CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED ORDER NO. R5-2006-0074

MONITORING AND REPORTING PROGRAM
FOR
UNITED STATES AIR FORCE
BEALE AIR FORCE BASE LANDFILLS NO.2 AND NO.3
CLASS III LANDFILLS
POST-CLOSURE MAINTENANCE AND DETECTION MONITORING
YUBA COUNTY

This monitoring and reporting program (MRP) incorporates requirements for detection monitoring and maintenance of Landfill No. 2 and No. 3 at Beale Air Force Base, located in Yuba County, California. This MRP is issued pursuant to Water Code Section 13267. Compliance with this MRP is ordered by Waste Discharge Requirements (WDRs) Order No. R5-2006-0074. The Discharger shall not implement any changes to this MRP unless a revised MRP is issued by the Executive Officer.

Pursuant to Section 20080(d)(1) of Title 27, the Discharger shall maintain water quality monitoring systems for background and detection monitoring.

A. SUMMARY OF REPORTING & MONITORING FREQUENCIES

Table A

Section	*Reporting:*	*Frequency*
B.	Periodic Reports:	
	1. Annual Monitoring Summary Report	Annually
	2. Constituents of Concern Report	Every 5 years
C.	Water Quality Protection Standard Report	Update as necessary
	Monitoring:	
D.	Leachate Monitoring	
	1. Seeps	Semiannually
	2. Leachate Collection System (if constructed)	Semiannually for COCs
E.	Groundwater Monitoring:	
	1. Elevation	Annually
	2. Background & Detection Monitoring	Semiannually
	3. Constituents of Concern	Every 5 years
F.	Facility Monitoring:	
	1. Standard Observations	Semiannually
	2. Maintenance Inspections	Semiannually
	3. After Significant Storm Events	Within 7 Days After Event
	4. Site Winterization	Annually
G.	Surface Water Monitoring:	Annually

B. REPORTING

1. Annual Monitoring Summary Report

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required under Order No. R5-2006-0074 and the August 1997 Standard Provisions and Reporting Requirements (SPRR). An Annual Monitoring Summary Report (Annual Report) shall 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 Water Quality Protection Standard. The report shall also include the following:

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 detection monitoring data for each unit showing sampling dates, well, constituents, concentrations, 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 for each unit showing well, sampling dates, constituents, concentrations, 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 detection monitoring, as specified in Section E.3.a herein.
g. A summary of the results of trend analysis performed on each constituent of the release during the prior year.
h. A summary of the results of water chemistry analysis of water quality data collected during the prior year.
i. An electronic copy of the data in a digital format acceptable to the Executive Officer.
j. A copy of the Sampling and Analysis Plan per WDR Monitoring Specification E.5 and the SPRR (Requirement 1, *Provisions for Monitoring*).

Reports which do not comply with the above-required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the waste discharge requirements.

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

Table B

Report	End of Reporting Period	Date Report Due
Annual Report	31 December	**31 January**

C. WATER QUALITY PROTECTION STANDARD (Section 20390)

The Water Quality Protection Standard (WQPS) 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 of Title 27)

The constituents of concern (COCs) for the landfill, including monitoring parameters, shall be as listed in Attachments D and E, which are incorporated herein and made part of this Order by reference. The constituent groups are as follows:

Table C

Constituents of Concern	**Units**	**Test Method**
Field Parameters:	See Attachment E	
General Minerals:	See Attachment E	
Inorganics (dissolved)	µg/L	See Attachment E
Volatile Organic Compounds	µg/L	USEPA Method 8260B
Semi-Volatile Organic Compounds	µg/L	USEPA Method 8270

2. Concentration Limits (Section 20400)

a. For VOCs and other organic COCs the concentration limit shall be the MDL.
b. For inorganic monitoring parameters and COCs for which at least 10% of the data from background samples equal or exceed their respective MDL, the concentration limit shall be determined as follows:
   i. Using the Tolerance Interval statistical procedure applied to historical background data, or
   ii. Using an alternative statistical method approved by the Executive Officer per Monitoring Specification E.8 of the WDRs.
c. For inorganic monitoring parameters and COCs for which less than 10% of the data from background samples equal or exceed their respective MDL, the concentration limit shall be the PQL.

Statistical concentration limits shall be based on historical background data and updated as necessary to reflect current background conditions. Prior to calculating concentration limits, the historical data shall be screened for trends to ensure that the data used is of a single statistical population (i.e. does not show appreciable variation per Section 20415(e)(10)). If a significant trend is identified that reflects changes in background conditions, the trend data shall be used to update concentration limits. Otherwise concentration limits shall be derived only from prior historical data. Concentration limits shall also take into account any seasonality in the data.

3. Monitoring Points (Section 20405)
The monitoring points for groundwater monitoring shall be as identified in Sections E.2 and E.3 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 points of compliance for Landfill No. 2 and Landfill No.3 are identified in Section E.3 herein.

5. Compliance Period (Section 20410)
The compliance period for each Unit shall be the number of years equal to the active life of the Unit plus the closure period. The compliance period is the minimum period during which the Discharger shall conduct a water quality monitoring program subsequent to a release from the Unit. The compliance period shall begin anew each time the Discharger confirms a new release from the unit.

D. LEACHATE MONITORING

The Discharger shall monitor the landfill (including the landfill toe area) for leachate seeps **semiannually** as part of standard observations. Any leachate seeps observed during these inspections or at any other time shall be sampled and analyzed for the constituents of concern referenced in Table C herein. Reporting shall be conducted in accordance with the Standard Provisions (*Provision 3, Reports to be Filed with the Board, REPORTING REQUIREMENTS*).
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E. 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 an **annual** 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 upgradient and down gradient 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:
   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. Separation of groundwater from the lowest point of the unit

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

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

The Discharger shall install and operate a sufficient number of Background Monitoring Points 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 units per Section 20415(b)(1)(A) of Title 27. Background monitoring data analysis shall include developing/updating concentration limits for statistical monitoring parameters and COCs, as necessary.

At Landfill No.2, background groundwater monitoring points shall consist of MWP-1A and 06C001MW-A. At Landfill No.3 background groundwater monitoring points shall consist of MWP-5 and MWP-6 and, at either facility, any future wells installed upgradient of the landfill for background monitoring. The monitoring schedule shall be as specified in Table E.3B.

3. Detection Monitoring (Sections 20420 and 20430)

The Discharger shall install and operate a groundwater detection monitoring system for the purpose of monitoring the uppermost aquifer that represents the quality of groundwater passing the point of compliance. A sufficient number of samples shall be taken from all Monitoring Points and Background 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 E.5 of the WDRs.

For Landfill No.2 the detection monitoring points shall include monitoring wells 06L004MW-A, 06A001MW-A, 06A002MW-A and 06L0003MW-A. For Landfill No.3 the detection monitoring points shall include monitoring wells MWP-1, MWP-2, MWP-3 and MWP-4A. Groundwater samples shall be collected and analyzed in accordance with the following schedule:

Table E.3B
Detection Monitoring Schedule

Parameter	Units	Frequency	Monitoring Approach	
Field Parameters			Nature/Extent	Trends
Elevation	Feet MSL	Annually	---	---
Specific Conductance	µMhos/cm	Semiannually	---	---
pH	pH units	Semiannually	---	---
Temperature	O_C	Semiannually	---	---
Turbidity	NTU	Semiannually	---	---

Monitoring Parameters (Attachment D)				
General Minerals:				
Chloride	mg/L	Semiannually	Interwell	Intrawell
Nitrate as N	mg/L	Semiannually	Interwell	Intrawell
Sulfate	mg/L	Semiannually	Interwell	Intrawell
TDS	mg/L	Semiannually	Interwell	Intrawell
Total Alkalinity	mg/L	Semiannually	Interwell	Intrawell
Total Hardness	mg/L	Semiannually	Interwell	Intrawell
Major Anions	mg/L	Annually	Interwell	Intrawell
Major Cations	mg/L	Annually	Interwell	Intrawell
Dissolved Inorganics	µg/L	Annually	Interwell/Intrawell	Intrawell
VOCs	µg/L	Annually	Intrawell	Intrawell
Constituents of Concern (Table C and Attachment E)		Every 5 years		

COC monitoring under this Order shall be conducted by **15 December 2007** and at least every five years thereafter. Any COC that is confirmed by retest (i.e. per WDR Monitoring Specification E.11) to be a constituent of a release shall be added to the monitoring parameter list per Table E.3B herein and Attachment E. In such cases, the Discharger shall also follow the Response to Release requirements of the WDRs (Monitoring Specification E.12) and 1997 Standard Provisions, as necessary.

a. Monitoring data analysis shall be include the following:

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

ii. Nature and Extent of Release
   - Comparisons with concentration limit to identify any new or previously undetected constituents at a monitoring point.
   - Water chemistry analysis, as necessary, by appropriate methods (i.e. ion balance, Piper diagram, Stiff diagram etc.).

iii. Effectiveness of Detection Monitoring
   - Preparation of time series plots for representative constituents
   - Trend analysis for each constituent using appropriate statistical and graphical methods (e.g., Mann-Kendall).
   - The effectiveness of closure as a corrective action and whether the closure continues to meet Title 27 performance standards
   - 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 the Annual Report, as specified under reporting Section B above.

F. FACILITY MONITORING

1. Standard Observations

Standard Observations shall be performed **semiannually** and shall include those elements identified in Definition 24 of the Standard Provisions. Each monitoring report shall include a summary and certification of completion of all Standard Observations in accordance with the Standard Provisions (*Provision 2h, Reports to be Filed with the Board, REPORTING REQUIREMENTS).* Field logs of standard observations shall also be included in the report.

2. Regular Maintenance Inspections

Landfill facilities (i.e. monitoring wells) shall be inspected **semiannually** to identify the need for maintenance and repairs. Necessary repairs shall be completed within 30 days of each inspection. Field logs of these inspections and documentation of the repairs shall be included in each annual monitoring report.

3. After Storm Events

Within seven days following each significant storm event (i.e. one which produces 2.5 inches or more of precipitation within a 24-hour period), the Discharger shall inspect the landfill cover and precipitation and drainage facilities for damage. Areas of erosion or sedimentation observed during the inspection(s) shall be flagged and repaired within seven days of identification. If repairs cannot be completed within the seven-day time frame, the Discharger shall notify the Regional Board of such and provide a schedule for completing necessary repairs. Findings and repairs implemented as a result of these inspections shall be included in each annual monitoring report. If no inspection was conducted because there was no significant storm event during the annual period, the report shall state such fact.

4. Site Winterization

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility for the purpose of winterizing the site. The inspection shall identify any damage to the landfill cover, grade, precipitation and drainage controls, access roads and other landfill facilities. Any necessary construction, maintenance, or repairs to these facilities shall be completed by **31 October**. The Discharger shall document the results of the winterization inspection and any repair measures implemented in the Annual Report.

Documentation of the results of the above inspections and any repairs implemented shall include field observations, the location of any damage observed (i.e. on a site map), photographs of the damage, and a description of any repairs implemented, including post-repair photographs.

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

1. **Surface Water**

The Discharger shall conduct surface water monitoring for the purpose of monitoring potential impacts from leachate seeps and/or hydraulic communication with impacted groundwater. The monitoring locations shall be as follows (see Site Map Attachments B and C):

Landfill No.2 Monitoring Point	Location	Drain
06L001SW	Upstream	Natural drain
06L005SW	Downstream	Hutchinson Creek
06L004SW	Downstream	Hutchinson Creek
06L003SW	Downstream	Natural drain
06L002SW	Downstream	Natural drain

Landfill No.3 Monitoring Point	Location	Drain
SWMP-1	Upstream	Natural drain
SWMP-2	Downstream	Natural drain
SWMP-3	Downstream	Natural drain

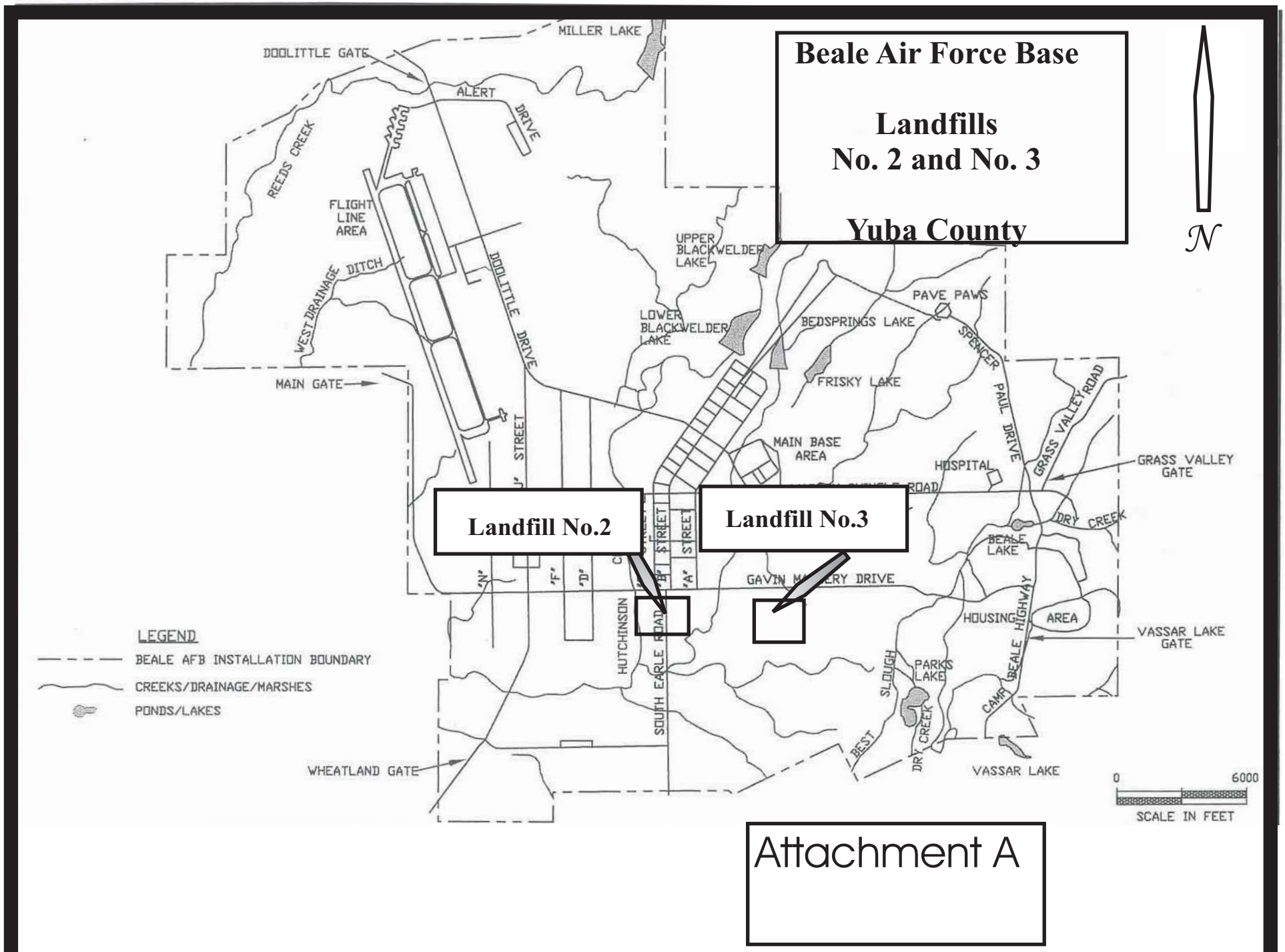
Surface water monitoring shall be conducted annually for the field and monitoring parameters specified in Table E.3.B (except for elevation). Five-year COC monitoring shall not be required for surface water. If monitoring data analysis (see Monitoring Specifications E.8 through E.10) indicates that there has been a release to surface water from the landfill, the Discharger shall propose additional monitoring locations to delineate the extent of the impact and design corrective measures, as necessary, in accordance with Sections 20425 and 20430 of Title 27.

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 Standard Provisions (*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.

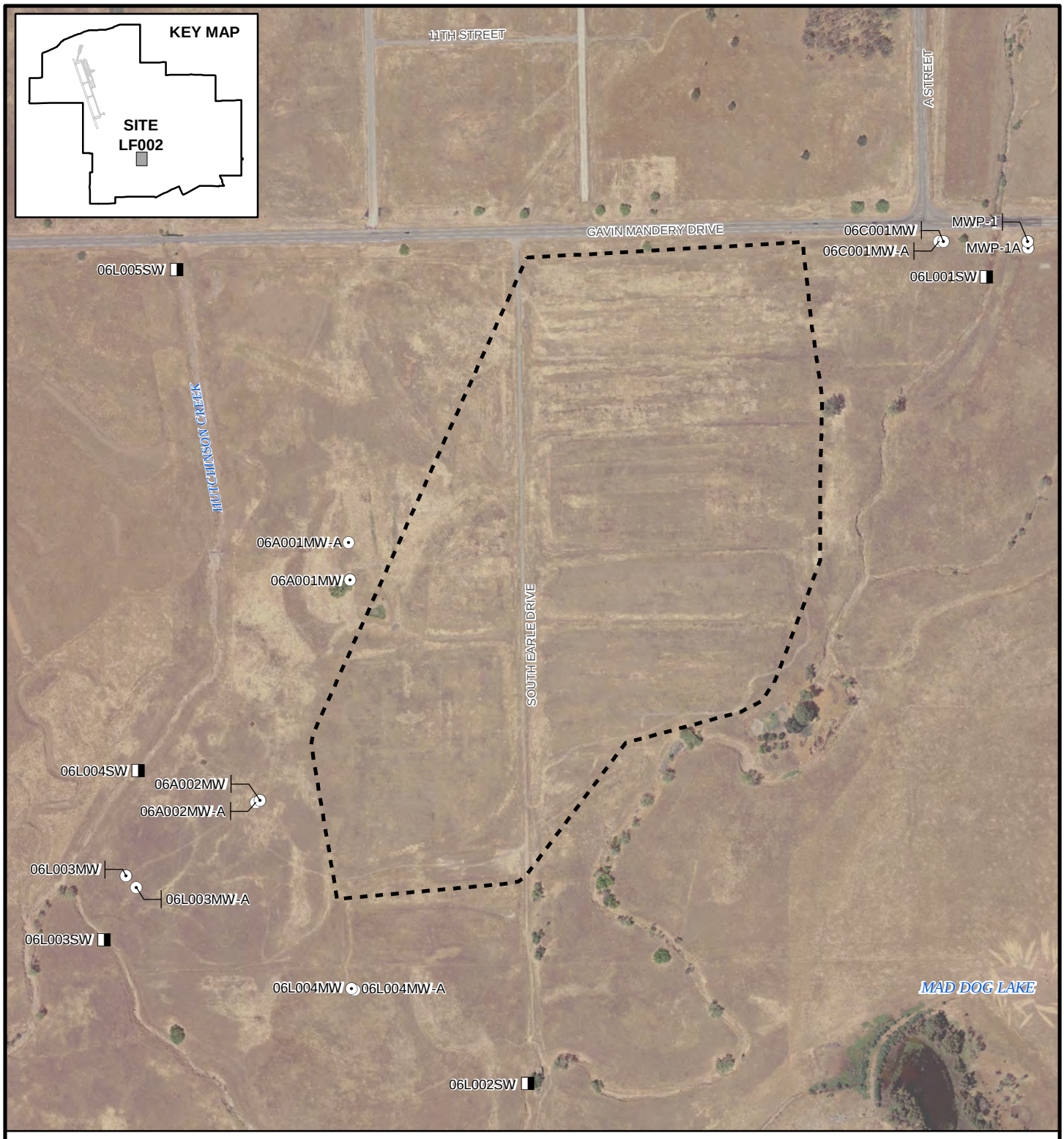
Ordered by: Andrew Attwood
For PATRICK PULUPA, Executive Officer

18 DECEMBER 2018
(Date)

Attachments
MWC



Attachment A



LEGEND

- GROUNDWATER MONITORING WELL
- SURFACE WATER SAMPLING LOCATION
- LF002 PERMITTED ALTERNATE MONITORING BOUNDARY

NOTE:

IMAGE SOURCE: BEALE AIR FORCE BASE.
IMAGE DATE: AUGUST 2016

N

0 500 1,000 feet

ATTACHMENT B
SITE LF002 MONITORING WELL AND SURFACE WATER SAMPLING LOCATIONS

SITES LF002 AND LF003 REVISED
POST-CLOSURE MAINTENANCE PLAN
BEALE AIR FORCE BASE, CALIFORNIA

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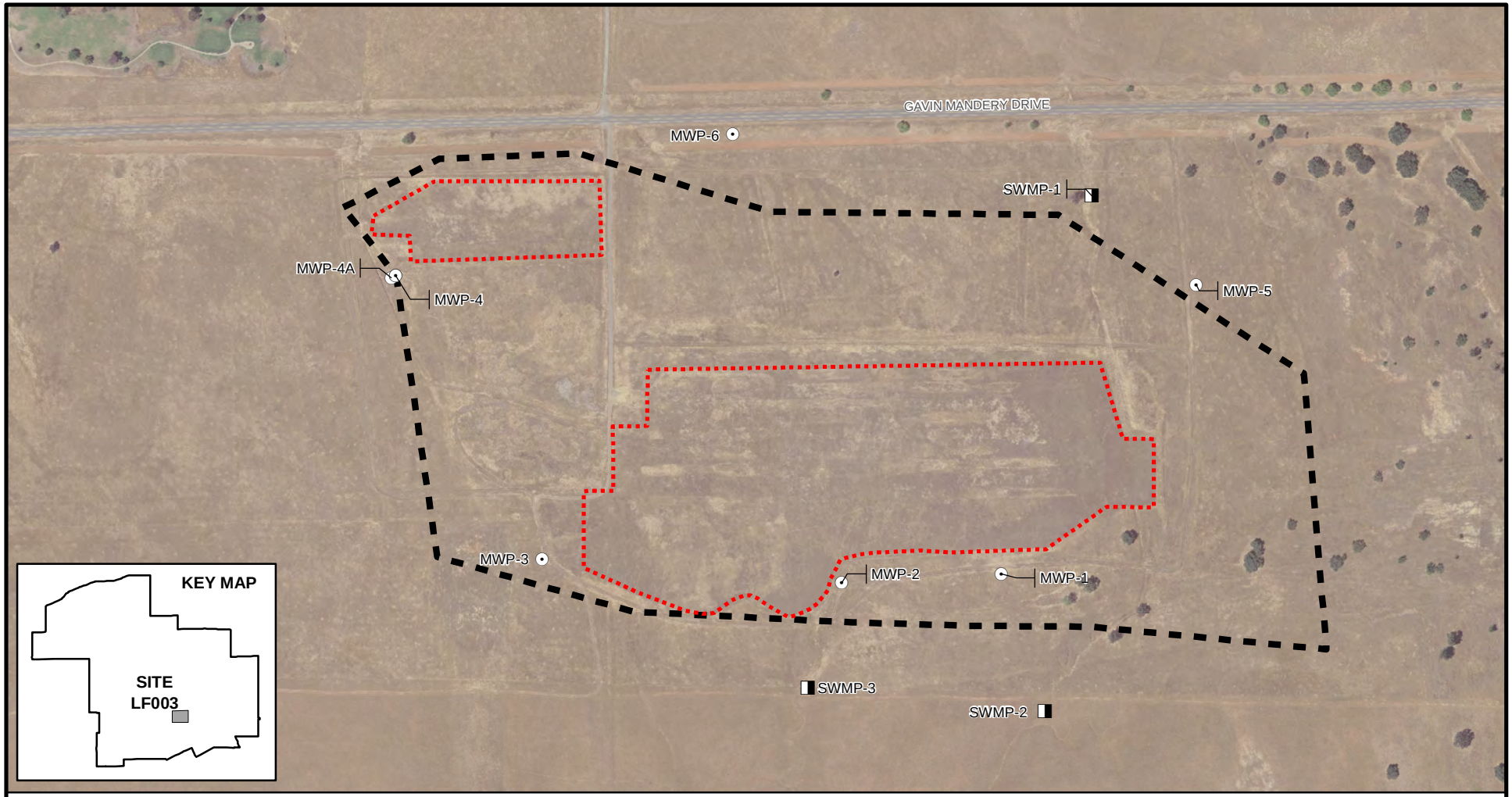

LEGEND

- GROUNDWATER MONITORING WELL
- SURFACE WATER SAMPLING LOCATION
- LF003 PERMITTED ALTERNATE MONITORING BOUNDARY
- APPROXIMATE LIMIT OF GEOMEMBRANE

0 500 1,000 feet

N

NOTE:

IMAGE SOURCE: BEALE AIR FORCE BASE.
IMAGE DATE: AUGUST 2016

ATTACHMENT C
SITE LF003 MONITORING WELL AND SURFACE WATER SAMPLING LOCATIONS

SITES LF002 AND LF003 REVISED
POST-CLOSURE MAINTENANCE PLAN
BEALE AIR FORCE BASE, CALIFORNIA

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ATTACHMENT D

MONITORING PARAMETERS &
APPROVED USEPA ANALYTICAL METHODS

Field Parameters	**USEPA Test Method**
Groundwater Elevation	----
pH	----
Specific conductance	----
Temperature	----
Turbidity	----

General Minerals	**USEPA Test Method**
Total Dissolved Solids (TDS)	2540C
Total Alkalinity	2310B
Total Hardness	2340B
<u>Major Anions</u>	
Chloride	300 (anion scan)
Nitrate – Nitrogen	300 (anion scan)
Sulfate	300 (anion scan)
<u>Major Cations</u>	
Calcium	200.7 (trace method)
Magnesium	200.7 (trace method)
Potassium	200.7 (trace method)
Sodium	200.7 (trace method)

Dissolved Inorganics[1]	**USEPA Test Method**
Antimony	200.7/6010
Arsenic	200.9/200.8
Barium	200.7/6010
Cadmium	200.7/6010
Chromium	200.7/6010
Copper	200.7/6010
Iron	200.7/6010
Lead	200.9/200.8
Manganese	200.7/6010
Mercury	7470A
Nickel	200.9/200.8
Silver	200.7/6010
Zinc	200.7/6010

ATTACHMENT D (CON'T)

Volatile Organic Compounds[2] **(**VOCs, by 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-Butlybenzene
sec-Butlybenzene
tert-Butlybenzene
tert-Butyl ethyl ether
Carbon disulfide
Carbon tetrachloride
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- l ,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

ATTACHMENT D (CON'T)

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
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-Trichloethane (Methylchloroforrn)
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)

1. Samples shall be filtered prior to performing dissolved inorganics analysis.
2. Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte per WDR Monitoring Specification E.13.

ATTACHMENT E

CONSTITUENTS OF CONCERN &
APPROVED USEPA ANALYTICAL METHODS

Field Parameters	**USEPA Test Method**
Groundwater Elevation	----
pH	----
Specific conductance	----
Temperature	----
Turbidity	----

General Minerals	**USEPA Test Method**
Total Dissolved Solids (TDS)	2540C
Total Alkalinity	2310B
Total Hardness	2340B
Major Anions	
Chloride	300 (anion scan)
Nitrate – Nitrogen	300 (anion scan)
Sulfate	300 (anion scan)
Major Cations	
Calcium	200.7 (trace method)
Magnesium	200.7 (trace method)
Potassium	200.7 (trace method)
Sodium	200.7 (trace method)

Dissolved Inorganics[1]	**USEPA Test Method**
Aluminum	200.7/6010
Antimony	200.7/6010
Arsenic	200.9/200.8
Barium	200.7/6010
Beryllium	200.7/6010
Cadmium	200.7/6010
Chromium	200.7/6010
Hexavalent Chromium	7199/1636
Cobalt	200.7/6010
Copper	200.7/6010
Iron	200.7/6010
Lead	200.9/200.8
Manganese	200.7/6010
Mercury	7470A
Molybdenum	200.7/6010
Nickel	200.9/200.8

ATTACHMENT E (CON'T)

Selenium	200.9/200.8
Silver	200.7/6010
Sulfide	9030
Thallium	200.7/6010
Tin	200.7/6010
Vanadium	200.7/6010
Zinc	200.7/6010

Volatile Organic Compounds[2] (VOCs, by 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-Butlybenzene
sec-Butlybenzene
tert-Butlybenzene
tert-Butyl ethyl ether
Carbon disulfide
Carbon tetrachloride
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- l ,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

ATTACHMENT E (CON'T)

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
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-Trichloethane (Methylchloroforrn)
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)

Semivolatile Organic Compounds[2] (USEPA Method 8270 - base, neutral, & acid extractables):
Acenaphthene
Acenaphthylene
Acetophenone
2-Acetylaminofluorene (2-AAF)
4-Aminobiphenyl
Anthracene

ATTACHMENT E (CON'T)

Benzo[a]anthracene (Benzanthracene)
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-methyethyl) 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)
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-Dimehtylphenol (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

ATTACHMENT E (CON'T)

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)
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propylnitrosamine)
N-Nitrosomethylethylamine (Methylethylnitrosamine)
N-Nitrosopiperidine
N-Nitrosospyrrolidine
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

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1. Samples shall be filtered prior to performing dissolved inorganics analysis.
2. Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte per WDR Monitoring Specification E.13.