## 19. PROPERTY VEGETATION PLANS

Is the land the subject of a property vegetation plan approved under Part 4 of the *Native Vegetation Act 2003* (and that continues in force) ?

**No**

**Disclaimer:** This statement is based on information supplied by a third party public authority. The accuracy of this information has not been verified by Woollahra Council and if the information is vital for the proposed end use, then it should be verified by the applicant.

## 20. ORDERS UNDER TREES (DISPUTES BETWEEN NEIGHBOURS) ACT 2006

Has an order been made under the *Trees (Disputes Between Neighbours) Act 2006* to carry out work in relation to a tree on the land (but only if Council has been notified of the order).

**No**

**Disclaimer:** This statement is based on information supplied by a third party public authority. The accuracy of this information has not been verified by Woollahra Council and if the information is vital for the proposed end use, then it should be verified by the applicant.

## 21. DIRECTIONS UNDER PART 3A

Is there a direction by the Minister in force under section 75P (2) (c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 of the Act does not have effect?

**No**

**Disclaimer:** This statement is based on information supplied by a third party public authority. The accuracy of this information has not been verified by Woollahra Council and if the information is vital for the proposed end use, then it should be verified by the applicant.

## 22. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR SENIORS

Is there a current site compatibility certificate (seniors housing), of which the Council is aware *?*

**No**

Are there any terms of a kind referred to in clause 18(2) of *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* that have been imposed as a condition of consent to a development application granted after 11 October 2007?

**No**

**Disclaimer:** This statement is based on information supplied by a third party public authority. The accuracy of this information has not been verified by Woollahra Council and if the information is vital for the proposed end use, then it should be verified by the applicant.

## 23. SITE COMPATIBILITY CERTIFICATES FOR INFRASTRUCTURE, SCHOOLS OR TAFE ESTABLISHMENTS

Is there a valid site compatibility certificate (infrastructure) or site compatibility certificate (schools or TAFE establishments), of which the Council is aware *?*

**No**

**Disclaimer:** This statement is based on information supplied by a third party public authority. The accuracy of this information has not been verified by Woollahra Council and if the information is vital for the proposed end use, then it should be verified by the applicant.

## 24. SITE COMPATIBILITY CERTIFICATES AND CONDITIONS FOR AFFORDABLE HOUSING

Is there a current site compatibility certificate (affordable rental housing), of which the Council is aware *?*

**No**

Are there any terms of a kind referred to in clause 17(1) or 37(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that have been imposed as a condition of consent to a development application in respect of the land?

**No**

**Disclaimer:** This statement is based on information supplied by a third party public authority. The accuracy of this information has not been verified by Woollahra Council and if the information is vital for the proposed end use, then it should be verified by the applicant.

## 25. PAPER SUBDIVISION INFORMATION

Is there a development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot?

**No**

## 26. SITE VERIFICATION CERTIFICATE

Is there a current site verification certificate of which this council is aware?

**No**

**Note:** A site verification certificate sets out the Director-General's opinion as to whether the land concerned is or is not biophysical strategic agricultural land or critical industry cluster land – see Division 3 of Part 4AA of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*

## 27. MATTERS ARISING UNDER THE CONTAMINATED LAND MANAGEMENT ACT 1997

(a) Is the land (or part of the land) to which this certificate relates significantly contaminated land?

**No**

(b) Is the land to which this certificate relates subject to a management order?

**No**

(c) Is the land to which this certificate relates the subject of an approved voluntary management proposal?

**No**

(d) Is the land to which this certificate relates subject to an ongoing maintenance order?

**No**

(e) Is the land to which this certificate relates the subject of a site audit statement?

**No**

**Note:** These matters are prescribed by section 59 (2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate. Section 53B requires site auditors to furnish local authorities with copies of audit statements relating to site audits for the purposes of statutory requirements.

**Disclaimer:** This statement is based on information supplied by a third party public authority. The accuracy of this information has not been verified by Woollahra Council and if the information is vital for the proposed end use, then it should be verified by the applicant.

## 28. LOOSE-FILL ASBESTOS INSULATION

Does the land include any residential premises (within the meaning of Division 1A of Part 8 of the *Home Building Act 1989*) listed on the register that is required to be maintained under that Division.

**No**

**Disclaimer:** This statement is based on information supplied by a third party public authority. The accuracy of this information has not been verified by Woollahra Council and if the information is vital for the proposed end use, then it should be verified by the applicant.

## 29. AFFECTED BUILDING NOTICES AND BUILDING PRODUCT RECTIFICATION ORDERS

(a) Is there any affected building notice in force in respect of the land?

**No**

(b) Is there any building product rectification order in force in respect of the land that has not been fully complied with?

**No**

(c) Is there any outstanding notice of intention to make a building product rectification order?

**No**

**Note:** ***affected building notice*** has the same meaning as in Part 4 of the *Building Products (Safety) Act 2017.*

***building product rectification*** order has the same meaning as in the *Building Products (Safety) Act 2017.*

**Disclaimer:** This statement is based on information supplied by a third party public authority. The accuracy of this information has not been verified by Woollahra Council and if the information is vital for the proposed end use, then it should be verified by the applicant.

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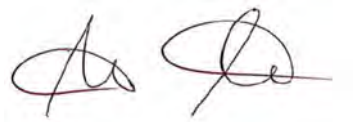
**Should the applicant require further information about any other matter please contact Council's Planning and Development Division.**



Anne White
per:
**Gary James**
**General Manager**

# APPENDIX H

## GROUNDWATER BORE SEARCH

# NSW Office of Water
## Work Summary

### GW106478

Licence: 10BL164255
Licence Status: CONVERTED

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): DOMESTIC

Work Type: Spear
Work Status: Supply Obtained
Construct.Method: Auger - Solid Flight
Owner Type: Private

Commenced Date:
Completion Date: 26/10/2004
Final Depth: 6.00 m
Drilled Depth: 6.00 m

Contractor Name: WATER WORKS
Driller: Andrew Malcolm Chalmers
Assistant Driller:

Property: MILLER 26 BERESFORD RD ROSE BAY
GWMA: -
GW Zone: -
Standing Water Level:
Salinity:
Yield:

## Site Details

Site Chosen By:

| | County | Parish | Cadastre |
|---|---|---|---|
| Form A: | CUMBE | CUMBE.1 | 3 212629 |
| Licensed: | CUMBERLAND | ALEXANDRIA | Whole Lot 3//212629 |

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6250499.0
Easting: 338696.0
Latitude: 33°52'24.7"S
Longitude: 151°15'21.5"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

## Construction

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

Cemented; S-Sump; CE-Centralisers

| Hole | Pipe | Component | Type | From (m) | To (m) | Outside Diameter (mm) | Inside Diameter (mm) | Interval | Details |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Hole | Hole | 0.00 | 6.00 | 125 | | | Auger - Solid Flight |
| 1 | 1 | Casing | Pvc Class 12 | 0.00 | 4.00 | 14 | 6 | | Driven into Hole, Glued |
| 1 | 1 | Opening | Slots - Horizontal | 4.50 | 5.50 | 55 | | 1 | Slotted On Site, Steel - ERW, Screwed, SL: 1200.0mm |

## Water Bearing Zones

| From (m) | To (m) | Thickness (m) | WBZ Type | S.W.L. (m) | D.D.L. (m) | Yield (L/s) | Hole Depth (m) | Duration (hr) | Salinity (mg/L) |
|---|---|---|---|---|---|---|---|---|---|
| 2.00 | 6.00 | 4.00 | Unknown | 2.00 | | | | 00:30:00 | 430.00 |

## Geologists Log

## Drillers Log

| From (m) | To (m) | Thickness (m) | Drillers Description | Geological Material | Comments |
|---|---|---|---|---|---|
| 0.00 | 6.00 | 6.00 | sand | Sand | |

## Remarks

13/01/2010: updated from original form A

*** End of GW106478 ***

# NSW Office of Water
## Work Summary

## GW107058

Licence: 10BL164827
Licence Status: CONVERTED

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): DOMESTIC

Work Type: Spear
Work Status: Supply Obtained
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 25/02/2005
Final Depth: 7.00 m
Drilled Depth:

Contractor Name: WATER WORKS
Driller: Andrew Malcolm Chalmers
Assistant Driller:

Property: RAMSAY 24 BERESFORD RD ROSE BAY 2029
GWMA: -
GW Zone: -
Standing Water Level: 3.000
Salinity:
Yield: 1.000

## Site Details

Site Chosen By:

| | County | Parish | Cadastre |
|---|---|---|---|
| Form A: | CUMBE | CUMBE.1 | B//369469 |
| Licensed: | CUMBERLAND | ALEXANDRIA | Whole Lot B//369469 |

Region: 10 - Sydney South Coast
River Basin: 213 - SYDNEY COAST - GEORGES RIVER
Area/District:
CMA Map: 9130-2N
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6250520.0
Easting: 338695.0
Latitude: 33°52'24.0"S
Longitude: 151°15'21.5"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unidentified Location

## Construction

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

| Hole | Pipe | Component | Type | From (m) | To (m) | Outside Diameter (mm) | Inside Diameter (mm) | Interval | Details |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Hole | Hole | 0.00 | 7.00 | 125 | | | Auger |
| 1 | 1 | Casing | Pvc Class 9 | -0.30 | 7.00 | 114 | | | Driven into Hole, Screwed and Glued |
| 1 | 1 | Opening | Screen | 6.00 | 7.00 | 55 | | 1 | Screwed, A: 0.20mm |

## Water Bearing Zones

| From (m) | To (m) | Thickness (m) | WBZ Type | S.W.L. (m) | D.D.L. (m) | Yield (L/s) | Hole Depth (m) | Duration (hr) | Salinity (mg/L) |
|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 7.00 | 4.00 | Unknown | 3.00 | | 1.00 | | 00:05:00 | 385.00 |

## Geologists Log

## Drillers Log

| From (m) | To (m) | Thickness (m) | Drillers Description | Geological Material | Comments |
|---|---|---|---|---|---|

## Remarks

25/02/2005: Form A Remarks:
Only first page of form A provided, information missing
16/02/2010: updated from original form A

*** End of GW107058 ***

# NSW Office of Water
## Work Summary

## GW107613

Licence: 10BL164350
Licence Status: CONVERTED

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): DOMESTIC

Work Type: Spear
Work Status: Supply Obtained
Construct.Method: Auger
Owner Type: Private

Commenced Date:
Completion Date: 10/01/2005
Final Depth: 7.00 m
Drilled Depth: 7.00 m

Contractor Name: WATER WORKS
Driller: Andrew Malcolm Chalmers
Assistant Driller:

Property: ISSA 28 BERESFORD RD ROSE BAY
GWMA: -
GW Zone: -
Standing Water Level: 3.000
Salinity:
Yield: 0.500

## Site Details

Site Chosen By:

| | County | Parish | Cadastre |
|---|---|---|---|
| Form A: | CUMBE | CUMBE.1 | 4//212629 |
| Licensed: | CUMBERLAND | ALEXANDRIA | Whole Lot 4//212629 |

Region: 10 - Sydney South Coast
River Basin: 213 - SYDNEY COAST - GEORGES RIVER
Area/District:
CMA Map: 9130-2N
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6250488.0
Easting: 338717.0
Latitude: 33°52'25.0"S
Longitude: 151°15'22.3"E

GS Map: -
MGA Zone: 0
Coordinate Source: GIS - Geographic Information System

## Construction

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

| Hole | Pipe | Component | Type | From (m) | To (m) | Outside Diameter (mm) | Inside Diameter (mm) | Interval | Details |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Hole | Hole | 0.00 | 7.00 | 125 | | | Auger |
| 1 | 1 | Casing | Pvc Class 9 | -0.30 | 7.00 | 114 | | | Driven into Hole, Screwed and Glued |
| 1 | 1 | Opening | Screen | 6.00 | 7.00 | 55 | | 1 | Other, Screwed, A: 0.20mm |

## Water Bearing Zones

| From (m) | To (m) | Thickness (m) | WBZ Type | S.W.L. (m) | D.D.L. (m) | Yield (L/s) | Hole Depth (m) | Duration (hr) | Salinity (mg/L) |
|---|---|---|---|---|---|---|---|---|---|
| 3.00 | 7.00 | 4.00 | Unknown | 3.00 | | 0.50 | | 00:05:00 | 387.00 |

## Geologists Log

## Drillers Log

| From (m) | To (m) | Thickness (m) | Drillers Description | Geological Material | Comments |
|---|---|---|---|---|---|
| 0.00 | 7.00 | 7.00 | sand | Sand | |

## Remarks

08/04/2010: updated from original form A

*** End of GW107613 ***

# NSW Office of Water
## Work Summary

## GW109248

Licence: 10BL602531
Licence Status: CONVERTED

Authorised Purpose(s): DOMESTIC
Intended Purpose(s): DOMESTIC

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

Commenced Date:
Completion Date: 20/08/2008
Final Depth:
Drilled Depth:

Contractor Name: INTERTEC DRILLING SERVICES
Driller: Paul Sheehy
Assistant Driller:

Property: WAGNER 24 A VICTORIA ROAD BELLEVUE HILL 2023 NSW
GWMA:
GW Zone:
Standing Water Level:
Salinity:
Yield:

## Site Details

Site Chosen By:

| | County | Parish | Cadastre |
|---|---|---|---|
| Form A: | CUMBE | CUMBE.1 | 1//415296 |
| Licensed: | | | |

Region: 10 - Sydney South Coast
River Basin: - Unknown
Area/District:
CMA Map:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6250464.0
Easting: 338262.0
Latitude: 33°52'25.6"S
Longitude: 151°15'04.6"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

## Construction

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

| Hole | Pipe | Component | Type | From (m) | To (m) | Outside Diameter (mm) | Inside Diameter (mm) | Interval | Details |
|---|---|---|---|---|---|---|---|---|---|

## Water Bearing Zones

| From (m) | To (m) | Thickness (m) | WBZ Type | S.W.L. (m) | D.D.L. (m) | Yield (L/s) | Hole Depth (m) | Duration (hr) | Salinity (mg/L) |
|---|---|---|---|---|---|---|---|---|---|

## Geologists Log
## Drillers Log

| From (m) | To (m) | Thickness (m) | Drillers Description | Geological Material | Comments |
|---|---|---|---|---|---|

## Remarks

*** End of GW109248 ***

# NSW Office of Water
## Work Summary

## GW109378

Licence: 10BL165173
Licence Status: CANCELLED

Authorised Purpose(s): TEST BORE
Intended Purpose(s): RECREATION (GROUNDWATER)

Work Type: Bore
Work Status: Test Hole
Construct.Method: Rotary Air/Mud
Owner Type: Private

Commenced Date:
Completion Date: 02/10/2008
Final Depth: 150.00 m
Drilled Depth: 150.00 m

Contractor Name: INTERTEC DRILLING SERVICES
Driller: Paul Sheehy
Assistant Driller:

Property: PRESBYTERIAN CHURCH 29-53 VICTORIA RD BELLEVUE HILL 2023 NSW
Standing Water Level: 68.000

GWMA:
GW Zone:
Salinity:
Yield: 0.300

## Site Details

Site Chosen By:

| | County | Parish | Cadastre |
|---|---|---|---|
| Form A: | CUMBE | CUMBE.1 | 1 1064059 |
| Licensed: | | | |

Region: 10 - Sydney South Coast
CMA Map:

River Basin: - Unknown
Area/District:
Grid Zone:
Scale:

Elevation: 0.00 m (A.H.D.)
Elevation Source: Unknown
Northing: 6250269.0
Easting: 338569.0
Latitude: 33°52'32.1"S
Longitude: 151°15'16.4"E

GS Map: -
MGA Zone: 0
Coordinate Source: Unknown

## Construction

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

| Hole | Pipe | Component | Type | From (m) | To (m) | Outside Diameter (mm) | Inside Diameter (mm) | Interval | Details |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Hole | Hole | 0.00 | 18.00 | 240 | | | Rotary Air/Mud |
| 1 | | Hole | Hole | 18.00 | 150.00 | 158 | | | Down Hole Hammer |
| 1 | 1 | Casing | Steel | -0.40 | 18.60 | 158 | | | Driven into Hole, Welded |
| 1 | 1 | Casing | Pvc Class 9 | 0.40 | 89.60 | 140 | | | Suspended in Clamps, Screwed and Glued |

## Water Bearing Zones

| From (m) | To (m) | Thickness (m) | WBZ Type | S.W.L. (m) | D.D.L. (m) | Yield (L/s) | Hole Depth (m) | Duration (hr) | Salinity (mg/L) |
|---|---|---|---|---|---|---|---|---|---|
| 44.00 | 48.00 | 4.00 | Unknown | | | 0.10 | | | 101.00 |
| 94.50 | 100.00 | 5.50 | Unknown | | | 0.60 | | | 175.00 |
| 112.00 | 119.00 | 7.00 | Unknown | 68.00 | | 0.30 | | | 223.00 |

## Geologists Log

## Drillers Log

| From (m) | To (m) | Thickness (m) | Drillers Description | Geological Material | Comments |
|---|---|---|---|---|---|
| 0.00 | 13.00 | 13.00 | SANDY CLAY | Sandy Clay | |
| 13.00 | 20.00 | 7.00 | SANDSTONE WEATHERED | Sandstone | |
| 20.00 | 21.00 | 1.00 | CLAYSTONE | Claystone | |
| 21.00 | 44.00 | 23.00 | SANDSTONE GREY | Claystone | |
| 44.00 | 48.00 | 4.00 | SANDSTONE QUARTZ | Sandstone | |
| 48.00 | 53.00 | 5.00 | SANDSTONE CLAY BANDS | Sandstone | |
| 53.00 | 60.00 | 7.00 | SANDSTONE GREY | Sandstone | |
| 60.00 | 61.00 | 1.00 | SANDSTONE CLAY BANDS | Sandstone | |
| 61.00 | 66.00 | 5.00 | SANDSTONE QUARTZ | Sandstone | |
| 66.00 | 70.00 | 4.00 | SANDSTONE GREY | Sandstone | |
| 70.00 | 71.50 | 1.50 | SHALE | Shale | |
| 71.50 | 79.00 | 7.50 | SANDSTONE GREY | Sandstone | |
| 79.00 | 84.00 | 5.00 | SANDSTONE QUARTZ | Sandstone | |
| 84.00 | 86.00 | 2.00 | SANDSTONE GREY | Sandstone | |
| 86.00 | 86.50 | 0.50 | SANDSTONE FRACTURED | Sandstone | |
| 86.50 | 94.50 | 8.00 | SANDSTONE GREY | Sandstone | |
| 94.50 | 100.00 | 5.50 | SANDSTONE QUARTZ | Sandstone | |
| 100.00 | 112.00 | 12.00 | SANDSTONE GREY | Sandstone | |
| 112.00 | 119.00 | 7.00 | SANDSTONE QUARTZ | Sandstone | |
| 119.00 | 126.00 | 7.00 | SANDSTONE GREY | Sandstone | |
| 126.00 | 134.00 | 8.00 | SANDSTONE QUARTZ | Sandstone | |
| 134.00 | 142.00 | 8.00 | SANDSTONE GREY | Sandstone | |
| 142.00 | 142.50 | 0.50 | SILTSTONE | Siltstone | |
| 142.50 | 150.00 | 7.50 | SANDSTONE GREY | Sandstone | |

## Remarks

02/10/2008: Previously 10BL165173

*** End of GW109378 ***

Department of Primary Industries
Office of Water



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All Groundwater
find a site
- All Groundwater Map
  - North Coast Region
  - Hunter Region
  - Greater Sydney Re...
  - South Coast Region
  - Northwest Region
  - Central West Region
  - Southwest Region
  - Far West Region
  - Great Artesian Basin
  - Coal Basins

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# Greater Sydney Region

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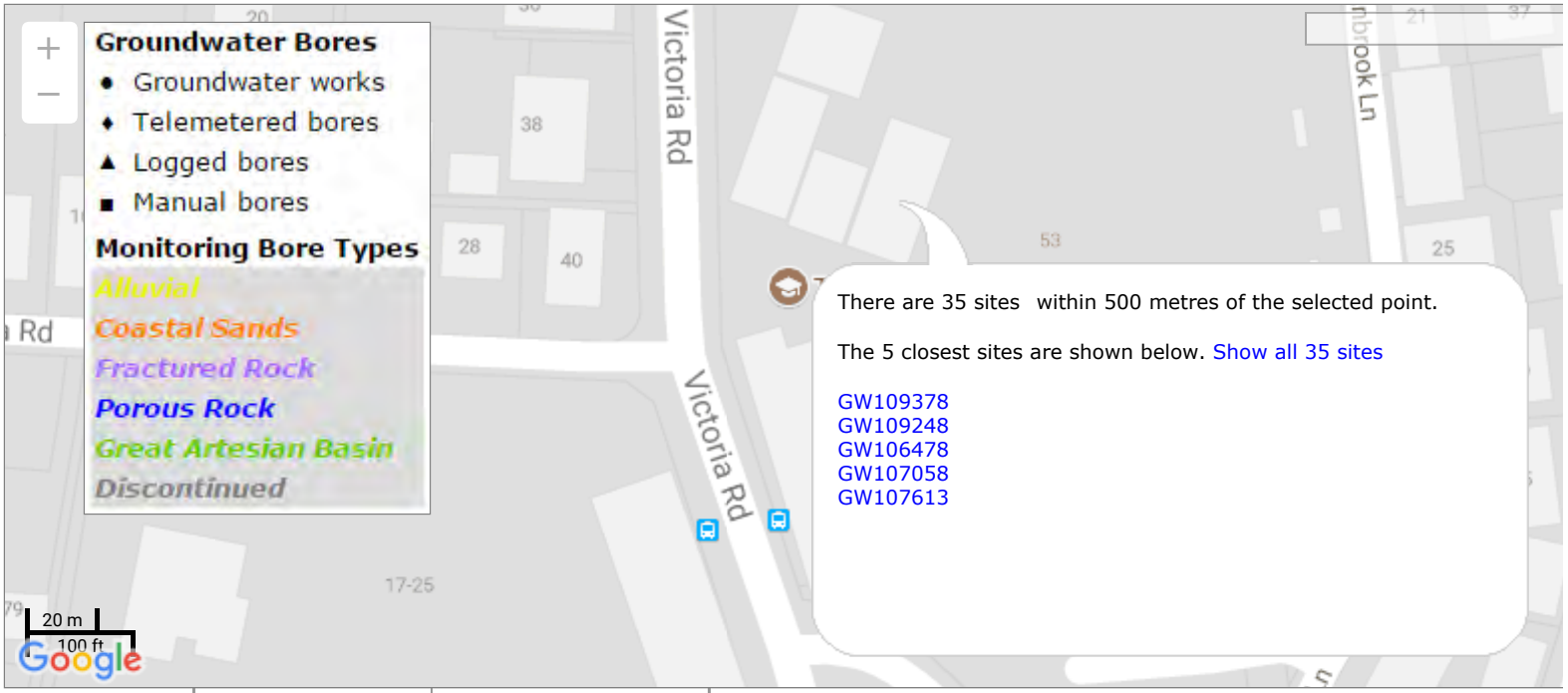
All data times are Eastern Standard Time

Map




Scale = 1 : 1693

# APPENDIX I

## METEORLOGICAL INFORMATION

Australian Government
Bureau of Meteorology

# Monthly rainfall

The Monthly rainfall is the total of all available Daily rainfall for the month. Observations of Daily rainfall are nominally made at 9 am local clock time and record the total for the previous 24 hours. Rainfall includes all forms of precipiation that reach the ground, such as rain, drizzle, hail and snow.
About monthly rainfall

Station: Rose Bay (Royal Sydney Golf Club) Number: 66098 Opened: 1928 Now: Open
Lat: 33.88° S Lon: 151.27° E Elevation: 8 m

Key: Units are millimetres. 12.3 = Not quality controlled.

Period for calculating statistics: (•) All years ( ) 1961-1990

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1928 | | | 150.1 | 141.4 | 111.2 | 180.2 | 190.8 | 53.0 | 7.7 | 37.2 | 5.6 | 23.3 | |
| 1929 | 17.9 | 406.8 | 148.2 | 199.5 | 326.0 | 56.4 | 102.4 | 105.1 | 36.3 | 272.4 | 90.3 | 41.2 | 1802.5 |
| 1930 | 160.6 | 11.7 | 127.9 | 112.2 | 112.4 | 269.8 | 156.9 | 44.4 | 14.8 | 54.6 | 17.4 | 161.0 | 1243.7 |
| 1931 | 57.5 | 41.4 | 131.4 | 223.4 | 77.3 | 108.2 | 285.7 | 8.6 | 117.6 | 23.1 | 111.5 | 88.7 | 1274.4 |
| 1932 | 8.7 | 128.9 | 117.4 | 138.2 | 90.2 | 38.2 | 62.7 | 54.6 | 209.6 | 28.0 | 87.7 | 100.8 | 1065.0 |
| 1933 | 201.2 | 5.5 | 103.2 | 196.2 | 107.3 | 58.8 | 73.3 | 12.7 | 67.0 | 99.4 | 129.1 | 117.1 | 1170.8 |
| 1934 | 78.8 | 211.6 | | | | | | | | | | | |
| 1941 | 84.1 | 56.2 | 44.3 | 84.3 | 48.5 | 69.1 | 41.7 | 102.9 | 57.2 | 70.5 | 31.4 | 24.2 | 714.4 |
| 1942 | 12.5 | 34.1 | 466.9 | 17.1 | 35.5 | 172.9 | 70.2 | 39.5 | 15.3 | 145.3 | 118.3 | 87.0 | 1214.6 |
| 1943 | 38.5 | 14.0 | 14.2 | 41.8 | 366.2 | 26.6 | 6.7 | 191.8 | 135.6 | 43.1 | 152.6 | 71.9 | 1103.0 |
| 1944 | 65.7 | 149.2 | 115.3 | 70.7 | 83.6 | 40.1 | 74.8 | 123.8 | 27.4 | 19.9 | 21.9 | 23.8 | 816.2 |
| 1945 | 59.9 | 42.5 | 33.4 | 331.4 | 150.1 | 198.7 | 91.1 | | | | | | |
| 1947 | | | | | | | | | | | | 170.2 | |
| 1948 | 190.8 | 65.3 | 113.6 | 39.2 | | | 40.3 | 11.8 | 70.1 | | | | |
| 1949 | 237.3 | 123.9 | 106.3 | 38.5 | 118.9 | 317.0 | 67.0 | 128.4 | 246.3 | | | | |
| 1979 | 116.4 | 4.3 | 234.8 | 39.6 | 138.1 | 160.8 | 34.0 | 7.6 | 22.1 | 55.2 | 83.6 | 0.0 | 896.5 |
| 1980 | 112.0 | 87.9 | 65.8 | 43.0 | 112.7 | 64.8 | 71.6 | 14.8 | 7.6 | 27.7 | 55.9 | 43.9 | 707.7 |
| 1981 | 53.8 | 226.0 | 46.7 | 106.7 | 125.7 | 62.2 | 50.8 | 10.2 | 0.0 | 162.1 | 92.8 | 70.2 | 1007.2 |
| 1982 | 66.3 | 0.0 | 186.8 | 4.6 | 42.9 | 203.7 | 182.9 | 24.0 | 228.2 | 46.6 | 27.5 | 27.3 | 1040.8 |
| 1983 | 47.3 | 57.0 | 256.2 | 297.7 | 191.7 | 88.9 | 44.3 | 86.4 | 42.6 | 162.4 | 35.8 | 82.7 | 1393.0 |

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1984 | 213.4 | 135.3 | 231.5 | 109.7 | 177.7 | 73.2 | 171.2 | 19.9 | 43.4 | 62.3 | 420.8 | 109.0 | 1767.4 |
| 1985 | 6.5 | 51.0 | 79.7 | 337.0 | 123.5 | 148.9 | 121.4 | 22.9 | 93.5 | 181.6 | 78.5 | 77.5 | 1322.0 |
| 1986 | 245.0 | 104.0 | 7.0 | 78.0 | 62.5 | 13.0 | 29.0 | 392.0 | 34.5 | 34.0 | 121.0 | 8.9 | 1128.9 |
| 1987 | 75.5 | 25.0 | 109.6 | 75.5 | 54.2 | 75.0 | 91.0 | 169.0 | 0.0 | 202.9 | 162.5 | 72.9 | 1113.1 |
| 1988 | 271.3 | 95.5 | 108.8 | 453.3 | 129.9 | 131.6 | 97.0 | 74.2 | 121.4 | 0.2 | 165.6 | 125.6 | 1774.4 |
| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
| 1989 | 174.4 | 74.6 | 152.1 | 370.8 | 167.7 | 279.5 | 17.9 | 52.4 | 1.0 | 21.8 | 59.1 | 143.7 | 1515.0 |
| 1990 | 73.2 | 613.8 | 163.1 | 335.3 | 150.1 | 35.4 | 104.0 | 178.0 | 220.6 | 42.8 | 38.2 | 75.7 | 2030.2 |
| 1991 | 102.2 | 53.6 | 23.8 | 40.8 | 132.2 | 323.0 | 128.8 | 5.0 | 22.1 | 17.2 | 39.8 | 212.8 | 1101.3 |
| 1992 | 117.8 | 370.0 | 94.0 | 94.3 | 89.9 | 116.0 | 20.2 | 61.0 | 31.4 | 138.8 | 152.2 | 177.2 | 1462.8 |
| 1993 | 80.0 | 73.0 | 88.7 | 72.6 | 23.0 | 86.2 | 110.8 | 79.0 | 106.0 | 64.0 | 84.6 | 34.8 | 902.7 |
| 1994 | 46.8 | 99.6 | 165.2 | 96.2 | 37.2 | 73.7 | 154.2 | 26.6 | 40.6 | 72.6 | 53.0 | 69.8 | 935.5 |
| 1995 | 82.2 | 100.4 | 173.8 | 26.2 | 210.0 | 128.4 | 8.6 | 0.0 | 218.8 | 42.2 | 133.0 | 85.8 | 1209.4 |
| 1996 | 120.8 | 43.2 | 34.8 | 67.2 | 172.2 | 204.6 | 54.6 | 101.0 | 102.2 | 27.4 | 95.0 | 34.6 | 1057.6 |
| 1997 | 156.8 | 120.8 | 17.8 | 17.2 | 267.8 | 151.4 | 276.8 | 35.0 | 139.4 | 30.0 | 47.0 | 31.0 | 1291.0 |
| 1998 | 94.7 | 37.8 | 35.6 | 251.2 | 235.2 | 135.2 | 93.2 | 529.6 | 48.4 | 63.2 | 59.4 | 98.4 | 1681.9 |
| 1999 | 156.4 | 152.6 | 41.8 | 310.4 | 95.2 | 95.8 | 174.0 | 123.0 | 25.2 | 159.0 | 80.8 | 97.4 | 1511.6 |
| 2000 | 41.5 | 59.4 | 238.6 | 69.2 | 41.0 | 45.2 | 34.8 | 33.2 | 33.4 | 67.4 | 122.6 | 51.2 | 837.5 |
| 2001 | 169.8 | 76.2 | 105.0 | 133.2 | 432.8 | 35.2 | 181.6 | 98.6 | 36.0 | 40.0 | 99.8 | 72.8 | 1481.0 |
| 2002 | 89.6 | 396.6 | 83.4 | 64.8 | 123.0 | 47.6 | 21.8 | 66.6 | 57.2 | 8.6 | 31.6 | 82.0 | 1072.8 |
| 2003 | 7.8 | 47.0 | 193.6 | 187.0 | 333.2 | 50.8 | 118.0 | 53.4 | 8.9 | 82.2 | 88.6 | 59.2 | 1229.7 |
| 2004 | 57.4 | 119.8 | 73.4 | 20.0 | 12.8 | 55.8 | 66.0 | 153.2 | 89.0 | 213.2 | 70.0 | 86.0 | 1016.6 |
| 2005 | 54.0 | 141.4 | 113.2 | 37.0 | 78.2 | 80.4 | 81.2 | 2.0 | 49.0 | 65.4 | 116.6 | 25.6 | 844.0 |
| 2006 | 129.0 | 28.0 | 55.6 | 17.6 | 65.8 | 238.0 | 233.8 | 70.6 | 133.6 | 22.4 | 50.4 | 104.8 | 1149.6 |
| 2007 | 50.0 | 92.4 | 53.0 | 386.8 | 12.2 | 411.8 | 50.4 | 131.4 | 51.2 | 21.0 | 165.2 | 87.2 | 1512.6 |
| 2008 | 40.4 | 289.0 | 65.4 | 143.4 | 11.2 | 135.0 | 131.6 | 77.8 | 83.8 | 70.2 | 64.2 | 61.6 | 1173.6 |
| 2009 | 30.2 | 102.8 | 67.2 | 161.8 | 197.2 | 115.8 | 70.6 | 6.0 | 11.2 | 143.8 | 17.2 | 87.2 | 1011.0 |
| 2010 | 47.4 | 234.8 | 41.2 | 43.8 | 247.4 | 163.0 | 144.2 | 36.6 | 44.4 | 101.0 | 126.4 | 121.8 | 1352.0 |
| 2011 | 73.8 | 9.8 | 220.0 | 177.4 | 147.8 | 71.0 | 278.0 | 74.8 | 73.8 | 36.8 | 145.0 | 84.4 | 1392.6 |
| 2012 | 189.6 | 180.4 | 211.2 | 174.0 | 30.0 | 273.8 | 68.6 | 22.4 | 33.6 | 42.2 | 47.4 | 19.6 | 1292.8 |
| 2013 | 152.0 | 109.8 | 54.2 | 208.4 | 77.6 | 348.4 | 51.8 | 19.4 | 80.2 | 25.0 |  | 56.6 |  |
| 2014 | 28.6 | 51.2 | 159.2 | 154.4 | 32.4 | 90.5 | 16.6 | 236.7 | 79.0 | 90.0 | 26.6 | 87.8 | 1053.0 |
| 2015 | 165.4 | 77.2 | 69.1 | 342.2 | 138.7 | 148.4 | 61.8 | 91.0 | 134.2 | 35.2 | 116.2 | 180.8 | 1560.2 |
| 2016 | 238.4 | 34.2 | 178.2 |  | 10.5 | 280.4 | 94.2 | 121.5 | 91.8 |  |  |  |  |

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2017 | 23.9 | 225.4 | 230.0 | 80.3 | 42.9 | 202.2 | 27.7 | 24.5 | 5.3 | 41.2 | 99.7 | 51.4 | 1054.5 |

1928 ▼ Go View a year of daily data

## Summary statistics for all years

| Statistic | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Annual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 100.3 | 117.2 | 119.3 | 142.4 | 125.5 | 136.9 | 96.8 | 82.5 | 71.6 | 73.2 | 90.2 | 79.8 | 1223.7 |
| Lowest | 6.5 | 0.0 | 7.0 | 4.6 | 10.5 | 13.0 | 6.7 | 0.0 | 0.0 | 0.2 | 5.6 | 0.0 | 707.7 |
| 5th %ile | 10.8 | 7.9 | 21.1 | 17.4 | 12.5 | 35.3 | 17.3 | 5.5 | 3.2 | 18.1 | 18.8 | 21.1 | 821.5 |
| 10th %ile | 24.4 | 15.1 | 34.9 | 26.2 | 30.0 | 40.1 | 22.4 | 8.6 | 7.7 | 21.6 | 27.1 | 24.1 | 870.2 |
| Median | 79.4 | 82.6 | 107.6 | 106.7 | 112.4 | 115.8 | 74.1 | 54.6 | 49.0 | 50.6 | 84.6 | 77.5 | 1172.2 |
| 90th %ile | 200.2 | 233.9 | 229.0 | 335.3 | 247.4 | 279.5 | 182.8 | 169.0 | 139.4 | 162.2 | 152.4 | 147.2 | 1621.1 |
| 95th %ile | 237.8 | 382.0 | 236.5 | 356.5 | 329.6 | 320.0 | 253.1 | 214.2 | 219.7 | 195.4 | 164.4 | 174.4 | 1772.6 |
| Highest | 271.3 | 613.8 | 466.9 | 453.3 | 432.8 | 411.8 | 285.7 | 529.6 | 246.3 | 272.4 | 420.8 | 212.8 | 2030.2 |

Data within the table which are in italics represent observations which have not been fully quality controlled, a process which may take a number of months to complete. While these data may be correct, you should exercise caution in their use.

Gaps occur in the table where there are missing valid daily observations within the month. This is frequently associated with the observer being unavailable (where observations are undertaken manually), a failure in the observing equipment, or when an event has produced suspect data.

Product Code: IDCJAC0001 reference: 34955047



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# APPENDIX J

## BOREHOLE LOGS

Aargus Pty Ltd
446 Parramatta Road
Petersham NSW 2049
Telephone: 1300 137 038

# BOREHOLE NUMBER BH1



**CLIENT** Impact Group Pty Ltd **PROJECT NAME** DSI

**PROJECT NUMBER** ES7155/2 **PROJECT LOCATION** 53 Victoria Rd, Bellevue Hill NSW

**DATE STARTED** 11/3/18 **COMPLETED** 11/3/18 **R.L. SURFACE** **DATUM**

**DRILLING CONTRACTOR** **SLOPE** 90° **BEARING** ---

**EQUIPMENT** Hand Auger **HOLE LOCATION**

**HOLE SIZE** 100mm **LOGGED BY** LC **CHECKED BY** MK

**NOTES**

| Method | Water | RL (m) | Depth (m) | Graphic Log | Classification Symbol | Material Description | Samples Tests Remarks | Moisture | Cons./Dens. | Additional Observations |
|---|---|---|---|---|---|---|---|---|---|---|
| DT | | | | | | Concrete | | D | | No hydrocarbon odour and staining observed, No Fibro-cement fragments noted, PID = 0.0ppm |
| HA | | | 0.5 | | | Fill: Sand, fine to medium grained, light grey/brown | | D | | |
| | | | | | SW | SAND, medium grained, brown/yellow | | M | | |
| | | | 1.0 | | | Borehole BH1 terminated at 1m | | | | |

Aargus Pty Ltd
446 Parramatta Road
Petersham NSW 2049
Telephone: 1300 137 038

# BOREHOLE NUMBER BH2



**CLIENT** Impact Group Pty Ltd **PROJECT NAME** DSI

**PROJECT NUMBER** ES7155/2 **PROJECT LOCATION** 53 Victoria Rd, Bellevue Hill NSW

**DATE STARTED** 11/3/18 **COMPLETED** 11/3/18 **R.L. SURFACE** **DATUM**

**DRILLING CONTRACTOR** **SLOPE** 90° **BEARING** ---

**EQUIPMENT** Hand Auger **HOLE LOCATION**

**HOLE SIZE** 100mm **LOGGED BY** LC **CHECKED BY** MK

**NOTES**

| Method | Water | RL (m) | Depth (m) | Graphic Log | Classification Symbol | Material Description | Samples Tests Remarks | Moisture | Cons./Dens. | Additional Observations |
|---|---|---|---|---|---|---|---|---|---|---|
| DT | | | | | | Concrete | | D | | No hydrocarbon odour and staining observed, No Fibro-cement fragments noted, PID = 0.0ppm |
| HA | | | 0.5 | | | Fill: Sand, fine to medium grained, light grey/brown | | D | | |
| | | | | | SW | SAND, medium grained, brown/yellow | | M | | |
| | | | 1.0 | | | Borehole BH2 terminated at 1m | | | | |

Aargus Pty Ltd
446 Parramatta Road
Petersham NSW 2049
Telephone: 1300 137 038

# BOREHOLE NUMBER BH3



**CLIENT** Impact Group Pty Ltd **PROJECT NAME** DSI

**PROJECT NUMBER** ES7155/2 **PROJECT LOCATION** 53 Victoria Rd, Bellevue Hill NSW

**DATE STARTED** 11/3/18 **COMPLETED** 11/3/18 **R.L. SURFACE** **DATUM**

**DRILLING CONTRACTOR** **SLOPE** 90° **BEARING** ---

**EQUIPMENT** Hand Auger **HOLE LOCATION**

**HOLE SIZE** 100mm **LOGGED BY** LC **CHECKED BY** MK

**NOTES**

| Method | Water | RL (m) | Depth (m) | Graphic Log | Classification Symbol | Material Description | Samples Tests Remarks | Moisture | Cons./Dens. | Additional Observations |
|---|---|---|---|---|---|---|---|---|---|---|
| DT | | | | | | Concrete | | D | | No hydrocarbon odour and staining observed, No Fibro-cement fragments noted, PID = 0.0ppm |
| HA | | | | | | Fill: Sand, fine to medium grained, light grey/brown | | D | | |
| | | | 0.5 | | SW | SAND, medium grained, brown/yellow | | M | | |
| | | | 1.0 | | | Borehole BH3 terminated at 1m | | | | |

Aargus Pty Ltd
446 Parramatta Road
Petersham NSW 2049
Telephone: 1300 137 038

# BOREHOLE NUMBER BH4



**CLIENT** Impact Group Pty Ltd **PROJECT NAME** DSI

**PROJECT NUMBER** ES7155/2 **PROJECT LOCATION** 53 Victoria Rd, Bellevue Hill NSW

**DATE STARTED** 11/3/18 **COMPLETED** 11/3/18 **R.L. SURFACE** **DATUM**

**DRILLING CONTRACTOR** **SLOPE** 90° **BEARING** ---

**EQUIPMENT** Hand Auger **HOLE LOCATION**

**HOLE SIZE** 100mm **LOGGED BY** LC **CHECKED BY** MK

**NOTES**

| Method | Water | RL (m) | Depth (m) | Graphic Log | Classification Symbol | Material Description | Samples Tests Remarks | Moisture | Cons./Dens. | Additional Observations |
|---|---|---|---|---|---|---|---|---|---|---|
| DT | | | | | | Concrete | | D | | No hydrocarbon odour and staining observed, No Fibro-cement fragments noted, PID = 0.0ppm |
| HA | | | | | | Fill: Sand, fine to medium grained, light grey/brown | D1/SS1 | D | | |
| | | | 0.5 | | SW | SAND, medium grained, brown/yellow | | M | | |
| | | | 1.0 | | | | | | | |

Borehole BH4 terminated at 1m

Aargus Pty Ltd
446 Parramatta Road
Petersham NSW 2049
Telephone: 1300 137 038

# BOREHOLE NUMBER BH5



**CLIENT** Impact Group Pty Ltd **PROJECT NAME** DSI

**PROJECT NUMBER** ES7155/2 **PROJECT LOCATION** 53 Victoria Rd, Bellevue Hill NSW

**DATE STARTED** 11/3/18 **COMPLETED** 11/3/18 **R.L. SURFACE** **DATUM**

**DRILLING CONTRACTOR** **SLOPE** 90° **BEARING** ---

**EQUIPMENT** Hand Auger **HOLE LOCATION**

**HOLE SIZE** 100mm **LOGGED BY** LC **CHECKED BY** MK

**NOTES**

| Method | Water | RL (m) | Depth (m) | Graphic Log | Classification Symbol | Material Description | Samples Tests Remarks | Moisture | Cons./Dens. | Additional Observations |
|---|---|---|---|---|---|---|---|---|---|---|
| DT | | | | | | Concrete | | D | | No hydrocarbon odour and staining observed, No Fibro-cement fragments noted, PID = 0.0ppm |
| HA | | | | | | Fill: Sand, fine to medium grained, light grey/brown | | D | | |
| | | | 0.5 | | SW | SAND, medium grained, brown/yellow | | M | | |
| | | | 1.0 | | | Borehole BH5 terminated at 1m | | | | |

Aargus Pty Ltd
446 Parramatta Road
Petersham NSW 2049
Telephone: 1300 137 038

# BOREHOLE NUMBER BH6



**CLIENT** Impact Group Pty Ltd **PROJECT NAME** DSI

**PROJECT NUMBER** ES7155/2 **PROJECT LOCATION** 53 Victoria Rd, Bellevue Hill NSW

**DATE STARTED** 11/3/18 **COMPLETED** 11/3/18 **R.L. SURFACE** **DATUM**

**DRILLING CONTRACTOR** **SLOPE** 90° **BEARING** ---

**EQUIPMENT** Hand Auger **HOLE LOCATION**

**HOLE SIZE** 100mm **LOGGED BY** LC **CHECKED BY** MK

**NOTES**

| Method | Water | RL (m) | Depth (m) | Graphic Log | Classification Symbol | Material Description | Samples Tests Remarks | Moisture | Cons./Dens. | Additional Observations |
|---|---|---|---|---|---|---|---|---|---|---|
| DT | | | | | | Concrete | | D | | No hydrocarbon odour and staining observed, No Fibro-cement fragments noted, PID = 0.0ppm |
| HA | | | | | | Fill: Sand, fine to medium grained, light grey/brown | | D | | |
| | | | 0.5 | | SW | SAND, medium grained, brown/yellow | | M | | |
| | | | 1.0 | | | Borehole BH6 terminated at 1m | | | | |

# APPENDIX K

## FIELD RECORD FORMS AND CALIBRATION CERTIFICATES

# Site Assessment
# Daily Worksheet Record

Aargus

| | | | | | |
|---|---|---|---|---|---|
| Project Name: | DSI | | | Project No: | ES 7155/2 |
| Client Name: | Impact Group | | | Fieldwork Date: | 11/03/2018 |
| Site Address: | 53 Victoria Rd, Bellevue Hill | | | | |
| Site Contact: | | | | Phone: | |
| Aargus Field Staff: | SP/LC | | | Phone: | |
| Site Safety Induction Required? | Yes | (No) | (circle) | Date of Induction: | |

| **Meteorological Data:** | | | | Station: | |
|---|---|---|---|---|---|
| Weather | Rainfall (mm) | Wind Direction | Wind Speed | Temp °C | Humidity |
| Sunny | | | | 25 | |

| **Site Observations:** | | Whole Site / Part Site (circle) |
|---|---|---|
| Stormwater Controls | Traffic Controls | Silt Fencing |
| | | |
| Plant & Equipment Onsite | Exclusion Zones | PPE Required |
| | | |
| Odours Present | Odour Suppression | Staining Present |
| No | No | No |
| USTs / ASTs present | Hotspots present | Stockpiles present |
| No | No | No |

| **Site Observations** | Location & Comments |
|---|---|
| | The site is used as cafe |
| | the site is fully covered by concrete |
| | Bounded by a concrete pathway then grass covered playground and garden bed. |
| | No staining |
| | No surface standing water |

# Soil Sampling

Aargus

| Sample No. | Depth (m) | Fill or Natural | Material Description | PID Reading (ppm) | Hazardous Gas Comments |
|---|---|---|---|---|---|
| BH1 | 0.4-0.5 | F | | 0 | |
| BH1 | 0.6-0.7 | N | | 0 | |
| BH2 | 0.4-0.5 | F | | 0 | |
| BH2 | 0.6-0.7 | N | | 0 | |
| BH3 | 0.2-0.3 | F | | 0 | |
| BH3 | 0.4-0.5 | N | | 0 | |
| BH4 | 0.2-0.3 | F | | 0 | |
| BH4 | 0.4-0.5 | N | | 0 | |
| BH5 | 0.2-0.3 | F | | 0 | |
| BH5 | 0.4-0.5 | N | | 0 | |
| BH6 | 0.2-0.3 | F | | 0 | |
| BH6 | 0.4-0.5 | N | | 0 | |
| D1 | | F | | 0 | |
| SS1 | | F | | 0 | |
| | | | | | |
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# Aargus Pty Ltd
## PID Certification Report
### Minirae 2000 PID

This PID has been performance checked/calibrated as follows:

- ☑ Calibrate 0.0ppm  Reading 0.0 ppm
- ☑ Calibrate 99.9 ppm isobutylene  Reading 99.9 ppm
- ☑ Charged
- ☑ Filter check
- ☑ Lamp check

Date: 11/03/2018

Checked by: SP/ LC,

Signature: Z Lem

Please check that the following items are contained within the PID Equipment Register

- ☑ PID carry. case
- ☑ Model Minirae 2000 PID meter
- ☑ Charger and adapter
- ☑ Fresh air filter
- ☑ Calibration tube
- ☑ Sample Probe
- ☑ Water Filter Trap
- ☑ Computer cable connector
- ☑ 2 CD software and USB memory.
- ☑ Regulator for small cylinder

Serial Number: 87148

# APPENDIX L

# REGULATORY CRITERIA

## Table 1: CT1 & CT2 values for classifying waste by chemical assessment without the TCLP test

*For disposal requirements for organic and inorganic chemical contaminants not listed below, contact the EPA. Aluminium, barium, boron, chromium (0 and III oxidation states), cobalt, copper, iron, manganese, vanadium and zinc have not been listed with values in this table and need not be tested for.*

| | Maximum values of *specific contaminant concentration* (SCC) for classification without TCLP | | |
|---|---|---|---|
| | General solid waste[1] | Restricted solid waste | |
| **Contaminant** | **CT1 (mg/kg)** | **CT2 (mg/kg)** | **CAS Registry Number** |
| Arsenic | 100 | 400 | |
| Benzene | 10 | 40 | 71-43-2 |
| Benzo(a)pyrene[2] | 0.8 | 3.2 | 50-32-8 |
| Beryllium | 20 | 80 | |
| Cadmium | 20 | 80 | |
| Carbon tetrachloride | 10 | 40 | 56-23-5 |
| Chlorobenzene | 2,000 | 8,000 | 108-90-7 |
| Chloroform | 120 | 480 | 67-66-3 |
| Chlorpyrifos | 4 | 16 | 2921-88-2 |
| Chromium (VI)[3] | 100 | 400 | |
| m-Cresol | 4,000 | 16,000 | 108-39-4 |
| o-Cresol | 4,000 | 16,000 | 95-48-7 |
| p-Cresol | 4,000 | 16,000 | 106-44-5 |
| Cresol (total) | 4,000 | 16,000 | 1319-77-3 |
| Cyanide (amenable)[4] | 70 | 280 | |
| Cyanide (total) | 320 | 1,280 | |
| 2,4-D | 200 | 800 | 94-75-7 |
| 1,2-Dichlorobenzene | 86 | 344 | 95-50-1 |
| 1,4-Dichlorobenzene | 150 | 600 | 106-46-7 |
| 1,2-Dichloroethane | 10 | 40 | 107-06-2 |
| 1,1-Dichloroethylene | 14 | 56 | 75-35-4 |
| Dichloromethane | 172 | 688 | 75-09-2 |
| 2,4-Dinitrotoluene | 2.6 | 10.4 | 121-14-2 |
| Endosulfan[5] | 60 | 240 | See below[5] |
| Ethylbenzene | 600 | 2,400 | 100-41-4 |
| Fluoride | 3,000 | 12,000 | |
| Fluroxypyr | 40 | 160 | 69377-81-7 |
| Lead | 100 | 400 | |

| Contaminant | Maximum values of *specific contaminant concentration* (SCC) for classification without TCLP | | CAS Registry Number |
|---|---|---|---|
| | General solid waste[1] | Restricted solid waste | |
| | CT1 (mg/kg) | CT2 (mg/kg) | |
| Mercury | 4 | 16 | |
| Methyl ethyl ketone | 4,000 | 16,000 | 78-93-3 |
| Moderately harmful pesticides[6] (total) | 250 | 1,000 | See below[6] |
| Molybdenum | 100 | 400 | |
| Nickel | 40 | 160 | |
| Nitrobenzene | 40 | 160 | 98-95-3 |
| C6–C9 petroleum hydrocarbons[7] | 650 | 2,600 | |
| C10–C36 petroleum hydrocarbons[7] | 10,000 | 40,000 | |
| Phenol (non-halogenated) | 288 | 1,152 | 108-95-2 |
| Picloram | 60 | 240 | 1918-02-1 |
| Plasticiser compounds[8] | 20 | 80 | See below[8] |
| Polychlorinated biphenyls[9] | <50 | <50 | 1336-36-3 |
| Polycyclic aromatic hydrocarbons (total)[10] | 200 | 800 | |
| Scheduled chemicals[11] | <50 | <50 | |
| Selenium | 20 | 80 | |
| Silver | 100 | 400 | |
| Styrene (vinyl benzene) | 60 | 240 | 100-42-5 |
| Tebuconazole | 128 | 512 | 107534-96-3 |
| 1,2,3,4-Tetrachlorobenzene | 10 | 40 | 634-66-2 |
| 1,1,1,2-Tetrachloroethane | 200 | 800 | 630-20-6 |
| 1,1,2,2-Tetrachloroethane | 26 | 104 | 79-34-5 |
| Tetrachloroethylene | 14 | 56 | 127-18-4 |
| Toluene | 288 | 1,152 | 108-88-3 |
| 1,1,1-Trichloroethane | 600 | 2,400 | 71-55-6 |
| 1,1,2-Trichloroethane | 24 | 96 | 79-00-5 |
| Trichloroethylene | 10 | 40 | 79-01-6 |
| 2,4,5-Trichlorophenol | 8,000 | 32,000 | 95-95-4 |
| 2,4,6-Trichlorophenol | 40 | 160 | 88-06-2 |
| Triclopyr | 40 | 160 | 55335-06-3 |

| Contaminant | Maximum values of *specific contaminant concentration* (SCC) for classification without TCLP | | CAS Registry Number |
|---|---|---|---|
| | General solid waste[1] | Restricted solid waste | |
| | CT1 (mg/kg) | CT2 (mg/kg) | |
| Vinyl chloride | 4 | 16 | 75-01-4 |
| Xylenes (total) | 1,000 | 4,000 | 1330-20-7 |

**Notes**

1. Values are the same for general solid waste (putrescible) and general solid waste (non-putrescible).
2. There may be a need for the laboratory to concentrate the sample to achieve the TCLP limit value for benzo(a)pyrene with confidence.
3. These limits apply to chromium in the +6 oxidation state only.
4. Analysis for cyanide (amenable) is the established method for assessing potentially leachable cyanide. The EPA may consider other methods if it can be demonstrated that these methods yield the same information.
5. Endosulfan (CAS Registry Number 115-29-7) means the total of Endosulfan I (CAS Registry Number 959-98-8), Endosulfan II (CAS Registry Number 891-86-1) and Endosulfan sulfate (CAS Registry Number 1031-07-8).
6. The following moderately harmful pesticides are to be included in the total values specified:

| Moderately harmful pesticides (total) | | | |
|---|---|---|---|
| Name | CAS Registry Number | Name | CAS Registry Number |
| Atrazine | 1912-24-9 | Imidacloprid | 138261-41-3 |
| Azoxystrobin | 131860-33-8 | Indoxacarb | 173584-44-6 |
| Bifenthrin | 82657-04-3 | Malathion (Maldison) | 121-75-5 |
| Brodifacoum | 56073-10-0 | Metalaxyl | 57837-19-1 |
| Carboxin | 5234-68-4 | Metalaxyl-M | 70630-17-0 |
| Copper naphthenate | 1338-02-9 | Methidathion | 950-37-8 |
| Cyfluthrin | 68359-37-5 | 3-Methyl-4-chlorophenol | 59-50-7 |
| Cyhalothrin | 68085-85-8 | Methyl chlorpyrifos | 5598-13-0 |
| Cypermethrin | 52315-07-08 | N-Methyl pyrrolidone | 872-50-4 |
| Deltamethrin | 52918-63-5 | 2-octylthiazol-3-one | 26530-20-1 |
| Dichlofluanid | 1085-98-9 | Oxyfluorfen | 42874-03-3 |
| Dichlorvos | 62-73-7 | Paraquat dichloride | 1910-42-5 |
| Difenoconazole | 119446-68-3 | Parathion methyl | 298-00-0 |
| Dimethoate | 60-51-5 | Permethrin | 52645-53-1 |
| Diquat dibromide | 85-00-7 | Profenofos | 41198-08-7 |
| Emamectin benzoate | 137515-75-4 & 155569-91-8 | Prometryn | 7287-19-6 |
| Ethion | 563-12-2 | Propargite | 2312-35-8 |
| Fenthion | 55-38-9 | Pentachloronitrobenzene (Quintozene) | 82-68-8 |
| Fenitrothion | 122-14-5 | Simazine | 122-34-9 |
| Fipronil | 120068-37-3 | Thiabendazole | 148-79-8 |

| Moderately harmful pesticides (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Fluazifop-P-butyl | 79241-46-6 | Thiamethoxam | 153719-23-4 |
| Fludioxonil | 131341-86-1 | Thiodicarb | 59669-26-0 |
| Glyphosate | 1071-83-6 | Thiram | 137-26-8 |

7. Approximate range of petroleum hydrocarbon fractions: petrol C6–C9, kerosene C10–C18, diesel C12–C18, and lubricating oils above C18. Laboratory results are reported as four different fractions: C6–C9, C10–C14, C15–C28 and C29–C36. The results of total petroleum hydrocarbons (TPH) (C10–C36) analyses are reported as a sum of the relevant three fractions. Please note that hydrocarbons are defined as molecules that only contain carbon and hydrogen atoms. Prior to TPH (C10–C36) analysis, clean-up may be necessary to remove non-petroleum hydrocarbon compounds. Where the presence of other materials that will interfere with the analysis may be present, such as oils and fats from food sources, you are advised to treat the extract that has been solvent exchanged to hexane with silica gel as described in *USEPA Method 1664A* (USEPA 2000).
8. Plasticiser compounds means the total of di-2-ethyl hexyl phthalate (CAS Registry Number 117-81-7) and di-2-ethyl hexyl adipate (CAS Registry Number 103-23-1) contained within a waste.
9. Polychlorinated biphenyls must be managed in accordance with the EPA's polychlorinated biphenyl (PCB) chemical control order 1997, which is available on the EPA website at www.epa.nsw.gov.au/resources/pesticides/pcbcco1997.pdf.
10. The following polycyclic aromatic hydrocarbons (PAHs) are assessed as the total concentration of 16 USEPA Priority Pollutant PAHs, as follows:

| Polycyclic aromatic hydrocarbons (total) | | | |
|---|---|---|---|
| **PAH name** | **CAS Registry Number** | **PAH name** | **CAS Registry Number** |
| Acenaphthene | 83-32-9 | Chrysene | 218-01-9 |
| Acenaphthylene | 208-96-8 | Dibenzo(a,h)anthracene | 53-70-3 |
| Anthracene | 120-12-7 | Fluoranthene | 206-44-0 |
| Benzo(a)anthracene | 56-55-3 | Fluorene | 86-73-7 |
| Benzo(a)pyrene | 50-32-8 | Indeno(1,2,3-cd)pyrene | 193-39-5 |
| Benzo(b)fluoranthene | 205-99-2 | Naphthalene | 91-20-3 |
| Benzo(ghi)perylene | 191-24-2 | Phenanthrene | 85-01-8 |
| Benzo(k)fluoranthene | 207-08-9 | Pyrene | 129-00-0 |

11. Scheduled chemicals must be managed in accordance with the EPA's scheduled chemical wastes chemical control order 2004, which is available on the EPA website at www.epa.nsw.gov.au/resources/pesticides/scwcco2004.pdf.

    The following scheduled chemicals are to be included in the total values specified:

| Scheduled chemicals (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Aldrin | 309-00-2 | Heptachlor | 76-44-8 |
| Alpha-BHC | 319-84-6 | Heptachlor epoxide | 1024-57-3 |
| Beta-BHC | 319-85-7 | Hexachlorobenzene | 118-74-1 |
| Gamma-BHC (Lindane) | 58-89-9 | Hexachlorophene | 70-30-4 |
| Delta-BHC | 319-86-8 | Isodrin | 465-73-6 |

| Scheduled chemicals (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Chlordane | 57-74-9 | Pentachlorobenzene | 608-93-5 |
| DDD | 72-54-8 | Pentachloronitrobenzene | 82-68-8 |
| DDE | 72-55-9 | Pentachlorophenol | 87-86-5 |
| DDT | 50-29-3 | 1,2,4,5-Tetrachlorobenzene | 95-94-3 |
| Dieldrin | 60-57-1 | 2,3,4,6-Tetrachlorophenol | 58-90-2 |
| Endrin | 72-20-8 | 1,2,4-Trichlorobenzene | 120-82-1 |
| Endrin aldehyde | 7421-93-4 | 2,4,5-Trichlorophenoxyacetic acid, salts and esters | 93-76-5 |

## Table 2: TCLP and SCC values for classifying waste by chemical assessment

*For disposal requirements for organic and inorganic chemical contaminants not listed below, contact the EPA. Aluminium, barium, boron, chromium (0 and III oxidation states), cobalt, copper, iron, manganese, vanadium and zinc have not been listed with values in this table and need not be tested for.*

| Contaminant | Maximum values for *leachable concentration* and *specific contaminant concentration* when used together | | | | CAS Registry Number |
|---|---|---|---|---|---|
| | General solid waste[1] | | Restricted solid waste | | |
| | Leachable concentration | Specific contaminant concentration | Leachable concentration | Specific contaminant concentration | |
| | TCLP1 (mg/L) | SCC1 (mg/kg) | TCLP2 (mg/L) | SCC2 (mg/kg) | |
| Arsenic | 5.0[2] | 500 | 20 | 2,000 | |
| Benzene | 0.5[2] | 18 | 2 | 72 | 71-43-2 |
| Benzo(a)pyrene[3] | 0.04[4] | 10 | 0.16 | 23 | 50-32-8 |
| Beryllium | 1.0[5] | 100 | 4 | 400 | |
| Cadmium | 1.0[2] | 100 | 4 | 400 | |
| Carbon tetrachloride | 0.5[2] | 18 | 2 | 72 | 56-23-5 |
| Chlorobenzene | 100[2] | 3,600 | 400 | 14,400 | 108-90-7 |
| Chloroform | 6[2] | 216 | 24 | 864 | 67-66-3 |
| Chlorpyrifos | 0.2 | 7.5 | 0.8 | 30 | 2921-88-2 |
| Chromium (VI)[6] | 5[2] | 1,900 | 20 | 7,600 | |
| m-Cresol | 200[2] | 7,200 | 800 | 28,800 | 108-39-4 |
| o-Cresol | 200[2] | 7,200 | 800 | 28,800 | 95-48-7 |
| p-Cresol | 200[2] | 7,200 | 800 | 28,800 | 106-44-5 |
| Cresol (total) | 200[2] | 7,200 | 800 | 28,800 | 1319-77-3 |
| Cyanide (amenable)[7, 8] | 3.5[7] | 300 | 14 | 1,200 | |
| Cyanide (total)[7] | 16[7] | 5,900 | 64 | 23,600 | |
| 2,4-D | 10[2] | 360 | 40 | 1,440 | 94-75-7 |
| 1,2-Dichlorobenzene | 4.3[2] | 155 | 17.2 | 620 | 95-50-1 |
| 1,4-Dichlorobenzene | 7.5[2] | 270 | 30 | 1,080 | 106-46-7 |
| 1,2-Dichloroethane | 0.5[2] | 18 | 2 | 72 | 107-06-2 |
| 1,1-Dichloroethylene | 0.7[2] | 25 | 2.8 | 100 | 75-35-4 |
| Dichloromethane | 8.6[2] | 310 | 34.4 | 1,240 | 75-09-2 |
| 2,4-Dinitrotoluene | 0.13[2] | 4.68 | 0.52 | 18.7 | 121-14-2 |
| Endosulfan[9] | 3 | 108 | 12 | 432 | See below[9] |

| Contaminant | Maximum values for *leachable concentration* and *specific contaminant concentration* when used together | | | | CAS Registry Number |
|---|---|---|---|---|---|
| | General solid waste[1] | | Restricted solid waste | | |
| | Leachable concentration | Specific contaminant concentration | Leachable concentration | Specific contaminant concentration | |
| | TCLP1 (mg/L) | SCC1 (mg/kg) | TCLP2 (mg/L) | SCC2 (mg/kg) | |
| Ethylbenzene | 30[10] | 1,080 | 120 | 4,320 | 100-41-4 |
| Fluoride | 150[10] | 10,000 | 600 | 40,000 | |
| Fluroxypyr | 2 | 75 | 8 | 300 | 69377-81-7 |
| Lead | 5[2] | 1,500 | 20 | 6,000 | |
| Mercury | 0.2[2] | 50 | 0.8 | 200 | |
| Methyl ethyl ketone | 200[2] | 7,200 | 800 | 28,800 | 78-93-3 |
| Moderately harmful pesticides[11](total) | N/A[12] | 250 | N/A[12] | 1,000 | See below[11] |
| Molybdenum | 5[10] | 1,000 | 20 | 4,000 | |
| Nickel | 2[10] | 1,050 | 8 | 4,200 | |
| Nitrobenzene | 2[2] | 72 | 8 | 288 | 98-95-3 |
| C6–C9 petroleum hydrocarbons[13] | N/A[12] | 650 | N/A[12] | 2,600 | |
| C10–C36 petroleum hydrocarbons[13] | N/A[12] | 10,000 | N/A[12] | 40,000 | |
| Phenol (non-halogenated) | 14.4[14] | 518 | 57.6 | 2,073 | 108-95-2 |
| Picloram | 3 | 110 | 12 | 440 | 1918-02-1 |
| Plasticiser compounds[15] | 1 | 600 | 4 | 2,400 | See below[15] |
| Polychlorinated biphenyls[12] | N/A[12] | < 50 | N/A[12] | < 50 | 1336-36-3 |
| Polycyclic aromatic hydrocarbons (total)[16] | N/A[12] | 200 | N/A[12] | 800 | |
| Scheduled chemicals[17] | N/A[12] | < 50 | N/A[12] | < 50 | See below[17] |
| Selenium | 1[2] | 50 | 4 | 200 | |
| Silver | 5.0[2] | 180 | 20 | 720 | |
| Styrene (vinyl benzene) | 3[10] | 108 | 12 | 432 | 100-42-5 |
| Tebuconazole | 6.4 | 230 | 25.6 | 920 | 107534-96-3 |
| 1,2,3,4-Tetrachlorobenzene | 0.5 | 18 | 2 | 72 | 634-66-2 |

| Contaminant | Maximum values for *leachable concentration* and *specific contaminant concentration* when used together | | | | CAS Registry Number |
|---|---|---|---|---|---|
| | General solid waste[1] | | Restricted solid waste | | |
| | Leachable concentration | Specific contaminant concentration | Leachable concentration | Specific contaminant concentration | |
| | TCLP1 (mg/L) | SCC1 (mg/kg) | TCLP2 (mg/L) | SCC2 (mg/kg) | |
| 1,1,1,2-Tetrachloroethane | 10[2] | 360 | 40 | 1,440 | 630-20-6 |
| 1,1,2,2-Tetrachloroethane | 1.3[2] | 46.8 | 5.2 | 187.2 | 79-34-5 |
| Tetrachloroethylene | 0.7[2] | 25.2 | 2.8 | 100.8 | 127-18-4 |
| Toluene | 14.4[14] | 518 | 57.6 | 2,073 | 108-88-3 |
| 1,1,1-Trichloroethane | 30[2] | 1,080 | 120 | 4,320 | 71-55-6 |
| 1,1,2-Trichloroethane | 1.2[2] | 43.2 | 4.8 | 172.8 | 79-00-5 |
| Trichloroethylene | 0.5[2] | 18 | 2 | 72 | 79-01-6 |
| 2,4,5-Trichlorophenol | 400[2] | 14,400 | 1,600 | 57,600 | 95-95-4 |
| 2,4,6-Trichlorophenol | 2[2] | 72 | 8 | 288 | 88-06-2 |
| Triclopyr | 2 | 75 | 8 | 300 | 55335-06-3 |
| Vinyl chloride | 0.2[2] | 7.2 | 0.8 | 28.8 | 75-01-4 |
| Xylenes (total) | 50[18] | 1,800 | 200 | 7,200 | 1330-20-7 |

**Notes**

1. Values are the same for general solid waste (putrescible) and general solid waste (non- putrescible).
2. See *Hazardous Waste Management System: Identification and Listing of Hazardous Waste – Toxicity Characteristics Revisions, Final Rule* (USEPA 2012b) for TCLP levels.
3. There may be a need for the laboratory to concentrate the sample to achieve the TCLP limit value for benzo(a)pyrene with confidence.
4. Calculated from *Hazardous Waste: Identification and Listing* (USEPA 2012a).
5. Calculated from 'Beryllium' in *The Health Risk Assessment and Management of Contaminated Sites* (DiMarco & Buckett 1996).
6. These limits apply to chromium in the +6 oxidation state only.
7. Taken from the *Land Disposal Restrictions for Newly Identified and Listed Hazardous Wastes and Hazardous Soil: Proposed Rule* (USEPA 1993).
8. Analysis for cyanide (amenable) is the established method used to assess the potentially leachable cyanide. The EPA may consider other methods if it can be demonstrated that these methods yield the same information.
9. Endosulfan (CAS Registry Number 115-29-7) means the total of endosulfan I (CAS Registry Number 959-98-8), endosulfan II (CAS Registry Number 891-86-1) and endosulfan sulfate (CAS Registry Number 1031-07-8).
10. Calculated from *Australian Drinking Water Guidelines* (NHMRC 2011).
11. The following moderately harmful pesticides are to be included in the total values specified:

| Moderately harmful pesticides (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Atrazine | 1912-24-9 | Imidacloprid | 138261-41-3 |
| Azoxystrobin | 131860-33-8 | Indoxacarb | 173584-44-6 |
| Bifenthrin | 82657-04-3 | Malathion (Maldison) | 121-75-5 |
| Brodifacoum | 56073-10-0 | Metalaxyl | 57837-19-1 |
| Carboxin | 5234-68-4 | Metalaxyl-M | 70630-17-0 |
| Copper naphthenate | 1338-02-9 | Methidathion | 950-37-8 |
| Cyfluthrin | 68359-37-5 | 3-Methyl-4-chlorophenol | 59-50-7 |
| Cyhalothrin | 68085-85-8 | Methyl chlorpyrifos | 5598-13-0 |
| Cypermethrin | 52315-07-08 | N-Methyl pyrrolidone | 872-50-4 |
| Deltamethrin | 52918-63-5 | 2-octylthiazol-3-one | 26530-20-1 |
| Dichlofluanid | 1085-98-9 | Oxyfluorfen | 42874-03-3 |
| Dichlorvos | 62-73-7 | Paraquat dichloride | 1910-42-5 |
| Difenoconazole | 119446-68-3 | Parathion methyl | 298-00-0 |
| Dimethoate | 60-51-5 | Permethrin | 52645-53-1 |
| Diquat dibromide | 85-00-7 | Profenofos | 41198-08-7 |
| Emamectin benzoate | 137515-75-4 & 155569-91-8 | Prometryn | 7287-19-6 |
| Ethion | 563-12-2 | Propargite | 2312-35-8 |
| Fenthion | 55-38-9 | Pentachloronitrobenzene (Quintozene) | 82-68-8 |
| Fenitrothion | 122-14-5 | Simazine | 122-34-9 |
| Fipronil | 120068-37-3 | Thiabendazole | 148-79-8 |
| Fluazifop-P-butyl | 79241-46-6 | Thiamethoxam | 153719-23-4 |
| Fludioxonil | 131341-86-1 | Thiodicarb | 59669-26-0 |
| Glyphosate | 1071-83-6 | Thiram | 137-26-8 |

12. No TCLP analysis is required. Moderately harmful pesticides, petroleum hydrocarbons, polychlorinated biphenyls, polycyclic aromatic hydrocarbons and scheduled chemicals are assessed using SCC1 and SCC2.

    Polychlorinated biphenyls must be managed in accordance with the EPA's polychlorinated biphenyl (PCB) chemical control order 1997, which is available on the EPA website at www.epa.nsw.gov.au/resources/pesticides/pcbcco1997.pdf.

13. Approximate range of petroleum hydrocarbon fractions: petrol C6–C9, kerosene C10–C18, diesel C12–C18, and lubricating oils above C18. Laboratory results are reported as four different fractions: C6–C9, C10–C14, C15–C28 and C29–C36. The results of total petroleum hydrocarbons (C10–C36) analyses are reported as a sum of the relevant three fractions. Please note that hydrocarbons are defined as molecules that only contain carbon and hydrogen atoms. Prior to TPH (C10–C36) analysis, clean-up may be necessary to remove non-petroleum hydrocarbon compounds. Where the presence of other materials that will interfere with the analysis may be present, such as oils and fats from food sources, you are advised to treat the extract that has been solvent exchanged to hexane with silica gel as described in USEPA *Method 1664A* (USEPA 2000).
14. Proposed level for phenol and toluene in *Hazardous Waste Management System: Identification and Listing of Hazardous Waste – Toxicity Characteristics Revisions, Final Rule* (USEPA 2012b).

15. Plasticiser compounds means the total of di-2-ethyl hexyl phthalate (CAS Registry Number 117-81-7) and di-2-ethyl hexyl adipate (CAS Registry Number 103-23-1) contained within a waste.
16. The following polycyclic aromatic hydrocarbons are assessed as the total concentration of 16 USEPA Priority Pollutant PAHs, as follows:

| Polycyclic aromatic hydrocarbons (total) | | | |
|---|---|---|---|
| **PAH name** | **CAS Registry Number** | **PAH name** | **CAS Registry Number** |
| Acenaphthene | 83-32-9 | Chrysene | 218-01-9 |
| Acenaphthylene | 208-96-8 | Dibenzo(a,h)anthracene | 53-70-3 |
| Anthracene | 120-12-7 | Fluoranthene | 206-44-0 |
| Benzo(a)anthracene | 56-55-3 | Fluorene | 86-73-7 |
| Benzo(a)pyrene | 50-32-8 | Indeno(1,2,3-cd)pyrene | 193-39-5 |
| Benzo(b)fluoranthene | 205-99-2 | Naphthalene | 91-20-3 |
| Benzo(ghi)perylene | 191-24-2 | Phenanthrene | 85-01-8 |
| Benzo(k)fluoranthene | 207-08-9 | Pyrene | 129-00-0 |

17. Scheduled chemicals must be managed in accordance with the EPA's scheduled chemical wastes chemical control order 2004, which is available on the EPA website at www.epa.nsw.gov.au/resources/pesticides/scwcco2004.pdf.

    The following scheduled chemicals are to be included in the total values specified:

| Scheduled chemicals (total) | | | |
|---|---|---|---|
| **Name** | **CAS Registry Number** | **Name** | **CAS Registry Number** |
| Aldrin | 309-00-2 | Heptachlor | 76-44-8 |
| Alpha-BHC | 319-84-6 | Heptachlor epoxide | 1024-57-3 |
| Beta-BHC | 319-85-7 | Hexachlorobenzene | 118-74-1 |
| Gamma-BHC (Lindane) | 58-89-9 | Hexachlorophene | 70-30-4 |
| Delta-BHC | 319-86-8 | Isodrin | 465-73-6 |
| Chlordane | 57-74-9 | Pentachlorobenzene | 608-93-5 |
| DDD | 72-54-8 | Pentachloronitrobenzene | 82-68-8 |
| DDE | 72-55-9 | Pentachlorophenol | 87-86-5 |
| DDT | 50-29-3 | 1,2,4,5-Tetrachlorobenzene | 95-94-3 |
| Dieldrin | 60-57-1 | 2,3,4,6-Tetrachlorophenol | 58-90-2 |
| Endrin | 72-20-8 | 1,2,4-Trichlorobenzene | 120-82-1 |
| Endrin aldehyde | 7421-93-4 | 2,4,5-Trichlorophenoxyacetic acid, salts and esters | 93-76-5 |

18. Calculated from *Guidelines for Drinking Water Quality* (WHO 2011).

# Table 1A (1) Health-based Investigation Levels (mg/kg)

| | Residential A | Residential B | Recreational C | Commercial / Industrial D |
|---|---|---|---|---|
| **Metals & Inorganics** | | | | |
| Arsenic (total) | 100 | 500 | 300 | 3,000 |
| Beryllium | 60 | 90 | 90 | 500 |
| Boron | 4,500 | 40,000 | 20,000 | 300,000 |
| Cadmium | 20 | 150 | 90 | 900 |
| Chromium (VI) | 100 | 500 | 300 | 3,600 |
| Cobalt | 100 | 600 | 300 | 4,000 |
| Copper | 6,000 | 30,000 | 17,000 | 240,000 |
| Lead | 300 | 1,200 | 600 | 1,500 |
| Manganese | 3,800 | 14,000 | 19,000 | 60,000 |
| Mercury (inorganic) | 40 | 120 | 80 | 730 |
| Methyl mercury | 10 | 30 | 13 | 180 |
| Nickel | 400 | 1,200 | 1,200 | 6,000 |
| Selenium | 200 | 1,400 | 700 | 10,000 |
| Zinc | 7,400 | 60,000 | 30,000 | 400,000 |
| Cyanide (free) | 250 | 300 | 240 | 1,500 |
| **Polycyclic Aromatic Hydrocarbons** | | | | |
| Carcinogenic PAHs (as BaP TEQ) | 3 | 4 | 3 | 40 |
| Total PAHs | 300 | 400 | 300 | 4,000 |
| **Phenols** | | | | |
| Phenols | 3,000 | 45,000 | 40,000 | 240,000 |
| Pentachlorophenol | 100 | 130 | 120 | 660 |
| Cresols | 400 | 4,700 | 4,000 | 25,000 |
| **Organochlorine Pesticides** | | | | |
| DDT+DDD+DDE | 240 | 600 | 400 | 3,600 |
| Aldrin & Dieldrin | 6 | 10 | 10 | 45 |
| Chlordane | 50 | 90 | 70 | 530 |
| Endosulfan | 270 | 400 | 340 | 2,000 |
| Endrin | 10 | 20 | 20 | 100 |
| Heptachlor | 6 | 10 | 10 | 50 |
| HCB | 10 | 15 | 10 | 80 |
| Methoxychlor | 300 | 500 | 400 | 2,500 |
| Mirex | 10 | 20 | 20 | 100 |
| Toxaphene | 20 | 30 | 30 | 160 |
| **Herbicides** | | | | |
| 2,4,5-T | 600 | 900 | 800 | 5,000 |
| 2,4-D | 900 | 1,600 | 1,300 | 9,000 |
| MCPA | 600 | 900 | 800 | 5,000 |
| MCPB | 600 | 900 | 800 | 5,000 |
| Mecoprop | 600 | 900 | 800 | 5,000 |
| Picloram | 4,500 | 6,600 | 5,700 | 35,000 |
| **Other Pesticides** | | | | |
| Atrazine | 320 | 470 | 400 | 2,500 |
| Chlorpyrifos | 160 | 340 | 250 | 2,000 |
| Bifenthrin | 600 | 840 | 730 | 4,500 |
| **Other Organics** | | | | |
| PCBs | 1 | 1 | 1 | 7 |
| PBDE Flame Retardants (Br1-Br9) | 1 | 2 | 2 | 10 |

**Table 1B(1) Soil-specific added contaminant limits for aged zinc in soil**

| Zn added contaminant limits (ACL, mg added contaminant/kg) | | | | | | |
|---|---|---|---|---|---|---|
| **Areas of ecological significance** | | | | | | |
| **pH [a]** | **CEC [b] (cmol/kg)** | | | | | |
| | **5** | **10** | **20** | **30** | **40** | **60** |
| **4.0** | 15 | 20 | 20 | 20 | 20 | 20 |
| **4.5** | 20 | 25 | 25 | 25 | 25 | 25 |
| **5.0** | 30 | 40 | 40 | 40 | 40 | 40 |
| **5.5** | 40 | 60 | 60 | 60 | 60 | 60 |
| **6.0** | 50 | 90 | 90 | 90 | 90 | 90 |
| **6.5** | 50 | 90 | 130 | 130 | 130 | 130 |
| **7.0** | 50 | 90 | 130 | 190 | 190 | 190 |
| **7.5** | 50 | 90 | 130 | 210 | 260 | 280 |
| **Urban residential/public open space [1]** | | | | | | |
| **pH [a]** | **CEC [b] (cmol/kg)** | | | | | |
| | **5** | **10** | **20** | **30** | **40** | **60** |
| **4.0** | 70 | 85 | 85 | 85 | 85 | 85 |
| **4.5** | 100 | 120 | 120 | 120 | 120 | 120 |
| **5.0** | 130 | 180 | 180 | 180 | 180 | 180 |
| **5.5** | 180 | 270 | 270 | 270 | 270 | 270 |
| **6.0** | 230 | 400 | 400 | 400 | 400 | 400 |
| **6.5** | 230 | 400 | 590 | 590 | 590 | 590 |
| **7.0** | 230 | 400 | 700 | 880 | 880 | 880 |
| **7.5** | 230 | 400 | 700 | 960 | 1200 | 1300 |
| **Commercial/Industrial** | | | | | | |
| **pH [a]** | **CEC [b] (cmol/kg)** | | | | | |
| | **5** | **10** | **20** | **30** | **40** | **60** |
| **4.0** | 110 | 130 | 130 | 130 | 130 | 130 |
| **4.5** | 150 | 190 | 190 | 190 | 190 | 190 |
| **5.0** | 210 | 290 | 290 | 290 | 290 | 290 |
| **5.5** | 280 | 420 | 420 | 420 | 420 | 420 |
| **6.0** | 360 | 620 | 620 | 620 | 620 | 620 |
| **6.5** | 360 | 620 | 920 | 920 | 920 | 920 |
| **7.0** | 360 | 620 | 1100 | 1400 | 1400 | 1400 |
| **7.5** | 360 | 620 | 1100 | 1500 | 1900 | 2000 |

1: Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.

2: Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.

3: The EIL is calculated from summing the ACL and the ABC.

a: pH measured using the CaCl2 method (Rayment & Higginson 1992).

b: CEC measured using the silver thiourea method (Chabra et al. 1972).

**Table 1B(2): Soil-specific added contaminant limits for aged copper in soil**

| Cu added contaminant limits (ACL, mg added contaminant/kg) | | | | | |
|---|---|---|---|---|---|
| **Aeras of ecological significance** | | | | | |
| **CEC (cmol/kg)[a] based** | | | | | |
| **5** | **10** | **20** | **30** | **40** | **60** |
| 30 | 65 | 70 | 70 | 75 | 80 |
| **pH[b] based** | | | | | |
| **4.5** | **5.5** | **6** | **6.5** | **7.5** | **8** |
| 20 | 45 | 65 | 90 | 190 | 270 |
| **Urban residential/public open space [1]** | | | | | |
| **CEC (cmol/kg)[a] based** | | | | | |
| **5** | **10** | **20** | **30** | **40** | **60** |
| 95 | 190 | 210 | 220 | 220 | 230 |
| **pH[b] based** | | | | | |
| **4.5** | **5.5** | **6** | **6.5** | **7.5** | **8** |
| 60 | 130 | 190 | 280 | 560 | 800 |
| **Commercial/industrial** | | | | | |
| **CEC (cmol/kg)[a] based** | | | | | |
| **5** | **10** | **20** | **30** | **40** | **60** |
| 140 | 280 | 300 | 320 | 330 | 340 |
| **pH[b] based** | | | | | |
| **4.5** | **5.5** | **6** | **6.5** | **7.5** | **8** |
| 85 | 190 | 280 | 400 | 830 | 1200 |

1. Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.
2. The lower of the CEC or the pH-based ACLs for the land use and soil conditions is the ACL to be used.
3. Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
4. The EIL is calculated from summing the ACL and the ABC.

a = CEC measured using the silver thiourea method (Chabra et al. 1972)

b = pH measured using the CaCl2 method (Rayment & Higginson 1992)

**Table 1A(3) Soil HSLs for vapour intrusion (mg/kg)**

| CHEMICAL | HSL A & HSL B Low – high density residential | | | | HSL C recreational / open space | | | | HSL D Commercial / Industrial | | | | Soil saturation concentration (Cast) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 m to <1 m | 1 m to <2 m | 2 m to <4m | 4 m+ | 0 m to <1 m | 1 m to <2 m | 2 m to <4m | 4 m+ | 0 m to <1 m | 1 m to <2 m | 2 m to <4m | 4 m+ | |
| **SAND** | | | | | | | | | | | | | |
| Toluene | 160 | 220 | 310 | 540 | NL | NL | NL | NL | NL | NL | NL | NL | 560 |
| Ethylbenzene | 55 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 64 |
| Xylenes | 40 | 60 | 95 | 170 | NL | NL | NL | NL | 230 | NL | NL | NL | 300 |
| Naphthalene | 3 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 9 |
| Benzene | 0.5 | 0.5 | 0.5 | 0.5 | NL | NL | NL | NL | 3 | 3 | 3 | 3 | 360 |
| F1 | 45 | 70 | 110 | 200 | NL | NL | NL | NL | 260 | 370 | 630 | NL | 950 |
| F2 | 110 | 240 | 440 | NL | NL | NL | NL | NL | NL | NL | NL | NL | 560 |
| **SILT** | | | | | | | | | | | | | |
| Toluene | 390 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 640 |
| Ethylbenzene | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 69 |
| Xylenes | 95 | 210 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 330 |
| Naphthalene | 4 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 10 |
| Benzene | 0.6 | 0.7 | 1 | 2 | NL | NL | NL | NL | 4 | 4 | 6 | 10 | 440 |
| F1 | 40 | 65 | 100 | 190 | NL | NL | NL | NL | 250 | 360 | 590 | NL | 910 |
| F2 | 230 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 570 |
| **CLAY** | | | | | | | | | | | | | |
| Toluene | 480 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 630 |
| Ethylbenzene | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 68 |
| Xylenes | 110 | 310 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 330 |
| Naphthalene | 5 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 10 |
| Benzene | 0.7 | 1 | 2 | 3 | NL | NL | NL | NL | 4 | 6 | 9 | 20 | 430 |
| F1 | 50 | 90 | 150 | 290 | NL | NL | NL | NL | 310 | 480 | NL | NL | 850 |
| F2 | 280 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL | 560 |

**Table 1B(3): Soil-specific added contaminant limits for aged chromium III and nickel in soil**

| CHEMICAL | Clay content (%clay) | Added contaminant limits (mg aded contaminant/kg) for various land uses | | |
|---|---|---|---|---|
| | | Areas of ecological significance | Urban residential and public open space | Commercial and industrial |
| Chromium III | ***1*** | 60 | 190 | 310 |
| | ***2.5*** | 80 | 250 | 420 |
| | ***5*** | 100 | 320 | 530 |
| | ***≥10*** | 130 | 400 | 660 |
| | | | | |
| Nickel | CEC[a] ($cmol_c$ /kg) | Areas of ecological significance | Urban residential and public open space | Commercial and industrial |
| | ***5*** | 5 | 30 | 55 |
| | ***10*** | 30 | 170 | 290 |
| | ***20*** | 45 | 270 | 460 |
| | ***30*** | 60 | 350 | 600 |
| | ***40*** | 70 | 420 | 730 |
| | ***60*** | 95 | 560 | 960 |

Notes:

1. Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.
2. Aged values apply to contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
3. The EIL is calculated from summing the ACL and the ABC.

a = CEC measured using the silver thiourea method (Chabra et al. 1972)

**Table 1B(4): Generic added contaminant limits for lead in soils irrespective of their physicochemical properties**

| Pb added contaminant limit (ACL, mg added contaminant/kg) for various land uses | | | |
|---|---|---|---|
| **CHEMICAL** | **Area of ecological significance** | **Urban residential and public open space** | **Commercial and industrial** |
| **LEAD** | 470 | 1100 | 1800 |

Notes:

1. Urban residential/public open space is broadly equivalent to the HIL A, HIL B and HIL C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.
2. Aged values are applicable to lead contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
3. The EIL is calculated from summing the ACL and the ABC.

**Table 1B(5) Generic EILs for aged As, fresh DDT and fresh naphthalene in soils irrespective of their physicochemical properties**

| Ecological Investigation Levels (mg total contaminant/kg) | | | |
|---|---|---|---|
| **CHEMICAL** | **Areas of ecological significance** | **Urban residential and public open space[1]** | **Commercial and industrial** |
| **Arsenic[2]** | 40 | 100 | 160 |
| **DDT[3]** | 3 | 480 | 640 |
| **Naphthalene[3]** | 10 | 170 | 370 |

**Notes:**

1. Urban residential/public open space is broadly equivalent to the HIL-A, HIL-B and HIL-C land use scenarios in Table 1A(1) Footnote 1 and as described in Schedule B7.
2. Aged values are applicable to arsenic contamination present in soil for at least two years. For fresh contamination refer to Schedule B5c.
3. Insufficient data was available to calculate aged values for DDT and naphthalene, consequently the values for fresh contamination should be used.
4. Insufficient data was available to calculate ACLs for As, DDT and naphthalene. The EIL should be taken directly from Table 1B(5).

**Table 1B(6): ESLs for TPH fractions F1 – F4, BTEX and benzo(a)pyrene in soil**

| CHEMICAL | Soil texture | ESLs (mg/kg dry soil) | | |
|---|---|---|---|---|
| | | Areas of ecological significance | Urban residential and public open space | Commercial and industrial |
| **F1 C6-C10** | Coarse/ | 125* | 180* | 215* |
| **F2 >C10-C16** | Fine | 25* | 120* | 170* |
| **F3 >C16-C34** | Coarse | - | 300 | 1700 |
| | Fine | - | 1300 | 2500 |
| **F4 >C34-C40** | Coarse | - | 2800 | 3300 |
| | Fine | - | 5600 | 6600 |
| **Benzene** | Coarse | 10 | 50 | 75 |
| | Fine | 10 | 65 | 95 |
| **Toluene** | Coarse | 10 | 85 | 135 |
| | Fine | 65 | 105 | 135 |
| **Ethylbenzene** | Coarse | 1.5 | 70 | 165 |
| | Fine | 40 | 125 | 185 |
| **Xylenes** | Coarse | 10 | 105 | 180 |
| | Fine | 1.6 | 45 | 95 |
| **Benzo(a)pyrene** | Coarse | 0.7 | 0.7 | 1.4 |
| | Fine | 0.7 | 0.7 | 1.4 |

Notes:
ESLs are of low reliability except where indicated by * which indicates that the ESL is of moderate reliability.

'-' indicates that insufficient data was available to derive a value.

To obtain F1, subtract the sum of BTEX concentrations from C6-C10 fraction and subtract naphthalene from >C10-C16 to obtain F2.

**Table 1 B(7): Management Limits for TPH fractions F1 - F4 in soil**

| TPH fraction | Soil texture | Management Limits1 (mg/kg dry soil) | |
|---|---|---|---|
| | | Residential, parkland and public open space | Commercial and industrial |
| **F1[2] C6- C10** | Coarse | 700 | 700 |
| | Fine | 800 | 800 |
| **F2[2] >C10-C16** | Coarse | 1000 | 1000 |
| | Fine | 1000 | 1000 |
| **F3 >C16-C34** | Coarse | 2500 | 3500 |
| | Fine | 3500 | 5000 |
| **F4 >C34-C40** | Coarse | 10 000 | 10 000 |
| | Fine | 10 000 | 10 000 |

**Table 7: Health screening levels for asbestos contamination in soil**

| Form of asbestos | Health Screening Level (w/w) | | | |
|---|---|---|---|---|
| | Residential A[1] | Residential B[2] | Recreational C[3] | Commercial/ Industrial D[4] |
| Bonded ACM | 0.01% | 0.04% | 0.02% | 0.05% |
| FA and AF (friable asbestos) | 0.001% | | | |
| All forms of asbestos | No visible asbestos for surface soil | | | |

Notes:

1. Residential A with garden/accessible soil also includes children's day care centres, preschools and primary schools.
2. Residential B with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
3. Recreational C includes public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and unpaved footpaths.
4. Commercial/industrial D includes premises such as shops, offices, factories and industrial sites.
5. The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures (refer Section 4.10). This screening level is not applicable to free fibres.

# APPENDIX M

## LABORATORY TECHNICAL INFORMATION

ALS Environmental

# National Analyte Listings and LORs

## For ALS Traditional Group operations

9 MAY 2014


RIGHT SOLUTIONS | RIGHT PARTNER

## 16. ANALYTES & GROUP ANALYTES INDEX STARTING PAGE

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Fresh Water | | | Saline Water | | | Soil | | Sediments |
| | ICP-AES | ICP-MS | Ultra Trace | ICP-AES | ICP-MS | Ultra Trace | Standard | Trace | |
| **METALS** | | | | | | | | | |
| Method Code | EG005 | EG020 | EG094 | EG005 | EG020 | EG093 | EG005 | EG020 | EG020SD |
| Units | mg/L | mg/L | µg/L | mg/L | mg/L | µg/L | mg/kg | mg/kg | mg/kg |
| Aluminium (Al) | 0.1 | 0.01 | 5 | 1 | 0.5 | 5 | 50 | - | |
| Antimony (Sb) | 0.01 | 0.001 | 0.2 | - | 0.01 | 0.5 | 5 | 0.1 | 0.5 |
| Arsenic (As) | 0.01 | 0.001 | 0.2 | 1 | 0.05 | 0.5 | 5 | 0.1 | 1 |
| Barium (Ba) | 0.1 | 0.001 | 0.5 | 1 | 0.05 | 1 | 10 | 0.1 | |
| Beryllium (Be) | 0.01 | 0.001 | 0.1 | - | 0.01 | 0.1 | 1 | 0.1 | |
| Bismuth (Bi) | - | 0.001 | 0.05 | - | 0.01 | 0.1 | - | - | |
| Boron (B) | 0.1 | 0.05 | 5 | - | - | 100 | 50 | 5 | |
| Cadmium (Cd) | 0.005 | 0.0001 | 0.05 | 0.05 | 0.005 | 0.2 | 1 | 0.1 | 0.1 |
| Cerium (Ce) | - | 0.001 | - | - | - | - | - | - | |
| Caesium (Cs) | - | 0.001 | - | - | 0.01 | - | - | - | - |
| Chromium (Cr) | 0.01 | 0.001 | 0.2 | 1 | 0.01 | 0.5 | 2 | 0.1 | 1 |
| Cobalt (Co) | 0.01 | 0.001 | 0.1 | 1 | 0.01 | 0.2 | 2 | 0.1 | 0.5 |
| Copper (Cu) | 0.01 | 0.001 | 0.5 | 1 | 0.05 | 1 | 5 | 0.1 | 1 |
| Dysprosium (Dy) | - | 0.001 | - | 0.001 | - | - | - | - | - |
| Erbium (Er) | - | 0.001 | - | 0.001 | - | - | - | - | - |
| Europium (Eu) | - | 0.001 | - | 0.001 | - | - | - | - | - |
| Gadolinium (Gd) | - | 0.001 | - | 0.001 | - | - | - | - | - |
| Gallium (Ga) | - | 0.001 | - | 0.001 | - | - | - | - | - |
| Hafnium (Hf) | - | 0.01 | - | 0.01 | - | - | - | - | - |
| Holmium (Ho) | - | 0.001 | - | 0.001 | - | - | - | - | - |
| Indium (In) | - | 0.001 | - | - | 0.01 | - | - | - | - |
| Iron (Fe) | 0.05 | 0.05 | 2 | 0.5 | 0.5 | 5 | 50 | - | - |
| Lanthanum (La) | - | 0.001 | - | - | - | - | - | - | - |
| Lead (Pb) | 0.01 | 0.001 | 0.1 | 1 | 0.01 | 0.2 | 5 | 0.1 | 1 |
| Lithium (Li) | - | 0.001 | 0.5 | - | - | 1 | - | - | - |
| Lutetium (Lu) | - | 0.001 | - | - | - | - | - | - | - |
| Manganese (Mn) | 0.01 | 0.001 | 0.5 | 1 | 0.01 | 0.5 | 5 | 0.1 | 10 |
| Molybdenum (Mo) | 0.01 | 0.001 | 0.1 | 1 | 0.01 | 0.1 | 2 | 0.1 | - |
| Neodymium (Nd) | - | 0.001 | - | - | - | - | - | - | - |
| Nickel (Ni) | 0.01 | 0.001 | 0.5 | 1 | 0.05 | 0.5 | 2 | 0.1 | 1 |
| Praseodymium (Pr) | - | 0.001 | - | - | - | - | - | - | - |
| Rubidium (Rb) | - | 0.001 | - | - | 0.01 | - | - | - | - |
| Samarium (Sm) | - | 0.001 | - | - | - | - | - | - | - |
| Selenium (Se) | 0.01 | 0.01 | 0.2 | - | 0.1 | 2 | 5 | 1 | 0.1 |
| Silver (Ag) | 0.01 | 0.001 | 0.1 | - | 0.01 | 0.1 | 2 | 0.1 | 0.1 |
| Strontium (Sr) | 0.01 | 0.001 | 1 | 1 | 0.01 | 10 | 2 | 0.1 | - |
| Tellurium (Te) | - | 0.005 | 0.2 | - | 0.05 | 0.5 | - | - | - |
| Terbium (Tb) | - | 0.001 | - | - | - | - | - | - | - |
| Thallium (Tl) | - | 0.001 | 0.02 | - | 0.01 | 0.1 | - | - | - |
| Thorium (Th) | - | 0.001 | 0.1 | - | 0.01 | 0.1 | - | - | - |
| Thulium (Tm) | - | 0.001 | - | - | - | - | - | - | - |
| Tin (Sn) | 0.01 | 0.001 | 0.2 | 1 | 0.01 | 5 | 5 | 0.1 | - |
| Titanium (Ti) | 0.01 | 0.01 | 1 | 1 | - | 5 | - | - | - |
| Uranium (U) | - | 0.001 | 0.05 | - | 0.01 | 0.1 | - | - | - |
| Vanadium (V) | 0.01 | 0.01 | 0.2 | 1 | - | 0.5 | 5 | 1 | 2 |
| Ytterbium (Yb) | - | 0.001 | - | - | - | - | - | - | - |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Fresh Water | | | Saline Water | | | Soil | | Sediments |
| | ICP-AES | ICP-MS | Ultra Trace | ICP-AES | ICP-MS | Ultra Trace | Standard | Trace | |
| Yttrium (Y) | - | 0.001 | - | - | 0.01 | - | - | - | - |
| Zinc (Zn) | 0.01 | 0.005 | 1 | 1 | 0.05 | 5 | 5 | 0.5 | 1 |
| Zirconium (Zr) | - | 0.005 | - | - | 0.05 | - | | - | - |
| **Please note – 0.05 µg/L is equivalent to 0.00005 mg/L and due to the number of decimal places results are reported in µg/L for ultra-trace ORC analysis** | | | | | | | | | |
| MERCURY (by ICP/MS or FIMS) – total or dissolved LORs | | | | | | | | | |
| Method Code | | EG035 | EG035-LL | | EG035 | EG-035-LL | EG-035T | | EG035L |
| Units | | mg/L | mg/L | | mg/L | mg/L | Mg/kg | | mg/kg |
| Mercury | | 0.0001 | 0.00004 | - | 0.0001 | 0.00004 | 0.1 | - | 0.01 |
| ADDITIONAL METALS (non NATA) | | | | | | | | | |
| Method Code | | EG020 | | | | | | | |
| Units | | mg/L | | | | | | | |
| Bromine | - | 0.1 | - | - | - | - | - | - | - |
| Germanium | - | 0.001 | - | - | - | - | - | - | - |
| Gold | - | 0.001 | - | - | - | - | - | - | - |
| Iodine | - | 0.1 | - | - | - | - | - | - | - |
| Niobium | - | 0.001 | - | - | - | - | - | - | - |
| Palladium | - | 0.001 | - | - | - | - | - | - | - |
| Platinum | - | 0.001 | - | - | - | - | - | - | - |
| Rhenium | - | 0.001 | - | - | - | - | - | - | - |
| Tantalum | - | 0.001 | - | - | - | - | - | - | - |
| Tungsten | - | 0.001 | - | - | - | - | - | - | - |
| RARE EARTH METALS | | | | | | | | | |
| Method Code | | EG021 | | | | | | | |
| Units | | mg/L | | | | | | | |
| Iridium (Ir) | | 0.0001 | - | - | - | - | - | - | - |
| Osmium (Os) | | 0.0002 | - | - | - | - | - | - | - |
| Rhodium (Rh) | | 0.0001 | - | - | - | - | - | - | - |
| Ruthenium (Ru) | | 0.0002 | - | - | - | - | - | - | - |
| Scandium (Sc)b | | 0.0001 | - | - | - | - | - | - | - |
| SPECIATED METALS | | | | | | | | | |
| Method Code | | EG032 / 33 | | EG032/3SL | | | | | |
| | | Fresh Water | | Saline Water | | | | | |
| Units | | µg/L | | µg/L | | | | | |
| As (III), (Arsenite) | | 1 | - | 2 | - | - | - | - | - |
| As (V), (Arsenate) | | 1 | - | 4 | - | - | - | - | - |
| AsB, (Arsenobetaine) | | 1 | - | 4 | - | - | - | - | - |
| DMA, (Dimethylarsenic Acid) | | 1 | - | 4 | - | - | - | - | - |
| MMA, (Monomethylarsonic Acid) | | 1 | - | 4 | - | - | - | - | - |
| Selenium (IV) | | 1 | - | 2 | - | - | - | - | - |
| **ORGANOTINS** Method Code | | EP090 | | | | | | | EP090 |
| Units | | ng Sn/L | | | | | | | Ug Sn/kg |
| Monobutyltin | | - | - | - | - | - | - | - | - |
| Dibutyltin | | - | - | - | - | - | - | - | - |
| Tributyltin (TBT) | | 2 | - | - | - | - | - | - | 0.5 |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Fresh/Saline Water | | | | Soil | | | Sediments |
| **TPH, TRH, TPH SPECIATION, SOLVENTS, BTEX, BTEXN** | | | | | | | | |
| **TPH** Method Code: | EP071,80 | EP071SG | | | EP071,80 | EP071SG | | |
| Units | µg/L | µg/L | | | mg/kg | mg/kg | | |
| C6 - C9 | 20 | - | | | 10 | - | | |
| C10 -C14 | 50 | 50 | | | 50 | 50 | | |
| C15 - C28 | 100 | 100 | | | 100 | 100 | | |
| C29 - C36 | 50 | 50 | | | 100 | 100 | | |
| Total C10-C36 ^ | 50 | 50 | | | 50 | 50 | | |
| **TRH** Method Code: | EP0711, 801 | | | | EP0711, 801 | | | EP071SD |
| C6-C10 | 20 | | | | 10 | | | 3-5 |
| >C10 -C16 | 100 | | | | 50 | | | 3-5 |
| >C16 – C34 | 100 | | | | 100 | | | 3-5 |
| >C34 – C40 | 100 | | | | 100 | | | 3-5 |
| Total >C10 - C40 ^ | 100 | | | | 100 | | | |
| C6-C10 minus BTEX (F1) | 20 | | | | 10 | | | |
| BTEXN Method Code: | EP080 | | | | EP080 | | | EP080-SD |
| Benzene | 1 | | | | 0.2 | | | 0.2 |
| Toluene | 2 | | | | 0.5 | | | 0.2 |
| Ethylbenzene | 2 | | | | 0.5 | | | 0.2 |
| meta- & para-Xylene | 2 | | | | 0.5 | | | 0.2 |
| ortho-Xylene | 2 | | | | 0.5 | | | 0.2 |
| Total Xylenes ^ | 2 | | | | 0.5 | | | |
| Naphthalene | 5 | | | | 2 | | | |
| Sum of BTEX ^ | 1 | | | | 0.5 | | | |
| **TRH Speciation-HRAF** Method Code: | EP070 | | | | EP070 | | | |
| Units | µg/L | µg/L | | | mg/kg | mg/kg | | |
| Aliphatic C10-C14 | 50 | | | | | | | |
| Aliphatic C15-C28 | 100 | | | | | | | |
| Aliphatic C16-C35 | | | | | 50 | | | |
| Aliphatic >C35 | | | | | 100 | | | |
| Aromatic C10-C14 | 50 | | | | | | | |
| Aromatic C15-C28 | 100 | | | | | | | |
| Aromatic C29-C36 | 50 | | | | | | | |
| Aromatic C16-C35 | | | | | 90 | | | |
| Aromatic >C35 | | | | | 100 | | | |
| TRH CWG Speciation Method Code: | EP070,79 | | | | EP070I,80I | | | |
| Aliphatics >C5-C6 | 20 | | | | 5 | | | |
| Aliphatics >C6-C8 | 20 | | | | 5 | | | |
| Aliphatics >C8-C10 | 20 | | | | 5 | | | |
| Aliphatics >C10-C12 | 50 | | | | 50 | | | |
| Aliphatics >C12-C16 | 50 | | | | 50 | | | |
| Aliphatics >C16-C21 | 50 | | | | 50 | | | |
| Aliphatics >C21-C35 | 50 | | | | 50 | | | |
| Aromatics >C5-C7 | 1 | | | | 0.2 | | | |
| Aromatics >C7-C8 | 2 | | | | 0.5 | | | |
| Aromatics >C8-C10 | 2 | | | | 0.5 | | | |
| Aromatics >C10-C12 | 50 | | | | 50 | | | |
| Aromatics >C12-C16 | 50 | | | | 50 | | | |
| Aromatics >C16-C21 | 50 | | | | 50 | | | |
| Aromatics >C21-C35 | 50 | | | | 50 | | | |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Water | | | Drinking water | | Soils | | Sediment |
| | Std VOC | | Ultra Trace | Super UT | VOC Trace | | | |
| **VOLATILE ORGANICS COMPOUNDS (VOC)** | | | | | | | | |
| **Monocyclic Aromatics** Method Code: | EP074A | | EP125A | EP125LL | EP074-WF | EP074A | EP074SIM | |
| Units | µg/L | | µg/L | µg/L | µg/L | mg/kg | mg/kg | |
| Benzene | 1 | | 0.05 | - | 1 | 0.2 | 0.02 | |
| Toluene | 2 | | 0.5 | - | 1 | 0.5 | 0.05 | |
| Ethylbenzene | 2 | | 0.05 | - | 1 | 0.5 | 0.02 | |
| meta- & para-Xylene | 2 | | 0.05 | - | 1 | 0.5 | 0.02 | |
| ortho-Xylene | 2 | | 0.05 | - | 1 | 0.5 | 0.02 | |
| 1,2,4-Trimethylbenzene | 5 | | 0.05 | - | 1 | 0.5 | - | |
| 1,3,5-Trimethylbenzene | 5 | | 0.05 | - | 1 | 0.5 | - | |
| Isopropylbenzene | 5 | | - | - | 1 | 0.5 | - | |
| n-Butylbenzene | 5 | | - | - | 1 | 0.5 | - | |
| n-Propylbenzene | 5 | | - | - | 1 | 0.5 | - | |
| p-Isopropyltoluene | 5 | | - | - | 1 | 0.5 | - | |
| sec-Butylbenzene | 5 | | - | - | 1 | 0.5 | - | |
| Styrene | 5 | | 0.05 | - | 1 | 0.5 | - | |
| tert-Butylbenzene | 5 | | - | - | 1 | 0.5 | - | |
| Sum of Xylenes | 5 | | 0.05 | - | 1 | | | |
| **Oxygenated Compounds** Method Code: | EP074B | | EP0125B | | EP074-WF | EP074B | EP074SIM | |
| 2-Butanone (MEK) | 50 | | - | | 10 | 5 | - | |
| 2-Hexanone (MBK) | 50 | | - | | 10 | 5 | - | |
| 2-Propanone (Acetone) | 50 | | - | | 10 | 5 | - | |
| 4-Methyl-2-pentanone (MIBK) | 50 | | - | | 10 | 5 | - | |
| Vinyl acetate | 50 | | - | | 10 | 5 | - | |
| **Sulfonated Compounds** Method Code: | EP074C | | EP0125C | | EP074-WF | EP074C | | |
| Carbon disulfide | 5 | | - | | 1 | 0.5 | - | |
| **Fumigants** Method Code: | EP074D | | EP125D | | EP074-WF | EP074D | EP074SIM | |
| 1,2-Dibromoethane | 5 | | 0.1 | | 1 | 0.5 | - | |
| 1,2-Dichloropropane | 5 | | 0.1 | | 1 | 0.5 | - | |
| 2,2-Dichloropropane | 5 | | - | | 1 | 0.5 | - | |
| cis-1,3-Dichloropropylene | 5 | | 0.1 | | 2 | 0.5 | - | |
| trans-1,3-Dichloropropylene | 5 | | 0.1 | | 2 | 0.5 | - | |
| **Halogenated Aliphatics** Method Code: | EP074E | | EP125E | EP125-LL | EP074-WF | EP074E | EP074SIM | |
| 1,1,1-Trichloroethane | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| 1,1-Dichloroethane | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| 1,1-Dichloroethene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Bromochloromethane | - | | 0.5 | | 1 | | | |
| Bromomethane | 50 | | 0.5 | | 0.5 | 5 | 0.02 | |
| Chloroethane | 50 | | 0.5 | | 1 | 5 | 0.02 | |
| Chloromethane | 50 | | - | | 1 | 5 | 0.02 | |
| cis-1,2-Dichloroethene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Dichlorodifluoromethane | 50 | | 0.5 | | 1 | 5 | 0.02 | |
| Iodomethane | 5 | | - | | 1 | 0.5 | - | |
| Methylene chloride (DCM) | 4 | | 1 | 0.1 | 4 | 0.5 | - | |
| Trichlorofluoromethane | 50 | | 0.5 | | 1 | 5 | 0.02 | |
| trans-1,2-Dichloroethene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Vinyl chloride | 50 | | 0.3 | 0.025 | 0.3 | 5 | 0.02 | |
| Units | µg/L | | µg/L | | µg/L | mg/kg | mg/kg | |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Water | | | Drinking water | | Soils | | Sediment |
| | Std VOC | | Ultra Trace | Super UT | VOC Trace | | | |
| 1,1,1,2-Tetrachloroethane | 5 | | - | | 1 | 0.5 | 0.02 | |
| 1,1,2,2-Tetrachloroethane | 5 | | - | | 1 | 0.5 | 0.02 | |
| 1,1,2-Trichloroethane | 5 | | - | | 1 | 0.5 | - | |
| 1,1-Dichloropropylene | 5 | | - | | 1 | 0.5 | - | |
| 1,2,3-Trichloropropane | 5 | | - | | 1 | 0.5 | - | |
| 1,2-Dibromo-3-chloropropane | 5 | | 0.1 | | 1 | 0.5 | - | |
| 1,2-Dichloroethane | 5 | | 0.1 | 0.02 | 1 | 0.5 | 0.02 | |
| 1,3-Dichloropropane | 5 | | - | | 1 | 0.5 | - | |
| Carbon tetrachloride | 5 | | 0.05 | 0.02 | 1 | 0.5 | 0.02 | |
| cis-1,4-Dichloro-2-butene | 5 | | - | | 1 | 0.5 | - | |
| Dibromomethane | 5 | | - | | 1 | 0.5 | - | |
| Hexachlorobutadiene | 5 | | 0.04 | | 0.5 | 0.5 | 0.02 | |
| Pentachloroethane | 5 | | - | | 1 | 0.5 | - | |
| Tetrachloroethene | 5 | | 0.05 | | 1 | 0.5 | 0.02 | |
| trans-1,4-Dichloro-2-butene | 5 | | - | | 1 | 0.5 | - | |
| Trichloroethene | 5 | | 0.05 | | 1 | 0.5 | 0.02 | |
| **Halogenated Aromatics** Method Code | EP074F | | EP125F | | EP074-WF | EP074F | EP074SIM | |
| 1,2,3-Trichlorobenzene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| 1,2,4-Trichlorobenzene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| 1,2-Dichlorobenzene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| 1,3,5-Trichlorobenzene | - | | - | | 1 | | | |
| 1,3-Dichlorobenzene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| 1,4-Dichlorobenzene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| 2-Chlorotoluene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| 4-Chlorotoluene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Benzyl Chloride | - | | 0.2 | | - | - | - | |
| Bromobenzene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Chlorobenzene | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Trichlorobenzenes (Sum) | - | | 0.1 | | 1 | | | |
| **Trihalomethanes** Method Code | EP074G | | EP125G | | EP074-WF | EP074G | EP074SIM | |
| Bromodichloromethane | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Bromoform | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Chloroform | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Dibromochloromethane | 5 | | 0.1 | | 1 | 0.5 | 0.02 | |
| Total Trihalomathanes (THMs) | 5 | | 0.1 | | 1 | | | |
| **Naphthalene** Method Code | EP074H | | EP125H | | EP074-WF | EP074H | EP074SIM | |
| Naphthalene | 7 | | 0.05 | | 5 | 5 | 0.05 | |
| **Miscellaneous** Method Code | EP074K | | The K and L Groups only reported when only specific compounds are requested via CoC. | | | | | |
| 1,3,5-Trimethylbenzene (NN) | 5 | | - | | 1 | | | |
| Total Trimethylbenzene (NN) | 5 | | - | | 1 | | | |
| **Fuel Oxygenates** Method Code | EP074L | | EP125L | | | EP074L | EP074SIM | |
| Units | µg/L | | µg/L | | µg/L | mg/kg | mg/kg | |
| Diisoproply ether (DIPE) | 1 | | - | | - | 0.1 | - | |
| Ethyl tert-butyl ether (ETBE) | 1 | | - | | - | 0.1 | - | |
| Methyl tert-butyl ether (MTBE) | 1 | 1 | 0.1 | | | 0.1 | - | |
| tert-Amyl ethyl ether (TAEE) | 1 | | - | | - | 0.1 | - | |
| tert-Amyl methyl ether (TAME) | 1 | | - | | - | 0.1 | - | |
| tert-Butyl alcohol(TBA) | 5 | | - | | - | 0.5 | - | |
| | | | | | | | | |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Water | | | Drinking water | | Soils | | Sediment |
| | Std VOC | | Ultra Trace | Super UT | VOC Trace | | | |
| **BROMINATED VOCS** Method Code | - | EP093 | | | | | | |
| Units | µg/L | µg/L | | | | mg/kg | | |
| 1,1,2,2-Tetrabromoethane | - | 1 | | | | | | |
| 1,2-Dibromoethene (total) | - | 0.1 | | | | | | |
| Bromoform | - | 0.1 | | | | | | |
| cis-1,2-Dibromoethene | - | 0.1 | | | | | | |
| Dibromomethane | - | 0.1 | | | | | | |
| trans-1,2-Dibromoethene | - | 0.1 | | | | | | |
| Tribromoethene | - | 0.1 | | | | | | |
| Vinyl Bromide | - | 0.1 | | | | | | |
| **VOC - ALKANES** Method Code | CM051C | | | | | | | |
| Decane | 10 | | | | | | | |
| Hexane | 10 | | | | | | | |
| Heptane | 10 | | | | | | | |
| Nonane | 10 | | | | | | | |
| Octane | 10 | | | | | | | |
| Pentane | 10 | | | | | | | |
| **VOC – Solvents** Method Code | CM051C | | | | | | | |
| 1-Heptane | 4 | | | | | | | |
| Butyl acetate | 20 | | | | | | | |
| Cyclopentene | 4 | | | | | | | |
| Cyclohexane | 4 | | | | | | | |
| Ethyl acetate | 20 | | | | | | | |
| **ALCOHOLS** Method Code | EP177 | | | | | | | |
| Ethanol | 50 | | | | | | | |
| Isobutanol | 50 | | | | | | | |
| Isopropanol | 50 | | | | | | | |
| n-Butanol | 50 | | | | | | | |
| n-Propanol | 50 | | | | | | | |
| **GLYCOLS** Method Code | EP067 | EP261 | | | | EP067 | | |
| 2-Butoxyethanol | 2,000 | 10 | | | | 2 | | |
| 2-Ethoxyethyl acetate | 2,000 | - | | | | 2 | | |
| Diethylene glycol monobutyl ether | 2,000 | 10 | | | | 2 | | |
| Diethylene glycol | 2,000 | - | | | | 2 | | |
| Ethylene glycol | 2,000 | 100 | | | | 2 | | |
| Propylene glycol | 2,000 | - | | | | 2 | | |
| Triethylene glycol | 2,000 | - | | | | 2 | | |
| **C1-C4 GASES** Method Code | EP033 | EP033LL | | | | *Not reported unless requested | | |
| Butane* | 20 | 1 | | | | | | |
| Butylene (Butene) * | 20 | 1 | | | | | | |
| Ethane* | 10 | 1 | | | | | | |
| Ethylene (Ethene) * | 10 | 1 | | | | | | |
| Methane | 10 | 1 | | | | | | |
| Propane* | 10 | 1 | | | | | | |
| Propylene (Propene)* | 10 | 1 | | | | | | |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Water | | Trace and Ultra trace | | Soil | | | Sediments |
| PAH (POLYAROMATIC HYDROCARBONS) | | | | | | | | |
| Method Code | EP075B(SIM) | EP075BWE | EP132B | EP132LL | EP075B(SIM) | EP075BSC | EP132B | EP132SD |
| Units | µg/L | µg/L | µg/L | µg/L | mg/kg | mg/kg | µg/kg | µg/kg |
| 2-Methylnaphthalene | - | - | 0.1 | - | - | - | 10 | 5.0 |
| 3-Methylcholanthrene | - | - | 0.1 | - | - | - | 10 | 4.0 |
| 7,12-Dimethylbenz(a)anthracene | - | - | 0.1 | - | - | - | 10 | 4.0 |
| Acenaphthene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Acenaphthylene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Anthracene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Benz(a)anthracene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Benzo(a)pyrene | 0.5 | 0.2 | 0.05 | 0.005 | 0.5 | 0.05 | 10 | 4.0 |
| Benzo(b&k)fluoranthene | - | - | 0.1 | - | - | - | 10 | - |
| Benzo(b) fluoranthene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Benzo(e)pyrene | - | - | 0.1 | - | - | - | 10 | 4.0 |
| Benzo(g,h,i)perylene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Benzo(k) fluoranthene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Chrysene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Coronene | - | - | 0.1 | - | - | - | 10 | 5.0 |
| Dibenz(a,h)anthracene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Fluoranthene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Fluorene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Indeno(1,2,3-cd)pyrene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| N-2-Fluorenyl acetamide | - | - | 0.1 | - | - | - | 100 | |
| Naphthalene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 5.0 |
| Perylene | - | - | 0.1 | - | - | - | 10 | 4.0 |
| Phenanthrene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Pyrene | 1 | 0.2 | 0.1 | 0.02 | 0.5 | 0.05 | 10 | 4.0 |
| Benzo(a)pyrene TEQ | 0.5 | 0.2 | 0.05 | 0.005 | 0.5 | 0.05 | 10 | 4.0 |
| PAH's (total) ^ | 1 | 0.2 | 0.1 | 0.005 | 0.5 | 0.05 | 10 | 90 |
| **PHENOLS** Method Code | EP075ASIM | EP132A | | | EP075ASIM | | EP132A | See EP075A |
| 2,3,4,6-Tetrachlorophenol | - | 0.1 | | | - | | 10 | |
| 2,4,5-Trichlorophenol | 1 | 0.1 | | | 0.5 | | 10 | |
| 2,4,6-Trichlorophenol | 1 | 0.1 | | | 0.5 | | 10 | |
| 2,4-Dichlorophenol | 1 | 0.1 | | | 0.5 | | 10 | |
| 2,4-Dimethylphenol | 1 | 0.1 | | | 0.5 | | 10 | |
| 2,6-Dichlorophenol | 1 | 0.1 | | | 0.5 | | 10 | |
| 2-Chlorophenol | 1 | 0.05 | | | 0.5 | | 10 | |
| 2-Methylphenol (o-Cresol) | 1 | - | | | 0.5 | | 10 | |
| 2-Nitrophenol | 1 | 0.1 | | | 0.5 | | 100 | |
| 3&4-Methylphenol | 2 | - | | | 1 | | 10 | |
| 4-Chloro-3-methylphenol | 1 | 0.05 | | | 0.5 | | 10 | |
| 4-Nitrophenol | - | 0.1 | | | - | | 10 | |
| Hexachlorophene | - | 0.1 | | | - | | 10 | |
| m-Cresol (3-Methylphenol) | - | 0.1 | | | - | | 10 | |
| o-Cresol (2-Methylphenol) | - | 0.1 | | | - | | - | |
| p-Cresol (4-Methylphenol) | - | 0.1 | | | - | | 10 | |
| Pentachlorophenol | 2 | 0.05 | | | 1 | | 10 | |
| Phenol | 1 | 0.1 | | | 0.5 | | 10 | |
| Tetrachlorophenol | - | 0.1 | | | - | | - | |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Soil | | Sediments |
| **OC PESTICIDES** Method Code | EP068A | | EP131A | EP131ACM | EP068A | EP131A | EP131A |
| Units | µg/L | | | µg/L | mg/kg | µg/kg | µg/kg |
| Aldrin | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| a-BHC | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| b-BHC | 0.5 | | 0.01 | 0.002 | 0.1 | 0.5 | 0.5 |
| d-BHC | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| g-BHC (Lindane) | 0.5 | | 0.01 | 0.002 | 0.1 | 0.5 | 0.25 |
| Chlordane - cis | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Chlordane - trans | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Chlordane (Total) | - | | - | 0.002 | - | - | 0.25 |
| DDD | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| DDE | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| DDT | 2 | | 0.01 | 0.002 | 0.2 | 0.5 | 0.5 |
| Dieldrin | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Endosulfan 1 | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Endosulfan 2 | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Endosulfan sulfate | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Endosulphan (Total) | - | | - | 0.002 | - | - | 0.5 |
| Endrin | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Endrin aldehyde | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Endrin ketone | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| HCB (Hexachlorobenzene) | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Heptachlor | 0.5 | | 0.005 | 0.001 | 0.05 | 0.5 | 0.5 |
| Heptachlor epoxide | 0.5 | | 0.01 | 0.002 | 0.05 | 0.5 | 0.5 |
| Methoxychlor | 2 | | 0.01 | 0.002 | 0.2 | 0.5 | 0.5 |
| Oxychlordane | - | | 0.01 | 0.002 | - | 0.5 | 0.5 |
| Aldrin + Dieldrin^(Sum of) | 0.5 | | 0.01 | 0.002 | - | - | 0.5 |
| DDD+DDE+DDT^(Sum of) | 0.5 | | 0.01 | 0.002 | - | - | 0.5 |
| | | | | | | | |
| Method Code | EP066 | EP131B | EP131BCM | | EP066 | See EP131B | EP131B |
| Units | µg/L | µg/L | µg/L | | mg/kg | µg/kg | µg/kg |
| Total PCB | 1 | 0.1 | 0.05 | | 0.1 | | 5.0 |
| Aroclor 1016* | 1 | 0.1 | 0.05 | | 0.1 | | 5.0 |
| Aroclor 1221* | 1 | 0.1 | 0.05 | | 0.1 | | 5.0 |
| Aroclor 1232* | 1 | 0.1 | 0.05 | | 0.1 | | 5.0 |
| Aroclor 1242* | 1 | 0.1 | 0.05 | | 0.1 | | 5.0 |
| Aroclor 1248* | 1 | 0.1 | 0.05 | | 0.1 | | 5.0 |
| Aroclor 1254* | 1 | 0.1 | 0.05 | | 0.1 | | 5.0 |
| Aroclor 1260* | 1 | 0.1 | 0.05 | | 0.1 | | 5.0 |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | Soil | | Sediments |
| OPPs (ORGANOPHOSPORUOUS PESTICIDES) | | | | | | | |
| Method Code | EP068B | EP130 | EP234A | EP234LL | EP068B | See EP130 | EP130A |
| Units | µg/L | µg/L | µg/L | µg/L | mg/kg | µg/kg | µg/kg |
| Azinphos-ethyl | - | - | 0.02 | - | - | - | - |
| Azinphos-methyl | 0.5 | 0.1 | 0.02 | - | 0.05 | 10 | 10 |
| Bromophos-ethyl | 0.5 | 0.1 | 0.1 | - | 0.05 | 10 | 10 |
| Carbophenothion | 0.5 | 0.1 | 0.02 | - | 0.05 | 10 | 10 |
| Chlorfenvinphos | - | - | 0.02 | - | - | - | - |
| Chlorfenvinphos E | 0.5 | 0.1 | - | - | 0.05 | 10 | 10 |
| Chlorfenvinphos Z | 0.5 | 0.1 | - | - | 0.05 | 10 | 10 |
| Chlorpyrifos | 0.5 | 0.05 | 0.02 | 0.001 | 0.05 | 10 | 10 |
| Chlorpyrifos-methyl | 0.5 | 0.1 | 0.2 | - | 0.05 | 10 | 10 |
| Coumaphos | - | - | 0.01 | - | - | - | - |
| Demeton-O & Demeton-S | - | - | 0.02 | - | - | - | - |
| Demeton-S-methyl | 0.5 | 0.1 | 0.02 | - | 0.05 | 10 | 10 |
| Diazinon | 0.5 | 0.1 | 0.01 | 0.0002 | 0.05 | 10 | 10 |
| Dichlorvos | 0.5 | 0.1 | 0.2 | - | 0.05 | 10 | 10 |
| Dimethoate | 0.5 | 0.1 | 0.02 | - | 0.05 | 10 | 10 |
| Disulfoton | - | - | 0.05 | - | - | - | - |
| Ethion | 0.5 | 0.1 | 0.02 | - | 0.05 | 10 | 10 |
| Ethoprophos | - | - | 0.01 | - | - | - | - |
| Fenamiphos | 0.5 | 0.1 | 0.01 | - | 0.05 | 10 | 10 |
| Fenchlorphos (Ronnel) | - | - | 10 | - | - | - | - |
| Fenitrothion | - | - | 2 | - | - | - | - |
| Fensulfothion | - | - | 0.01 | - | - | - | - |
| Fenthion | 0.5 | 0.1 | 0.05 | - | 0.05 | 10 | 10 |
| Malathion | 0.5 | 0.1 | 0.02 | 0.001 | 0.05 | 10 | 10 |
| Mevinphos | - | - | 0.02 | - | - | - | - |
| Monocroptophos | 2 | 0.1 | 0.02 | - | 0.2 | 10 | 10 |
| Omethoate | - | - | 0.01 | - | - | - | - |
| Parathion | 2 | 0.1 | 0.2 | - | 0.2 | 10 | 10 |
| Parathion-methyl | 2 | 0.1 | 2 | - | 0.2 | 10 | 10 |
| Phorate | - | - | 0.1 | - | - | - | - |
| Pirimiphos-methyl | - | - | 0.01 | 0.0002 | - | - | - |
| Pirimphos-ethyl | 0.5 | 0.1 | 0.01 | - | 0.05 | 10 | 10 |
| Profenofos | - | - | 0.01 | - | - | - | - |
| Prothiofos | 0.5 | 0.1 | 0.1 | - | 0.05 | 10 | 10 |
| Sulfotep | - | - | 0.005 | 0.0002 | - | - | - |
| Sulprofos | - | - | 0.05 | - | - | - | - |
| Temephos | - | - | 0.02 | - | - | - | - |
| Terbufos | - | - | 0.01 | - | - | - | - |
| Tetrachlorvinphos | - | - | 0.01 | - | - | - | - |
| Triazophos | - | - | 0.005 | - | - | - | - |
| Trichlorfon | - | - | 0.02 | - | - | - | - |
| Trichloronate | - | - | 0.5 | - | - | - | - |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Water | | Drinking Water | | Soil | | | Sediments |
| **PHENOXY ACID HERBICIDES** | | | | | | | | |
| Method Code | EP202 | EP202LL | See EP202LL | | EP202 | | | |
| Units | µg/L | µg/L | | | mg/kg | | | |
| 2,4,5-T | 10 | 0.01 | | | 0.02 | | | |
| 2,4,5-TP | 10 | 0.01 | | | 0.02 | | | |
| 2,4,6-T | 10 | 0.1 | | | N/A | | | |
| 2,4-D | 10 | 0.01 | | | 0.02 | | | |
| 2,4-DB | 10 | 0.01 | | | 0.02 | | | |
| 2,4-DP | 10 | 0.01 | | | 0.02 | | | |
| 2,6-D | 10 | 0.1 | | | N/A | | | |
| 4-Chlorophenoxyacetic Acid | 10 | 0.01 | | | 0.02 | | | |
| Clopyralid | 10 | 0.05 | | | 0.02 | | | |
| Dicamba | 10 | 0.01 | | | 0.02 | | | |
| MCPA | 10 | 0.01 | | | 0.02 | | | |
| MCPB | 10 | 0.01 | | | 0.02 | | | |
| Mecoprop (MCPP) | 10 | 0.01 | | | 0.02 | | | |
| Fluroxypyr | 10 | 0.05 | | | 0.02 | | | |
| Picloram | 10 | 0.05 | | | 0.02 | | | |
| Triclopyr | 10 | 0.01 | | | 0.02 | | | |
| Bentazone | - | 0.01 | | | - | | | |
| **SYNTHETIC PYRETHROIDS** | | | | | | | | |
| Method Code | EP094 | | EP094LL | | EP094 | | | See EP094 |
| Units | µg/L | | µg/L | | mg/kg | | | |
| Allethrin | 0.5 | | - | | 0.05 | | | |
| Bifenthrin | 0.5 | | 0.2 | | 0.05 | | | |
| Bioresmethrin | 0.5 | | 0.2 | | 0.05 | | | |
| Cyfluthrin | 0.5 | | 0.2 | | 0.05 | | | |
| Cyhalothrin (Lambda) | 0.5 | | 0.2 | | 0.05 | | | |
| Cypermethrin | 0.5 | | 0.2 | | 0.05 | | | |
| Deltamethrin& Tralomethrin | 0.5 | | 0.2 | | 0.05 | | | |
| Fenvalerate& Esenvalerate | 0.5 | | 0.2 | | 0.05 | | | |
| Permethrin | 0.5 | | 0.2 | | 0.05 | | | |
| Phenothrin | 0.5 | | 0.2 | | 0.05 | | | |
| Tau-fluvalinate | 0.5 | | 0.2 | | 0.05 | | | |
| Tetramethrin | 0.5 | | - | | 0.05 | | | |
| Transfluthrin | 0.5 | | - | | 0.05 | | | |
| SYNERGIST Piperonyl Butoxide (PBO) | 0.5 | | 0.2 | | 0.05 | | | |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX/ METHOD CODES & LORS | | | |
|---|---|---|---|---|
| | Abbreviated | Water | | Soil |
| | Name | Standard | Trace | Standard |
| **EXPLOSIVES & MICELLANEOUS ORGANICS** | | | | |
| **EXPLOSIVES** Method Code | | EP0203 | EP0203 | EP203 |
| Units | | µg/L | µg/L | mg/kg |
| 1,3,5-Trinitrobenzene | 1,3,5-TNB | 20 | 1 | 0.1 |
| 1,3-Dinitrobenzene | 1,3-DNB | 20 | 1 | 0.1 |
| 2,4,6-trinitrotoluene | 2,4,6-TNT | 20 | 1 | 0.1 |
| 2,4-Dinitrotoluene | 2,4-DNT | 20 | 1 | 0.1 |
| 2,6-Dinitrotoluene | 2,6-DNT | 20 | 1 | 0.1 |
| 2,4- & 2,6-DNT(Isomeric Mixture)* | -- | 20 | 1 | 0.1 |
| 2-Amino-2,4-dinitrotoluene | 2-Am-DNT | 20 | 1 | 0.1 |
| 2-Nitrotoluene | 2-NT or o-NT | 20 | 1 | 0.1 |
| 3-Nitrotoluene | 3-NT or m-NT | 20 | 1 | 0.1 |
| 4-Amino-2,6-dinitrotoluene | 4-Am-DNT | 20 | 1 | 0.1 |
| 4-Am- & 2-Am-DNT (Isomeric Mixture)* | -- | 20 | 1 | 0.1 |
| 4-Nitrotoluene | 4-NT or p-NT | 20 | 1 | 0.1 |
| Hexahydro-1,3,5-trinitro-1,3,5-triazine | RDX | 20 | 1 | 0.1 |
| Methyl-2,4,6-trinitrophenylnitramine | Tetryl | 20 | 1 | 0.1 |
| Nitrobenzene | NB | 20 | 1 | 0.1 |
| Nitroglycerine | NG | 200 | 5 | 1 |
| Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine | HMX | 20 | 1 | 0.1 |
| Pentaerythritol tetranitrate | PETN | 200 | 5 | 1 |
| ***Results will be replaced as isomeric mixture except where equally high concentrations of both compounds are detected** | | | | |
| **PFOS/PFOA and AFFF** | | | | |
| | Standard | Trace in fresh or saline water | | |
| Method Code | EP231 / EP231PFC | EP231-LL / EP231PFC-LL | | EP231/EP231PFC |
| Units | µg/L | µg/L | | mg/kg |
| Perfluorooctane sulphonate (PFOS) | 0.01 | 0.002 | | 0.0005 |
| Perfluorooctanoic acid (PFOA) | 0.01 | 0.002 | | 0.0005 |
| 6:2 Fluorotelomer sulphonate (6:2 FTS) | 0.1 | 0.01 | | 0.005 |
| 8:2 Fluorotelomer sulphonate (8:2 FTS) | 0.1 | 0.01 | | 0.001 |
| N-Ethyl-heptadecafluorooctane sulphonamide (N-Et-FOSA) | 0.05 | 0.005 | | 0.001 |
| N-Ethyl-heptadecafluorooctane sulphonamidoethanol (N-Et-FOSE) | 1 | 0.1 | | 0.001 |
| N-Methyl-heptadecafluorooctane sulphonamide (N-Me-FOSA) | 0.5 | 0.05 | | 0.001 |
| N-Methyl-heptadecafluorooctane sulphonamidoethanol (N-Me-FOSE) | 1 | 0.1 | | 0.001 |
| Perfluorobutane sulphonate (PFBS) | 0.02 | 0.002 | | 0.0002 |
| Perfluorodecane sulphonate (PFDcS) | 0.02 | 0.002 | | 0.0002 |
| Perfluorodecanoic acid (PFDcA) | 0.02 | 0.002 | | 0.0002 |
| Perfluorododecanoic acid (PFDoA) | 0.05 | 0.005 | | 0.0002 |
| Perfluoroheptanoic acid (PFHpA) | 0.02 | 0.002 | | 0.0002 |
| Perfluorohexane sulphonate (PFHxS) | 0.02 | 0.002 | | 0.0002 |
| Perfluorohexanoic acid (PFHxA) | 0.02 | 0.002 | | 0.0002 |
| Perfluorononanoic acid (PFNA) | 0.02 | 0.002 | | 0.0002 |
| Perfluorooctane sulphonamide (PFOSA) | 0.02 | 0.002 | | 0.0002 |
| Perfluorotridecanoic acid (PFTriA) | 0.05 | 0.005 | | 0.0002 |
| Perfluorotetradecanoic acid (PFTeA) | 0.5 | 0.05 | | 0.001 |
| Perfluoroundecanoic acid (PFUnA) | 0.05 | 0.005 | | 0.0002 |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | |
|---|---|---|---|---|
| | Water | Soil | | |
| | Standard | Standard | Full listing | |
| Units | µg/L | mg/kg | mg/kg | |
| **SEMIVOLATILE ORGANIC COMPOUNDS – USEPA 8270 list** | | | | |
| **PHENOLS** Method Code | EP075A | EP075A | EP076 | |
| 2,4,5-Trichlorophenol | 2 | 0.5 | 0.5 | |
| 2,4,6-Trichlorophenol | 2 | 0.5 | 0.5 | |
| 2,4-Dichlorophenol | 2 | 0.5 | 0.5 | |
| 2,4-Dimethylphenol | 2 | 0.5 | 0.5 | |
| 2,6-Dichlorophenol | 2 | 0.5 | 0.5 | |
| 2-Chlorophenol | 2 | 0.5 | 0.5 | |
| 2-Methylphenol | 2 | 0.5 | 0.5 | |
| 2-Nitrophenol | 2 | 0.5 | 0.5 | |
| 3 & 4-Methylphenol | 2 | 0.5 | 0.5 | |
| 4-Chloro-3-methylphenol | 2 | 0.5 | 0.5 | |
| Pentachlorophenol | 4 | 1 | 0.5 | |
| Phenol | 2 | 0.5 | 0.5 | |
| **POLYAROMATIC HYDROCARBONS** Method Code | EP075B | EP075B | EP076 | |
| 2-Chloronaphthalene | 2 | 0.5 | 0.5 | |
| 2-Methylnaphthalene | 2 | 0.5 | 0.5 | |
| 3-Methylcholanthrene | 2 | 0.5 | 0.5 | |
| 7,12-Dimethylbenz (a)anthracene | 2 | 0.5 | 0.5 | |
| Acenaphthene | 2 | 0.5 | 0.5 | |
| Acenaphthylene | 2 | 0.5 | 0.5 | |
| Anthracene | 2 | 0.5 | 0.5 | |
| Benzo(a)anthracene | 2 | 0.5 | 0.5 | |
| Benzo(a)pyrene | 2 | 0.5 | 0.05 | |
| Benzo(b) & (k) fluoranthene | 4 | 1 | 0.5 | |
| Benzo(g,h,i)perylene | 2 | 0.5 | 0.5 | |
| Chrysene | 2 | 0.5 | 0.5 | |
| Dibenz(a,h)anthracene | 2 | 0.5 | 0.5 | |
| Fluoranthene | 2 | 0.5 | 0.5 | |
| Fluorene | 2 | 0.5 | 0.5 | |
| Indeno(1,2,3-cd)pyrene | 2 | 0.5 | 0.5 | |
| N-2Fluorenylacetamide | 2 | 0.5 | 0.5 | |
| Naphthalene | 2 | 0.5 | 0.5 | |
| Phenanthrene | 2 | 0.5 | 0.5 | |
| Pyrene | 2 | 0.5 | 0.5 | |
| Benzo(a)pyrene TEQ (WHO) | 2 | 0.5 | 0.5 | |
| **PHTHALATE ESTERS** Method Code | EP75C | EP075C | EP076 | |
| Bis(2-ethylhexyl) adipate | 2 | | | |
| Bis(2-ethylhexyl) phthalate | 10 | 5 | 0.5 | |
| Butyl benzyl phthalate | 2 | 0.5 | 0.5 | |
| Di-n-butyl phthalate | 2 | 0.5 | 0.5 | |
| Di-n-octyl phthalate | 2 | 0.5 | 0.5 | |
| Diethyl phthalate | 2 | 0.5 | 0.5 | |
| Dimethyl phthalate | 2 | 0.5 | 0.5 | |
| **NITROSAMINES** Method Code | EP075D | EP075D | EP076 | |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | |
|---|---|---|---|---|
| | Water | Soil | | |
| | Standard | Standard | Full listing | |
| Diphenylamine & N-Nitrosodiphenylamine | 4 | 1 | 0.5 | |
| Methapyrilene | 2 | 0.5 | 0.5 | |
| N-Nitrosodi-n-propylamine | 2 | 0.5 | 0.5 | |
| N-Nitrosodibutylamine | 2 | 0.5 | 0.5 | |
| N-Nitrosodiethylamine | 2 | 0.5 | 0.5 | |
| N-Nitrosomethylethylamine | 2 | 0.5 | 0.5 | |
| N-Nitrosomorpholine | 2 | 0.5 | 0.5 | |
| N-Nitrosopiperidine | 2 | 0.5 | 0.5 | |
| N-Nitrosopyrrolidine | 4 | 1 | 0.5 | |
| **NITROAROMATICS & KETONES** Method Code | EP075E | EP075E | EP076 | |
| 1,3,5-Trinitrobenzene | 2 | 0.5 | 0.5 | |
| 1-Naphthylamine | 2 | 0.5 | 0.5 | |
| 2-Picoline | 2 | 0.5 | 0.5 | |
| 2,4-Dinitrotoluene | 4 | 1 | 0.2 | |
| 2,6-Dinitrotoluene | 4 | 1 | 0.5 | |
| 4-Aminobiphenyl | 2 | 0.5 | 0.5 | |
| 4-Nitroquinoline-N-oxide | 2 | 0.5 | 0.5 | |
| 5-Nitro-o-toluidine | 2 | 0.5 | 0.5 | |
| Acetophenone | 2 | 0.5 | 0.5 | |
| Azobenzene | 2 | 0.5 | 0.5 | |
| Chlorobenzilate | 2 | 0.5 | 0.5 | |
| Dimethylaminoazobenzene | 2 | 0.5 | 0.5 | |
| Isophorone | 2 | 0.5 | 0.5 | |
| Nitrobenzene | 2 | 0.5 | 0.5 | |
| Pentachloronitrobenze | 2 | 0.5 | 0.5 | |
| Phenacetin | 2 | 0.5 | 0.5 | |
| Pronamide | 2 | 0.5 | 0.5 | |
| **HALOETHERS** Method Code | EP075F | EP075F | EP076 | |
| 4-Bromophenyl phenyl ether | 2 | 0.5 | 0.5 | |
| 4-Chlorophenyl phenyl ether | 2 | 0.5 | 0.5 | |
| Bis(2-chloroethyl) ether | 2 | 0.5 | 0.5 | |
| Bis(2-chloroethoxy) methane | 2 | 0.5 | 0.5 | |
| **CHLORINATED HYDROCARBONS** Method Code | EP075G | EP075G | EP076 | |
| 1,2,4-Trichlorobenzene | 2 | 0.5 | 0.5 | |
| 1,2-Dichlorobenzene | 2 | 0.5 | 0.5 | |
| 1,3-Dichlorobenzene | 2 | 0.5 | 0.5 | |
| 1,4-Dichlorobenzene | 2 | 0.5 | 0.5 | |
| Hexachlorobenzene | 4 | 1 | 0.05 | |
| Hexachlorobutadiene | 2 | 0.5 | 0.05 | |
| Hexachlorocyclopentadiene | 10 | 2.5 | 0.5 | |
| Hexachloroethane | 2 | 0.5 | 0.5 | |
| Hexachloropropylene | 2 | 0.5 | 0.5 | |
| Pentachlorobenzene | 2 | 0.5 | 0.5 | |
| **ANILINES AND BENZIDINES** Method Code | EP075H | EP075H | EP076 | |
| 4-Chloroaniline | 2 | 0.5 | 0.5 | |
| 2-Nitroaniline | 4 | 1 | 0.5 | |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | |
|---|---|---|---|---|
| | Water | Soil | | |
| | Standard | Standard | Full listing | |
| 3,3'Dichlorobenzidine | 2 | 0.5 | 0.5 | |
| 3-Nitroaniline | 4 | 1 | 0.5 | |
| 4-Nitroaniline | 2 | 0.5 | 0.5 | |
| Aniline | 2 | 0.5 | 0.5 | |
| Carbazole | 2 | 0.5 | 0.5 | |
| Dibenzofuran | 2 | 0.5 | 0.5 | |
| **ORGANOCHLORINE PESTICIDES** Method Code | EP075I | EP075I | EP076 | |
| Units | µg/L | mg/kg | mg/kg | |
| 4,4'-DDD | 2 | 0.5 | 0.05 | |
| 4,4-DDE | 2 | 0.5 | 0.05 | |
| 4,4'-DDT | 4 | 1 | 0.1 | |
| Aldrin | 2 | 0.5 | 0.05 | |
| alpha-BHC | 2 | 0.5 | 0.05 | |
| beta & gamma-BHC | 2 | 1 | 0.05 | |
| delta-BHC | 2 | 0.5 | 0.05 | |
| Dieldrin | 2 | 0.5 | 0.05 | |
| Endrin | 2 | 0.5 | 0.05 | |
| Endosulfan 1 | 2 | 0.5 | 0.05 | |
| Endosulfan 2 | 2 | 0.5 | 0.05 | |
| Endosulfan sulfate | 2 | 0.5 | 0.05 | |
| Heptachlor | 2 | 0.5 | 0.05 | |
| Heptachlor epoxide | 2 | 0.5 | 0.05 | |
| **OP PESTICIDES** Method Code | EP075J | EP075J | EP076 | |
| Chlorfenvinphos | 2 | - | - | |
| Chlorfenvinphos-E | - | 0.5 | 0.05 | |
| Chlorfenvinphos-Z | - | 0.5 | 0.05 | |
| Chlorpyrifos | 2 | 0.5 | 0.05 | |
| Chlorpyrifos methyl | 2 | 0.5 | 0.05 | |
| Diazinon | 2 | 0.5 | 0.05 | |
| Dichlorvos | 2 | 0.5 | 0.05 | |
| Dimethoate | 2 | 0.5 | 0.05 | |
| Ethion | 2 | 0.5 | 0.05 | |
| Fenthion | 2 | 0.5 | 0.05 | |
| Malathion | 2 | 0.5 | 0.05 | |
| Pirimiphos ethyl | 2 | 0.5 | 0.05 | |
| Prothiofos | 2 | 0.5 | 0.05 | |
| **MISCELLANEOUS** Method Code | EP075K | EP075K | EP076 | |
| 1,2,4,5-Tetrachlorobenzene | 2 | 0.5 | 0.5 | |
| 1,3,5-Trichlorobenzene | 2 | 0.5 | 0.5 | |
| cis-Isosafrole | 2 | 0.5 | 0.5 | |
| Diallate | 2 | 0.5 | 0.5 | |
| Methanesulfonate ethyl | 2 | 0.5 | 0.5 | |
| Methanesulfonate methyl | 2 | 0.5 | 0.5 | |
| Safrole | 2 | 0.5 | 0.5 | |
| Tetrachlorophenol | 2 | 0.5 | 0.5 | |
| trans-Isosafrole | 2 | 0.5 | 0.5 | |
| **K Group is not routinely reported but is available when specific compounds are requested via CoC.** | | | | |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | |
|---|---|---|---|---|
| | Water | Soil | | |
| | Standard | Standard | Full listing | |
| **SUPER SVOC – additional analytes** Method Code | | | EP076 | |
| Units | | | mg/kg | |
| 1.2.3.4-Tetrachlorobenzene | | | 0.5 | |
| 1.2.3-Trichlorobenzene | | | 0.5 | |
| 1.2.4-Trichlorobenzene | | | 0.5 | |
| 2.3.5.6-Tetrachlorophenol | | | 0.5 | |
| 2.3.4.5-Tetrachlorophenol | | | 0.5 | |
| 2.3.4.6-Tetrachlorophenol | | | 0.5 | |
| 2.3.4-Trichlorophenol | | | 0.5 | |
| 2.3.5-Trichlorophenol | | | 0.5 | |
| 2.3.6-Trichlorophenol | | | 0.5 | |
| 2.3-Dichlorophenol | | | 0.5 | |
| 2.5-Dichlorophenol | | | 0.5 | |
| 2-Methylanaline | | | 0.5 | |
| 3.4.5-Trichlorophenol | | | 0.5 | |
| 3-&4-Chlorophenol | | | 0.5 | |
| 3.4-Dichlorophenol | | | 0.5 | |
| 3.5-Dichlorophenol | | | 0.5 | |
| Azinphos Methyl | | | 0.05 | |
| Bisphenol-A | | | 0.5 | |
| Bromophos-ethyl | | | 0.05 | |
| Carbophenothion | | | 0.05 | |
| cis-Isosafrole | | | 0.5 | |
| cis-Chlordane | | | 0.05 | |
| Demeton-S-methyl | | | 0.05 | |
| Endrin aldehyde | | | 0.05 | |
| Endrin ketone | | | 0.05 | |
| Fenamiphos | | | 0.05 | |
| Methoxychlor | | | 0.2 | |
| Monocrotophos | | | 0.5 | |
| Octachlorostyrene | | | 0.5 | |
| Parathion-methyl | | | 0.2 | |
| Parathion | | | 0.2 | |
| Pyridine | | | 1 | |
| CHLORO-NAPTHALENES | | | | |
| **CHLORINATED NAPHTHALENES** Method Code | EP132C | EP132C | | |
| Units | µg/L | mg/kg | | |
| 1-Chloronaphthalene | 0.1 | 10 | | |
| 2-Chloronaphthalene | 0.1 | 10 | | |
| Chloronaphthalene | 0.1 | 10 | | |
| Trichloronaphthalene | 0.1 | 10 | | |
| Tetrachloronaphthalene | 0.1 | 10 | | |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Soil | | | |
| **PBDEs** (Soil) Method Code | | | | | EP064 | | | |
| Units | µg/L | µg/L | µg/L | pg/L | mg/kg | µg/kg | pg/g | µg/kg |
| DecaBDE (Br10) | | | | | 0.2 | | | |
| DiBDE (Br2) | | | | | 0.05 | | | |
| HeptaBDE (Br7) | | | | | 0.05 | | | |
| HexaBDE (Br6) | | | | | 0.05 | | | |
| MonoBDE (Br1) | | | | | 0.05 | | | |
| NonaBDE (Br9) | | | | | 0.2 | | | |
| OctaBDE (Br8) | | | | | 0.1 | | | |
| PentaBDE (Br5) | | | | | 0.05 | | | |
| TetraBDE (Br4) | | | | | 0.05 | | | |
| TriBDE (Br3) | | | | | 0.05 | | | |
| Sum of (Br1 to Br9) | | | | | 0.05 | | | |
| Sum of (Br1 to Br10) | | | | | 0.05 | | | |

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | |
|---|---|---|---|---|
| | Water | | | Soil |
| **RADIONUCLIDE SCREENS** Method Code | EA250 | | | EA250 |
| Units | Bq/L | | | Bq/kg |
| Gross alpha (LORs apply to water samples up to a TDS of 400mg/L) | 0.05 | | | 500 |
| Gross beta (LORs apply to water samples up to a TDS of 400mg/L) | 0.10 | | | 500 |
| **NATURAL RADIONUCLIDES** Method Code | EA252 | | | EA252 |
| Ac-227 | 0.20 | | | 1.0 |
| K-40 | 2.0 | | | 10 |
| Pa-231 | 1.0 | | | 5.0 |
| Pb-210 | 10 | | | 50 |
| Ra-223 | 0.20 | | | 1.0 |
| Ra-226 | 0.20 | | | 1.0 |
| Ra-228 | 0.20 | | | 1.0 |
| Th-227 | 0.20 | | | 1.0 |
| Th-228 | 0.20 | | | 1.0 |
| Th-230 | 10 | | | 50 |
| Th-234 | 2.0 | | | 10.0 |
| U-235 | 0.20 | | | 1.0 |
| U-238 | - | | | 10.0 |
| **ARTIFICIAL RADIONUCLIDES** Method Code | EA253 | | | EA253 |
| Cs-134 | 0.050 | | | 1.0 |
| Cs-137 | 0.050 | | | 1.0 |
| I-131 | 0.050 | | | 1.0 |
| **RADIUM 226 and RADIUM 228** Method Code | EA251 | | | EA251 |
| Radium 226 | 0.2 | | | 1.0 |
| Radium 228 | 0.2 | | | 1.0 |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Water | | Drinking Water | | Soil | | | Sediments |
| | Standard | Trace | UltraTrace | Super UT | Standard | Trace | Ultra Trace | |
| **CARBAMATES & THIOCARBAMATES** | | | | | | | | |
| Method Code | EP201 | See EP234B | EP234B | EP234LL | EP201 | | | See EP201 |
| Units | µg/L | | µg/L | µg/L | mg/kg | µg/kg | | µg/kg |
| 3-Hydroxyl Carbofuran | 0.2 | | 0.02 | - | 0.02 | | | |
| Aldicarb | 0.2 | | 0.05 | - | 0.02 | | | |
| Bendiocarb | 0.2 | | 0.01 | - | 0.02 | | | |
| Benomyl | - | | 0.02 | - | | | | |
| Carbaryl | 0.2 | | 0.02 | - | 0.02 | | | |
| Carbofuran | 0.2 | | 0.01 | - | 0.02 | | | |
| Methiocarb | 0.2 | | 0.01 | - | 0.02 | | | |
| Methomyl | 0.2 | | 0.01 | - | 0.02 | | | |
| Molinate | - | | 0.1 | - | | | | |
| Oxamyl | 0.2 | | 0.01 | - | 0.02 | | | |
| Thiobencarb | - | | 0.01 | 0.0002 | | | | |
| Thiodicarb | 0.2 | | 0.01 | - | 0.02 | | | |
| **OTHER HERBICIDES and DITHIOCARBAMATES** | | | | | | | | |
| Units | µg/L | µg/L | µg/L | | mg/kg | | | |
| QUATERNARY AMMONIUM HERBICIDES | | | | | | | | |
| Method Code | EP205 | | | | | | | |
| Diquat | 0.05 | | | | | | | |
| Paraquat | 0.1 | | | | | | | |
| **Glyphosate** Method Code | EP204 | EP204LL | EP236 | | | | | |
| Glyphosate | 10 | 1 | 0.1 | | | | | |
| AMPA | 10 | 1 | 0.1 | | | | | |
| **Sulfonylurea** Method Code | EP206 | EP206LL | | | | | | |
| Metsulfuron Methyl | 5 | 0.1 | | | | | | |
| MISCELLANEOUS PESTICIDES | | | | | | | | |
| Method Code | EP068D | | | | EP068D | | | |
| Cypermethrins (total) | 2 | | | | 0.2 | | | |
| Method Code | EP068E | | | | EP068E | | | |
| Methoprene | 0.5 | | | | 0.5 | | | |
| **DITHIOCARBAMATES** Method Code | EP126 | | See EP126 | | | | | |
| Ferbam | - | | | | | | | |
| Mancozeb | - | | | | | | | |
| Maneb | - | | | | | | | |
| Metham-Sodium | - | | | | | | | |
| Metiram | - | | | | | | | |
| Nabam | - | | | | | | | |
| Propineb | - | | | | | | | |
| Thiram | - | | | | | | | |
| Zineb | - | | | | | | | |
| Ziram | - | | | | | | | |
| Sum of Dithiocarbamates as $CS_2$ | 1 | | | | | | | |

# ALS ANALYTES & LORS LISTING

| GROUP / ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Water | | Drinking Water | | Soil | | | |
| | Standard | Trace | UltraTrace | Super UT | Standard | Trace | Ultra Trace | |
| Units | µg/L | µg/L | µg/L | µg/L | mg/kg | | | |
| **MULTIRESIDUE PESTICIDES SUITES** | | | | | | | | |
| OP PESTICIDES (Organophosphate Pesticides) | | | | | | | | |
| Method Code | EP234A | EP215 | EP234A | EP234LL | EP234 | | | |
| Azinphos-ethyl | 0.02 | - | 0.02 | - | 0.01 | | | |
| Azinphos-methyl | 0.02 | - | 0.02 | - | 0.01 | | | |
| Bromophos-ethyl | 0.1 | - | 0.1 | - | - | | | |
| Carbophenothion | 0.02 | - | 0.02 | - | - | | | |
| Chlorfenvinphos | 0.02 | - | 0.02 | - | 0.01 | | | |
| Chlorfenvinphos E | - | - | - | - | - | | | |
| Chlorfenvinphos Z | - | - | - | - | - | | | |
| Chlorpyrifos | 0.02 | 0.005 | 0.02 | 0.001 | - | | | |
| Chlorpyrifos-methyl | 0.2 | - | 0.2 | - | 0.05 | | | |
| Coumaphos | 0.01 | - | 0.01 | - | 0.01 | | | |
| Demeton-O & Demeton-S | 0.02 | - | 0.02 | - | 0.1 | | | |
| Demeton-S-methyl | 0.02 | - | 0.02 | - | 0.01 | | | |
| Diazinon | 0.01 | 0.005 | 0.01 | 0.0002 | 0.01 | | | |
| Dichlorvos | 0.2 | - | 0.2 | - | - | | | |
| Dimethoate | 0.02 | - | 0.02 | - | 0.01 | | | |
| Disulfoton | 0.05 | - | 0.05 | - | 0.01 | | | |
| Ethion | 0.02 | - | 0.02 | - | - | | | |
| Ethoprophos | 0.01 | - | 0.01 | - | 0.01 | | | |
| Fenamiphos | 0.01 | - | 0.01 | - | 0.01 | | | |
| Fenchlorphos (Ronnel) | 10 | - | 10 | - | - | | | |
| Fenitrothion | 2 | - | 2 | - | 0.5 | | | |
| Fensulfothion | 0.01 | - | 0.01 | - | 0.01 | | | |
| Fenthion | 0.05 | - | 0.05 | - | 0.01 | | | |
| Malathion | 0.02 | 0.002 | 0.02 | 0.001 | 0.01 | | | |
| Mevinphos | 0.02 | - | 0.02 | - | 0.01 | | | |
| Monocroptophos | 0.02 | - | 0.02 | - | 0.01 | | | |
| Omethoate | 0.01 | - | 0.01 | - | 0.01 | | | |
| Parathion | 0.2 | - | 0.2 | - | 0.05 | | | |
| Parathion-methyl | 2 | - | 2 | - | 0.5 | | | |
| Phorate | 0.1 | - | 0.1 | - | 0.02 | | | |
| Pirimiphos-methyl | 0.01 | - | 0.01 | 0.0002 | 0.01 | | | |
| Pirimphos-ethyl | 0.01 | - | 0.01 | - | - | | | |
| Profenofos | 0.01 | - | 0.01 | - | - | | | |
| Prothiofos | 0.1 | - | 0.1 | - | - | | | |
| Sulfotep | 0.005 | - | 0.005 | 0.0002 | 0.01 | | | |
| Sulprofos | 0.05 | - | 0.05 | - | - | | | |
| Temephos | 0.02 | - | 0.02 | 0.001 | - | | | |
| Terbufos | 0.01 | - | 0.01 | - | - | | | |
| Tetrachlorvinphos | 0.01 | - | 0.01 | - | 0.01 | | | |
| Triazophos | 0.005 | - | 0.005 | - | 0.01 | | | |
| Trichlorfon | 0.02 | - | 0.02 | - | 0.01 | | | |
| Trichloronate | 0.5 | - | 0.5 | - | - | | | |
| **Carbamates & Thiocarbamates** | | | | | **Carbamates & Thiocarbamates** | | | |
| Method Code | EP234B | EP215 | EP234B | EP234LL | EP234 | | | |
| Units | µg/L | µg/L | µg/L | µg/L | mg/kg | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 3-Hydroxyl Carbofuran | 0.02 | - | 0.02 | - | - | | | |
| Aldicarb | 0.05 | - | 0.05 | - | 0.01 | | | |
| Bendiocarb | 0.01 | - | 0.01 | - | 1 | | | |
| Benomyl | 0.02 | - | 0.02 | - | 0.01 | | | |
| Carbaryl | 0.02 | - | 0.02 | - | 0.01 | | | |
| Carbofuran | 0.01 | - | 0.01 | - | 0.01 | | | |
| Methiocarb | 0.01 | - | 0.01 | - | 0.01 | | | |
| Methomyl | 0.01 | - | 0.01 | - | 0.01 | | | |
| Molinate | 0.1 | 0.005 | 0.1 | - | 0.02 | | | |
| Oxamyl | 0.01 | - | 0.01 | 0.0002 | 0.01 | | | |
| Thiobencarb | 0.01 | 0.005 | 0.01 | - | 0.01 | | | |
| Thiodicarb | 0.01 | - | 0.01 | - | 0.01 | | | |
| Dinitroanilines | | | | | | | | |
| Method Code | EP234C | EP215 | EP234C | EP234LL | EP234 | | | |
| Units | µg/L | µg/L | µg/L | µg/L | mg/kg | | | |
| Pendimethalin | 0.05 | - | 0.05 | 0.001 | - | | | |
| Trifluralin | 10 | 0.005 | 10 | - | - | | | |
| Triazinone Herbicides | | | | | | | | |
| Method Code | EP234D | | EP234D | EP234LL | EP234 | | | |
| Units | µg/L | | µg/L | µg/L | mg/kg | | | |
| Hexazinone | 0.02 | - | 0.02 | 0.0002 | 0.01 | | | |
| Metribuzine | 0.02 | - | 0.02 | | 0.01 | | | |
| Conazole, Triazole & Aminopyrimidine Fungicides | | | | | | | | |
| Method Code | EP234E | | EP234E | EP234LL | EP234 | | | |
| Units | µg/L | | µg/L | µg/L | mg/kg | | | |
| Cyproconazole | 0.02 | - | 0.02 | - | 0.01 | | | |
| Cyprodinil | 0.01 | - | 0.01 | - | 0.01 | | | |
| Difenoconazole | 0.02 | - | 0.02 | 0.0002 | - | | | |
| Flusilazole | 0.02 | - | 0.02 | 0.0002 | 0.01 | | | |
| Hexaconazole | 0.02 | - | 0.02 | 0.0002 | 0.01 | | | |
| Paclobutrazole | 0.05 | - | 0.05 | - | 0.01 | | | |
| Penconazole | 0.01 | - | 0.01 | 0.0002 | 0.01 | | | |
| Propiconazole | 0.05 | - | 0.05 | 0.0002 | 0.01 | | | |
| Pyrimethanil | 0.02 | - | 0.02 | - | 0.01 | | | |
| Tebuconazole | 0.01 | - | 0.01 | 0.0002 | 0.01 | | | |
| Phenylurea, Thiaziadolurea, Uracil & Sulfonyl Urea Herbicides | | | | | | | | |
| Method Code | EP234F | EP215 | EP234F | EP234LL | EP234 | | | |
| Units | µg/L | µg/L | µg/L | µg/L | mg/kg | | | |
| Bromacil | 0.02 | - | 0.02 | - | 0.01 | | | |
| Chlorsulfuron | 0.2 | - | 0.2 | - | 0.05 | | | |
| Diuron | 0.02 | 0.005 | 0.02 | 0.0002 | 0.01 | | | |
| Fluometuron | 0.01 | - | 0.01 | - | 0.01 | | | |
| Tebuthiuron | 0.02 | - | 0.02 | - | 0.01 | | | |
| **Chloracetanilides** | | | | | | | | |
| Method Code | EP234G | EP215 | EP234G | EP234LL | EP234 | | | |
| Units | µg/L | µg/L | µg/L | µg/L | mg/kg | | | |
| Metolachlor | 0.01 | 0.005 | 0.01 | 0.001 | 0.01 | | | |
| **Triazine Herbicides** | | | | | | | | |
| Method Code | EP234H | EP215 | EP234H | EP234LL | EP234 | | | |
| Units | µg/L | µg/L | µg/L | µg/L | mg/kg | | | |
| Ametryn | 0.01 | - | 0.01 | 0.0002 | 0.01 | | | |
| Atrazine | 0.01 | 0.005 | 0.01 | 0.0002 | 0.01 | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Cyanazine | 0.02 | - | 0.02 | 0.0002 | 0.01 | | | |
| Cyromazine | 0.05 | - | 0.05 | - | 0.01 | | | |
| Irgarol | 0.002 | - | 0.002 | - | 0.01 | | | |
| Prometryn | 0.01 | - | 0.01 | 0.0002 | 0.01 | | | |
| Propazine | 0.01 | - | 0.01 | 0.0002 | 0.01 | | | |
| Simazine | 0.02 | 0.005 | 0.02 | 0.0002 | 0.01 | | | |
| Terbuthylazine | 0.01 | - | 0.01 | 0.0002 | 0.01 | | | |
| Terbutryn | 0.01 | - | 0.01 | 0.0002 | 0.1 | | | |
| Miscellaneous ESI Positive Pesticides | | | | | | | | |
| Method Code | EP234I | | EP234I | | EP234 | | | |
| Units | µg/L | | µg/L | | mg/kg | | | |
| Diclofop-methyl | 0.05 | | 0.05 | | - | | | |
| EPN | 0.05 | | 0.05 | | - | | | |
| Fenarimol | 0.02 | | 0.02 | | 0.01 | | | |
| Oxyfluorfen | 1 | | 1 | | - | | | |
| Thiamethoxam | 0.02 | | 0.02 | | 0.01 | | | |
| Miscellaneous ESI Negative Pesticides | | | | | | | | |
| Method Code | EP234J | | EP234J | | | | | |
| Units | µg/L | | µg/L | | | | | |
| Asulam | 2 | | 2 | | | | | |
| Brodifacoum | 0.05 | | 0.05 | | | | | |
| Bromoxynil | 0.05 | | 0.05 | | | | | |
| Chlorothalonil | 2 | | 2 | | | | | |
| Diflufenican | 0.02 | | 0.02 | | | | | |
| Fipronil | 0.01 | | 0.01 | | | | | |
| Iprodione | 0.05 | | 0.05 | | | | | |
| Oryzalin | 0.05 | | 0.05 | | | | | |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS |
|---|---|
| **STEROIDS & PHARMACEUTICAL PERSONAL CARE PRODUCTS** | |
| **STEROIDS – A** Method Code | EP240A |
| Units | ng/L |
| 19-Norethindrone | 3 |
| Progesterone | 1 |
| Testosterone | 1 |
| **STEROIDS – B** Method Code: | EP240B |
| Units | ng/L |
| 17α-Estradiol | 3 |
| 17β-Estradiol | 3 |
| 17α-Ethynylestradiol | 1 |
| Equilenin | 1 |
| Equilin | 1 |
| Estriol | 1 |
| Estrone | 1 |
| **PPCP - A** Method Code: | EP241A |
| Units | µg/L |
| 1,7-dimethylxanthine | 0.5 |
| Azithromycin | 40 |
| Bezafibrate | 1 |
| Caffeine | 0.3 |
| Carbamazepine | 1 |
| Ciprofloxacin | 2 |
| Clarithromycin | 10 |
| Clindamycin | 1 |
| Coumarin | 1 |
| Diazepam | 0.5 |
| Enrofloxacin | 40 |
| Erythromycin | 1 |
| Ifosfamide | 0.5 |
| Indomethacin | 1 |
| Ketoprofen | 0.5 |
| Lincomycin | 0.5 |
| Methotrexate | 1 |
| Metoprolol | 1 |
| Nalidixic acid | 1 |
| Norfloxacin | 1 |
| Paracetamol | 1 |
| Roxithromycin | 40 |
| Sulfadimethoxine | 1 |
| Sulfamethazine | 1 |
| Sulfamethizole | 1 |
| Sulfamethoxazole | 1 |
| Tolefanamic Acid | 1 |
| Trimethoprim | 1 |
| Tylosin | 40 |
| | |

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS |
|---|---|
| **STEROIDS & PHARMACEUTICAL PERSONAL CARE PRODUCTS** | |
| **PPCP – B** Method Code | EP241B |
| Units | µg/L |
| Bezafibrate | 1 |
| Chloramphenicol | 1 |
| Chlorophene | 0.3 |
| Clofibric Acid | 1 |
| Diclofenac | 1 |
| Gemfibrozil | 1 |
| Ibuprofen | 2 |
| Tolfenamic Acid | 1 |
| Triclosan | 0.3 |
| **TETRACYCLINES** Method Code | EP242 |
| Units | µg/L |
| Chlorotetracycline | 1 |
| Demeclocycline | 1 |
| Doxycycline | 1 |
| Oxytetracycline | 1 |
| Tetracycline | 1 |
| POTENTIAL ENDOCRINE DISRUPTING COMPOUNNDS PHENOLS | |
| Method Code | EP244 |
| Units | µg/L |
| 4 Tert Octyl Phenol | 2 |
| Bisphenol A | 2 |
| Diethylstilbestrol | 2 |
| Nonyl-phenol (4-N-nonylphenol) | 2 |
| | |
| **SAXITOXINS** Method Code: | EP263 |
| Units | µg/L |
| Decarbamoylgonyautoxin-2 (deGTX2) | 2 |
| Decarbamoylgonyautoxin-3 (deGTX3) | 0.5 |
| Gonyautoxin-2 (GTX2) | 2 |
| Gonyautoxin-3 (GTX3) | 1 |
| Neosaxitoxin | 0.5 |
| N-sulfocarbamoyl-gonyautoxin-2 (C1) | 2 |
| N-sulfocarbamoyl-gonyautoxin-3 (C2) | 1 |
| Saxitoxin (STX) | 1 |
| Other Algal Toxins | |
| Method Code: | EP248 |
| Units | µg/L |
| Anatoxin-a | 0.1 |
| Cylindrospermopsin | 0.05 |
| Deoxycylindrospermopsim | 0.05 |
| | |
| | |
| | |
| | |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS |
|---|---|
| DISINFECTION BY-PRODUCTS | Drinking Water |
| **TRIHALOMETHANES** Method Code: | EP074G |
| Units | µg/L |
| Chloroform | 5 |
| Bromodichloromethane | 5 |
| Bromoform | 5 |
| Dibromochloromethane | 5 |
| Total Trihalomethanes | 5 |
| **CHLOROACETIC ACIDS** Method Code: | EP120-1 |
| Units | µg/L |
| Monochloroacetic Acid | 1 |
| Dichloroacetic Acid | 1 |
| Trichloroacetic Acid | 1 |
| **EPICHLOROHYDRIN** Method Code: | EP081 |
| Units | mg/L |
| Epichlorohydrin | 0.00005 |
| ALDEHYDES Method Code: | EP121 |
| Units | µg/L |
| Formaldehyde | 2 |
| Acetaldehyde | 2 |
| Propionaldehyde | 2 |
| Acrolein (Propenal) | 2 |
| Butyraldehyde | 2 |
| **HALOACETIC ACIDS** Method Code | EP120 |
| Units | µg/L |
| Monochloroacetic Acid | 1 |
| Dichloroacetic Acid | 1 |
| Trichloroacetic Acid | 1 |
| Bromoacetic Acid | 5 |
| Bromochloroacetic Acid | 1 |
| Bromodichloroacetic Acid | 1 |
| Dibromoacetic Acid | 1 |
| Dibromochloroacetic Acid | 10 |
| Tribromoacetic Acid | 10 |
| **Specialist Organics, Phenols & Dalapon** | |
| Method Code | EP247 |
| 2,4-Dinitrophenol | 0.01 |
| 2-Methyl-4.6-dinitrophenol | 0.05 |
| 4-Nonylphenol (mixture of isomers) | 0.1 |
| Hexachlorophene | 0.1 |
| 4-Nitrophenol | 0.1 |
| 4-Chloro-3-methylphenol | 0.1 |
| Pentachlorophenol | 0.1 |
| Dinoseb | 0.1 |
| Dalapon | 0.1 |
| Bisphenol-A | 0.05 |
| | |

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS |
|---|---|
| DISINFECTION BY-PRODUCTS | Drinking Water |
| **NITROSAMINES** Method Code: | EP239 |
| Units | µg/L |
| N-Nitrosodimethylamine (NDMA) | 0.003 |
| N-Nitrosomethylethylamine (NMEA) | 0.003 |
| N-Nitrosodiethylamine (NDEA) | 0.01 |
| N-Nitrosodi-n-propylamine (NDPA) | 0.003 |
| 1-Nitrosopiperidine (NPip) | 0.003 |
| Nitrosomorpholine (NMorA) | 0.003 |
| 1-Nitrosopyrrolidine (NPyr) | 0.01 |
| **NDBA** Method Code: | EP239B |
| Units | µg/L |
| N-Nitrodosi-n-butylamine (NDBA) | 0.02 |
| Volatile Disinfection byproducts Method Code: | EP239 |
| Units | mg/L |
| Haloacetonitriles | |
| Chloroacetonitrile | 0.005 |
| Dichloroacetonitrile | 0.005 |
| Trichloroacetonitrile | 0.005 |
| Bromoacetonitrile | 0.005 |
| Bromochloroacetonitrile | 0.005 |
| Dibromoacetonitrile | 0.005 |
| Chlorinated Propanones | |
| 1,1-Dichloro-2-propanone | 0.005 |
| 1,3-Dichloro-2-propanone | 0.005 |
| 1,1,3-Trichloro-2-propanone | 0.005 |
| 1,1,1-Trichloro-2-propanone | 0.005 |
| Chloronitromethanes | |
| Chloropicrin | 0.005 |
| Other Volatile DBPs | |
| Chloral hydrate | 0.005 |
| Trichloroacetaldehyde | 0.005 |
| | |
| **MISCELLANEOUS ORGANICS** Method Code: | EP200 |
| Units | µg/L |
| Octyl Phenol Ethoxylates | 5 |
| Nonyl Phenol Ethoxylates | 5 |
| Nonylphenol monoethoxylate (mixture of isomers) | |
| Nonylphenol diethoxylate (mixture of isomers) | |
| Nonylphenol triethoxylate (mixture of isomers) | |
| Nonylphenol tetraethoxylate (mixture of isomers) | |
| **Nonylphenol Ethoxylates** Method Code: | EP260 |
| Units | µg/L |
| Nonylphenol monoethoxylate | 100 |
| Nonylphenol diethoxylate | 100 |
| Nonylphenol triethoxylate | 100 |
| Nonylphenol tetraethoxylate | 100 |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | | |
|---|---|---|---|---|---|---|---|
| **DIOXINS, FURANS and PCBS and PBDEs BY HR/GC/MS** | | | | | | | |
| **PCDDs (POLYCHLORINATED DIBENZO-P-DIOXINS) by HRMS** | | | | | | | |
| Method Code | EP300 | | | | EP300 | | |
| Units | pg/L | | | | pg/g | | |
| 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin (TCDD) | 5 | | | | 0.5 | | |
| 1,2,3,7,8-Pentachlorodibenzo-*p*-dioxin (PeCDD) | 25 | | | | 2.5 | | |
| 1,2,3,4,7,8-Hexachlorodibenzo-*p*-dioxin (HxCDD) | 25 | | | | 2.5 | | |
| 1,2,3,6,7,8-Hexachlorodibenzo-*p*-dioxin (HxCDD) | 25 | | | | 2.5 | | |
| 1,2,3,7,8,9-Hexachloroibenzo-*p*-dioxin (HxCDD) | 25 | | | | 2.5 | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-*p*-dioxin (HpCDD) | 25 | | | | 2.5 | | |
| Octachlorodibenzo-*p*-dioxin (OCDD) | 100 | | | | 10.0 | | |
| **POLYCHLORINATED DIBENZOFURANS (PCDFs) by HRMS** | | | | | | | |
| 2,3,7,8-Tetrachlorodibenzofuran (TCDF) | 5 | | | | 0.5 | | |
| 1,2,3,7,8-Pentachlorodibenzofuran (PeCDF) | 25 | | | | 2.5 | | |
| 2,3,4,7,8-Pentachlorodibenzofuran (PeCDF) | 25 | | | | 2.5 | | |
| 1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF) | 25 | | | | 2.5 | | |
| 1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF) | 25 | | | | 2.5 | | |
| 2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF) | 25 | | | | 2.5 | | |
| 1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF) | 25 | | | | 2.5 | | |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF) | 25 | | | | 2.5 | | |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF) | 25 | | | | 2.5 | | |
| Octachlorodibenzofuran (OCDF) | 50 | | | | 5.0 | | |
| Total Tetrachlorodibenzo-*p*-dioxin (TCDD) | 5 | | | | 0.5 | | |
| Total Pentachlorodibenzo-*p*-dioxin (PeCDD) | 25 | | | | 2.5 | | |
| Total Hexachlorodibenzo-*p*-dioxin (HxCDD) | 25 | | | | 2.5 | | |
| Total Heptachlorodibenzo-*p*-dioxin (HpCDD) | 25 | | | | 2.5 | | |
| Octachlorodibenzo-*p*-dioxin (OCDD) | 100 | | | | 10 | | |
| Total Tetrachlorodibenzofuran (TCDF) | 5 | | | | 0.5 | | |
| Total Pentachlorodibenzofuran (PeCDF) | 25 | | | | 2.5 | | |
| Total Hexachlorodibenzofuran (HxCDF) | 25 | | | | 2.5 | | |
| Total Heptachlorodibenzofuran (HpCDF) | 25 | | | | 2.5 | | |
| Octachlorodibenzofuran (OCDF) | 50 | | | | 5.0 | | |
| Σ TEQ (I-TEQ) LOR | 50.1 | | | | 5.01 | | |
| Σ TEQ (WHO-TEQ) LOR | 62.5 | | | | 6.25 | | |
| **PCBs by HRMS** Method Code | EP301 | | | | EP301 | | |
| Units | pg/L | | | | pg/g | | |
| PCB 77 | 5.0 | | | | 2.5 | | |
| PCB 81 | 2.0 | | | | 1.0 | | |
| PCB 105 | 2.0 | | | | 1.0 | | |
| PCB 114 | 2.0 | | | | 1.0 | | |
| PCB 118 | 10.0 | | | | - | | |
| PCB 123 | 2.0 | | | | 5.0 | | |
| PCB 126 | 2.0 | | | | 1.0 | | |
| PCB 156 | 2.0 | | | | 1.0 | | |
| PCB 157 | 2.0 | | | | - | | |
| PCB 168 | 2.0 | | | | - | | |
| PCB 169 | 2.0 | | | | 1.0 | | |
| PCB 189 | 2.0 | | | | 1.0 | | |
| Σ TEQ (WHO-TEQ) LOR | 0.23 | | | | 0.11 | | |
| **TRACE PBDES by HRMS** Method Code MDL[EPA] | LOQ | | | | | | |
| Units pg/L | Pg/sample | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| BR2-DPE-7 | 6 | 8 | | | | | | |
| BR2-DPE-8/11 | 15 | 16 | | | | | | |
| BR2-DPE-10 | 10 | 8 | | | | | | |
| BR2-DPE-12/13 | 6 | 16 | | | | | | |
| BR2-DPE-15 | 4 | 8 | | | | | | |
| BR3-DPE-17/25 | 11 | 16 | | | | | | |
| BR3-DPE-28/33 | 10 | 16 | | | | | | |
| BR3-DPE-30 | 5 | 8 | | | | | | |
| BR3-DPE-32 | 6 | 8 | | | | | | |
| BR3-DPE-35 | 11 | 8 | | | | | | |
| BR3-DPE-37 | 4 | 8 | | | | | | |
| BR4-DPE-47 | 32 | 8 | | | | | | |
| BR4-DPE-49 | 11 | 8 | | | | | | |
| BR4-DPE-51 | 4 | 8 | | | | | | |
| BR4-DPE-66 | 10 | 8 | | | | | | |
| BR4-DPE-71 | 10 | 8 | | | | | | |
| BR4-DPE-75 | 5 | 8 | | | | | | |
| BR4-DPE-77 | 6 | 8 | | | | | | |
| BR4-DPE-79 | 8 | 8 | | | | | | |
| BR5-DPE-85 | 12 | 12 | | | | | | |
| BR5-DPE-99 | 30 | 12 | | | | | | |
| BR5-DPE-100 | 20 | 12 | | | | | | |
| BR5-DPE-105 | 16 | 12 | | | | | | |
| BR5-DPE-116 | 18 | 12 | | | | | | |
| BR5-DPE-118 | 30 | 12 | | | | | | |
| BR5-DPE-119/120 | 8 | 24 | | | | | | |
| BR5-DPE-126 | 12 | 12 | | | | | | |
| BR6-DPE-128 | 22 | 16 | | | | | | |
| BR6-DPE-138/166 | 9 | 32 | | | | | | |
| BR6-DPE-140 | 12 | 16 | | | | | | |
| BR6-DPE-153 | 12 | 16 | | | | | | |
| BR6-DPE-154 | 20 | 16 | | | | | | |
| BR6-DPE-155 | 14 | 16 | | | | | | |
| BR6-DPE-156 | n/a | 16 | | | | | | |
| BR7-DPE-181 | 30 | 20 | | | | | | |
| BR7-DPE-183 | 16 | 20 | | | | | | |
| BR7-DPE-184 | n/a | 20 | | | | | | |
| BR7-DPE-190 | 30 | 20 | | | | | | |
| BR7-DPE-191 | n/a | 20 | | | | | | |
| BR8-DPE-196 | n/a | 20 | | | | | | |
| BR8-DPE-197 | n/a | 20 | | | | | | |
| BR8-DPE-203 | 14 | 20 | | | | | | |
| BR9-DPE-206 | 80 | 80 | | | | | | |
| BR9-DPE-207 | 50 | 80 | | | | | | |
| BR9-DPE-208 | 60 | 80 | | | | | | |
| BR10-DPE-209 | 200 | 80 | | | | | | |
| Pentabromoethylbenzene [PBEB] | 5 | 8 | | | | | | |
| Hexabromobenzene [HBB] | 11 | 8 | | | | | | |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | |
|---|---|---|---|---|---|---|
| | Ambient Air | | Soil Gas / Landfill Gas | | Passive Samplers | Occ Hygiene |
| VOLATILE ORGANICS | PASSIVATED (STEEL) CANISTERS | | | | CHARCOAL SORBENTS | |
| Method Code | EP101 (-14, -15, -15X) | | EP101 (-14, -15, -15X)-SG | | EP091 | |
| Units | ppbv | µg/m³ | ppmv | mg/m³ | µg | µg |
| Freon 12 | 0.5 | 2.5 | 0.05 | 0.25 | - | - |
| Chloromethane | 0.5 | 1.0 | 0.05 | 0.10 | - | - |
| Freon 114 | 0.5 | 3.5 | 0.05 | 0.35 | - | - |
| Vinyl chloride | 0.5 | 1.3 | 0.002 | 0.005 | 2 | 2 |
| Bromomethane | 0.5 | 1.9 | 0.05 | 0.19 | 2 | 2 |
| Chloroethane | 0.5 | 1.3 | 0.05 | 0.13 | - | - |
| Freon 11 | 0.5 | 2.8 | 0.05 | 0.28 | 1 | 1 |
| 1.1-Dichloroethene | 0.5 | 2.0 | 0.05 | 0.20 | - | - |
| Dichloromethane | 0.5 | 1.7 | 0.05 | 0.17 | - | - |
| Freon 113 | 0.5 | 3.8 | 0.05 | 0.38 | - | - |
| 1.1-Dichloroethane | 0.5 | 2.0 | 0.05 | 0.20 | 0.5 | 0.5 |
| cis-1.2-Dichloroethene | 0.5 | 2.0 | 0.005 | 0.02 | 0.5 | 0.5 |
| Chloroform | 0.5 | 2.4 | 0.05 | 0.24 | 0.5 | 0.5 |
| 1.2-Dichloroethane | 0.5 | 2.0 | 0.05 | 0.20 | 0.5 | 0.5 |
| 1.1.1-Trichloroethane | 0.5 | 2.7 | 0.05 | 0.27 | 0.5 | 0.5 |
| Benzene | 0.5 | 1.6 | 0.030 | 0.10 | 0.5 | 0.5 |
| Carbon Tetrachloride | 0.5 | 3.1 | 0.05 | 0.31 | 0.5 | 0.5 |
| 1.2-Dichloropropane | 0.5 | 2.3 | 0.05 | 0.23 | 0.5 | 0.5 |
| Trichloroethene | 0.5 | 2.7 | 0.001 | 0.005 | 0.5 | 0.5 |
| cis-1.3-Dichloropropylene | 0.5 | 2.3 | 0.05 | 0.23 | 0.5 | 0.5 |
| trans-1.3-Dichloropropene | 0.5 | 2.3 | 0.05 | 0.23 | 0.5 | 0.5 |
| 1.1.2-Trichloroethane | 0.5 | 2.7 | 0.05 | 0.27 | 0.5 | 0.5 |
| Toluene | 0.5 | 1.9 | 0.05 | 0.19 | 0.5 | 0.5 |
| 1.2-Dibromoethane (EDB) | 0.5 | 3.8 | 0.05 | 0.38 | 0.5 | 0.5 |
| Tetrachloroethene | 0.5 | 3.4 | 0.05 | 0.34 | 0.5 | 0.5 |
| Chlorobenzene | 0.5 | 2.3 | 0.05 | 0.23 | 0.5 | 0.5 |
| Ethylbenzene | 0.5 | 2.2 | 0.05 | 0.22 | 0.5 | 0.5 |
| meta- & para-Xylene | 1 | 4.3 | 0.05 | 0.43 | 1.0 | 1.0 |
| Styrene | 0.5 | 2.1 | 0.05 | 0.21 | 0.5 | 0.5 |
| 1.1.2.2-Tetrachloroethane | 0.5 | 3.4 | 0.05 | 0.34 | 0.5 | 0.5 |
| ortho-Xylene | 0.5 | 2.2 | 0.05 | 0.22 | 0.5 | 0.5 |
| 4-Ethyltoluene | 0.5 | 2.4 | 0.05 | 0.24 | - | - |
| Total Xylenes | 1.5 | 6.5 | 0.15 | 0.65 | 1.5 | 1.5 |
| 1.3.5-Trimethylbenzene | 0.5 | 2.4 | 0.05 | 0.24 | 0.5 | 0.5 |
| 1.2.4-Trimethylbenzene | 0.5 | 2.4 | 0.05 | 0.24 | 0.5 | 0.5 |
| 1.3-Dichlorobenzene | 0.5 | 3.0 | 0.05 | 0.30 | 0.5 | 0.5 |
| Benzylchloride | 0.5 | 2.6 | 0.05 | 0.26 | - | - |
| 1.4-Dichlorobenzene | 0.5 | 3.0 | 0.05 | 0.30 | 0.5 | 0.5 |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | |
|---|---|---|---|---|---|---|
| | Ambient Air | | Soil Gas / Landfill Gas | | Passive Samplers | Occ Hygiene |
| **VOLATILE ORGANICS** | **PASSIVATED (STEEL) CANISTERS** | | | | **CHARCOAL SORBENTS** | |
| 1.2-Dichlorobenzene | 0.5 | 3.0 | 0.05 | 0.30 | 0.5 | 0.5 |
| 1.2.4-Trichlorobenzene | 0.5 | 3.7 | 0.05 | 0.37 | 0.5 | 0.5 |
| Hexachlorobutadiene | 0.5 | 5.3 | 0.05 | 0.53 | 0.5 | 0.5 |
| Method Code | EP101 (-15, -15X) | | EP101 (-15, -15X)-SG | | EP091 | |
| Units | ppbv | µg/m³ | ppmv | mg/m³ | µg | µg |
| Acetone | 0.5 | 1.2 | 0.05 | 0.12 | 0.5 | 0.5 |
| Bromodichloromethane | 0.5 | 3.4 | 0.05 | 0.34 | 0.5 | 0.5 |
| 1.3-Butadiene | 0.5 | 1.1 | 0.05 | 0.11 | - | - |
| Carbon disulfide | 0.5 | 1.6 | 0.05 | 0.16 | - | - |
| 2-Chlorotoluene | 0.5 | 2.6 | 0.05 | 0.26 | 0.5 | 0.5 |
| 1-Chloro-2-propene (Allyl chloride) | 0.5 | 1.6 | 0.05 | 0.16 | - | - |
| Cyclohexane | 0.5 | 1.7 | 0.05 | 0.17 | 0.5 | 0.5 |
| Dibromochloromethane | 0.5 | 4.3 | 0.05 | 0.43 | 0.5 | 0.5 |
| 1.4-Dioxane | 0.5 | 1.8 | 0.05 | 0.18 | - | - |
| Ethylacetate | 0.5 | 1.8 | 0.05 | 0.18 | - | - |
| trans-1.2-Dichloroethene | 0.5 | 2.0 | 0.05 | 0.20 | 0.5 | 0.5 |
| Heptane | 0.5 | 2.0 | 0.05 | 0.20 | 0.5 | 0.5 |
| Hexane | 0.5 | 1.8 | 0.05 | 0.18 | 0.5 | 0.5 |
| Isooctane | 0.5 | 2.3 | 0.05 | 0.23 | 0.5 | 0.5 |
| Isopropyl Alcohol | 0.5 | 1.2 | 0.05 | 0.12 | - | - |
| 2-Butanone (MEK) | 0.5 | 1.5 | 0.05 | 0.15 | 0.5 | 0.5 |
| Methyl iso-Butyl ketone | 0.5 | 2.0 | 0.05 | 0.20 | 0.5 | 0.5 |
| 2-Hexanone (MBK) | 0.5 | 2.0 | 0.05 | 0.20 | 0.5 | 0.5 |
| Propene | 0.5 | 0.9 | 0.05 | 0.09 | - | - |
| Methyl tert-Butyl Ether (MTBE) | 0.5 | 1.8 | 0.05 | 0.18 | - | - |
| Tetrahydrofuran | 0.5 | 1.5 | 0.05 | 0.15 | - | - |
| Bromoform | 0.5 | 5.2 | 0.05 | 0.52 | 0.5 | 0.5 |
| Vinyl Acetate | 0.5 | 1.8 | 0.05 | 0.18 | - | - |
| Vinyl bromide | 0.5 | 2.2 | 0.05 | 0.22 | - | - |
| Method Code | EP101 (-15X) | | EP101 (-15X)-SG | | EP091 | |
| Units | ppbv | µg/m³ | ppmv | mg/m³ | µg | µg |
| Ethanol | 0.5 | 0.9 | 0.05 | 0.090 | - | - |
| Acetonitrile | 0.5 | 0.8 | 0.05 | 0.080 | - | - |
| Acrolein | 0.5 | 1.1 | 0.05 | 0.110 | - | - |
| Acrylonitrile | 0.5 | 1.1 | 0.05 | 0.110 | - | - |
| tert-Butyl alcohol | 0.5 | 1.5 | 0.05 | 0.150 | - | - |
| 2-Chloro-1.3-butadiene | 0.5 | 1.8 | 0.05 | 0.180 | - | - |
| Di-isopropyl Ether | 0.5 | 2.1 | 0.05 | 0.210 | - | - |
| Ethyl tert-Butyl Ether (ETBE) | 0.5 | 2.1 | 0.05 | 0.210 | - | - |
| tert-Amyl Methyl Ether (TAME) | 0.5 | 2.1 | 0.05 | 0.210 | - | - |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | |
|---|---|---|---|---|---|---|
| | Ambient Air | | Soil Gas / Landfill Gas | | Passive Samplers | Occ Hygiene |
| **VOLATILE ORGANICS** | **PASSIVATED (STEEL) CANISTERS** | | | | **CHARCOAL SORBENTS** | |
| Methyl Methacrylate | 0.5 | 2.1 | 0.05 | 0.210 | - | - |
| 1.1.1.2-Tetrachloroethane | 0.5 | 3.4 | 0.05 | 0.340 | 0.5 | 0.5 |
| Isopropylbenzene | 0.5 | 2.4 | 0.05 | 0.250 | 0.5 | 0.5 |
| n-Propylbenzene | 0.5 | 2.4 | 0.05 | 0.250 | 0.5 | 0.5 |
| tert-Butylbenzene | 0.5 | 2.7 | 0.05 | 0.270 | 0.5 | 0.5 |
| sec-Butylbenzene | 0.5 | 2.7 | 0.05 | 0.270 | 0.5 | 0.5 |
| 2-isopropyltoluene | 0.5 | 2.7 | 0.05 | 0.270 | - | - |
| n-Butylbenzene | 0.5 | 2.7 | 0.05 | 0.270 | 0.5 | 0.5 |
| Naphthalene | 0.5 | 2.6 | 0.019 | 0.100 | 0.5 | 0.5 |
| **HYDROCARBONS** | | | | | | |
| Method Code | EP101-H | | EP101-HSG | | EP091 | |
| Units | ppbv | µg/m³ | ppmv | mg/m³ | µg | µg |
| Propene | 0.5 | 0.9 | 0.05 | 0.09 | - | - |
| Propane | 0.5 | 0.9 | 0.05 | 0.09 | - | - |
| 2-Methylpropane | 0.5 | 1.2 | 0.05 | 0.12 | - | - |
| 1-Butene | 0.5 | 1.1 | 0.05 | 0.11 | - | - |
| n-Butane | 0.5 | 1.2 | 0.05 | 0.12 | - | - |
| trans-2-Butene | 0.5 | 1.1 | 0.05 | 0.11 | - | - |
| cis-2-Butene | 0.5 | 1.1 | 0.05 | 0.11 | - | - |
| 2-Methylbutane | 0.5 | 1.5 | 0.05 | 0.15 | - | - |
| 1-Pentene | 0.5 | 1.4 | 0.05 | 0.14 | - | - |
| n-Pentane | 0.5 | 1.5 | 0.05 | 0.14 | - | - |
| trans-2-Pentene | 0.5 | 1.4 | 0.05 | 0.13 | - | - |
| cis-2-Pentene | 0.5 | 1.4 | 0.05 | 0.14 | - | - |
| 2-Methyl-1.3-butadiene | 0.5 | 1.3 | 0.05 | 0.13 | - | - |
| 2.2-Dimethylbutane | 0.5 | 1.8 | 0.05 | 0.18 | - | - |
| 2.3-Dimethylbutane | 0.5 | 1.8 | 0.05 | 0.18 | - | - |
| 2-Methylpentane | 0.5 | 1.8 | 0.05 | 0.18 | - | - |
| Cyclopentane | 0.5 | 1.4 | 0.05 | 0.14 | - | - |
| 3-Methylpentane | 0.5 | 1.8 | 0.05 | 0.18 | - | - |
| 1-Hexene | 0.5 | 1.7 | 0.05 | 0.17 | - | - |
| n-Hexane | 0.5 | 1.8 | 0.05 | 0.18 | 0.5 | 0.5 |
| 2.4-Dimethylpentane | 0.5 | 2 | 0.05 | 0.2 | - | - |
| Methylcyclopentane | 0.5 | 1.7 | 0.05 | 0.17 | - | - |
| 2-Methylhexane | 0.5 | 2 | 0.05 | 0.2 | - | - |
| 2.3-Dimethylpentane | 0.5 | 2 | 0.05 | 0.2 | - | - |
| Cyclohexane | 0.5 | 1.7 | 0.05 | 0.17 | 0.5 | 0.5 |
| 3-Methylhexane | 0.5 | 2 | 0.05 | 0.2 | - | - |
| Isooctane | 0.5 | 2.3 | 0.05 | 0.23 | 0.5 | 0.5 |
| Benzene | 0.5 | 1.6 | 0.03 | 0.1 | 0.5 | 0.5 |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | |
|---|---|---|---|---|---|---|
| | Ambient Air | | Soil Gas / Landfill Gas | | Passive Samplers | Occ Hygiene |
| **VOLATILE ORGANICS** | **PASSIVATED (STEEL) CANISTERS** | | | | **CHARCOAL SORBENTS** | |
| n-Heptane | 0.5 | 2 | 0.05 | 0.2 | 0.5 | 0.5 |
| Methylcyclohexane | 0.5 | 2 | 0.05 | 0.2 | - | - |
| 2.3.4-Trimethylpentane | 0.5 | 2.3 | 0.05 | 0.23 | - | - |
| 2-Methylheptane | 0.5 | 2.3 | 0.05 | 0.23 | - | - |
| 3-Methylheptane | 0.5 | 2.3 | 0.05 | 0.23 | - | - |
| n-Octane | 0.5 | 2.3 | 0.05 | 0.23 | 0.5 | 0.5 |
| Toluene | 0.5 | 1.9 | 0.05 | 0.19 | 0.5 | 0.5 |
| n-Nonane | 0.5 | 2.6 | 0.05 | 0.26 | 0.5 | 0.5 |
| Ethylbenzene | 0.5 | 2.2 | 0.05 | 0.22 | 0.5 | 0.5 |
| meta- & para-Xylene | 1 | 4.3 | 0.1 | 0.43 | 1 | 1 |
| ortho-Xylene | 0.5 | 2.2 | 0.05 | 0.22 | 0.5 | 0.5 |
| Styrene | 0.5 | 2.1 | 0.05 | 0.21 | 0.5 | 0.5 |
| Isopropylbenzene | 0.5 | 2.4 | 0.05 | 0.24 | 0.5 | 0.5 |
| n-Propylbenzene | 0.5 | 2.4 | 0.05 | 0.24 | 0.5 | 0.5 |
| 2-Ethyltoluene | 0.5 | 2.4 | 0.05 | 0.24 | - | - |
| n-Decane | 0.5 | 2.9 | 0.05 | 0.29 | 0.5 | 0.5 |
| 4-Ethyltoluene | 0.5 | 2.5 | 0.05 | 0.24 | - | - |
| 1.3.5-Trimethylbenzene | 0.5 | 2.4 | 0.05 | 0.24 | 0.5 | 0.5 |
| 3-Ethyltoluene | 0.5 | 2.4 | 0.05 | 0.24 | - | - |
| 1.2.4-Trimethylbenzene | 0.5 | 2.4 | 0.05 | 0.24 | 0.5 | 0.5 |
| 1.2.3-Trimethylbenzene | 0.5 | 2.4 | 0.05 | 0.24 | - | - |
| 1.4-Diethylbenzene | 0.5 | 2.7 | 0.05 | 0.27 | - | - |
| 1.3-Diethylbenzene | 0.5 | 2.7 | 0.05 | 0.27 | - | - |
| n-Undecane | 0.5 | 3.2 | 0.05 | 0.32 | - | - |
| n-Dodecane | 0.5 | 3.5 | 0.05 | 0.35 | - | - |
| Naphthalene | 0.5 | 2.6 | 0.02 | 0.26 | 0.5 | 0.5 |
| **SULPHUR GASES IN PASSIVATED CANISTERS** | | | | | | |
| Method Code | EP101-S | | EP101-S | | | |
| Units | ppbv | µg/m³ | ppmv | mg/m³ | | |
| Hydrogen Sulphide | 20 | 30 | 0.05 | 0.08 | - | - |
| Carbonyl Sulfide | 5 | 10 | 0.05 | 0.10 | - | - |
| Dimethyl Sulfide | 0.5 | 1.0 | 0.005 | 0.01 | - | - |
| Carbon disulfide | 0.5 | 1.8 | 0.005 | 0.02 | - | - |
| Methanethiol | 5 | 10 | 0.05 | 0.10 | - | - |
| Ethanethiol | 5 | 10 | 0.05 | 0.10 | - | - |
| **TPH** | | | | | | |
| Method Code | EP103-PH | | EP103-PSG | | EP091-S | |
| Units | ppbv | µg/m³ | ppmv | mg/m³ | µg | µg |
| C6 - C9 Fraction | 50 | 200 | 5 | 20 | 50 | 200 |
| C10 - C14 Fraction | 50 | 350 | 5 | 35 | 50 | 350 |

# ALS ANALYTES & LORS LISTING

| GROUP ANALYTES | MATRIX / METHOD CODES & LORS | | | | | |
|---|---|---|---|---|---|---|
| | Ambient Air | | Soil Gas / Landfill Gas | | Passive Samplers | Occ Hygiene |
| **VOLATILE ORGANICS** | **PASSIVATED (STEEL) CANISTERS** | | | | **CHARCOAL SORBENTS** | |
| C6 - C10 Fraction | 50 | 200 | 5 | 20 | 50 | 200 |
| C6 - C10 Fraction minus BTEX (F1) | 50 | 200 | 5 | 20 | 50 | 200 |
| >C10 - C16 Fraction | 50 | 400 | 5 | 40 | 50 | 400 |
| >C10 - C16 Fraction minus Naphthalene (F2) | 50 | 400 | 5 | 40 | 50 | 400 |
| **TRH SPECIATION CWG - Volatile** Method Code | EP103-S | | EP103-SSG | | EP091-S | |
| Aliphatic >C5-C6 | 50 | 165 | 5 | 16.5 | 50 | 165 |
| Aliphatic >C6-C8 | 50 | 200 | 5 | 20 | 50 | 200 |
| Aliphatic >C8-C10 | 50 | 250 | 5 | 25 | 50 | 250 |
| Aliphatic >C10-C12 | 50 | 300 | 5 | 30 | 50 | 300 |
| Aromatic >C5-C7 | 0.5 | 1.6 | 0.05 | 0.16 | 0.5 | 1.6 |
| Aromatic >C7-C8 | 0.5 | 1.9 | 0.05 | 0.19 | 0.5 | 1.9 |
| Aromatic >C8-C10 | 2.5 | 12.5 | 0.25 | 1.25 | 2.5 | 12.5 |
| Aromatic >C10-C12 | 5 | 25 | 0.5 | 2.5 | 5 | 25 |
| **TRH SPECIATION CWG Semi Vol'** Method Code | | | EP103-SV[PN] | | | |
| Aliphatic >C12-C16 | | | 10 | 81 | | |
| Aliphatic >C16-C21 | | | 25 | 274 | | |
| Aromatic >C12-C16 | | | 5 | 37 | | |
| Aromatic >C16-C21 | | | 5 | 50 | | |
| **Light Hydrocarbons and Gases** Method Code | EP104G | EP104 | | | | |
| Units | % | ppmV | % | ppmV | | |
| Helium | 0.005 | 50 | 0.005 | 50 | | |
| Oxygen | 0.1 | 1000 | 0.1 | 1000 | | |
| Carbon Dioxide | 0.005 | 50 | 0.005 | 50 | | |
| Carbon Monoxide | 0.0005 | 5 | 0.0005 | 5 | | |
| Hydrogen | 0.005 | 50 | 0.005 | 50 | | |
| Inert Gases (Nitrogen+Argon calc' by difference) | 0.1 | 1000 | 0.1 | 1000 | | |
| Methane | | | 0.05 | 500 | | |
| Ethane | | | 0.01 | 100 | | |
| Ethene | | | 0.01 | 100 | | |
| Propane | | | 0.01 | 100 | | |
| Propene | | | 0.01 | 100 | | |
| 1-Butene | | | 0.05 | 500 | | |
| Butane | | | 0.05 | 500 | | |
| **CRC PVI Key indicators** Method Code | EP104-PVI | EP104-PVI | | | | |
| Methane | 0.5 | 5000 | 0.5 | 5000 | | |
| Oxygen | 0.1 | 1000 | 0.1 | 1000 | | |
| Carbon Dioxide | 0.05 | 500 | 0.05 | 500 | | |