

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO.
FOR CLEAN CLOSURE OF
FOLSOM CORPORATION YARD LANDFILL
CITY OF FOLSOM
CLASS III LANDFILL
SACRAMENTO COUNTY

This monitoring and reporting program (MRP) is issued pursuant to California Water Code Section 13267 and incorporates requirements for corrective action, detection and site maintenance monitoring contained in Title 27 regulations, Waste Discharge Requirements (WDRs) Order No. _____, and the August 1997 Standard Provisions and Reporting Requirements (SPRR). Compliance with this MRP is ordered by the WDRs. The Discharger shall not implement any changes to this MRP unless a revised MRP is issued by the Executive Officer.

Pursuant to 27 CCR Section 20430(d), the Discharger shall maintain water quality monitoring systems for background and corrective action monitoring.

MRP SUMMARY TABLE

<i>Section</i>	<i>Type</i>	<i>Frequency</i>
	<i>Monitoring</i>	
A.	Standard Observations	Weekly
B.	Facility Monitoring:	
	1. Maintenance Inspections	Monthly
	2. After Significant Storm Events	Within 7 Days After Event
	3. Site Winterization	Annually
C.	Water Quality Protection Standard	Update as necessary
D.	Groundwater Monitoring	
	1. Elevation	Quarterly
	2. Background	
	a. Field Parameters	Semiannually
	b. Monitoring parameters	Semiannually
	c. Constituents of Concern	Annually
	3. Corrective Action	Same as D.2
E.	Surface Water Monitoring:	Per General Storm Water Permit
	<i>Reporting</i>	
F.	Periodic Reporting:	
	1. Semiannual Report ¹	Semiannually
	2. Annual Monitoring Summary	Annually
	3. Constituents of Concern	Every 5 years
G.	Notifications ²	Per SPRR

1. Including certification of standard observations
2. In event of release or leachate seep.

A. STANDARD OBSERVATIONS

Standard observations shall be performed **weekly** at the site and shall include those elements identified in Definition 24 of the SPRR. Each monitoring report shall include a summary and certification of completion of all Standard Observations (*Provision 2h, Reports to be Filed with the Board, REPORTING REQUIREMENTS, SPRR*). Field logs of standard observations shall also be included in the report. Any landfill leachate seeps detected during these inspections (or at any other time) shall be reported in accordance with the SPRR (*Provision 3, Reports to be Filed with the Board, REPORTING REQUIREMENTS*), and any leachate that enters the excavation area or facility drainage system shall be sampled and analyzed for the COCs referenced in Table C herein. This monitoring shall discontinue upon concurrence by Regional Water Board Executive Officer that clean-closure is complete and in compliance with WDRs Order No. _____.

B. FACILITY MONITORING

The discharger shall inspect those areas of the landfill and associated facilities (e.g., cover, precipitation and drainage controls, monitoring wells, access roads) not yet disturbed by clean closure activities (i.e., areas not within the current phase of clean closure construction), as necessary, to ensure that such facilities are functioning properly and in adequate repair. Facility inspections shall also include any disturbed areas of the landfill where clean closure construction activities have been suspended for a significant period of time (i.e., six months or greater). Any damage to the landfill facilities observed during these inspections shall be flagged and repaired. Facility inspections and repairs shall be conducted in accordance with the following schedule:

Purpose	Inspection Frequency	Complete Repairs¹
1. Regular Maintenance	Monthly	Within 30 days
2. Storm Response	Within one week of significant storm event ²	Within two weeks of storm event
3. Site Winterization	By September 30 of each year	By October 31 of each year

1. If necessary repairs cannot be completed within specified time frame, the Discharger shall, within 7 days, notify the Regional Water Board and provide a schedule for completing them.
2. A "significant" storm event shall be one that produces 1.5 inches or more of precipitation within a 24-hour period, as measured at the Represa Station.

The results of these inspections, including documentation of any significant damage and/or repairs (e.g., field logs, site map showing location of damage, before and after photos) shall be included in the semiannual monitoring report for the period and summarized in the Annual Report. If no inspection and/or repairs were conducted as required above, the report shall so state, providing the reason and circumstances (e.g., landfill removed, no significant storm event during monitoring period). This monitoring shall discontinue upon concurrence by Regional Water Board Executive Officer that clean-closure is complete and in compliance with WDRs Order No. _____.

C. WATER QUALITY PROTECTION STANDARD (Section 20390)

The Water Quality Protection Standard (WQPS) for groundwater shall consist of all Constituents of Concern, Concentration Limits for each constituent of concern, Monitoring Points, Point of Compliance, and the Compliance Period.

1. Constituents of Concern (Section 20395)

The constituents of concern (COC) list includes all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit. The COCs for the landfill, including monitoring parameters, shall be as listed in Tables G.1 and G.2, which are incorporated herein and made part of this Order by reference. The COC list groups are as follows:

Table C.1

Constituents of Concern	Units	Test Method
Field Parameters:	See Table G.1	
General Minerals:	See Table G.1	
Dissolved Metals	µg/L	See Table G.1
Volatile Organic Compounds	µg/L	USEPA Method 8260B
Semi-Volatile Organic Compounds	µg/L	USEPA Method 8270
Organophosphorus Pesticides	µg/L	USEPA Method 8141A
Chlorinated Herbicides	µg/L	USEPA Method 8151
Organochlorine Pesticides	µg/L	USEPA Method 8081A
Polychlorinated Biphenols (PCBs)	µg/L	USEPA Method 8082

2. Concentration Limits (Section 20400)

The Discharger developed concentration limits using historical monitoring data from background well FCY-9. The previous six years (12 semiannual sampling events) of monitoring data was evaluated, as follows:

a. Statistical

CLs for statistical COCs were developed consistent with Monitoring Specification G.19 using a nonparametric statistical method (Chebyshev Prediction Limits) and an EPA software program (ProUCL, Version 4.0). A total of 26 inorganic COCs were identified for which at least 10% of the data from background samples equaled or exceeded their respective MDL. Upper prediction limits (i.e., CLs) were calculated at the 95 percent confidence level. The results are listed in Table G.1.

b. Non-Statistical

i. A total of 14 inorganic COCs were identified for which less than 10% of the data from background samples equaled or exceeded their respective MDL. Of these, 10 were not detected in background. In accordance with Monitoring Specification G.20, the concentration limits for these

constituents were set equal to the MDL, as listed in Table G.1.

- ii. The concentration limit for VOCs and all other organic COCs was set to the MDL in accordance with Monitoring Specification G.21.

3. Monitoring Points (Section 20405)

The monitoring points for groundwater monitoring shall be as identified in Table D.3.a herein.

4. Point of Compliance (Section 20405)

The point of compliance (POC) for the water standard is a vertical surface located at the hydraulically down gradient limit of the Unit that extends through the uppermost aquifer underlying the Unit. The POC wells shall include existing wells FCYs-2, 5, 6, 8, and 9, and any future wells that meet the above definition.

5. Compliance Period (Section 20410)

The compliance period (the minimum period for a landfill during which the Discharger shall conduct a water quality monitoring program subsequent to a release from the Unit) is equal to the active life of the Unit plus the closure period. Following removal of the landfill unit, the compliance period shall be extended until the discharger can demonstrate that the Unit has been in continuous compliance with the WQPS for a period of three consecutive years, including proof period under Section 20430(f), and as approved by the Executive Officer. See Monitoring Specification G.27.

D. GROUNDWATER MONITORING

1. Groundwater Elevation Monitoring (Section 20415(e)(13))

The groundwater surface elevation (in feet and hundredths, MSL) in all wells and piezometers shall be measured on a **quarterly** basis. Groundwater elevations taken prior to purging the well and sampling for Monitoring Parameters may be used to fulfill this requirement. Groundwater elevations for all monitoring wells for a given groundwater body shall be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater gradient and direction. The results of groundwater elevation monitoring shall be displayed on a water table contour map and/or groundwater flow net for the site and included in each monitoring report. The Discharger shall use the groundwater elevation monitoring data to determine the following, as feasible:

- a. The groundwater flow velocity
- b. The gradient direction in the upper aquifer, and in any additional zone of saturation monitored pursuant to this MRP
- c. Times of highest and lowest elevations of the water levels in the wells
- d. Estimated separation of groundwater from the lowest point of the unit

The results of these determinations shall be included in the semi-annual reports.

2. Background Monitoring (Section 20415(b)(1)(A))

Background monitoring shall be performed for developing and updating concentration limits as described in Section C.2.

a. Monitoring Points

The Discharger shall install and operate a sufficient number of background monitoring wells at appropriate locations and depths to yield ground water samples from the uppermost aquifer that represent the quality of ground water that has not been affected by a release from the unit. The background monitoring system may include wells that are not hydraulically upgradient of the Unit if it can be demonstrated that samples from such wells are representative of background groundwater quality, or are at least more representative than those provided by upgradient wells. The background monitoring points for groundwater shall be as listed in Table D.3.a herein.

b. Monitoring Parameters

See Section D.3.b.

c. Monitoring Schedule

The background monitoring schedule shall be as specified in Table D.3.c.

3. Corrective Action Monitoring (Sections 20425 and 20430)

The Discharger shall install and operate a groundwater corrective action monitoring system for the purpose of monitoring the nature and extent of the release and the progress of corrective action.

a. Monitoring Points

The corrective action monitoring locations shall be as follows:

Table D.3.a: Monitoring Locations

<u>Aquifer</u>	<u>Zone</u>	<u>Monitoring Wells</u>	
		<u>Background</u>	<u>Downgradient</u>
Upper	Dredge tailings	FCY-9 ^{1,2}	FCYs-2, 4, 5, 6, 8, 9 ²
Lower	Mehrten	FCYs-3 ² , 7 ²	FCYs-3 ² , 7 ²

1. No upgradient background well feasible due to limited extent of shallow zone. Discharger has demonstrated sufficiency of well FCY-9 for background monitoring per Section 20415(b)(2).
2. Intrawell monitoring performed on these wells (each well functions as its own background well).

Absent a demonstration that it is no longer needed for monitoring, any groundwater monitoring wells damaged or destroyed during clean closure activities shall be repaired or replaced, as applicable, in accordance with

Section B herein.

b. Monitoring Parameters

Monitoring parameters are constituents of concern that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a Unit. The monitoring parameters for the landfill shall be as listed in Table D.3.c and Tables G.1 and G.2. Any COC confirmed by retest (per WDR Monitoring Specification G.23) to be a constituent of a release shall also be added to the monitoring parameter list per Monitoring Specification G.25. In such cases, the Discharger shall also follow the Response to Release requirements of the WDRs (Monitoring Specification E.22) and 1997 SPRR, as necessary.

c. Monitoring Schedule

A sufficient number of samples shall be taken from all monitoring points to satisfy the data analysis requirements for a given reporting period, and shall be taken in a manner that ensures sample independence to the greatest extent feasible. Collection and analysis of samples shall be in accordance with procedures set forth in the Sampling Collection and Analysis Plan per Monitoring Specification G.5 of the WDRs. The groundwater corrective action monitoring schedule shall be as follows:

**Table D.3.c:
 Corrective Action Monitoring Schedule**

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>	<u>Data Analysis</u>
Field Parameters			
Elevation	Feet MSL	Quarterly	---
Specific Conductance	µMhos/cm	Semiannually	---
pH	pH units	Semiannually	---
Redox potential	millivolts	Semiannually	---
Temperature	°C, °F	Semiannually	---
Turbidity	NTU	Semiannually	---
Monitoring Parameters			
General Minerals:			
Chloride	mg/L	Semiannually	Statistical
Nitrate	mg/L	Semiannually	Statistical
Sulfate	mg/L	Semiannually	Statistical
TDS	mg/L	Semiannually	Statistical
Total Alkalinity	mg/L	Semiannually	Statistical
Total Hardness	mg/L	Semiannually	Statistical
Chemical Oxygen Demand (COD)	mg/L	Semiannually	Statistical
Major Anions ¹	mg/L	Annually	Statistical
Major Cations ¹	mg/L	Annually	Statistical

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<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>	<u>Data Analysis</u>
Dissolved arsenic	µg/L	Semiannually	Statistical
Dissolved Iron	µg/L	Semiannually	Statistical
VOCs ¹	µg/L	Annually	Statistical
Dissolved Metals ¹	µg/L	Annually	Statistical/Nonstatistical
COCs ^{1,2}	See Table C	Every 5 years	Statistical/Nonstatistical

1. See Tables G.1 and G.2 for the full list of constituents and EPA test methods.
2. COC monitoring shall be conducted by **15 December 2011** and at least every five years thereafter. If the landfill is clean closed per the WDRs Order No. ____ in 2008, then this sampling is no longer necessary.

d. Data Evaluation

Corrective Action monitoring data evaluation shall include the following:

i. Background Data

- Updating concentration limits for statistical monitoring parameters and COCs, as necessary.

ii. Nature and Extent of Release

- Comparing monitoring data with concentration limits to identify any new release or new constituent of existing release.
- Water chemistry analysis by ion balance and an appropriate graphical methods (e.g., Piper diagram, Trilinear plot, Stiff diagram)
- Preparation of contaminant contour maps for representative constituents/parameters (e.g., specific conductance, TDS, COD, Redox potential).

iii. Effectiveness of Corrective Action

- Preparation of time series plots for each constituent for which there are three or more data points (including non-detect values).
- Trend analysis for each constituent for which there are four or more data points above the practical quantitation limit (PQL), using appropriate statistical and graphical methods (e.g., Mann-Kendall, Sen's Slope).
- Comparing monitoring data with concentration limits (i.e., cleanup goals) to check progress in returning to compliance with WQPS.
- Comparing contour maps for representative constituents/parameters with those of prior years to track changes in plume concentrations and/or groundwater geochemical conditions.
- A discussion of the ongoing effectiveness of corrective action measures implemented (e.g., clean closure) and the need for additional corrective action measures and/or monitoring wells.

The results of the above analysis, including a narrative discussion, shall be included in each semiannual report and summarized in the Annual Report, as specified under Section F.2 below. The semiannual monitoring reports shall also include a discussion of the progress of corrective action toward returning to compliance with the WQPS, as specified in Section 20430(h) of Title 27.

E. SURFACE WATER MONITORING (Section 20415(c))

Storm water shall be monitored at an appropriate background location and at representative outfalls toward the nearest surface water (i.e., Lake Natoma) in accordance with the NPDES General Storm Water Permit (Construction Activities or Industrial). The storm water monitoring locations shall include the following monitoring points (Attachment B: Site Map):

<u>Monitoring Point</u>	<u>Storm Water Type</u>	<u>Drain</u>	<u>Location</u>
SW-1	Runon	Upstream swale	NE of landfill
SW-2	Runoff	Landfill perimeter swale	NW outfall
SW-3	Runoff	Landfill perimeter swale	SW outfall

Storm water sampling shall include the semiannual field and monitoring parameters specified in Table D.3.c and those parameters required under the General Storm Water Permit. If the landfill units are clean closed in compliance with WDRs Order No. ___ and with Regional Water Board staff concurrence, sampling of Table D.3.c constituents shall no longer be required under this Order (sampling may still be required under the General Storm Water Permit, however, if the site has not yet been backfilled and/or reclaimed).

F. REPORTING

1. Semiannual Reports

The Discharger shall report monitoring data and information as required in this MRP and as required under WDRs Order No. ___ and the SPRR. Reports shall be submitted **semiannually**. Each semiannual monitoring report shall include the following information:

- a. A compliance evaluation summary for the monitoring period as specified in the SPRR (Requirement 2, *Reports to be Filed with the Board, REPORTING REQUIREMENTS*).
- b. A tabular summary of well information from the installation logs, including well name, top-of-casing elevation, total depth, depths/elevations of screened interval, aquifer or zone (i.e. uppermost), and soil type(s) over the screened interval.
- c. The results of groundwater elevation monitoring.

- d. Tabular summaries of corrective action monitoring data for the monitoring period, showing sampling date, well, constituents, concentrations, units, and concentration limits. The table shall also clearly show whether new monitoring data exceedances occurred during the monitoring period (i.e. highlight exceedances).
- e. Tables of historical monitoring data, as available, for each waste management unit (or former waste management unit, if clean closed), showing well, sampling dates, constituents, concentrations, units, and concentration limits. The data shall be presented so as to clearly show historical concentrations at each well.
- f. Plots, graphical summaries and a narrative discussion of the results of correction action monitoring, as specified in Section D.3.d herein.
- g. Field and laboratory tests sheets.
- h. An electronic copy of historical analytical data for at least the previous five years, as available, in a digital format necessary for statistical analysis (e.g., Excel format).

2. **Annual Monitoring Summary Report**

An Annual Monitoring Summary Report (Annual Report) shall also be prepared and submitted in accordance with this section of the MRP and the SPRR (Requirement 4, *Reports to be Filed with the Board, REPORTING REQUIREMENTS*). The report shall summarize monitoring results for the prior year and include a discussion of compliance with the WDRs and the WQPS. The report may be included in the Second Semiannual Report for each year, but shall also include the following:

- a. Tabular and graphical summaries of the results of the prior year, including, but not necessarily limited to, representative time series plots and contaminant contour maps.
- b. A summary of the results of trend analysis performed on each constituent of the release during the prior year.
- c. A summary of the results of water chemistry analysis of water quality data collected during the prior year.
- d. A summary of comparisons of contaminant contour maps of representative constituents/parameters with those of prior years to track changes in plume and/or groundwater geochemical conditions since initiation of corrective action.
- e. A copy of the Sampling and Analysis Plan per WDR Monitoring Specification E.5 and the SPRR (Requirement 1, *Provisions for Monitoring*).

Reports that do not comply with the above-required format will be **REJECTED** and

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the Discharger shall be deemed to be in noncompliance with the waste discharge requirements.

The semiannual and annual reports shall be submitted to the Board in accordance with the following schedule for the calendar period in which samples were taken or observations made:

<u>Report</u>	<u>End of Reporting Period</u>	<u>Date Report Due</u>
First Semiannual	30 June	31 July
Second Semiannual	31 December	31 January
Annual Report	31 December	31 January

The Discharger shall implement the above monitoring program on the effective date of this Program. The transmittal letter accompanying monitoring reports submitted under this Order shall, as required under the SPRR (*Provision 5, General Requirements, REPORTING REQUIREMENTS*), contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

Ordered by: _____
PAMELA C. CREEDON, Executive Officer

(Date)

Attachments
JDM: 9 July 2008

Table G.1
 INORGANIC CONSTITUENTS OF CONCERN, APPROVED USEPA
 ANALYTICAL METHODS, & CONCENTRATION LIMITS

	USEPA Test Method	Concentration Limit
Field Parameters		
Groundwater Elevation, Ft MSL	----	----
pH, pH units	----	<6, >8
Oxidation-Reduction (Redox) Potential, Millivolts	----	----
Specific conductance, μ Mhos/cm	----	550
Temperature, $^{\circ}$ C, $^{\circ}$ F	----	----
Turbidity, NTU	----	----
General Minerals, mg/L		
Total Dissolved Solids (TDS)	2540C	354
Total Alkalinity	2320B	250
Total Hardness	2340B	
Chemical Oxygen Demand (COD)	410.4	
Major Anions		
Bicarbonate	2310B	250
Chloride	300	60
Nitrate – Nitrogen	300	60
Sulfate	300	57
Major Cations		
Calcium	200.7/6010	----
Magnesium	200.7/6010	----
Potassium	200.7/6010	----
Sodium	200.7/6010	----
Dissolved Metals, μg/L¹		
Aluminum	200.7/6010	MDL
Antimony	200.7/6010	MDL
Arsenic	200.9/200.8	4.6
Barium	200.7/6010	MDL
Beryllium	200.7/6010	MDL
Cadmium	200.7/6010	MDL
Chromium	200.7/6010	10
Hexavalent Chromium	7199/1636	MDL
Cobalt	200.7/6010	MDL
Copper	200.7/6010	MDL

Table G.1

Cyanide	335.4/9010	MDL
Iron	200.9/200.8	93
Lead	200.9/200.8	5
Manganese	200.7/6010	MDL
Mercury	7470A	0.2
Molybdenum	200.7/6010	MDL
Nickel	200.9/200.8	MDL
Selenium	200.9/200.8	MDL
Silver	200.7/6010	MDL
Sulfide	9030	MDL
Thallium	200.7/6010	MDL
Tin	200.7/6010	MDL
Vanadium	200.7/6010	MDL
Zinc	200.7/6010	MDL

1. Samples shall be filtered prior to performing dissolved inorganics analysis.

Table G.2

ORGANIC CONSTITUENTS OF CONCERN & APPROVED USEPA
 ANALYTICAL METHODS
 (CONCENTRATION LIMIT = MDL)

Volatile Organic Compounds (VOCs)¹ (USEPA Method 8260B)

Acetone
 Acetonitrile
 Acrolein
 Acrylonitrile
 Allyl chloride (3-Chloropropene)
 Tert-Amyl methyl ether
 Benzene
 Bromobenzene
 Bromochloromethane
 Bromodichloromethane
 Bromoform (Tribromomethane)
 Tert-Butyl alcohol
 n-Butylbenzene
 sec-Butylbenzene
 tert-Butylbenzene
 tert-Butyl ethyl ether
 Carbon disulfide
 Carbon tetrachloride

Table G.2

Chlorobenzene
Chloroethane (Ethyl chloride)
Chloroform (Trichloromethane)
Chloroprene
Dibromochloromethane (Chlorodibromomethane)
1,2-Dibromo-3-chloropropane (DBCP)
1,2-Dibromoethane (Ethylene dibromide; EDB)
o-Dichlorobenzene (1,2-Dichlorobenzene)
m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
trans- 1,4-Dichloro-2-butene
Dichlorodifluoromethane (CFC-12)
1,1-Dichloroethane (Ethylidene chloride)
1,2-Dichloroethane (Ethylene dichloride)
1,1-Dichloroethylene (1,1-Dichloroethene; Vinylidene chloride)
cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)
1,2-Dichloropropane (Propylene dichloride)
1,3-Dichloropropane
2,2-Dichloropropene
1,1-Dichloropropene
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Ethylbenzene
Ethyl methacrylate
Hexachlorobutadiene
Hexachloroethane
2-Hexanone (Methyl butyl ketone)
Iodomethane (Methyl iodide)
Isobutyl alcohol
di-Isopropyl ether
Methacrylonitrile
Methyl bromide (Bromomethene)
Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Methyl chloride (Chloromethane)
Methyl ethyl ketone (MEK: 2-Butanone)
4-Methyl-2-pentanone (Methyl isobutylketone)
Methyl tert-butyl ether (MtBE)
Naphthalene
2-Nitropropane

Table G.2

n-Propylbenzene
Propionitrile
Styrene
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)
Toluene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane (Methylchloroform)
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
1,2,4-Trimethylbenzene
1,3,5-Trimethylbenzene
Vinyl chloride
Xylenes (total)

Semi-VOCs¹ (USEPA Method 8270 - base, neutral, & acid extractables):

Acenaphthene
Acenaphthylene
Acetophenone
2-Acetylaminofluorene (2-AAF)
4-Aminobiphenyl
Anthracene
Benzo[a]anthracene (Benzoanthracene)
Benzo[b]fluoranthene
Benzo[k]fluoranthene
Benzo[g,h,i]perylene
Benzo[a]pyrene
Benzyl alcohol
Bis(2-ethylhexyl) phthalate
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl) ether (Dichloroethyl ether)
Bis(2-chloro-1-methylethyl) ether (Bis(2-chloroisopropyl) ether; DCIP)
4-Bromophenyl phenyl ether
Butyl benzyl phthalate (Benzyl butyl phthalate)
p-Chloroaniline
p-Chloro-m-cresol (4-Chloro-3-methylphenol)
2-Chloronaphthalene
2-Chlorophenol
4-Chlorophenyl phenyl ether
Chrysene
o-Cresol (2-methylphenol)
m-Cresol (3-methylphenol)

Table G.2

p-Cresol (4-methylphenol)
Dibenz[a,h]anthracene
Dibenzofuran
Di-n-butyl phthalate
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Diethyl phthalate
p-(Dimethylamino)azobenzene
7,12-Dimethylbenz[a]anthracene
3,3'-Dimethylbenzidine
2,4-Dimethylphenol (m-Xylenol)
Dimethyl phthalate
m-Dinitrobenzene
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate
Diphenylamine
Ethyl methanesulfonate
Famphur
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachloropropene
Indeno(1,2,3-c,d)pyrene
Isophorone
Isosafrole
Kepone
Methapyrilene
3-Methylcholanthrene
Methyl methanesulfonate
2-Methylnaphthalene
1,4-Naphthoquinone
1-Naphthylamine
2-Naphthylamine
o-Nitroaniline (2-Nitroaniline)
m-Nitroaniline (3-Nitroaniline)
p-Nitroaniline (4-Nitroaniline)
Nitrobenzene
o-Nitrophenol (2-Nitrophenol)
p-Nitrophenol (4-Nitrophenol)
N-Nitrosodi-n-butylamine (Di-n-butylnitrosamine)
N-Nitrosodiethylamine (Diethylnitrosamine)
N-Nitrosodimethylamine (Dimethylnitrosamine)
N-Nitrosodiphenylamine (Diphenylnitrosamine)

Table G.2

N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propylNitrosamine)
N-Nitrosomethylethylamine (MethylethylNitrosamine)
N-Nitrosopiperidine
N-Nitrosopyrrolidine
5-Nitro-o-toluidine
Pentachlorobenzene
Pentachloronitrobenzene (PCNB)
Pentachlorophenol
Phenacetin
Phenanthrene
Phenol
p-Phenylenediamine
Polychlorinated biphenyls (PCBs; Aroclors)
Pronamide
Pyrene
Safrole
1,2,4,5-Tetrachlorobenzene
2,3,4,6-Tetrachlorophenol
o-Toluidine
2,4,5-Trichlorophenol
0,0,0-Triethyl phosphorothioate
sym-Trinitrobenzene

Organochlorine Pesticides¹ (USEPA Method 8081A)

Aldrin
 α -BHC
 β -BHC
 γ -BHC (Lindane)
 δ -BHC
Chlorobenzilate
 α -Chlordane
 γ -Chlordane
Chlordane – not otherwise specified
DBCP
4,4'-DDD
4,4'-DDE
4,4'-DDT
Diallate
Dieldrin
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Endrin ketone
Heptachlor
Heptachlor epoxide

Table G.2

Hexachlorocyclopentadiene
Isodrin
Methoxychlor
Toxaphene

Polychlorinated Biphenols¹ (PCBs, USEPA Method 8082)

Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260

Organophosphorus Pesticides¹ (USEPA Method 8141A):

Chlorpyrifos
Diazinon
Dimethioate
Disulfoton
Ethion
Famphur
Malathion
Parathion
Parathion-ethyl
Parathion-methyl
Phorate

Chlorinated Herbicides¹ (USEPA Method 8151A):

2,4-D (2,4-Dichlorophenoxyacetic acid)
Dicamba
Dinoseb (DNBP; 2-sec-Butyl-4,6-dinitrophenol)
MCPA
MCPP
Silvex (2,4,5-Trichlorophenoxypropionic acid; 2,4,5-TP)
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)
Pentachlorophenol

1. Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte per WDR Monitoring Specification G.13.