by WSP as not representing minimal risk. However, the LQM S4UL document was critically reviewed and the approach and chemical input parameters were utilised where considered to be appropriate.

An industry-led C4SL Working Group is in the process of deriving a larger set of C4SLs in the near future, for approximately 20 contaminants. This will include a critical review of the chemical input data for all selected substances, and may therefore lead to further amendments to the chemical input data used in the WSP in-house screening values. It is considered likely that the contaminant list will

<sup>&</sup>lt;sup>4</sup> CL:AIRE 'Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination' SP1010, Final Project Report (Revision 2). September 2014.

<sup>&</sup>lt;sup>5</sup> Defra 'SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document'. December 2014.

<sup>&</sup>lt;sup>6</sup> DCLG Planning Practice Guidance 'Land Affected by Contamination', particularly Paragraphs 001 and 007. Ref IDs: 33-001-20140306 & 33-007-20140612.

<sup>&</sup>lt;sup>7</sup> Environment Agency 'CLEA Software (Version 1.05) Handbook (and Software)', Report SC050021/SR4. September 2009.

<sup>&</sup>lt;sup>8</sup> CL:AIRE 'The EIC/AGS/CL:AIRE Soil Generic Assessment Criteria for Human Health Risk Assessment'. ISBN 978-1-05046-20-1. January 2010.

<sup>&</sup>lt;sup>9</sup> Nathanail et al '*The LQM/CIEH S4ULs for Human Health Risk Assessment*', Land Quality Press, ISBN 978-0-9931084-0-2. 2015.

crossover with the 2009 EIC/AGS/CL:AIRE GACs. As such, this document was not critically reviewed by WSP.

WSP's current approach to the assessment of risks to human health is to continue to evaluate minimal risk through the use of in-house derived GACs, and to use the published C4SLs as a secondary tier of assessment until such time as additional C4SLs are published and/or in-house values are derived.

#### EXPOSURE MODELS

#### LAND USES

WSP has largely adopted the exposure assumptions of the generic land use scenarios included within SR3, with two additional public open space scenarios included from within SP1010 and two bespoke exposure scenarios (highways):

- à Residential with homegrown produce consumption;
- à Residential without homegrown produce consumption;
- à Allotments;
- à Commercial;
- à Public open space near residential housing (POS<sub>resi</sub>);
- à Public park (POS<sub>park</sub>);
- à Highways (surface soils); and
- à Highways (subsurface soils).

Exceptions are described in the following Sections.

#### SOIL PROPERTIES

SR3 assumes a sandy loam soil with a pH of 7 and a Soil Organic Matter (SOM) content of 6% for its generic land uses, based on the geographical spread of topsoils in the UK. WSP has adopted these default values. In addition, GACs based on an SOM of 1% and 2.5% have been derived, based on common experience of the nature of Made Ground and lack of topsoil on many brownfield sites.

#### RECEPTOR CHARACTERISTICS AND BEHAVIOURS

SP1010 provides some updated exposure parameters for long-term inhalation rates<sup>10</sup> and the consumption rates for homegrown produce<sup>11</sup> compared to those provided in SR3. This data was used to derived WSP's GACs.

The changes in inhalation rates do not apply to the allotment generic land use scenario, as these are based on the breathing rates for short-term exposure of light to moderate intensity activity which were derived from a study that was not updated in USEPA 2011, so the SR3 rates were retained.

<sup>&</sup>lt;sup>10</sup> USEPA, National Centre for Environmental Assessment 'Exposure Factors Handbook: 2011 Edition' EPA/600/R-09/052F. September 2011.

<sup>&</sup>lt;sup>11</sup> National Diet and Nutrition Survey 2008/2009 to 2010/2011.



#### HIGHWAYS EXPOSURE SCENARIOS

Human health GAC for a Highways exposure scenario have been derived. The site area is defined by publicly accessible land adjacent to highways, comprising both hard and soft landscaped areas. Exposure is considered to be largely transitory.

There are no publicly available GAC for this exposure scenario. Consequently, WSP have derived GAC for the following exposure scenarios:

- à Highways (surface soils); and
- à Highways (sub-surface soils).

Surface soils GAC are for soil at ground level and within 300mm of the surface. Conversely, subsurface GAC are for soils at a depth exceeding 0.3m bgl. These GAC are not to be used as import criteria.

The critical receptor is a young female child, CLEA age classes 4-9. This is consistent with the critical receptor for the POS(resi) exposure scenario, and considered to be appropriate for a child potentially playing outside without direct adult supervision.

For all GAC, a sandy loam soil and a soil organic matter content of 1% is assumed. There is no building on site.

Exposure scenarios for surface and subsurface soils are detailed below. These are considered to be conservative estimates, due to the mostly transitory use of publically accessible lands adjacent to highways.

#### HIGHWAYS GAC (SURFACE SOILS)

The relevant exposure pathways include direct soil and dust ingestion, dermal contact (outdoors) and the inhalation of outdoor dust and vapour.

The exposure frequency is 170 days per annum, and the occupancy period outdoors is 1 hour per day (as per the POS (resi) exposure scenario). The soil and dust ingestion rate has been set at 50 mg/day, consistent with a POS(park) exposure scenario.

#### HIGHWAYS GAC (SUBSURFACE SOILS)

The single relevant exposure pathway is the inhalation of outdoor vapour. Direct exposure pathways are not viable due to the depth of the soils below ground level.

The exposure frequency is 170 days per annum, and the occupancy period outdoors is 1 hour per day (as per the POS (resi) exposure scenario). The soil and dust ingestion rate has been set to zero, as direct exposure pathways to soils at this depth are not viable.

#### CHEMICAL DATA

#### PHYSICO-CHEMICAL PARAMETERS

Physico-chemical properties for the contaminants for which GACs have been derived have been obtained following critical review of the following hierarchy of data sources:

- 1. Environment Agency/Defra SGV reports where available;
- 2. Environment Agency 'Compilation of Data for Priority Organic Pollutants for Derivation of Soil Guideline Values', Report SC050021/SR7, November 2008; and
- 3. Published fate and transport reviews within Nathanail et. al 2015 and CL:AIRE 2010.

Where appropriate, and where sufficient data is available, values were adjusted to reflect a UK soil temperature of  $10^{\circ}C$  (e.g.  $K_{aw}$ ).

#### TOXICOLOGICAL DATA

Toxicological data for the derivation of minimal risk Health Criteria Values (HCV) for each contaminant was selected with due regard to the approach presented in SR2. Where appropriate, the following hierarchy of data sources was used:

- **1.** UK toxicity reviews published by authoritative bodies including:
  - < EA;
  - < Public Health England (PHE);
  - < Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT); and
  - < Committee on Carcinogenicity of Chemicals in Food, Consumer Products and the Environment (COC).
- 2. Authoritative European sources such as European Food Standards Agency (EFSA)
- **3.** International organisations including:
  - < World Health Organisation (WHO); and
  - Joint FAO/WHO Expert Committee on Food Additives (JECFA).
- 4. Authoritative country-specific sources including:
  - United States Environmental Protection Agency (USEPA);
  - < US Agency for Toxic Substances and Disease Registry (ATSDR);
  - < US Integrated Risk Information System (IRIS); and
  - < Netherlands National Institute for Public Health and the Environment (RIVM).

Factors such as the applicability of the data to human health (e.g. epidemiological vs. animal studies), the quality of the data, the level of uncertainty in the results and the age of the data were also taken into account in the final selection. Details for specific substances are available on request.

#### MEAN DAILY INTAKES

Estimations of background exposure for each threshold substance have been updated. In line with the SR2 approach, the exposure from non-threshold substances in the soil does not take into account exposure from other sources, and as such GACs were derived without consideration of the Mean Daily Intake (MDI) for those substances.

The data published by the EA in its series of TOX reports between 2002 and 2009 was evaluated to determine whether the values were considered to remain valid today. Values from these current UK published sources were not amended unless they were considered to be significantly different so that the GACs remained as comparable as possible with the revoked SGVs.

#### ORAL MEAN DAILY INTAKES

Oral MDI were generally estimated as the sum of exposure via the ingestion of food and drinking water using the default adult physiological parameters presented in Table 3.3 of SR2.

Data on the exposure of substances from food ingestion was generally obtained from UK Total Diet Studies (TDS) published by the Food Standards Agency (FSA) and its predecessor the Ministry of Agriculture, Fisheries and Food (MAFF) and from studies commissioned by COT. Where no UK-specific data was available, MDI were derived from the European Food Safety Authority (EFSA), Health Canada and US sources. This was a rare occurrence, and in these instances, the data was evaluated to determine its applicability to the UK.

Data on the concentrations of substances in tap water was obtained from a variety of sources. UK data was used where available, with preference given to Drinking Water Inspectorate (DWI) 2014 data from water company tap water testing (LOD, 1<sup>st</sup> and 99<sup>th</sup> percentile data is available). Where the substance was not included in tap water testing, other UK sources of information were considered including:

- à DWI data from water company tap water testing from previous years;
- à COT; and
- à FSA.

Where UK data was not available, a number of other data sources were considered, largely WHO International Programme on Chemical Safety (IPCS) Concise International Chemical Assessment Documents (CICADs) and background documents for the development of Guidelines for Drinking Water Quality, using professional judgement on the relevance of the data to the UK. The final decision on the MDI from drinking water was made using professional judgement on the balance of relevance and probability, taking into account the detection limit where not detected, Koc and solubility, reduction in use of the substance, banned substances, tight controls (e.g. on explosives) and with due consideration to the SR2 instruction that "if no data or information in background exposure are available, background exposure should be assumed to be negligible and the MDI set to zero...."

Data from other countries was generally not used because it was considered that the hydrogeology of these countries along with industrial practices were unlikely to be reflective of the UK.



#### INHALATION MEAN DAILY INTAKES

Inhalation MDIs were based on estimates of average daily exposure by the inhalation pathway and calculated using the default adult physiological parameters presented in Table 3.3 of SR2.

The inhalation MDIs were generally estimated using background exposure data from the UK, derived from Defra's UK-AIR: Air Information Resource<sup>12</sup>, which provides ambient air quality data from a number of sites forming a UK-wide monitoring network. The MDIs for heavy metals were based on rolling annual average metal mass concentration data from Defra's UK Heavy Metals Monitoring Network from the period October 2009 to September 2010<sup>13</sup>.

Information for some substances was obtained from UK sources including Environment Agency TOX reports and data from the UK Expert Panel on Air Quality Standards (EPAQS). Where recent UK data was not available, data was sourced from the International Programme on Chemical Safety (IPCS), the World Health Organisation (WHO), the Agency for Toxic Substances and Diseases Registry (ATSDR), Health Canada, and various other peer-reviewed sources summarised by LQM/CIEH<sup>14</sup>.

For other substances, where no data or information on background exposure was available, background exposure was assumed to be negligible and the MDI set at 0.5\*TDI in accordance with guidance in SR2.

#### PLANT UPTAKE

Soil to plant concentration factors are available in CLEA v1.071 for arsenic, cadmium, hexavalent chromium, lead, mercury, nickel and selenium. For all remaining inorganic chemicals, concentration factors were obtained using the PRISM model. Substance-specific correction factors have been selected in accordance with the guidance established within SR3. This is consistent to the approach utilised in the derivation of the LQM S4UL and the EIC/AGS/CL:AIRE GAC.

Where there is a lack of appropriate data to enable the derivation of specific soil to plant concentrations factors for organic chemicals, plant uptake was modelled within CLEA v1.071 using the generic equations recommended within SR3, as follows:

- à Green Vegetables Ryan et al. (1988);
- à Root Vegetables Trapp (2002);
- à Tuber Vegetables Trapp et al. (2007); and
- à Tree Fruit Trapp et al. (2003).

There are no suitable models available for modelling uptake for herbaceous fruit or shrub fruit. Exposure is considered negligible.

<sup>&</sup>lt;sup>12</sup> Crown 2016 copyright Defra via uk-air.defra.gov.uk, licenced under the Open Government Licence (OGL).

<sup>&</sup>lt;sup>13</sup> Defra, 2013 Spreadsheet of historic data for multiple years for the Metals network. Available online at: <u>http://uk-air.defra.gov.uk/data/metals-data</u>. [Accessed 13/03/2016].

<sup>&</sup>lt;sup>14</sup> LQM/CIEH, 2015. The LQM/CIEH S4ULs for Human Health Risk Assessment.



#### SOIL SATURATION LIMITS

GACs are not limited to their theoretical soil saturation within CLEA, although where either the aqueous or the vapour-based saturation is exceeded, this is highlighted within the Workbook (compared with the lower of the two values). This affects pathways which depend on partitioning calculations so in reality this only affects the vapour pathways and is relevant to organic substances and other substances, such as elemental mercury, that have a significant volatile component. However, the Workbook highlights saturation for direct contact pathways to indicate to the user where further qualitative consideration of free phase contamination at the surface may be required.

Where the lower of the two saturation limits is exceeded and the vapour pathway is the only exposure route being considered, the chronic risks to human health are likely to be negligible. Further evaluation could be undertaken using an alternative model suitable for evaluating non-aqueous phase liquids (NAPLs), such as the Johnson & Ettinger (J&E) approach described in USEPA 2003. However, WSP considers that if NAPLs are suspected, given the known limitations and oversimplifications of J&E, soil vapour monitoring is a more accurate way of assessing potential risks.

Where the lower saturation limit is exceeded for the vapour pathway and a number of exposure routes are being considered, then the contribution from the NAPL via vapour inhalation to the overall exposure can be evaluated using the procedure provided in SR4. WSP would evaluate this as part of a DQRA process or through soil vapour monitoring on-site to determine site-specific soil vapour concentrations.

#### CHEMICAL SPECIFIC ASSUMPTIONS

#### CYANIDES

Cyanide has high acute toxicity, and short term exposure is an important consideration when assessing the risks from soils contaminated with cyanide. The primary risk to human receptors from free cyanide in soils is an acute risk.

There is no current UK guidance available for calculating acute risks from free cyanide. Consequently, GAC for acute exposure were derived using the algorithms presented in MADEP 1992<sup>15</sup> and assuming a one-off ingestion of 10g of soil (this conservative value has been taken as an upper bound estimate for a one-off soil ingestion rate amongst children). Receptor body weights have been selected according to the critical receptor for each exposure scenario. The lowest of the chronic and acute GAC for each land use scenario were adopted by WSP.

#### LEAD

The SGV for lead was withdrawn by the EA in 2009, and in 2011 the EA withdrew their published TOX report in light of new scientific evidence. The C4SL for lead was derived using the latest scientific evidence from a large human dataset. As such, no chemical-specific margin was applied in the derivation of the C4SL for lead. It may be possible for WSP to derive a GAC for lead using the same dataset and applying a chemical-specific margin, but the value is likely to be lower than UK natural background concentrations. Therefore, WSP has adopted the toxicological data used to derive the C4SLs in deriving the GAC for lead until such time as alternative GACs are published by an authoritative body. The relative bioavailability was set at 100% in line with the approach taken for other GACs, whereas the C4SL assumes 60% for soil and 64% for airborne dust. Thus, the WSP GAC are lower than the C4SLs.

<sup>&</sup>lt;sup>15</sup> MADEP 'Background Documentation for the Development of an "Available Cyanide" Benchmark Concentration' 1992. <u>http://www.mass.gov/dep/toxics/cn\_soil.htm</u>



#### POLYCYCLIC AROMATIC HYDROCARBONS

WSP's approach to the assessment of polycyclic aromatic hydrocarbons (PAHs) uses the surrogate marker approach. BaP was used as a surrogate marker for all genotoxic PAHs in line with the Health Protection Agency 2010<sup>16</sup> recommendations and SP1010. This assumes that the PAH profile of the data is similar to that of the coal tars used in the Culp *et al* oral carcinogenicity study from which the toxicity data for BaP was produced. In reality, this profile has been shown by HPA to be applicable on the majority of contaminated sites based on assessment of sites across the country.

The alternative is the Toxic Equivalency Factor (TEF) approach which uses a reference compound and assigns TEFs for other compounds based on estimates of potency. Key uncertainties with this approach include the assumption that all compounds have the same toxic mechanism of action within the body and that no compounds with a greater potency than the reference compound are present. It is considered by the HPA that the TEF approach is likely to under predict the true carcinogenicity of PAHs and therefore favours the surrogate marker approach.

For these reasons, WSP considers that the adoption of BaP as a surrogate marker for genotoxic PAHs, as opposed to the TEF approach, is reasonable. In rare cases where the PAH profile may differ from the wide definitions of the Culp *et al* study the user should discuss their project with an experienced risk assessor. In addition, WSP has derived a GAC for naphthalene, which is commonly a risk driver due to its high volatility, relative to other PAH compounds.

#### TRIMETHYLBENZENES

The GAC for trimethylbenzenes can be used for the assessment of any individual isomer (1,2,3-trimethylbenzene, 1,2,4-trimethylbenzene or 1,3,5-trimethylbenzene), or a mixture of the three isomers.

#### CHEMICAL GROUPS

For a number of chemical groups, the available toxicity data is for combinations of chemicals. Given that the physico-chemical parameters may differ between the chemicals, the GACs for the chemicals within the groups have been calculated and then the lowest GAC selected to represent the entire group. This was the approach taken by the EA for m-, o- and p-xylenes, and has also been adopted by WSP for:

- à 2-chlorophenol, 2,4-dichlorophenol, 2,4,6-trichlorophenol and 2,3,4,6-tetrachlorophenol;
- à 2-, 3- and 4-methylphenol (total cresols);
- à aldrin and dieldrin; and
- à  $\alpha$  and  $\beta$ -endosulphan.

<sup>&</sup>lt;sup>16</sup> HPA Contaminated Land Information Sheet 'Risk Assessment Approaches for Polycyclic Aromatic Hydrocarbons (PAHs) 2010

#### **EXPOSURE TO VAPOURS**

#### INHALATION OF MEASURED VAPOURS

WSP has derived a set of soil vapour GACs (GAC<sub>sv</sub>) that allow for the assessment of measured site soil vapour concentrations, using J&E, in order to establish potential risks via indoor inhalation of vapours. This methodology enables a more robust assessment of exposure via the inhalation of soil vapours indoors than using CLEA-derived soil GAC, as it is based upon measured soil vapour concentrations beneath the site. It also allows for the assessment of vapours from all source terms (i.e. groundwater, soil or NAPL). Outdoor inhalation was not included. WSP considers that the indoor inhalation pathway is the significantly dominant risk-driver.

The generic land use scenarios within CLEA (residential and commercial) that were used to derive the soil GAC were used to define the receptor and building characteristics for the soil vapour GAC. Only residential and commercial generic land use scenarios include the indoor inhalation of vapours pathway.

The  $GAC_{sv}$  were derived for three different soil types; sand, sandy loam and clay, reflecting the importance of this parameter within the J&E model. A depth to contamination of 0.85 m below the base of the building foundation was assumed (i.e. 1 m below ground level). This differs from the depth assumed for the soil GAC (0.5 m bgl), but was selected by WSP as a reasonable worst case scenario.

It is acknowledged that the J&E commonly over-predicts indoor vapour concentrations. In particular, it will significantly over-predict vapour concentrations for suspended floor slabs, which many new builds are constructed with, it does not take into account lateral migration and assumes an infinite source of contamination at steady state conditions. In addition, it is common for soil gas/vapour wells to be installed with at least 1 m of plain riser at the surface and this equates to a total depth of 0.85 m below the building foundation plus a 0.15 m thick foundation, and so is more representative of the depth that samples will be taken from.

The TDSIs and IDs for each substance were converted from  $\mu$ gkg<sup>-1</sup>bwday<sup>-1</sup> to  $\mu$ gm<sup>-3</sup> using the standard conversions quoted in Table 3.3 of SR2, thereby replacing the need to model C<sub>air</sub> in the equation:

$$C_{air} = \alpha. C_{vap}$$
. 1,000,000 $cm^3m^{-3}$ 

Where:

 $C_{air}$  is the concentration of vapours within the building, mg<sup>-3</sup>

 $\alpha$  is the steady state attenuation coefficient between soil and indoor air, dimensionless  $C_{vap}$  is the soil vapour concentration, mgcm<sup>-3</sup>

The target concentrations within indoor air for each substance (C<sub>air</sub>) are a function of receptor inhalation rates and occupancy periods, as defined by the site conceptual exposure model (assuming standard CLEA occupancy periods and receptors).

The attenuation factor was calculated using J&E (Equation 10.4 in SR3) and the resulting  $C_{vap}$  is equivalent to the GAC<sub>sv</sub> for the modelled exposure scenario.

Where reported soil vapour concentrations exceed the relevant saturated vapour concentration, free product may occur, and the user should discuss their project with an experienced risk assessor.



#### INHALATION OF GROUNDWATER-DERIVED VAPOURS

WSP has derived a set of groundwater GACs ( $GAC_{gw}$ ) to evaluate the potential risks through the indoor inhalation of groundwater-derived vapours by first applying the approach described above for the derivation of the WSP  $GAC_{sv}$  to determine the acceptable concentration in soil vapour directly above the water table.

The depth to groundwater was assumed to be 1 m bgl (i.e. 0.85 m below the base of the building foundation). This depth was considered to be more representative of commonly encountered groundwater conditions than the 0.5 m below the base of the building foundation (i.e. 0.65 m bgl) that is used by CLEA for an unsaturated source present in the overlying soil.

The  $GAC_{gw}$  was then back-calculated from the  $GAC_{sv}$  using the air-water partition coefficient (K<sub>aw</sub>) for each substance.

The WSP Groundwater Vapour GAC are protective against a dissolved phase contaminant source only. If the presence of NAPL is suspected, the risks from this source will need to be assessed. Where reported groundwater concentrations exceed the relevant solubility limit, free product may occur, and the user should discuss their project with an experienced risk assessor.



#### **INTERNAL GUIDANCE NOTE**

# GROUNDWATER & SURFACE WATER RISK ASSESSMENT

### WSP APPROACH TO SELECTING APPROPRIATE UK SCREENING CRITERIA

#### **GENERAL INFORMATION**

For sites in the UK, the regulators are the Environment Agency (EA), Natural Resources Wales (NRW) and the Scottish Environment Protection Agency (SEPA). NRW generally refers to EA documentation, unless otherwise specified.

We apply the requirements of the <u>Water Framework Directive (WFD)</u>, <u>Groundwater Daughter Directive (GWDD)</u>, <u>Environmental Quality Standards Directive (EQSD)</u>, <u>UK Regulations and Directions</u>, and follow the <u>EA Remedial</u> <u>Targets Methodology</u> and <u>SEPA WAT-PS-10-01</u> guidance.

The GWDD and applicable guidance states that where a **hazardous** substance is present in the soil beneath a site but is yet to enter groundwater, **no discernible entry** of that hazardous substance is allowed into **groundwater** under the concept of "*prevent*". This effectively requires the allowable concentration of the contaminant of concern to be only either background or the limit of detection within the groundwater body. The EA has produced a list Minimum Reporting Values (MRVs) to support the assessment of 'discernible entry' which SEPA also uses. For hazardous substances that do not have an MRV, the limit of detection should be used.

Where a hazardous substance has already entered the groundwater to a discernible level the regulators may accept a pragmatic approach and appropriate quality standards may be used to quantify the risk under the concept of seeking to *"limit"* an existing impact.

Where **non-hazardous** pollutants in groundwater are concerned, under the concept of "*limit*", **no new pollution** (or substantial risk of pollution) of groundwater is allowable and quality standards are generally an acceptable concentration.

For surface water bodies or groundwater-dependent terrestrial ecosystems, under the EQSD, quality standards are generally an acceptable concentration irrespective of whether the substance is hazardous or non-hazardous.

Both RTM and WAT-PS-10-01 state that any standard used must also be **relevant to the nature of the receptor** and that they should be *'fit for purpose'* in terms of the specific period of time over which they should be measured. For example, **drinking water standards should not be used to protect a river**.

The WSP approach is as follows:

- Quantitative risk assessment is to be undertaken by comparing modelled or actual concentrations in groundwater or surface water with an appropriate standard.
- The hierarchy of sources of screening criteria used is:
  - 1. UK published values;
  - 2. EU published values; and
  - 3. WHO published values.
- Country-specific values should not be used with the following exceptions:
- Where SEPA has specified that their use is acceptable.
- Where a client has specifically requested. In these circumstances, we should advise our client of the limitations of using the values.
- Where the limit of detection (LOD) is greater than a published screening criterion, we should ensure that the best available LOD has been used. Where the best available LOD has been used, the assessor should not determine



that a potential risk exists to the water body. This is in line with the approach that the EA and SEPA take in determining the classification status of the water bodies. Where the LOD could have been lower, this should be highlighted as a limitation in our assessment.

- Where no published standard is available, we determine on a case-by-case basis whether site-specific or chemical-specific criteria should be derived through additional research or studies.
- In the absence of additional information being available, WSP will determine whether the limit of detection is considered to be an appropriate assessment criterion, or whether we disregard the substance from assessment.

#### HAZARDOUS SUBSTANCES IN GROUNDWATER

The GWDD seeks to prevent environmental damage and hence requires no discernible entry of hazardous substances into groundwater.

	ENGLAND & WALES		SCOTLAND					
•	Where discernible entry into groundwater has not yet occurred, soil leachate concentrations or theoretical partitioning calculations should be used to determine	•	Theoretically, where the receptor is a groundwater body, SEPA requires MRVs to be used as the assessment limit for hazardous substances.					
	the presence or absence of hazardous substances. In this case, MRVs should be used as the target concentration.	•	However, where an assessment of 'significant' pollution under Part 2A is required, the consideration of MRVs can be superseded. So in reality, where					
•	Where no MRV exists, an appropriate LOD should be used for each hazardous substance.		discernible entry has already occurred, i.e. concentrations are detectable in groundwater, an					
•	Where discernible entry has already occurred, i.e. concentrations are detectable in groundwater, an appropriate target concentration based on a published standard can be used i.e. the requirement		appropriate target concentration based on a published standard can be used i.e. the requirement of WFD is relaxed to achieve a more pragmatic remedial target than background concentrations.					
	of WFD is relaxed by the EA in order to achieve a more pragmatic remedial target than background concentrations.	1	Where concentrations are detected up-gradient, SEPA allows this to be taken into account in the MRV beneath a site.					
		•	Where no MRV exists, an appropriate LOD should be used for each hazardous substance.					

**Note:** where a groundwater sample matrix is not suitable for analysis by sensitive analytical methods, for example, samples of landfill leachate containing high ionic concentrations, the EA has produced a list of alternative MRVs which may be appropriate. These have not been included in gINT.

#### IMPACT TO AQUATIC LIFE IN SURFACE WATERS

Where a published EQS exists:

- Use annual average (AA) EQS. Bear in mind that we generally do not monitor regularly over a year so our analytical results provide a snap shot for further consideration. Highlight these limitations in your report. The EA states that monthly or quarterly monitoring with a minimum of nine samples over three years, and three samples per year, is required.<sup>1</sup> No equivalent specification is stated by SEPA.
- Do not use Maximum Allowable Concentrations (MAC) in the majority of cases. They are designed to assess acute exposure of the aquatic environment to pollutants. They may be applicable in a one-off catastrophic spill or leak in an emergency response situation. Note: gINT only includes MACs for contaminants for which no AA exists.

<sup>&</sup>lt;sup>1</sup> EA 'Rules for Assessing Surface Water Body Status and Potential: Decision document for 2015 new building block (Cycle 2) Water Framework Directive classifications' Version 2.0, (updated October 2015).



- Focus on chemical status of the surface water body:
  - Priority substances
  - Other pollutants
- We do not assess ecological status on a regular basis with the exception of specific pollutants. These are part of the overall ecological status.
- Priority substances, other pollutants and specific pollutant EQSs represent the boundary between Good status and failing surface water quality. Therefore, an exceedance highlights a potential risk that the surface water may not achieve or maintain a Good status which contravenes the requirements of the WFD.
- Adopt this approach for all surface water bodies, not just those where chemical quality has been assessed by the EA/NRW/SEPA.
- Ammonia is part of the ecological status of the surface water body. You may evaluate it if your site is a significant source e.g. gasworks. Compare your results to the Good status. Anything above this concentration may represent a contravention of WFD.
- A number of EQSs do not come into force until 22 December 2018. Consider whether it is pertinent to use these values as an indicator of long term contamination issues that may pose issues to your client in the near future.
- You should always consider the use of mBAT to determine the bioavailable EQS for copper, lead, manganese, nickel and zinc.
- Hardness, pH and dissolved organic carbon (DOC) and dissolved calcium should be retained each and every time from samples taken from the receiving surface water and NOT the groundwater on-site.
- Consider your results against the regulator's classification of the surface water body that you are assessing. How
  do your findings compare? Is your site potentially deteriorating the current chemical or ecological status? You
  can find links to the data in the RBMs as follows:
  - England <u>http://environment.data.gov.uk/catchment-planning/</u>
  - Wales http://waterwatchwales.naturalresourceswales.gov.uk/en/
  - Scotland -

Where an EQS has not been published under WFD or EQSD the following can apply:

	ENGLAND & WALES		SCOTLAND
•	Use EA operational Environmental Quality Standards for Environmental Permitting. (These standards are	•	Non-WFD EQSs have also been published by SEPA in WAT-SG-53. These comprise two lists:
	essentially the repealed Dangerous Substances Directive (DSD) substances. They have been advocated by SEPA for use in Scotland and, in the case of xylenes, by CL:AIRE 2017 in 'Petroleum Hydrocarbons in Groundwater: <i>Guidance on</i> <i>assessing petroleum hydrocarbons using existing</i>		<ul> <li>repealed Dangerous Substances Directive (DSD) substances which are no longer discharged in significant quantities so are not considered under WFD but which have been derived using the rigorous process required for WFD substances.</li> </ul>
	hydrogeological risk assessment methodologies' v1.1 March 2017).		<ul> <li>non-statutory EQS from other sources, to be used with caution.</li> </ul>
•	Ethylbenzene - the proposed EQS from EA 'Proposed Environmental Quality Standards for Ethylbenzene in Water' R&D Technical Report P2- 115/TR4. 2002 is used. (This is equivalent to the Scottish non-statutory EQS.)	•	Petroleum hydrocarbons - where no equivalent VOC, SVOC or PAH data are available use proxy compounds as per CL:AIRE 'Petroleum Hydrocarbons in Groundwater: <i>Guidance on</i> <i>assessing petroleum hydrocarbons using existing</i>
•	Petroleum hydrocarbons - where no equivalent VOC, SVOC or PAH data are available use proxy compounds as per CL:AIRE 'Petroleum		hydrogeological risk assessment methodologies' v1.1 March 2017. Do not use WHO Drinking Water Standards.



Hydrocarbons in Groundwater: *Guidance on* assessing petroleum hydrocarbons using existing hydrogeological risk assessment methodologies' v1.1 March 2017. NEVER use WHO Drinking Water Standards. **NEVER** use the term "controlled waters" in Scotland it is "water environment".

#### IMPACT TO DRINKING WATER

Consider the current and potential future use of the aquifer when selecting the appropriate assessment criteria.

#### ABSTRACTION FOR PUBLIC AND PRIVATE POTABLE SUPPLY

In line with the RTM in England and Wales and WAT-PS-10-01 in Scotland, we use Drinking Water Quality Standards (DWS) to evaluate the potential risk to aquifers and surface waters which are abstracted for potable supply. Where an aquifer is not utilised for public potable supply, this is a conservative approach, but fits with the EA and SEPA's precautionary approach and protects the potential future exploitation of the groundwater. (We do not take this approach regularly for surface waters because they are less likely to be abstracted for potable supply.)

ENGLAND & WALES	SCOTLAND
The sources of drinking water standards are applied by WSP in the following hierarchy:	<ul> <li>WAT-PS-10-01 provides a list of Resource Protection Values (RPV) which are equivalent to the England and Wales approach, except that US EPA National</li> </ul>
<ul> <li>UK Drinking Water Standards (The Water Supply (Water Quality) Regulations of England, Wales and Scotland)</li> </ul>	Primary Drinking Water Regulations are also used, where they are lower than the equivalent WHO standard.
<ul> <li>EC Drinking Water Directive 1998</li> </ul>	<ul> <li>Other WHO Drinking Water Guidelines 2017</li> </ul>
<ul> <li>WHO Drinking Water Guidelines 2017</li> </ul>	<ul> <li>WHO Petroleum Products in Drinking Water 2008</li> </ul>
<ul> <li>WHO Petroleum Products in Drinking Water 2008</li> </ul>	

Note: Values for radioactivity are also available but have not been included in gINT.

*The Private Water Supplies Regulations* of England, Scotland and Wales prescribe maximum concentrations and values of inorganic and organic constituents as well as radioactivity and bacteria for natural waters intended for private supply (Type B). The concentrations and values are now the same as those for public potable supply.

#### **OTHER POTENTIAL RECEPTORS**

Ensure that you consider other potential receptors in your risk assessments, including, but not limited to:

- The Natural Mineral Water, Spring Water and Bottled Drinking Water Regulations of England, Scotland and Wales
  which prescribe maximum concentrations and values of inorganic and organic constituents as well as radioactivity
  and bacteria for natural waters intended for sale for human consumption.
- The Bathing Water Regulations 2013 which provides standards for the classification of the quality of bathing
  waters at specified locations on the basis of intestinal enterococci and E. coli levels.
- WAT-SG-53, Table 9a: Operational Standards for Aquaculture which provides the operational water quality standards used by SEPA for regulating the use of chemicals in aquaculture.



# OVERVIEW OF RELEVANT LEGISLATION

#### **EUROPEAN DIRECTIVES**

#### WATER FRAMEWORK DIRECTIVE

The European Union (EU) Water Framework Directive 2000/60/EC (WFD) is a strategic framework designed to:

- protect, improve and enhance the status and to prevent further deterioration of aquatic ecosystems and associated wetlands which depend on the aquatic ecosystems;
- promote the sustainable use of water; and
- reduce and reverse all pollution of water, especially by 'priority' and 'priority hazardous' substances.

#### **GROUNDWATER DAUGHTER DIRECTIVE**

The EU Groundwater Daughter Directive 2006/118/EC (GWDD) provides additional detail on the methodologies to implement the WFD (listed above). It provides procedures, definitions, criteria and standards for achieving 'Good' groundwater chemical status and provides a requirement to define groundwater safeguard zones to protect drinking water supplies.

Hazardous substances must be <u>prevented</u> from entering groundwater and non-hazardous substances should be <u>limited</u> from entering groundwater to concentrations that do not cause pollution.

#### **Key Points:**

- All water bodies should achieve Good chemical and ecological status by 2021.
- Hazardous substances must not enter groundwater (prevent).
- Non-hazardous substances must be limited to prevent pollution of groundwater (limit).

Discharge of <u>all</u> pollutants directly into groundwater, without percolation through soils or sub-soils is prohibited, subject to certain limited exemptions.

#### ENVIRONMENTAL QUALITY STANDARDS DIRECTIVE

The Environmental Quality Standards Directive (EQSD), also known as the Priority Substances Directive 2008/105/EC (PSD) as amended by 2013/39/EU, lays out the requirement to protect surface waters and defines EQSs for hazardous and non-hazardous priority substances as well as 'other' chemical pollutants that are deemed to pose a threat to the aquatic environment.

#### **UK LEGISLATION**

#### WATER ENVIRONMENT (WATER FRAMEWORK DIRECTIVE) REGULATIONS

The WFD, GWDD and EQSD have been transposed into UK law through The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (SI 2017/407) and The Water Environment (River Basin Management Planning etc.) (Miscellaneous Amendments) (Scotland) Regulations 2015 (SI 2015/211). These regulations set out the requirements and remits of River Basin Management plans.



#### STANDARDS AND CLASSIFICATION DIRECTIONS

To support the UK WFD Regulations, the details of the latest system of standards and classification to support the River Basin Management Plans are set out in a series of Directions:

- The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015;
- The Scotland River Basin District (Standards) Directions 2014; and
- The Scotland River Basin District (Standards) Amendment Directions 2015.

Scottish Environment Protection Agency (SEPA) 'Supporting Guidance (WAT-SG-53): Environmental Quality Standards and Standards for Discharges to Surface Waters' v6. December 2015 also summarises its approach, the standards provided in the Scottish Directions, plus a series of acceptable non-WFD additional standards.

#### CONTROL OF ACTIVE DISCHARGES TO WATER

The Environmental Permitting (England and Wales) Regulations 2016 (SI 2016/1154) and The Water Environment (Controlled Activities) (Scotland) Regulations 2011 transpose the parts of the WFD and GWDD that require the Environment Agency (EA) and SEPA to take all necessary measures to prevent the discharge of pollutants by direct or indirect input into groundwater as a result of <u>current</u> activities. The measures to prevent are regulated through

permitted surface activities and controls. It is an offence to cause or knowingly permit a groundwater activity unless authorised by a permit or registered as exempt.

SEPA makes the distinction that a 'discharge' is from a point source, whereas an 'input' could be from a point or diffuse source.

# CONTROL OF PASSIVE DISCHARGES TO WATER

Part 2A of The Environmental Protection Act 1990 (Part 2A) effectively controls the passive release of pollutants from land where the original activity that led to the contamination has ceased. (If subsequent activities disturb the land and cause a release of

#### **Key Points:**

- Passive discharge point source release from ground contamination from an activity that has ceased (historical).
- Active discharge point source release from current activities. Must not contravene the requirements of the WFD so controls/permits required.
- Direct discharges to groundwater are prohibited.
   Pollutants must percolate soil or sub-soil before

pollutants that discharge to groundwater, an Environmental Permit may be required at that stage.)

The control of passive discharges is also regulated through the planning system where the site, as a minimum, not be able to designated as 'contaminated land' as defined under Part 2A, and through Anti-Pollution Works Notices under Section 161A of the Water Resources Act 1991 (as amended).

Passive/historical releases of pollutants may also be controlled through voluntary remediation.



### UK APPROACH TO EVALUATING WATER BODIES

#### **RIVER BASIN MANAGEMENT PLANS**

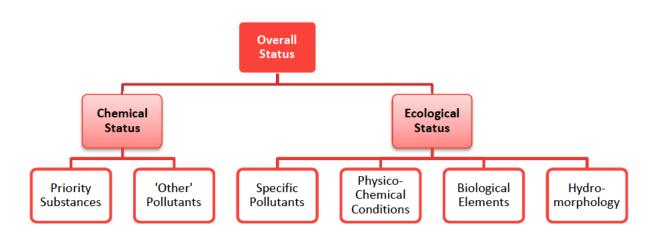
River Basin Management Plans (RBMP) are based on the detailed analysis of the impacts of human activity on the water environment within each river basin. They are designed to protect and improve the quality of our ground and surface water environment and are reviewed and updated every six years. They identify improvement measures to progress all ground and surface water bodies to 'Good' status by 2021.

#### SURFACE WATER BODY CLASSIFICATION

Environmental Quality Standards (EQSs) are used by the EA and SEPA to characterise, monitor and classify surface water bodies and to help these regulators establish measures to progress all water bodies to 'Good' status. For surface water bodies the following applies:

- Chemical status is determined on a 'Good' or 'Fail' basis.
- Ecological status is determined on a scale of 'High', 'Good', 'Moderate', 'Poor' and 'Bad'.
- The overall ecological status is determined by the lowest classification of all the parameters that are assessed.

#### For an overall 'Good' status both ecological and chemical status must be at least 'Good' (see Figure 1).



#### Figure 1: Elements of Surface Water Body Status Classification

*Priority substances* – are defined by the European Commission (EC) and are reviewed every six years to ensure they stay relevant and that the EQSs are up to date.

*Other pollutants* – not priority substances, but defined by the EC and with EQSs identical to those laid down in current legislation which was applicable prior to 13 January 2009.

*Specific pollutants* – European Union (EU) Member states are required to identify nationally significant pollutants to support the assessment of 'Good' ecological status.

#### Surface Water Bodies:

- Inland waters lakes, lochs, rivers, streams, canals, reservoirs
- Transitional waters estuarine and brackish river mouths
- Coastal waters -within one nautical mile of land



*Physico-chemical conditions* – includes parameters such as dissolved oxygen, pH, ammonia and phosphate that define the general chemistry of the surface water body and may influence the degree to which the aquatic ecosystem can thrive.

*Biological elements* – the condition and abundance of fish and invertebrates within the surface water body including the presence of invasive species.

*Hydromorphology* – includes water flow, sediment composition and the structure of the habitat and its ability to support an aquatic ecosystem.

#### GROUNDWATER BODY CLASSIFICATION

Groundwater bodies are classified on their quantitative and chemical status.

The quantitative status comprises four tests which evaluate the impact of groundwater abstractions on: water balance; impact to surface water bodies; impact to water-dependent terrestrial ecosystems; and saline or other intrusions.

The chemical status requires analytical data collected by the EA and the SEPA across the water body to be evaluated against five tests to determine the groundwater quality in terms of: saline or other intrusion; potential impact to surface water bodies and groundwater-dependent terrestrial ecosystems; drinking water quality and general chemical loading. The EA and SEPA assess

#### Groundwater:

 All water within the saturated zone below the surface of the ground.

#### Groundwater body:

- A volume of groundwater that is capable of supplying 10 m<sup>3</sup>/day or 50 people on a continuous basis.
- Must be protected for future resource potential.

the groundwater analytical data against a series of Threshold Values (TRVs) set out in the Standards and Classification Directions (2014 and 2015). The TRVs are used to decide if further, specific evaluation is required. i.e. They are not used by the regulators to classify the groundwater bodies' chemical status and, as such, they are **not appropriate to be used as part of site-specific investigations.** 

#### UK GUIDANCE ON THE SELECTION OF ASSESSMENT CRITERIA

The frameworks for assessing the risks to groundwater and surface water risk from pollutants are:

- EA 'Remedial Targets Methodology: Hydrogeological Risk Assessment for Land Contamination' 2006. (RTM).
- SEPA 'Position Statement (WAT-PS-10-01): Assigning Groundwater Assessment Criteria for Pollutant Inputs' v3.0, August 2014.

Although the RTM precedes the formal adoption of the WFD in England and Wales, the document was cognisant of the requirements of the forthcoming requirements of the WFD i.e. no entry of hazardous substances into water bodies, and no new pollution by all other substances.

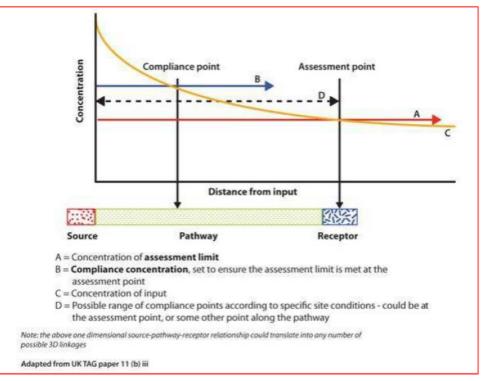


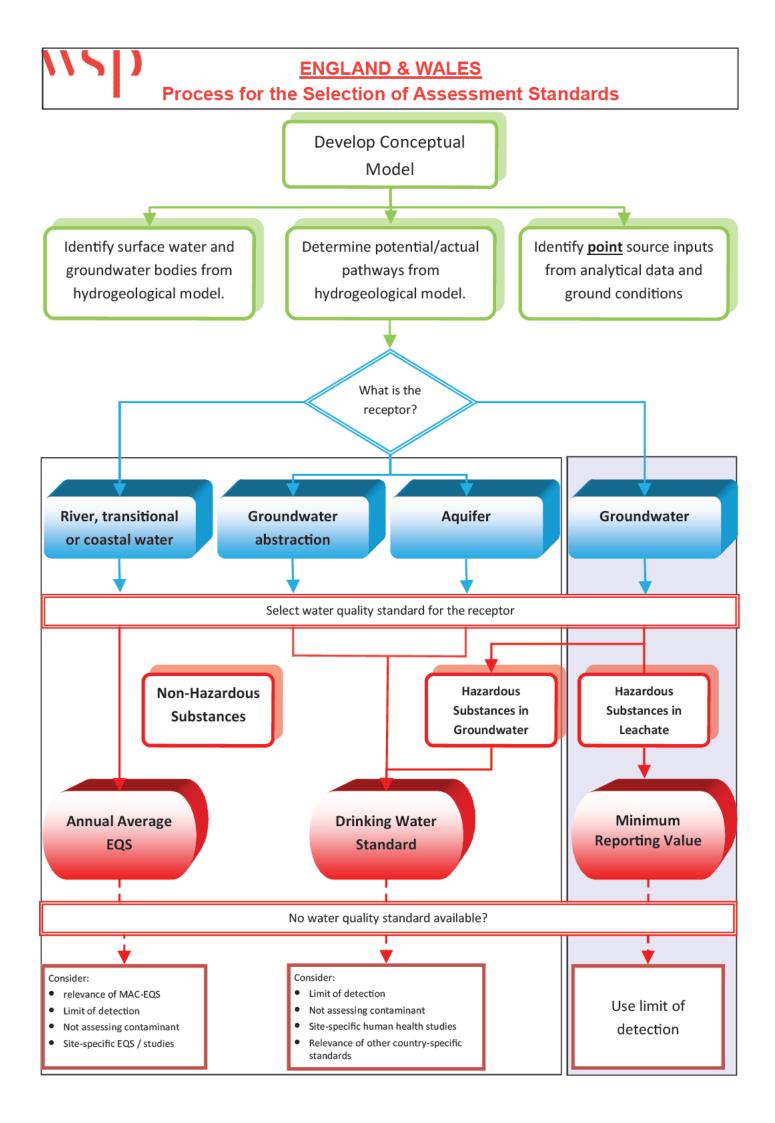
#### RTM and WAT-PS-10-01 differ in their nomenclature as follows in Table 1 and Figure 2:

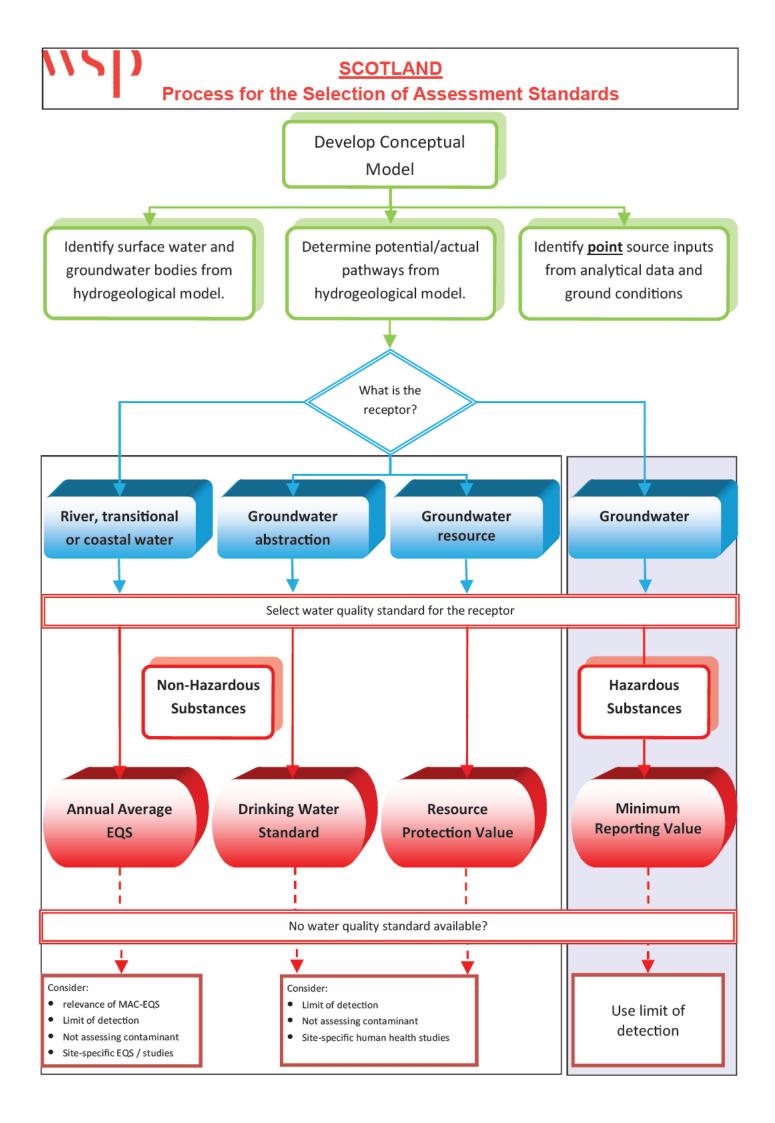
Table 1: Common Definitions in Water Risk Assessments

DEFINITION	NAME IN ENGLAND & WALES	NAME IN SCOTLAND					
Water bodies that are required to be assessed.	Controlled Waters	Water Environment					
The assessment standard of a substance which should not be exceeded.	Target concentration (where the compliance point is set at or near the receptor)	Assessment limit					
The point at or near a receptor where an assessment standard should be achieved.	Compliance point	Assessment point					
Concentration of a substance at a certain point along the contaminant pathway, back-calculated using fate and transport modelling to ensure that the assessment standard is not exceeded at the receptor.	Target concentration	Compliance concentration (Rarely used)					
The point along the contaminant pathway where a compliance/target concentration can be measured or predicted.	Compliance point	Compliance point (Rarely used)					

#### Figure 2: Assessment and Compliance Points







### PRE-REPORT DATA CHECK

	All GEOL_GEO2 codes are complete.
Ø	All GEOL_GEO2 codes are recognised and suitable for this report.
Ø	All SampleMatrix fields are complete
$\bigcirc$	All result and screening units match
	All TPH fractions are present for all samples to enable the calculation of the TPH Hazard Index

#### Parks Public Open Space, SOM=1%

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Unrecognised analytes															
	MADEGROUND			NATURAL GROUND						S	S	AC			
ANALYTE	MIN	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >A	LOCATIONS FAILING SCREENING		
Aliphatics & Aromatics >C10-44 (Unrecognised code)	10.0	13.2	42.8	10.0	5.00	10.0	-	mg/kg	6	12	5	0			
Aliphatics >C5-10 (Unrecognised code)	0.050	0.053	0.30	0.050	0.025	0.050	-	mg/kg	6	12	1	0			
Aromatics >C5-10 (Unrecognised code)	0.050	0.034	0.11	0.050	0.025	0.050	-	mg/kg	6	12	1	0			
Bis(2-chloroisopropyl)ether (TIC) (Unrecognised code)	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
WAC (Unrecognised code)	10.0	10.0	10.0	10.0	10.0	10.0	-	mg/kg	6	12	12	0			

#### Site Area(s) Selected: Whole site Phase(s): All phases

#### Parks Public Open Space, SOM=1%

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Aliphatics and Aromatics															
	MADEGROUND		NATURAL GROUND						S	S	0				
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	МАХ	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening		
Aliphatic C05-C06	0.010	0.009	0.043	0.010	0.005	0.010	94,700	mg/kg	6	12	1	0			
Aliphatic C06-C08	0.010	0.015	0.086	0.010	0.011	0.017	146,000	mg/kg	6	12	4	0			
Aliphatic C08-C10	0.010	0.023	0.17	0.010	0.009	0.013	14,300	mg/kg	6	12	3	0			
Aliphatic C10-C12	1.00	0.50	1.00	1.00	0.50	1.00	20,900	mg/kg	6	12	0	0			
Aliphatic C10-C44	5.00	6.88	17.1	5.00	2.50	5.00	-	mg/kg	6	12	6	0			
Aliphatic C12-C16	1.00	0.50	1.00	1.00	0.50	1.00	24,700	mg/kg	6	12	0	0			
Aliphatic C16 C21	1 00	0 58	1 32	1 00	0 50	1 00		mg/kg	6	12	1	0			
Aliphatic C16-C35	1.71	6.70	16.0	1.00	1.37	2.24	455,000	mg/kg	6	12	11	0			
Aliphatic C21-C35	1.71	6.49	14.7	1.00	1.37	2.24	-	mg/kg	6	12	11	0			
Aliphatic C35-C44	1.00	0.56	1.06	1.00	0.50	1.00	455,000	mg/kg	6	12	1	0			
Aromatic C06-C07	0.010	0.005	0.010	0.010	0.005	0.010	-	mg/kg	6	12	0	0			
Aromatic C07-C08	0.010	0.005	0.010	0.010	0.005	0.010	86,800	mg/kg	6	12	0	0			
Aromatic C08-C10	0.010	0.016	0.11	0.010	0.005	0.010	7,220	mg/kg	6	12	2	0			
Aromatic C10-C12	1.00	0.50	1.00	1.00	0.50	1.00	9,240	mg/kg	6	12	0	0			
Aromatic C10-C44	5.00	7.03	25.7	5.00	2.50	5.00	-	mg/kg	6	12	6	0			
Aromatic C12-C16	1.00	0.50	1.00	1.00	0.50	1.00	10,200	mg/kg	6	12	0	0			

Gint Database: 70072063 Drax FCA.gpj

Data range: All data selected

# wsp

#### Site Area(s) Selected: Whole site Phase(s): All phases

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Aliphatics and Aromatics															
	MA	DEGROUI	ND	ΝΑΤυ	RAL <b>G</b> RC	UND				S	S	U			
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLE	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening		
Aromatic C16-C21	1.00	0.59	1.43	1.00	0.50	1.00	7,630	mg/kg	6	12	1	0			
Aromatic C16-C35	1.00	5.59	18.7	1.00	1.93	3.35	-	mg/kg	6	12	10	0			
Aromatic C21-C35	1.00	5.42	17.2	1.00	1.93	3.35	7,820	mg/kg	6	12	10	0			
Aromatic C35-C44	1.00	1.16	7.09	1.00	0.50	1.00	7,820	mg/kg	6	12	1	0			
Aromatic C40-C44	1.00	0.56	1.13	1.00	0.50	1.00	-	mg/kg	6	12	1	0			
Total Aliphatics and Aromatics (C5-C44)	10.0	12.7	42.8	10.0	5.00	10.0	-	mg/kg	6	12	4	0			
TPH Hazard Index	0.0003	0.001	0.003	0.0003	0.0005	0.0007	1.00	mg/kg	6	12	N/A	0			
Alkali and Alkaline Earth Met	als														
	MA	DEGROUI	ND	ΝΑΤυ	RAL <b>G</b> RC	UND				S	s				

	MA	DEGROU	ND	ΝΑΤυ	IRAL GRO	DUND				្ល	្ល	0			
ANALYTE	MIN	MEAN*	MAX	NIM	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES	NO. OF LOCATIONS >A	LOCATIONS FAILING SCREENING		
Barium	37.1	77.9	117	48.9	106	164	5,770	mg/kg	6	12	12	0			
Beryllium	0.32	0.66	1.04	0.45	1.08	1.71	63.0	mg/kg	6	12	12	0			

Gint Database: 70072063 Drax FCA.gpj

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Asbestos															
	MA	DEGROL	IND	ΝΑΤΙ		DUND				S	S	0			
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	МАХ	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening		
Asbestos Quantification - Gravimetric	0.001	0.0005	0.001	-	-	-	-	%	1	1	0	0			
Asbestos Quantification - PCM Evaluation	0.001	0.0005	0.001	-	-	-	-	%	1	1	0	0			
Asbestos Quantification - Total %	0.001	0.0005	0.001	-	-	-	-	%	1	1	0	0			
Additional Asbestos Components using TM048 (Quantification)	-	-	-	-	-	-	-	No units	1	1	0	0			
Asbestos Ex. actinolite	-	-	-	-	-	-	-	No units	6	10	0	0			
Asbestos Ex. Amosite	-	-	-	-	-	-	-	No units	6	10	0	0			
Asbestos Ex. anthophyllite	-	-	-	-	-	-	-	No units	6	10	0	0			
Asbestos Ex. Chrysotile	-	-	-	-	-	-	-	No units	6	10	0	0			
Asbestos Ex crocidolite								No units	6	10	0	0			
Asbestos Ex. tremolite	-	-	-	-	-	-	-	No units	6	10	0	0			
Asbestos Quantification Comments	-	-	-	-	-	-	-	No units	1	1	0	0			
Non-Asbestos Fibres	-	-	-	-	-	-	-	No units	6	10	0	0			

Gint Database: 70072063 Drax FCA.gpj

# wsp

Site Area(s) Selected: Whole site

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

BTEX and Fuel Additives															
	MA	DEGROU	IND	NATU	RAL GRO	DUND				<u>ເ</u>	ŝ	0			
ANALYTE	Min	MEAN*	MAX	NIM	MEAN*	МАХ	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening		
1,2,4-Trimethylbenzene	0.090	0.045	0.090	0.090	0.045	0.090	3,260	mg/kg	6	12	0	0			
1,3,5-Trimethylbenzene	0.080	0.040	0.080	0.080	0.040	0.080	3,260	mg/kg	6	12	0	0			
Benzene	0.090	0.045	0.090	0.090	0.045	0.090	90.0	mg/kg	6	12	0	0			
BTEX	0.40	0.20	0.40	0.40	0.20	0.40	-	mg/kg	6	12	0	0			
Ethylbenzene	0.040	0.020	0.040	0.040	0.020	0.040	16,500	mg/kg	6	12	0	0			
Methyl t-butylether (MTBE)	0.10	0.050	0.10	0.10	0.050	0.10	98,400	mg/kg	6	12	0	0			
Tertiary Amyl Methyl Ether (TAME)	0 10	0 050	0 10	0 10	0 050	0 10		mg/kg	6	12	0	0			
Toluene	0.070	0.035	0.070	0.070	0.035	0.070	87,200	mg/kg	6	12	0	0			
Xylene - Total (Summed)	0.10	0.10	0.10	0.10	0.10	0.10	16,600	mg/kg	6	12	12	0			
Xylene-m & p	0.10	0.050	0.10	0.10	0.050	0.10	16,600	mg/kg	6	12	0	0			
Xylene-o	0.10	0.050	0.10	0.10	0.050	0.10	16,600	mg/kg	6	12	0	0			

Site Area(s) Selected: Whole site Phase(s): All phases

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Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Chlorinated Aliphatics															
	MA	DEGROU	IND	ΝΑΤυ		DUND				ទ	S	U			
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	МАХ	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING		
1,1,1,2-Tetrachloroethane	0.10	0.050	0.10	0.10	0.050	0.10	1,470	mg/kg	6	12	0	0			
1,1,1-Trichloroethane	0.070	0.035	0.070	0.070	0.035	0.070	110,000	mg/kg	6	12	0	0			
1,1,2,2-Tetrachloroethane	0.10	0.050	0.10	0.10	0.050	0.10	1,810	mg/kg	6	12	0	0			
1,1,2-Trichloroethane	0.10	0.050	0.10	0.10	0.050	0.10	1,110	mg/kg	6	12	0	0			
1,1-Dichloroethane	0.080	0.040	0.080	0.080	0.040	0.080	20,400	mg/kg	6	12	0	0			
1,1-Dichloroethene	0.10	0.050	0.10	0.10	0.050	0.10	3,500	mg/kg	6	12	0	0			
1,1 Dichloropropene	0 10	0 050	0 10	0 10	0 050	0 10		mg/kg	6	12	0	0			
1,2,3-Trichloropropane	0.16	0.080	0.16	0.16	0.080	0.16	-	mg/kg	6	12	0	0			
1,2-Dichloroethane	0.050	0.025	0.050	0.050	0.025	0.050	21.0	mg/kg	6	12	0	0			
1,2-Dichloropropane	0.10	0.050	0.10	0.10	0.050	0.10	158	mg/kg	6	12	0	0			
1,3-Dichloropropane	0.070	0.035	0.070	0.070	0.035	0.070	-	mg/kg	6	12	0	0			
2,2-Dichloropropane	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
Carbon tetrachloride	0.10	0.050	0.10	0.10	0.050	0.10	1,250	mg/kg	6	12	0	0			
Chloroethane	0.10	0.050	0.10	0.10	0.050	0.10	154,000	mg/kg	6	12	0	0			
Chloroform	0.080	0.040	0.080	0.080	0.040	0.080	2,770	mg/kg	6	12	0	0			
Chloromethane	0.070	0.035	0.070	0.070	0.035	0.070	142	mg/kg	6	12	0	0			

Gint Database: 70072063 Drax FCA.gpj

Data range: All data selected

# 115

Site Area(s) Selected: Whole site

Phase(s): All phases

Report Name: Screener\_Soil\_v3.07.rpt

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Chlorinated Aliphatics														
	MA	DEGROU	IND	ΝΑΤυ		DUND				S	S	U		
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	МАХ	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening	
Cis 1,2-Dichloroethene	0.060	0.030	0.060	0.060	0.030	0.060	692	mg/kg	6	12	0	0		
Cis 1,3-Dichloropropene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		
Dichloromethane	0.10	0.057	0.15	0.17	0.086	0.18	1,510	mg/kg	6	12	0	0		
Hexachlorobutadiene	0.10	0.050	0.10	0.10	0.050	0.10	48.0	mg/kg	6	12	0	0		
Hexachloroethane	0.10	0.050	0.10	0.10	0.050	0.10	158	mg/kg	6	12	0	0		
Tetrachloroethene (PCE)	0.050	0.025	0.050	0.050	0.025	0.050	812	mg/kg	6	12	0	0		
Trans-1,2-Dichloroethene	0.10	0.050	0.10	0.10	0.050	0.10	1,650	mg/kg	6	12	0	0		
Trans-1,3-Dichloropropene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		
Trichloroethene (TCE)	0.090	0.045	0.090	0.090	0.045	0.090	41.0	mg/kg	6	12	0	0		
Vinyl chloride	0.060	0.030	0.060	0.060	0.030	0.060	4.80	mg/kg	6	12	0	0		

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Chlorinated Aromatics														
	MA	DEGROU	IND	ΝΑΤυ	IRAL <b>G</b> RO	DUND				S	S	0		
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	МАХ	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening	
1,2,3-Trichlorobenzene	0.20	0.10	0.20	0.20	0.10	0.20	765	mg/kg	6	12	0	0		
1,2,4-Trichlorobenzene	0.10	0.050	0.10	0.10	0.050	0.10	1,350	mg/kg	6	12	0	0		
1,2-Dichlorobenzene	0.10	0.050	0.10	0.10	0.050	0.10	24,400	mg/kg	6	12	0	0		
1,3,5-Trichlorobenzene	0.20	0.10	0.20	0.20	0.10	0.20	381	mg/kg	6	12	0	0		
1,3-Dichlorobenzene	0.080	0.040	0.080	0.080	0.040	0.080	454	mg/kg	6	12	0	0		
1,4-Dichlorobenzene	0.050	0.025	0.050	0.050	0.025	0.050	8,940	mg/kg	6	12	0	0		
2 Chlorotoluene	0 090	0 045	0 090	0 090	0 045	0 090		mg/kg	6	12	0	0		
4-Chlorotoluene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		
Chlorobenzene	0.050	0.025	0.050	0.050	0.025	0.050	1,770	mg/kg	6	12	0	0		
Hexachlorobenzene	0.10	0.050	0.10	0.10	0.050	0.10	30.0	mg/kg	6	12	0	0		

# 1150

Site Area(s) Selected: Whole site

Phase(s): All phases

### Print date: 11/11/2022

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Chlorinated Phenols														
	M	ADEGROL	JND	ΝΑΤυ		DUND				S	S	U		
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	МАХ	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING	
2,4,5-Trichlorophenol	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		
2,4,6-Trichlorophenol	0.001	0.0008	0.002	0.001	0.0005	0.001	1,050	mg/kg	6	12	3	0		
2,4-Dichlorophenol	0.001	0.0005	0.001	0.001	0.0005	0.001	1,050	mg/kg	6	12	0	0		
2-Chlorophenol	0.001	0.0005	0.001	0.001	0.0005	0.001	1,050	mg/kg	6	12	0	0		
4-Chloro-3-Methlphenol	0.001	0.0005	0.001	0.001	0.0005	0.001	-	mg/kg	6	12	0	0		
Chlorophenols - Total (Summed Isomers)	0.001	0.051	0.10	0.001	0.051	0.10	1,050	mg/kg	6	12	12	0		
Dioxins and Furans														
	MA	ADEGROL	JND	ΝΑΤυ		DUND				S	S	0		
ANALYTE	MIN	MEAN*	MAX	NIM	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening	
Dibenzofuran	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		

# wsp

#### Parks Public Open Space, SOM=1%

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Dyes															
	MAI	DEGROUNE	)	NATUR	RAL <b>G</b> RO	UND				S	S	0			
ANALYTE	NIM	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING	OCKEENING	
3-Nitroaniline	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
4-Nitroaniline	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
Explosives															
	MAI	DEGROUNE	)	NATUR	RAL <b>G</b> RO	UND				S	S	U			
ANALYTE	NIM	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING	OCKEENING	
2,4-Dinitrotoluene	0.10	0.050	0.10	0.10	0.050	0.10	928	mg/kg	6	12	0	0			
2,6-Dinitrotoluene	0.10	0.050	0.10	0.10	0.050	0.10	468	mg/kg	6	12	0	0			

vsp

Site Area(s) Selected: Whole site

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

General Chemistry															
	MA	DEGROU	ND	ΝΑΤυ	RAL <b>G</b> RO	DUND				LES	S	U			
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLE	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >A(	Locations Failing Screening		
Acid Neutralisation Capacity at pH 6	0.030	0.020	0.042	0.030	0.015	0.030	-	mol/kg	6	12	2	0			
Acid Neutralisation Capacity pH4	0.042	0.061	0.079	0.041	0.053	0.065	-	mol/kg	6	12	12	0			
рН	5.61	7.19	7.81	7.28	7.58	7.87	-	pH Units	6	12	12	0			

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Halogonated Hydrocarbons														
	MA	DEGROU	ND	NATU	RAL GRO	DUND				S	S	0		
ANALYTE	MIM	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening	
1,2-Dibromo-3-Chloropropane	0.14	0.070	0.14	0.14	0.070	0.14	-	mg/kg	6	12	0	0		
1,2-Dibromoethane	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		
Bromobenzene	0.10	0.050	0.10	0.10	0.050	0.10	1,770	mg/kg	6	12	0	0		
Bromochloromethane	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		
Bromodichloromethane	0.070	0.035	0.070	0.070	0.035	0.070	56.0	mg/kg	6	12	0	0		
Bromoform	0.10	0.050	0.10	0.10	0.050	0.10	4,060	mg/kg	6	12	0	0		
Bromomethane	0 10	0 050	0 10	0 10	0 050	0 10		mg/kg	6	12	0	0		
Dibromochloromethane	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		
Dibromomethane	0.090	0.045	0.090	0.090	0.045	0.090	-	mg/kg	6	12	0	0		
Dichlorodifluoromethane	0.060	0.030	0.060	0.060	0.030	0.060	-	mg/kg	6	12	0	0		
Trichlorofluoromethane	0.060	0.030	0.060	0.060	0.030	0.060	-	mg/kg	6	12	0	0		

Site Area(s) Selected: Whole site

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Inorganics														
	MA	DEGROUN	ND	ΝΑΤυ	RAL GRO	UND				ល	ល	0		
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening	
Chloride	7.57	27.2	133	13.3	22.0	30.7	-	mg/kg	6	12	12	0		
Cyanide (Complex)	1.00	0.50	1.00	1.00	0.50	1.00	-	mg/kg	6	12	0	0		
Cyanide (Free)	1.00	0.50	1.00	1.00	0.50	1.00	15.0	mg/kg	6	12	0	0		
Cyanide (Total)	1.00	0.50	1.00	1.00	0.50	1.00	-	mg/kg	6	12	0	0		
2:1 Water Soluble Ammonium	2,180	6,918	18,900	2,890	6,260	9,630	-	ug/l	6	12	12	0		
Sulphate as SO4	4,000	47,470	274,000	4,700	51,800	98,900	-	ug/l	6	12	10	0		
Ketones														
	MA	DEGROUN	ND	NATU	ral <b>G</b> ro	UND				ល	ល	o		
ANALYTE	NIM	MEAN*	MAX	NIM	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING SCREENING	
Isophorone	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		

Site Area(s) Selected: Whole site

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Metals															
	MA	DEGROU	IND	NATU	RAL GRO	DUND				S	S	0			
ANALYTE	MiN	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening		
Arsenic	4.52	7.87	12.5	6.72	8.46	10.2	168	mg/kg	6	12	12	0			
Boron	1.00	0.79	2.85	1.00	0.50	1.00	46,000	mg/kg	6	12	2	0			
Cadmium	0.020	0.29	0.47	0.36	0.57	0.78	555	mg/kg	6	12	11	0			
Chromium	6.59	12.9	18.4	9.74	19.3	28.9	-	mg/kg	6	12	12	0			
Copper	7.61	15.6	33.9	11.6	20.6	29.6	44,400	mg/kg	6	12	12	0			
Hexavalent Chromium	0.60	0.30	0.60	0.60	0.30	0.60	69.0	mg/kg	6	12	0	0			
Lead	17 4	30 2	44 0	22 2	25 9	296	808	mg/kg	6	12	12	0			
Mercury	0.10	0.050	0.10	0.10	0.050	0.10	242	mg/kg	6	12	0	0			
Nickel	6.26	12.6	19.7	8.11	31.4	54.7	804	mg/kg	6	12	12	0			
Selenium	1.00	0.50	1.00	1.00	0.50	1.00	1,850	mg/kg	6	12	0	0			
Vanadium	11.0	23.7	41.1	17.1	31.1	45.0	5,030	mg/kg	6	12	12	0			
Zinc	25.6	90.0	448	34.4	56.8	79.1	173,000	mg/kg	6	12	12	0			

Site Area(s) Selected: Whole site

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Other															
	MA	DEGROU	IND	ΝΑΤυ	RAL GRO	DUND				ល	ល	0			
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening		
Soil Organic Matter (SOM)	0.68	1.70	3.48	1.08	1.11	1.13	-	%	6	12	12	0			
Total organic carbon (TOC)	0.40	0.99	2.02	0.63	0.64	0.66	-	%	6	12	12	0			
2-Chloronaphthalene	0.10	0.050	0.10	0.10	0.050	0.10	1,180	mg/kg	6	12	0	0			
4-Bromophenylphenyl ether	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
4-Chloroaniline	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
4-Chlorophenyl phenyl ether	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
Azobenzene	0 10	0 050	0 10	0 10	0 050	0 10		mg/kg	6	12	0	0			
Bis (2-chloroethoxy) methane	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
Bis (2-chloroethyl) ether	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
Carbazole	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
Carbon Disulphide	0.070	0.035	0.070	0.070	0.035	0.070	1,320	mg/kg	6	12	0	0			
Nitrobenzene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
n-Nitrosodi-n-Propylamine	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
Styrene	0.10	0.050	0.10	0.10	0.050	0.10	5,930	mg/kg	6	12	0	0			

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

MADEGROUND         NATURAL GROUND         NATURAL GROUND         SI         SI	PAHs															
2-Methylnaphthalene       0.10       0.050       0.10       0.050       0.10       -       mg/kg       6       12       0       0         Acenaphthylene       0.008       0.008       0.012       0.006       0.012       0.006       0.012       -       mg/kg       6       12       1       0         Acenaphthylene       0.012       0.006       0.012       0.006       0.012       -       mg/kg       6       12       0       0         Anthracene       0.016       0.008       0.016       0.008       0.016       -       mg/kg       6       12       0       0		M	ADEGROL	JND	ΝΑΤυ		DUND				S	S	0			
Acenaphthene       0.008       0.008       0.012       0.012       0.012       0.006       0.012       -       mg/kg       6       12       1       0         Acenaphthylene       0.012       0.006       0.012       0.012       0.006       0.012       -       mg/kg       6       12       0       0         Anthracene       0.016       0.008       0.016       0.008       0.016       -       mg/kg       6       12       0       0	ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	МАХ	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLE	NO. OF SAMPLE > LOD	NO. OF LOCATIONS >A(	Locations Failing Screening		
Acenaphthylene       0.012       0.006       0.012       0.012       0.006       0.012       -       mg/kg       6       12       0       0         Anthracene       0.016       0.008       0.016       0.008       0.016       -       mg/kg       6       12       0       0	2-Methylnaphthalene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0			
Anthracene         0.016         0.016         0.016         0.016         0.016         - mg/kg         6         12         0         0	Acenaphthene	0.008	0.008	0.044	0.008	0.004	0.008	-	mg/kg	6	12	1	0			
	Acenaphthylene	0.012	0.006	0.012	0.012	0.006	0.012	-	mg/kg	6	12	0	0			
Benzo (a) anthracene 0.014 0.024 0.052 0.014 0.016 0.025 - mg/kg 6 12 8 0	Anthracene	0.016	0.008	0.016	0.016	0.008	0.016	-	mg/kg	6	12	0	0			
	Benzo (a) anthracene	0.014	0.024	0.052	0.014	0.016	0.025	-	mg/kg	6	12	8	0			
Benzo (a) pyrene 0.015 0.019 0.052 0.015 0.013 0.019 11.0 mg/kg 6 12 6 0	Benzo (a) pyrene	0.015	0.019	0.052	0.015	0.013	0.019	11.0	mg/kg	6	12	6	0			
Benzo (b) fluoranthene 0 015 0 036 0 088 0 015 0 024 0 040 mg/kg 6 12 9 0	Benzo (b) fluoranthene	0 015	0 036	0 088	0 015	0 024	0 040		mg/kg	6	12	9	0			
Benzo (ghi) perylene 0.024 0.014 0.034 0.024 0.012 0.024 - mg/kg 6 12 1 0	Benzo (ghi) perylene	0.024	0.014	0.034	0.024	0.012	0.024	-	mg/kg	6	12	1	0			
Benzo (k) fluoranthene 0.014 0.009 0.030 0.014 0.007 0.014 - mg/kg 6 12 1 0	Benzo (k) fluoranthene	0.014	0.009	0.030	0.014	0.007	0.014	-	mg/kg	6	12	1	0			
Chrysene 0.010 0.042 0.16 0.010 0.017 0.029 - mg/kg 6 12 9 0	Chrysene	0.010	0.042	0.16	0.010	0.017	0.029	-	mg/kg	6	12	9	0			
Coronene 0.20 0.10 0.20 0.20 0.10 0.20 - mg/kg 6 12 0 0	Coronene	0.20	0.10	0.20	0.20	0.10	0.20	-	mg/kg	6	12	0	0			
Dibenzo (ah) anthracene 0.023 0.012 0.023 0.023 0.012 0.023 - mg/kg 6 12 0 0	Dibenzo (ah) anthracene	0.023	0.012	0.023	0.023	0.012	0.023	-	mg/kg	6	12	0	0			
Fluoranthene 0.017 0.055 0.18 0.017 0.029 0.049 - mg/kg 6 12 9 0	Fluoranthene	0.017	0.055	0.18	0.017	0.029	0.049	-	mg/kg	6	12	9	0			
Fluorene 0.010 0.008 0.039 0.010 0.005 0.010 - mg/kg 6 12 1 0	Fluorene	0.010	0.008	0.039	0.010	0.005	0.010	-	mg/kg	6	12	1	0			
Indeno (1,2,3-cd) pyrene 0.018 0.016 0.046 0.018 0.009 0.018 - mg/kg 6 12 3 0	Indeno (1,2,3-cd) pyrene	0.018	0.016	0.046	0.018	0.009	0.018	-	mg/kg	6	12	3	0			
Naphthalene 0.009 0.026 0.21 0.009 0.005 0.009 1,240 mg/kg 6 12 2 0	Naphthalene	0.009	0.026	0.21	0.009	0.005	0.009	1,240	mg/kg	6	12	2	0			

Gint Database: 70072063 Drax FCA.gpj

Data range: All data selected

# wsp

Site Area(s) Selected: Whole site Phase(s): All phases

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

PAHs															
	MA	DEGROUI	ND	ΝΑΤυ	RAL GRO	DUND				S	S	ų			
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	МАХ	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >A	Locations Failing Screening		
PAH Total (EPA 16)	0.12	0.30	1.14	0.12	0.15	0.25	-	mg/kg	6	12	8	0			
PAH Total (EPA 17)	10.0	5.00	10.0	10.0	5.00	10.0	-	mg/kg	6	12	0	0			
Phenanthrene	0.015	0.050	0.22	0.015	0.026	0.044	-	mg/kg	6	12	9	0			
Pyrene	0.015	0.049	0.17	0.015	0.025	0.042	-	mg/kg	6	12	9	0			

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

PCBs															
	MA	DEGROU	JND	ΝΑΤυ	IRAL GRO	DUND				S	S	0			
ANALYTE	MiN	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening		
PCB101	0.003	0.002	0.003	0.003	0.002	0.003	-	mg/kg	6	12	0	0			
PCB118	0.003	0.002	0.003	0.003	0.002	0.003	-	mg/kg	6	12	0	0			
PCB138	0.003	0.002	0.003	0.003	0.002	0.003	-	mg/kg	6	12	0	0			
PCB153	0.003	0.002	0.003	0.003	0.002	0.003	-	mg/kg	6	12	0	0			
PCB180	0.003	0.002	0.003	0.003	0.002	0.003	-	mg/kg	6	12	0	0			
PCB28	0.003	0.002	0.003	0.003	0.002	0.003	-	mg/kg	6	12	0	0			
PCB52	0 003	0 002	0 003	0 003	0 002	0 003		mg/kg	6	12	0	0			
Total PCB Congeners ICES 7	0.021	0.011	0.021	0.021	0.011	0.021	2.60	mg/kg	6	12	0	0			

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Pesticides, Herbicides and In	secticide	s												
	MA	DEGROUND		NATU	RAL <b>G</b> RC	UND				ي ب	S	0		
ANALYTE	WIN	MEAN*	MAX	NIM	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening	
Hexachlorocyclopentadiene	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		
Pentachlorophenol	0.001	0.0005	0.001	0.001	0.0005	0.001	119	mg/kg	6	12	0	0		
Pharmaceuticals														
	MA	DEGROUND		NATU	RAL <b>G</b> RC	UND				S	S	0		
ANALYTE	MiN	MEAN*	MAX	NIM	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening	
2-Nitroaniline	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		

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### Site Area(s) Selected: Whole site Phase(s): All phases

Print date: 11/11/2022

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Phenols															
	MA	DEGROU	ND	NATU		DUND				S	S	AC			
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >A	Locations Failing Screening		
2,4-Dimethylphenol	0.001	0.0005	0.001	0.001	0.0005	0.001	9,180	mg/kg	6	12	0	0			
2-Methylphenol (o-Cresol)	0.10	0.050	0.10	0.10	0.050	0.10	46,000	mg/kg	6	12	0	0			
2-Nitrophenol	0.001	0.0005	0.001	0.001	0.0005	0.001	-	mg/kg	6	12	0	0			
4-Methylphenol	0.10	0.050	0.10	0.10	0.050	0.10	46,000	mg/kg	6	12	0	0			
4-Nitrophenol	0.001	0.001	0.006	0.001	0.0005	0.001	-	mg/kg	6	12	4	0			
Methylphenols Total (Summed)	0.10	0.10	0.10	0.10	0.10	0.10	46,000	mg/kg	6	12	12	0			
Phenol	0 001	0 001	0 007	0 001	0 001	0 002	760	mg/kg	6	12	4	0			
Phenol (Total)	0.009	0.005	0.013	0.009	0.005	0.009	-	mg/kg	6	12	1	0			

**\\S**D

Site Area(s) Selected: Whole site

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

Phthalates														
	MA	DEGROUN	ID	NATU	RAL GRO	DUND				S	S	0		
ANALYTE	MiN	MEAN*	MAX	NIM	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening	
Bis (2-ethylhexyl) phthalate	0.10	0.050	0.10	0.10	0.050	0.10	16,600	mg/kg	6	12	0	0		
Butyl benzyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	254,000	mg/kg	6	12	0	0		
Diethyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	89,300	mg/kg	6	12	0	0		
Dimethyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	-	mg/kg	6	12	0	0		
Di-n-butyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	2,630	mg/kg	6	12	0	0		
Di-n-octyl phthalate	0.10	0.050	0.10	0.10	0.050	0.10	20,000	mg/kg	6	12	0	0		
Physical														
	MA	DEGROUN	ID	ΝΑΤυ	RAL GRO	DUND				ល	ល	0		
ANALYTE	NIM	MEAN*	МАХ	NIM	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening	
Loss on ignition	2.12	4.95	7.58	3.42	5.52	7.61	-	%	6	12	12	0		

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

QA Standard															
	MA	DEGROU	ND	NATU	IRAL <b>G</b> RC	UND				S	S				
ANALYTE	MIN	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing Screening		
4-Bromofluorobenzene	87.1	93.2	97.0	88.5	90.9	93.2	-	%	6	12	12	0			
Acenaphthene-d10	81.1	87.0	90.1	87.0	87.1	87.1	-	%	6	12	12	0			
Chrysene-d12	73.2	80.1	84.8	76.9	77.3	77.6	-	%	6	12	12	0			
Dibromofluoromethane	109	111	118	118	120	121	-	%	6	12	12	0			
EPH Surrogate % recovery**	97.1	101	106	107	107	107	-	%	6	12	12	0			
Naphthalene-d8	75.6	82.7	86.3	84.2	84.8	85.4	-	%	6	12	12	0			
Perylene d12**	717	80 4	88 6	80 <del>9</del>	82 6	84 2		%	6	12	12	0			
Phenanthrene-d10**	82.7	85.4	88.5	80.8	81.8	82.8	-	%	6	12	12	0			
Toluene-d8 Surrogate	97.8	99.7	101	101	101	101	-	%	6	12	12	0			

Phase(s): All phases

Site Area(s) Selected: Whole site

Notes: \* For results below LOD, a value of half LOD is used in the calculation of the mean

TPH/EPH																
	MA	DEGROUN	ND	ΝΑΤυ	RAL GRO	UND				S	S	U				
ANALYTE	Min	MEAN*	MAX	NIW	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	Locations Failing	SCREENING		
GRO Surrogate	92.1	101	120	86.7	89.2	91.7	-	%	6	12	12	0				
Mineral oils	5.00	13.6	42.4	5.00	6.50	10.5	-	mg/kg	6	12	10	0				
PRO (>C5-C10)	0.020	0.051	0.42	0.020	0.010	0.020	-	mg/kg	6	12	1	0				
VOCs																
									_	_	1					
	MA	DEGROUN	ND	NATU	RAL GRO	OUND				S.	S	0				
ANALYTE	NIW	DEGROUI *NV BW	MAX	NATU	RAL GRO	XAM	ASSESSMENT CRITERIA (AC)	UNITS	NO. OF LOCATIONS	NO. OF SAMPLES	NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING	SCREENING		
4-Isopropyltoluene							ASSESSMENT CRITERIA (AC)	SLIN mg/kg	NO. OF LOCATIONS	NO. OF SAMPLES	o NO. OF SAMPLES > LOD	NO. OF LOCATIONS >AC	LOCATIONS FAILING	SCREENING		
	NIW	MEAN*	MAX	NIW	MEAN*	MAX		mg/kg			NO. OF > LOD		LOCATIONS FAILING	SCREENING		
4-IsopropyItoluene	2 ¥	*N W B 0.050	XW 0.10	<b>N</b> 0.10	*WEAN* 0.050	X W 0.10	-	mg/kg	6	12	NO. OF > LOD	0	LOCATIONS FAILING	SCREENING		
4-IsopropyItoluene iso-PropyIbenzene	2 0.10 0.050	*NE 9.050 0.025	XW 0.10 0.050	NW 0.10 0.050	*NE JU 0.050 0.025	XW 0.10 0.050	- 22,500	mg/kg mg/kg mg/kg	6	12 12	0 NO. OF	0	LOCATIONS FAILING	SCREENING		
4-Isopropyltoluene iso-Propylbenzene n-Butylbenzene	2 0.10 0.050 0.11	*UEAN 0.050 0.025 0.055	0.10 0.050 0.11	E 0.10 0.050 0.11	*ИЦ 0.050 0.025 0.055	XW 0.10 0.050 0.11	- 22,500 -	mg/kg mg/kg mg/kg	6 6 6	12 12 12	NO. OF NO. OF > LOD	0 0 0	LOCATIONS FAILING	SCREENING		

Gint Database: 70072063 Drax FCA.gpj

# 1150

THERE WERE NO EXCEEDANCES OF Parks Public Open Space, SOM=1%

# PRE-REPORT DATA CHECK

V	All analyte codes are matched to the library
	All SampleMatrix fields are complete
V	All result and screening units match

Region	Wales and England	Hardness	0-50 mg/l
Water Body	Surface water	Recieving surface	Good (or below)
Water Body Type	Inland	water status	
Surface Water Type	River or Stream	Altitude	< 80m Elevation

Sample Matrix: LEACH	IATE										a(s) Selected: nt(s) Selected	
Unrecognised analytes												
ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations SAMPLED	No. SAMPLES > LOD	No. Locations > Ac	Location(s) Failing Screening		
C16-C35 Aliphatics (Unrecognised code)	20.0	16.7	60.0	-		ug/l	5	-	0			
C16-C35 Aromatics (Unrecognised code)	20.0	16.7	60.0	-		ug/l	5	-	0			
Aliphatics and Aromatics												
ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	Units	No. Locations Sampled	No. SAMPLES > LOD	No. Locations > AC	Location(s) Failing Screening		
Aliphatic C05-C06	10.00	5.00	10.00	-		ug/l	5	-	0			
Aliphatic C06-C08	10.00	5.00	10.00	-		ug/l	5	-	0			
Aliphatic C08-C10	10.00	5.00	10.00	-		ug/l	5	-	0			
Aliphatic C10-C12	10.00	5.00	10.00	-		ug/l	5	-	0			
Aliphatic C12-C16	20.0	16.7	60.0	-		ug/l	5	-	0			
Aliphatic C16-C21	20.0	16.7	60.0	-		ug/l	5	-	0			
Aliphatic C21-C35	20.0	16.7	60.0	-		ug/l	5	-	0			

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Sample Matrix: LEACH	ATE											Area(s) Selected: W Event(s) Selected: A	
Aliphatics and Aromatics													
Analyte	Min	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations	SAMPLED	NO. SAMPLES > LOD	No. Locations > AC	LOCATION(S) FAILING	SCREENING	
Aliphatics C12-C35	20.0	16.7	60.0	-		ug/l	5		-	0			
Aromatic C06-C07	10.00	5.00	10.00	10.0	CL:AIRE 2017	ug/l	5		-	0			
Aromatic C07-C08	10.00	5.00	10.00	74.0	CL:AIRE 2017	ug/l	5		-	0			
Aromatic C08-C10	10.00	5.00	10.00	20.0	CL:AIRE 2017	ug/l	5		-	0			
Aromatic C10-C12	10.00	5.00	10.00	2.00	CL:AIRE 2017	ug/l	5		-	0			
Aromatic C12-C16	20.0	16.7	60.0	2.00	CL:AIRE 2017	ug/l	5		-	0			
Aromatic C12-C35	20.0	16.7	60.0	-		ug/l	5		-	0			
Aromatic C16-C21	20.0	16.7	60.0	0.10	CL:AIRE 2017	ug/l	5		-	0			
Aromatic C21-C35	20.0	16.7	60.0	0.0002	CL:AIRE 2017	ug/l	5		-	0			
Total Aliphatics and Aromatics (C5-C35)	10.0	14.2	60.0	-		ug/l	5		-	0			

# wsp

Sample Matrix: LEACH	ATE									Site Area(s) Selected: Whole si Event(s) Selected: All even
Alkali and Alkaline Earth N	letals									
ANALYTE	MiN	MEAN*	MaX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations SAMPLED	No. SAMPLES > LOD	No. Locations > AC	Location(s) Failing Screening
Barium	4.5	40.1	104.0	-		ug/l	6	12	0	
Beryllium	0.100	0.069	0.165	-		ug/l	5	1	0	
BTEX and Fuel Additives										
ANALYTE	MiN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations SAMPLED	No. Samples > Lod	No. Locations > Ac	Location(s) Failing Screening
Benzene	1.00	2.75	10.00	10.0	EQS 2015	ug/l	5	-	0	
Ethylbenzene	1.00	2.75	10.00	20.0	Proposed EQS	ug/l	5	-	0	
Methyl t-butylether (MTBE)	1.00	2.75	10.00	-		ug/l	5	-	0	
Tertiary Amyl Methyl Ether (TAME)	1.00	2.75	10.00	-		ug/l	5	-	0	
Toluene	1.00	2.75	10.00	74.0	EQS 2015	ug/l	5	-	0	
Xylene	2.00	5.50	20.00	30.0	CL:AIRE 2017	ug/l	5	-	0	
Xylene - Total (Summed)	1.00	5.50	10.00	-		ug/l	5	6	0	
Xylene-m & p	1.00	2.75	10.00	-		ug/l	5	-	0	
Xylene-o	1.00	2.75	10.00	-		ug/l	5	-	0	

Gint Database: 70072063 Drax FCA.gpj

Print date: 09/11/2022

Sample Matrix: LEACH	IATE									Site Area(s) Selected: Whole site Event(s) Selected: All events
General Chemistry										
ANALYTE	MiN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	Units	No. Locations Sampi ed	No. SAMPLES	No. Locations > AC	Location(s) Failing Screening
рН	7.17	7.98	8.52	6.00/9.00	EQS 2015	pH Units	6	12	0	
Electrical conductivity	33	129	229	-		uS/cm	6	12	0	
Inorganics										
ANALYTE	MiN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations Sampien	No. SAMPLES	No. Locations > Ac	Location(s) Failing Screening
Ammoniacal Nitrogen as N	200	8965	16500	300	EQS 2015	ug/l	5	5	4	TP01, TP02, TP04, TP05
Chloride	2000	1442	2800	-		ug/l	6	3	0	
Cyanide (Complex)	50.0	25.0	50.0	1.00	EQS 2015 - Assumes Free Cyanide	ug/l	5	-	0	
Cyanide (Free)	50.0	25.0	50.0	1.00	EQS 2015	ug/l	5	-	0	
Cyanide (Total)	50.0	25.0	50.0	1.00	EQS 2015 - Assumes Free Cyanide	ug/l	5	-	0	
Fluoride	500	839	1500	-		ug/l	6	10	0	
Sulphate as SO4	2000	19525	67200	-		ug/l	6	8	0	

Sample Matrix: LEACH	ATE									Site Area(s) Selected: Whole site Event(s) Selected: All events
Metals										
ANALYTE	Min	MEAN*	MaX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	NO. LOCATIONS SAMPIED	No. SAMPLES > LOD	No. Locations > AC	Location(s) Failing Screening
Antimony	1.00	1.19	2.66	-		ug/l	6	5	0	
Arsenic	0.50	3.41	10.40	50.0	EQS 2015	ug/l	6	10	0	
Boron	53	321	604	-		ug/l	5	6	0	
Cadmium	0.08	0.24	1.25	0.080	EQS 2015	ug/l	6	2	1	TP02
Chromium	1.00	1.10	6.25	4.70	EQS 2015	ug/l	6	3	1	TP05
Chromium III	30.0	15.0	30.0	4.70	EQS 2015	ug/l	5	-	0	
Copper	0.50	8.48	31.20	1.00	EQS 2015 - Bioavailable	ug/l	6	12	6	TP01, TP02, TP03, TP04, TP05, TP06
Hexavalent Chromium	30.0	15.0	30.0	3.40	EQS 2015	ug/l	5	-	0	
Lead	0.20	1.79	10.20	1.20	EQS 2015 - Bioavailable	ug/l	6	10	3	TP02, TP04, TP05
Mercury	0.010	0.005	0.010	0.070	EQS 2015 MAC	ug/l	6	-	0	
Molybdenum	3.00	6.93	19.30	-		ug/l	6	7	0	
Nickel	0.55	3.90	12.30	4.00	EQS 2015 - Bioavailable	ug/l	6	12	4	TP01, TP02, TP04, TP05
Selenium	1.00	1.10	3.35	-		ug/l	6	4	0	
Zinc	1.3	23.0	126.0	10.9	EQS 2015 - Bioavailable	ug/l	6	12	2	TP02, TP05

Sample Matrix: LEACH	IATE										Site Area(s) Selected: Whole site Event(s) Selected: All events
Other											
ANALYTE	MIN	MEAN*	MAX	Assessment Criteria (AC)	Assessment Criteria Source		UNITS	No. Locations Same en	O. SA	NO. LOCATIONS > AC	Location(s) Failing Screening
DOC	4020	11341	31300	-		ug	g/I	6	12	0	

Sample Matrix: LEACH	IATE									Site Area Event	ted: Who ted: All e	
PAHs												
ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	No. Locations Sampi ED	No. SAMPLES	No. Locations > AC	Location(s) Failing Screening		
Acenaphthene	0.005	0.006	0.030	-		ug/l	5	1	0			
Acenaphthylene	0.005	0.005	0.030	-		ug/l	5	-	0			
Anthracene	0.005	0.005	0.030	0.10	EQS 2015	ug/l	5	-	0			
Benzo (a) anthracene	0.005	0.005	0.030	-		ug/l	5	-	0			
Benzo (a) pyrene	0.002	0.002	0.012	0.0002	EQS 2015	ug/l	5	-	0			
Benzo (b) fluoranthene	0.005	0.006	0.030	-		ug/l	5	1	0			
Benzo (ghi) perylene	0.005	0.005	0.030	-		ug/l	5	-	0			
Benzo (k) fluoranthene	0.005	0.005	0.030	-		ug/l	5	-	0			
Chrysene	0.005	0.005	0.030	-		ug/l	5	-	0			
Dibenzo (ah) anthracene	0.005	0.005	0.030	-		ug/l	5	-	0			
Fluoranthene	0.005	0.008	0.030	0.006	EQS 2015	ug/l	5	1	1	TP02		
Fluorene	0.005	0.005	0.030	-		ug/l	5	-	0			
Indeno (1,2,3-cd) pyrene	0.005	0.005	0.030	-		ug/l	5	-	0			
Naphthalene	0.010	0.013	0.060	2.00	EQS 2015	ug/l	5	1	0			
PAH (Total)	0.082	0.089	0.492	-		ug/l	5	-	0			
Phenanthrene	0.006	0.010	0.030	-		ug/l	5	5	0			
Pyrene	0.005	0.008	0.030	-		ug/l	5	1	0			

Sample Matrix: LEACH	IATE										rea(s) Sele ent(s) Sele	
Phenols												
ANALYTE	Min	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations	No. SAMPLES	No. Locations > AC	Location(s) Failing Screening		
Cresols	6.00	3.00	6.00	-		ug/l	5	-	0			
Phenol	2.00	4.17	20.00	7.70	EQS 2015	ug/l	5	1	1	TP05		
Phenol (Monohydric)	16.00	9.00	20.00	-		ug/l	6	1	0			
Xylenols	8.00	4.00	8.00	-		ug/l	5	-	0			
ТРН/ЕРН												
ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	Units	No. Locations	No. SAMPLES	No. Locations > AC	Location(s) Failing Screening		
GRO Surrogate	57.0	75.2	97.0	-		%	5	6	0			
PRO (C5-C12)	50.0	25.0	50.0	-		ug/l	5	-	0			

# EXCEEDANCES OF THRESHOLDS

### Sample matrix: LEACHATE

#### Inorganics **Result Criteria** Analyte Point ID Sample Threshold Units Stratum Depth (m Source bgl) Ammoniacal Nitrogen as N TP01 2.70 - 2.80 6900 EQS 2015 300 Made Ground ug/l TP02 1.10 - 1.20 8290 EQS 2015 300 ug/l Made Ground 1.80 - 1.90 8300 EQS 2015 300 ug/l Alluvium **TP04** 2.20 - 2.30 16500 EQS 2015 300 ug/l Made Ground **TP05** 1.20 - 1.30 13700 EQS 2015 300 Made Ground ug/l Metals Analyte **Result Criteria** Threshold Point ID Sample Units Stratum Depth (m Source bgl) **TP02** 1.10 - 1.20 1.25 EQS 2015 0.080 Cadmium ug/l Made Ground 1.80 - 1.90 1.23 EQS 2015 0.080 Alluvium ug/l Chromium TP05 1.20 - 1.30 6.25 EQS 2015 4.70 ug/l Made Ground Copper **TP01** 0.10 - 0.20 Made Ground 3.65 EQS 2015 -1.00 ug/l Bioavailable 8.91 EQS 2015 -2.70 - 2.80 1.00 Made Ground ug/l Bioavailable 5.20 EQS 2015 -**TP02** 1.10 - 1.20 1.00 Made Ground ug/l Bioavailable 9.99 EQS 2015 -1.80 - 1.90 1.00 ug/l Alluvium Bioavailable 4.33 EQS 2015 -1.00 TP03 0.90 - 1.00 ug/l Made Ground Bioavailable TP04 0.90 - 1.00 5.96 EQS 2015 -1.00 Made Ground ug/l Bioavailable 2.20 - 2.30 15.9 EQS 2015 -Made Ground 1.00 ug/l Bioavailable TP05 0.70 - 0.80 Made Ground 5.23 EQS 2015 -1.00 ug/l Bioavailable 1.20 - 1.30 Made Ground 31.2 EQS 2015 -1.00 ug/l Bioavailable TP06 0.20 - 0.30 Made Ground 8.91 EQS 2015 -1.00 ug/l Bioavailable 1.50 - 1.60 Made Ground 2.04 EQS 2015 -1.00 ug/l Bioavailable Lead TP02 1.80 - 1.90 Alluvium 5.83 EQS 2015 -1.20 ug/l Bioavailable TP04 2.20 - 2.30 Made Ground 1.25 EQS 2015 -1.20 ug/l Bioavailable TP05 1.20 - 1.30 10.2 EQS 2015 -1.20 ug/l Made Ground Bioavailable Nickel TP01 2.70 - 2.80 4.12 EQS 2015 -4.00 ug/l Made Ground Bioavailable **TP02** 1.10 - 1.20 12.3 EQS 2015 -4.00 Made Ground ug/l Bioavailable TP04 2.20 - 2.30 6.17 EQS 2015 -4.00 ug/l Made Ground

Bioavailable



# EXCEEDANCES OF THRESHOLDS

## Sample matrix: LEACHATE

Metals							
Analyte	Point ID	Sample Depth (m bgl)	Result	Criteria Source	Threshold	Units	Stratum
Nickel	TP05	1.20 - 1.30	10.3	EQS 2015 - Bioavailable	4.00	ug/l	Made Ground
Zinc	TP02	1.10 - 1.20	95.3	EQS 2015 - Bioavailable	10.9	ug/l	Made Ground
		1.80 - 1.90	29.9	EQS 2015 - Bioavailable	10.9	ug/l	Alluvium
	TP05	1.20 - 1.30	126	EQS 2015 - Bioavailable	10.9	ug/l	Made Ground
PAHs							
Analyte	Point ID	Sample Depth (m bgl)	Result	Criteria Source	Threshold	Units	Stratum
Fluoranthene	TP02	1.80 - 1.90	0.023	EQS 2015	0.006	ug/l	Alluvium
Phenols							
Analyte	Point ID	Sample Depth (m bgl)	Result	Criteria Source	Threshold	Units	Stratum

# PRE-REPORT DATA CHECK

V	All analyte codes are matched to the library
	All SampleMatrix fields are complete
V	All result and screening units match

Region	Wales and England	Hardness	NA
Water Body	Groundwater	Recieving surface	NA
Water Body Type	NA	water status	
Surface Water Type	NA	Altitude	NA

Sample Matrix: LEACH	IATE										ea(s) Selected: W ent(s) Selected: A	
Unrecognised analytes												
ANALYTE	Min	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations SAMPLED	No. SAMPLES > LOD	No. Locations > Ac	Location(s) Failing Screening		
C16-C35 Aliphatics (Unrecognised code)	20.0	16.7	60.0	-		ug/l	5	-	0			
C16-C35 Aromatics (Unrecognised code)	20.0	16.7	60.0	-		ug/l	5	-	0			
Aliphatics and Aromatics												
ANALYTE	Min	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations Sampled	No. SAMPLES > LOD	No. Locations > AC	Location(s) Failing Screening		
Aliphatic C05-C06	10.00	5.00	10.00	15,000	WHO 2008	ug/l	5	-	0			
Aliphatic C06-C08	10.00	5.00	10.00	15,000	WHO 2008	ug/l	5	-	0			
Aliphatic C08-C10	10.00	5.00	10.00	300	WHO 2008	ug/l	5	-	0			
Aliphatic C10-C12	10.00	5.00	10.00	300	WHO 2008	ug/l	5	-	0			
Aliphatic C12-C16	20.0	16.7	60.0	300	WHO 2008	ug/l	5	-	0			
Aliphatic C16-C21	20.0	16.7	60.0	-		ug/l	5	-	0			
Aliphatic C21-C35	20.0	16.7	60.0	-		ug/l	5	-	0			

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Sample Matrix: LEACH	ATE										•	ed: Whole site ed: All events
Aliphatics and Aromatics												
ANALYTE	Min	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations	SAMPLED No. SAMPLES > LOD	No. Locations > AC	Location(s) Failing Screening		
Aliphatics C12-C35	20.0	16.7	60.0	-		ug/l	5	-	0			
Aromatic C06-C07	10.00	5.00	10.00	-		ug/l	5	-	0			
Aromatic C07-C08	10.00	5.00	10.00	-		ug/l	5	-	0			
Aromatic C08-C10	10.00	5.00	10.00	300	WHO 2008	ug/l	5	-	0			
Aromatic C10-C12	10.00	5.00	10.00	90.0	WHO 2008	ug/l	5	-	0			
Aromatic C12-C16	20.0	16.7	60.0	90.0	WHO 2008	ug/l	5	-	0			
Aromatic C12-C35	20.0	16.7	60.0	-		ug/l	5	-	0			
Aromatic C16-C21	20.0	16.7	60.0	90.0	WHO 2008	ug/l	5	-	0			
Aromatic C21-C35	20.0	16.7	60.0	90.0	WHO 2008	ug/l	5	-	0			
Total Aliphatics and Aromatics (C5-C35)	10.0	14.2	60.0	-		ug/l	5	-	0			

# wsp

Sample Matrix: LEACH	IATE									Site Area(s) Selected Event(s) Selected	
Alkali and Alkaline Earth N	letals										
ANALYTE	MiN	MEAN*	MaX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations SAMPLED	No. SAMPLES > LOD	No. Locations > AC	Location(s) Failing Screening	
Barium	4.5	40.1	104.0	700	WHO 2017	ug/l	6	12	0		
Beryllium	0.100	0.069	0.165	12.0	WHO 2017	ug/l	5	1	0		
BTEX and Fuel Additives											
ANALYTE	MiN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	No. Locations Sampled	No. SAMPLES > LOD	No. Locations > AC	Location(s) Failing Screening	
Benzene	1.00	2.75	10.00	1.00	UK DWS	ug/l	5	-	0		
Ethylbenzene	1.00	2.75	10.00	300	WHO 2017	ug/l	5	-	0		
Methyl t-butylether (MTBE)	1.00	2.75	10.00	15.0	WHO 2017	ug/l	5	-	0		
Tertiary Amyl Methyl Ether (TAME)	1.00	2.75	10.00	-		ug/l	5	-	0		
Toluene	1.00	2.75	10.00	700	WHO 2017	ug/l	5	-	0		
Xylene	2.00	5.50	20.00	500	WHO 2017	ug/l	5	-	0		
Xylene - Total (Summed)	1.00	5.50	10.00	-		ug/l	5	6	0		
Xylene-m & p	1.00	2.75	10.00	-		ug/l	5	-	0		
Xylene-o	1.00	2.75	10.00	-		ug/l	5	-	0		

Gint Database: 70072063 Drax FCA.gpj

Print date: 09/11/2022

Sample Matrix: LEACH	ATE									Site Area(s) Selected: Whole site Event(s) Selected: All events
General Chemistry										
ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	No. Locations Sampi en	No. SAMPLES	No. Locations > AC	Location(s) Failing Screening
рН	7.17	7.98	8.52	6.50/10.0	UK DWS	pH Units	6	12	0	
Electrical conductivity	33	129	229	2,500	UK DWS	uS/cm	6	12	0	
Inorganics				L.	5			S	•	
ANALYTE	Min	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	Assessment Criteria Source	UNITS	NO. LOCATIONS SAMPIED	No. SAMPLES	No. Locations > Ac	Location(s) Falling Screening
Ammoniacal Nitrogen as N	200	8965	16500	389	UK DWS	ug/l	5	5	4	TP01, TP02, TP04, TP05
Chloride	2000	1442	2800	250,000	UK DWS	ug/l	6	3	0	
Cyanide (Complex)	50.0	25.0	50.0	50.0	UK DWS - Assumes Total Cyanide	ug/l	5	-	0	
Cyanide (Free)	50.0	25.0	50.0	50.0	UK DWS - Assumes Total Cyanide	ug/l	5	-	0	
Cyanide (Total)	50.0	25.0	50.0	50.0	UK DWS	ug/l	5	-	0	
Fluoride	500	839	1500	1,500	UK DWS	ug/l	6	10	0	
Sulphate as SO4	2000	19525	67200	250,000	UKDWS	ug/l	6	8	0	

Sample Matrix: LEACH	ATE										Area(s) Selected: Whe event(s) Selected: All	
Metals												
ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	NO. LOCATIONS SAMPLED	No. SAMPLES > LOD	No. Locations > Ac	Location(s) Failing Screening		
Antimony	1.00	1.19	2.66	5.00	UK DWS	ug/l	6	5	0			
Arsenic	0.50	3.41	10.40	10.0	UK DWS	ug/l	6	10	1	TP05		
Boron	53	321	604	1,000	UK DWS	ug/l	5	6	0			
Cadmium	0.08	0.24	1.25	5.00	UK DWS	ug/l	6	2	0			
Chromium	1.00	1.10	6.25	50.0	UK DWS	ug/l	6	3	0			
Chromium III	30.0	15.0	30.0	-		ug/l	5	-	0			
Copper	0.50	8.48	31.20	2,000	UK DWS	ug/l	6	12	0			
Hexavalent Chromium	30.0	15.0	30.0	-		ug/l	5	-	0			
Lead	0.20	1.79	10.20	10.0	UK DWS	ug/l	6	10	1	TP05		
Mercury	0.010	0.005	0.010	1.00	UK DWS	ug/l	6	-	0			
Molybdenum	3.00	6.93	19.30	70.0	WHO 2017	ug/l	6	7	0			
Nickel	0.55	3.90	12.30	20.0	UK DWS	ug/l	6	12	0			
Selenium	1.00	1.10	3.35	10.0	UK DWS	ug/l	6	4	0			
Zinc	1.3	23.0	126.0	-		ug/l	6	12	0			

Sample Matrix: LEACH	IATE										Site Area(s) Selected: Event(s) Selected:	
Other												
ANALYTE	MIN	MEAN*	MAX	Assessment Criteria (AC)	Assessment Criteria Source		UNITS	NO. LOCATIONS SAMPI ED		No. Locations > AC	Location(s) Failing Screening	
DOC	4020	11341	31300	) -		ug	g/I	6	12	0		

Sample Matrix: LEACH	IATE									Site Area(s) Selec Event(s) Selec	ted: Whole site ted: All events
PAHs											
ANALYTE	MIN	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	No. Locations Sampled	No. SAMPLES > LOD	No. Locations > Ac	Location(s) Failing Screening	
Acenaphthene	0.005	0.006	0.030	-		ug/l	5	1	0		
Acenaphthylene	0.005	0.005	0.030	-		ug/l	5	-	0		
Anthracene	0.005	0.005	0.030	-		ug/l	5	-	0		
Benzo (a) anthracene	0.005	0.005	0.030	-		ug/l	5	-	0		
Benzo (a) pyrene	0.002	0.002	0.012	0.010	UKDWS	ug/l	5	-	0		
Benzo (b) fluoranthene	0.005	0.006	0.030	-		ug/l	5	1	0		
Benzo (ghi) perylene	0.005	0.005	0.030	-		ug/l	5	-	0		
Benzo (k) fluoranthene	0.005	0.005	0.030	-		ug/l	5	-	0		
Chrysene	0.005	0.005	0.030	-		ug/l	5	-	0		
Dibenzo (ah) anthracene	0.005	0.005	0.030	-		ug/l	5	-	0		
Fluoranthene	0.005	0.008	0.030	-		ug/l	5	1	0		
Fluorene	0.005	0.005	0.030	-		ug/l	5	-	0		
Indeno (1,2,3-cd) pyrene	0.005	0.005	0.030	-		ug/l	5	-	0		
Naphthalene	0.010	0.013	0.060	-		ug/l	5	1	0		
PAH (Total)	0.082	0.089	0.492	-		ug/l	5	-	0		
Phenanthrene	0.006	0.010	0.030	-		ug/l	5	5	0		
Pyrene	0.005	0.008	0.030	-		ug/l	5	1	0		

Sample Matrix: LEACH	ATE										Area(s) Selected: Whole site event(s) Selected: All events
Phenols											
ANALYTE	MIM	MEAN*	MAX	ASSESSMENT CRITERIA (AC)	ASSESSMENT CRITERIA SOURCE	UNITS	No. Locations SAMPLED	No. SAMPLES > LOD	No. Locations > AC	LOCATION(S) FAILING SCBEENING	
Cresols	6.00	3.00	6.00	-		ug/l	5	-	0		
Phenol	2.00	4.17	20.00	-		ug/l	5	1	0		
Phenol (Monohydric)	16.00	9.00	20.00	-		ug/l	6	1	0		
Xylenols	8.00	4.00	8.00	-		ug/l	5	-	0		
ТРН/ЕРН											
ANALYTE	MIN	MEAN*	MAX	Assessment Criteria (AC)	Assessment Criteria Source	UNITS	No. Locations Sampled	No. SAMPLES > LOD	No. Locations > Ac	LOCATION(S) FAILING SCREENING	
GRO Surrogate	57.0	75.2	97.0	-		%	5	6	0		
PRO (C5-C12)	50.0	25.0	50.0	-		ug/l	5	-	0		

# EXCEEDANCES OF THRESHOLDS

# Sample matrix: LEACHATE

# Inorganics

Analyte	Point ID	Sample Depth (m bgl)	Result Criteria Source	Threshold	Units	Stratum
Ammoniacal Nitrogen as N	TP01	2.70 - 2.80	6900 UK DWS	389	ug/l	Made Ground
	TP02	1.10 - 1.20	8290 UK DWS	389	ug/l	Made Ground
		1.80 - 1.90	8300 UK DWS	389	ug/l	Alluvium
	TP04	2.20 - 2.30	16500 UK DWS	389	ug/l	Made Ground
	TP05	1.20 - 1.30	13700 UK DWS	389	ug/l	Made Ground
Metals						
Metals						
Analyte	Point ID	Sample Depth (m bgl)	Result Criteria Source	Threshold	Units	Stratum
Arsenic	TP05	1.20 - 1.30	10.4 UK DWS	10.0	ug/l	Made Ground