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**[TENTATIVE] MONITORING & REPORTING PROGRAM
R5-2020-####**



ORDER INFORMATION

| | |
|-------------------------|---|
| Order Type(s): | Monitoring & Reporting Program (MRP) |
| Status: | TENTATIVE |
| Program: | Title 27 Discharges to Land |
| Region 5 Office: | Sacramento (Rancho Cordova) |
| Discharger(s): | County of Placer |
| Facility: | Loomis Landfill |
| Address: | Ong Place, near the intersection of King and Penryn Roads |
| County: | Placer County |
| Parcel Nos.: | 043-080-029 |
| WDID: | 5A310303001 |
| Prior Order(s): | 72-118, 90-053, 94-079, R5-2004-0041 |

CERTIFICATION

I, PATRICK PULUPA, Executive Officer, hereby certify that the following is a full, true, and correct copy of the order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____ [Month] [Year].

PATRICK PULUPA,
Executive Officer

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LOOMIS LANDFILL
PLACER COUNTY
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GLOSSARY

| | |
|-----------------------------|--|
| AMR | Annual Monitoring Report |
| CalRecycle | California Department of Resources Recycling and Recovery |
| CAMP | Corrective Action Monitoring Program |
| C.F.R. | Code of Federal Regulations |
| CIWQS | California Integrated Water Quality System Project |
| COCs | Constituents of Concern |
| DMP | Detection Monitoring Program |
| DWR | California Department of Water Resources |
| EC | Electrical Conductivity |
| ELAP | State Water Board's Environmental Laboratory Accreditation Program (formerly administered by California Department of Public Health) |
| EMP | Evaluation Monitoring Program |
| EW | Extraction Well |
| Five-Year COCs | Five-Year Constituents of Concern |
| GeoTracker | State Water Board's Data Management System for Sites with Potential Groundwater Impact |
| GP | Gas Probe |
| LCRS | Leachate Collection and Removal System |
| LF | Landfill |
| LFG | Landfill Gas |
| MDL | Method Detection Limit |

| | |
|--|---|
| Method TO-15 VOCs | Volatile Organic Compounds associated with USEPA Method TO-15 |
| MRP | Monitoring and Reporting Program |
| MSW | Municipal Solid Waste |
| MSWLF | Municipal Solid Waste Landfill |
| N/A | Not Applicable |
| PID | Photo Ionization Detector |
| POC | Point of Compliance for Water Quality Protection Standard |
| QA/QC | Quality Assurance/Quality Control |
| Qualified Professional | Professional Civil Engineer or Geologist licensed by the State of California |
| RCRA | Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. |
| RL | Reporting Limit |
| ROWD / JTD | Report of Waste Discharge / Joint Technical Document |
| SCAP | Sample Collection and Analysis Plan |
| SGP | Soil Pore Gas |
| SI | Surface Impoundment |
| SMR | Semiannual Monitoring Report |
| SPRRs / Standard Provisions ... | <i>Standard Provisions and Reporting Requirements for Nonhazardous Solid Waste Discharges Regulated by Subtitle D and/or Title 27 Municipal Solid Waste Facilities, December 2015 Edition</i> |
| TDS | Total Dissolved Solids |

Title 27California Code of Regulations, Title 27
USEPA.....United States Environmental Protection Agency
VOCsVolatile Organic Compounds
WDRs.....Waste Discharge Requirements
WMUWaste Management Unit
WQPSWater Quality Protection Standard

UNITS

ft³ / minCubic Feet per Minute
°FDegrees Fahrenheit
Gallons/DayGallons per Day
mg/L.....Milligrams per Liter
µg/L.....Micrograms per Liter
µmhos/cmMicrosiemens per Centimeter
µg/cm³Micrograms per Cubic Centimeter
ng/L.....Nanograms per Liter
NTUs.....Nephelometric Turbidity Units
% Vol.Percent by Volume
Inches HgInches of Mercury (Barometric Pressure)
MM Hg VacuumMillimeters of Mercury (Barometric Pressure)

PREFACE

Adopted by the California Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) pursuant to Water Code section 13267, subdivision (b)(1), this Order establishes a Monitoring and Reporting Program (MRP) for the County of Placer (Discharger), which owns and/or operates the Loomis Landfill (Facility) in Placer County. Additional information regarding the Facility is set forth in the enumerated findings of Waste Discharge Requirements Order R5-2020-#### (WDRs Order). Except as otherwise provided in the following MRP, these findings are incorporated herein.

The MRP also contains supplemental findings related to monitoring and reporting activities, and/or Facility conditions. For the purposes of California Code of Regulations, title 27 (Title 27) (e.g., §§ 21720, 20380-20435), the findings and provisions of this Order are conversely incorporated as part of the WDRs Order as well.

Although adopted with the WDRs Order, this is a separate order subject to subsequent revision by the Executive Officer in accordance with delegated authority per Water Code section 13223. For the purposes of Title 27, such revisions shall be automatically incorporated as part of the WDRs Order.

MONITORING & REPORTING PROGRAM

IT IS HEREBY ORDERED, pursuant to Water Code section 13267: that all previously issued Monitoring and Reporting Program(s) for the discharge of solid waste at the Facility are rescinded (except for enforcement purposes); and that the Discharger, their agents, employees and successors shall comply with the following Monitoring and Reporting Program (MRP). The Discharger shall not implement any changes until a revised MRP is issued by the Central Valley Water Board or its Executive Officer.

A. General Provisions

1. **Incorporation of Standard Provisions**—The Discharger shall comply with all relevant provisions of the *Standard Provisions and Reporting Requirements for Nonhazardous Solid Waste Discharges Regulated by Subtitle D and/or Title 27 Municipal Solid Waste Facilities, December 2015 Edition* (SPRRs or Standard Provisions), which are incorporated herein. See, e.g., SPRRs section I (*Standard Monitoring Specifications*) and section J (*Response to Release*).
2. **Monitoring Provisions in WDRs Order**—The Discharger shall comply with all “Monitoring Provisions” in the Facility’s operative Title 27 WDRs Order, which are also incorporated herein.
3. **Compliance with Title 27**—The Discharger shall comply with all of Title 27 provisions as they pertain to activities described in this MRP (including SPRRs).
4. **Sample Collection and Analysis Plan (SCAP)**—All samples shall be collected, preserved and transported in accordance with the most recently approved Sample Collection and Analysis Plan (SCAP) and the Quality Assurance/Quality Control (QA/QC) standards specified therein. The Discharger may use alternative analytical test methods (including new USEPA-approved methods), provided that the alternative methods have method detection limits (MDLs) equal to or lower than the analytical methods specified in this MRP and are identified in the approved SCAP. At the time of the adoption of the WDRs, the Discharger does not have an approved SCAP on file. The WDRs are requiring that the Discharger submit a SCAP for review and approval.

B. Detection Monitoring Program (DMP)—To detect a release at the earliest possible time (see Title 27, § 20420, subd. (b)), the Discharger shall implement a Detection Monitoring Program (DMP) for groundwater and surface water in accordance with the provisions of Title 27, particularly sections 20415 and 20420. Groundwater and surface water¹ detection monitoring networks shall be revised (as needed).

1. Groundwater

a. Required Network—The Facility’s groundwater monitoring well network consists of the wells listed in **Table 1**.² As of the date of this Order, the network meets the requirements of Title 27. (Title 27, § 20415, subd. (b).)

Table 1—Groundwater Monitoring Network

| Well | Program | Point of Compliance (WQPS) |
|--------|------------------------------|----------------------------|
| MW-1A | Corrective Action | No |
| MW-2A | Detection, Corrective Action | Yes |
| MW-3A | Detection, Corrective Action | Yes |
| MW-4A | Detection, Corrective Action | Yes |
| MW-5A | Background | No |
| MW-6A | Background | No |
| MW-8A | Detection, Corrective Action | Yes |
| MW-9A | Detection, Corrective Action | Yes |
| MW-10B | Corrective Action | No |
| MW-11C | Background | No |
| MW-12C | Proposed | No |
| OW-1 | Evaluation | No |
| OW-2 | Corrective Action | No |
| B | Private/Domestic | No |
| HD-1 | Private/Domestic | No |
| HD-2 | Private/Domestic | No |
| HH | Private/Domestic | No |

See Glossary for definitions of terms and abbreviations in table. **Private wells are only required to be sampled if property access is granted by the well owners.**

¹ I.e., to the extent that surface water detection monitoring is required under this Order.

² Non-background monitoring wells at the Point of Compliance constitute “Monitoring Points” for purposes of the Water Quality Protection Standard (WQPS).

- b. **Sample Collection and Analysis**—Groundwater samples shall be collected from each well and analyzed for Monitoring Parameters listed in **Table 2** (*Physical Parameters*) and **Table 3** (*Constituent Parameters*), in accordance with the specified schedule for each parameter. (Title 27, § 20420, subs. (e)-(f).)

Table 2—Groundwater Detection Monitoring, Physical Parameters

| Physical Parameter | GeoTracker Code | Units | Sampling Freq. | Reporting Freq. |
|-------------------------|-----------------|----------|----------------|-----------------|
| Temperature | TEMP | °F | Semiannually | Semiannually |
| Electrical Conductivity | SC | µmhos/cm | Semiannually | Semiannually |
| pH | PH | pH Units | Semiannually | Semiannually |
| Turbidity | TURB | NTUs | Semiannually | Semiannually |

See Glossary for definitions of terms and abbreviations in table.

Table 3—Groundwater Detection Monitoring, Constituent Parameters

| Constituent Parameter | GeoTracker Code | Units | Sampling Freq. | Reporting Freq. |
|---|-----------------|-------|----------------|-----------------|
| Bicarbonate Alkalinity | BICACO3 | mg/L | Semiannually | Semiannually |
| Chemical Oxygen Demand | COD | mg/L | Semiannually | Semiannually |
| TDS | TDS | mg/L | Semiannually | Semiannually |
| Chloride | CL | mg/L | Semiannually | Semiannually |
| Sulfate | SO4 | mg/L | Semiannually | Semiannually |
| Short List VOCs (Attachment A) | (various) | µg/L | Semiannually | Semiannually |
| 1,2,3-Trichloropropane per Method SRL-524M-TCP | TCPR123 | ng/L | Semiannually | Semiannually |
| Nitrate as Nitrogen | NO3N | mg/L | Annually | Annually |
| Dissolved Calcium | CA | mg/L | Annually | Annually |
| Dissolved Magnesium | MG | mg/L | Annually | Annually |
| Dissolved Potassium | K | mg/L | Annually | Annually |
| Dissolved Sodium | NA | mg/L | Annually | Annually |

See Glossary for definitions of terms and abbreviations in table.

- c. **Five-Year COCs**—The Discharger shall analyze for groundwater samples from each well for the Five-Year Constituents of Concern (Five-Year COCs) listed in **Table 4**. Five-Year COCs were last monitored in 2016, and shall be analyzed again in 2021. (Title 27, § 20420, subd. (g).)

Table 4—Groundwater Detection Monitoring, Five-Year COCs

| Five-Year Constituent | GeoTracker Code | Units | Sampling & Reporting Freq. |
|--|-----------------|-------|---|
| Total Organic Carbon | TOC | mg/L | Sampling to be conducted during the 2 nd Semiannual 2021 monitoring period and every 5 years thereafter. |
| Dissolved Inorganics (Attachment B) | (various) | µg/L | (same) |
| Extended List VOCs (Attachment C) | (various) | µg/L | (same) |
| Semi-Volatile Organic Compounds (Attachment D) | (various) | µg/L | (same) |
| Chlorophenoxy Herbicides (Attachment E) | (various) | µg/L | (same) |
| Organophosphorus Compounds (Attachment F) | (various) | µg/L | (same) |

See Glossary for definitions of terms and abbreviations in table.

- d. **Groundwater Conditions**—Each quarter, the Discharger shall monitor the Groundwater Conditions specified in **Table 5**, with the result of such monitoring being reported semiannually per **Section E.1.**³ (Title 27, § 20415, subd. (b)(1).)

³ To the extent feasible, this information shall be determined separately for: (1) the uppermost aquifer; (2) any zones of perched water; and (3) any additional zone of saturation monitored based upon water level elevations taken prior to the collection of the water quality data submitted in the report. (Title 27, § 20415, subd. (e)(15).)

**Table 5—Groundwater Detection Monitoring,
 Groundwater Conditions**

| Groundwater Condition | GeoTracker Code | Monitoring Freq. | Reporting Freq. |
|---------------------------|-----------------|------------------|-----------------|
| Elevation (Well-Specific) | ELEV | Quarterly | Semiannually |
| Gradient | (none) | Quarterly | Semiannually |
| Flow Rate | (none) | Quarterly | Semiannually |

2. Unsaturated Zone

a. Required Network—Unsaturated zone monitoring is not feasible since the Facility overlies bedrock. However, landfill gas monitoring is being conducted at the Facility as part of the approved Corrective Action Program. See **Section C.1** for the specific monitoring requirements.

3. Surface Water—Runoff from the Facility is collected in one or more drainage channels, which periodically flow to Secret Ravine, which may be affected by a release. (See Title 27, § 20415, subd. (c)(1).)

a. Required Network—The Facility’s surface water monitoring network consists of the monitoring points listed in **Table 6**. As of the date of this Order, the network does not meet the requirements of Title 27. (See § 20415, subd. (c).) **There is a surface water drainage channel located southwest of the Facility. The surface water monitoring network needs to be expanded to include sampling of this channel.** The WDRs require that the Discharger submit a Sampling Collection and Analysis Plan, including new surface water sampling points for the channel located southwest of the Facility, for review and approval **by 31 January 2021**.

Table 6—Surface Water Detection Monitoring Network

| Monitoring Point | Program or Function | Location / Notes |
|------------------|-----------------------|------------------|
| SR-A | Background (Upstream) | Secret Ravine |
| SR-B | Downstream | Secret Ravine |

See Glossary for definitions of terms and abbreviations in table.

- b. **Sample Collection and Analysis**—When surface water is present at monitoring points in **Table 6** at any point during the monitoring period, samples shall be collected from each monitoring point and analyzed for the Monitoring Parameters in **Table 7** (*Physical Parameters*) and **Table 8** (*Constituent Parameters*), in accordance with the specified schedule. (Title 27, § 20420, subds. (e)-(f).)

Table 7—Surface Water Detection Monitoring, Physical Parameters

| Physical Parameter | GeoTracker Code | Units | Sampling Freq. | Reporting Freq. |
|--|-----------------|------------|----------------|-----------------|
| Electrical Conductivity | SC | µmhos/cm | Semiannually | Semiannually |
| pH | PH | Std. Units | Semiannually | Semiannually |
| Turbidity | TURB | NTUs | Semiannually | Semiannually |
| Temperature | TEMP | °F | Semiannually | Semiannually |
| Hardness | HARD | mg / L | Semiannually | Semiannually |
| Flow to Surface Waters at Time of Sampling | (none) | Yes/No | Semiannually | Semiannually |

See Glossary for definitions of terms and abbreviations in table.

Table 8—Surface Water Detection Monitoring, Constituent Parameters

| Constituent Parameter | GeoTracker Code | Units | Sampling Freq. | Reporting Freq. |
|------------------------|-----------------|-------|----------------|-----------------|
| Bicarbonate Alkalinity | BICACO3 | mg/L | Semiannually | Semiannually |
| Chemical Oxygen Demand | COD | mg/L | Semiannually | Semiannually |
| TDS | TDS | mg/L | Semiannually | Semiannually |
| Chloride | CL | mg/L | Semiannually | Semiannually |
| Sulfate | SO4 | mg/L | Semiannually | Semiannually |
| Nitrate as Nitrogen | NO3N | mg/L | Annually | Annually |
| Dissolved Calcium | CA | mg/L | Annually | Annually |
| Dissolved Magnesium | MG | mg/L | Annually | Annually |
| Dissolved Potassium | K | mg/L | Annually | Annually |
| Dissolved Sodium | NA | mg/L | Annually | Annually |

See Glossary for definitions of terms and abbreviations in table.

4. Summary of Water Quality Protection Standard (WQPS)

Components—The Water Quality Protection Standard (WQPS) is the Title 27 analytical framework through which an individual WMU is monitored for releases and impacts to water quality, i.e., the Detection Monitoring Program (DMP). (See Title 27, § 20390, subd. (a).) As explained in further detail below, for the duration of the *Compliance Period*, the *Monitoring Points* situated at a WMU's *Point of Compliance* are sampled and analyzed for *Monitoring Parameters* indicative of a release. If concentrations of *Constituents of Concern* exceed *Concentration Limits*, the results are confirmed through *Retesting Procedures*.

- a. **Compliance Period**—The “compliance period” is the minimum time for which a water quality monitoring will be required— i.e., equal to the sum of active years and the closure period. (Title 27, § 20410.) The period restarts each time an Evaluation Monitoring Program (EMP) is initiated for a given WMU. (*Id.*, §§ 20410(a), 20415, 20425.) If a WMU is in corrective action, the period continues until it is demonstrated that the WMU has been in continuous compliance with its WQPS for at least three years. (*Id.*, § 20410, subd. (c).)
- b. **Monitoring Points**—For WQPS purposes, a “monitoring point” is any well, device, or location where monitoring is conducted, and is specified in the Facility’s WDRs and subject to the WQPS. (Title 27, § 20164.) Monitoring Points are listed in **Section B** (*Detection Monitoring Program*)—specifically **Table 1** (*Groundwater*) and **Table 6** (*Surface Water*).
- c. **Point of Compliance (POC)**—The Point of Compliance (POC) is a vertical plane at the WMU’s hydraulically downgradient limit, extending through the uppermost underlying aquifer. (Title 27, §§ 10164, 20405(a).) The Facility’s POC monitoring wells are listed below in **Table 1**.
- d. **Constituents of Concern (COCs)**—Constituents of Concern (COCs) are waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in a WMU. (Title 27, §§ 20164, 20395.)
- e. **Monitoring Parameters**—Monitoring Parameters are a predetermined set of COCs and measurable physical characteristics (e.g., temp., electrical conductivity, pH), which serve as reliable indicators of a WMU release, and for which samples will therefore be routinely analyzed. (Title 27, §§ 20164, 20395(a), 20420(e)-(f).) For the purposes of this MRP, the Monitoring Parameters are:

- i. For **Surface Water**, those in Table 7 and Table 8;
 - ii. For **Groundwater**, those in Table 2 and Table 3; and
- f. Five-Year COCs**—In addition to the Monitoring Parameters described above, this Order requires the *quinquennial analysis* of samples for a larger range of constituents that are reasonably expected to be found in, or derived from, the waste contained within each unit at the Facility. (Title 27, §§ 20395, 20420(g).) Analytical results for Five-Year COCs were last submitted to the Central Valley Water Board as part of the 2016 Annual Monitoring Report and are due again in 2021. For the purposes of this MRP, the Five-Year COCs are listed in:
- i. **Attachment B** (*Dissolved Inorganics*);
 - ii. **Attachment C** (*Extended List VOCs*);
 - iii. **Attachment D** (*Semi-Volatile Organic Compounds*);
 - iv. **Attachment E** (*Chlorophenoxy Herbicides*);
 - v. **Attachment F** (*Organophosphorus Compounds*); and
 - vi. Any other COCs listed in **Table 4** (*Groundwater*).
- g. Concentration Limits**—The Concentration Limit for each COC is the “background concentration,” as determined by the statistical methods outlined in subdivision (e)(8) of Title 27, section 20415.⁴ (Title 27, § 20400, subs. (a), (b).) Methods for calculating Concentration Limits were proposed in the most recently approved WQPS Report. The approved methods use interwell tolerance interval plots to evaluate the nature and extent of the current release and intrawell statistical analysis to determine trends.

Concentration Limits shall be proposed and/or updated by the Discharger on an annual basis, in the Annual Monitoring Report (AMR) submitted per **Section E.2**. Unless expressly rejected by the Executive Officer in writing, these Concentration Limits shall be incorporated as part of this Order.

⁴ Concentration Limits are initially proposed by the discharger, then reviewed and approved by the Central Valley Water Board (subject to any necessary revisions). The limits specified herein are approved and incorporated as part of the Facility’s WDRs.

h. Retesting Procedures—If monitoring results indicate measurably significant evidence of a release, as described in Section I.45 of the SPRRs (*Standard Monitoring Specifications*), the Discharger shall apply the following:

- i. **Non-Statistical Retesting Procedures (SPRRs, § I.46)** for analytes detected in less than 10 percent of background samples (e.g., non-naturally occurring COCs); and
- ii. **Statistical Retesting Procedures (SPRRs, § I.46)** for analytes detected in at least 10 percent of background samples (e.g., naturally occurring COCs).

C. Corrective Action Monitoring Program (CAMP)—To demonstrate the effectiveness of ongoing correction action at the Facility, the Discharger shall perform the following additional monitoring in accordance with of subdivision (d) of Title 27, section 20430.

1. Landfill Gas Corrective Action—The Facility’s landfill gas (LFG) corrective action system currently consists of a free venting gas collection system.

a. Probe Network—The Facility’s network of LFG probes, used to monitor the impacts of the LFG collection system upgrades, includes the following LFG probes: **GP-4, GP-7, and P-4**. These probes shall be monitored in accordance with the Monitoring Parameters in **Table 9**.

Table 9—Landfill Gas Corrective Action, Probe Network Monitoring Parameters

| Parameter | Units | Sampling Freq. | Reporting Freq. |
|-------------------------|----------------------------|----------------|-----------------|
| Atmospheric Temperature | °F | Quarterly | Annually |
| Atmospheric Pressure | PSIG | Quarterly | Annually |
| Methane | % by volume | Quarterly | Annually |
| Carbon Dioxide | % by volume | Quarterly | Annually |
| Oxygen | % by volume | Quarterly | Annually |
| Nitrogen | % by volume | Quarterly | Annually |
| Pressure / Vacuum | Inches of H ₂ O | Quarterly | Annually |

| Parameter | Units | Sampling Freq. | Reporting Freq. |
|---|--------------------|----------------|-----------------|
| Volatile Organic Compounds per USEPA Method TO-15 | µg/cm ³ | Semiannually | Annually |

See Glossary for definitions of terms and abbreviations in table.

D. Additional Facility Monitoring

1. **Leachate Collection & Removal System (LCRS)**—The Discharger shall operate and maintain leachate collection trench and sump and conduct monitoring of any detected leachate seeps in accordance with Title 27 and the following provisions.
 - a. **Monthly Sump Inspection**—All LCRS sumps shall be inspected monthly for the presence of leachate. As provided in **Table 10**, the total flow and flow rate for leachate in each sump shall be recorded after each inspection and reported semiannually per **Section E.1**.

Table 10—LCRS Sump Monitoring, Monthly Inspection Parameters

| Physical Parameter | GeoTracker Code | Units | Sampling Freq. | Reporting Freq. |
|--------------------|-----------------|-------------|----------------|-----------------|
| Total Flow | (none) | Gallons | Monthly | Semiannually |
| Flow Rate | FLOW | Gallons/Day | Monthly | Semiannually |

See Glossary for definitions of terms and abbreviations in table.

- b. **Sample Collection and Analysis**— When leachate is present in the collection sump, samples shall be collected and analyzed for the parameters in **Table 11**⁵, in accordance with the specified schedule.

⁵ The sampling and reporting schedules in Table 11 are applicable for subsequent monitoring only. When notifying Central Valley Water Board staff of the first detection of leachate, the Discharger shall indicate when laboratory results are expected to be available.

Table 11—LCRS Sump Monitoring, Parameters for Subsequent Monitoring

| Constituent Parameter | GeoTracker Code | Units | Sampling Freq. | Reporting Freq. |
|--|-----------------|-------|----------------|-----------------|
| Bicarbonate Alkalinity | BICACO3 | mg/L | Semiannually | Semiannually |
| Chemical Oxygen Demand | COD | mg/L | Semiannually | Semiannually |
| TDS | TDS | mg/L | Semiannually | Semiannually |
| Chloride | CL | mg/L | Semiannually | Semiannually |
| Sulfate | SO4 | mg/L | Semiannually | Semiannually |
| Short List VOCs (Attachment A) | (various) | µg/L | Semiannually | Semiannually |
| 1,2,3-Trichloropropane per Method SRL-524M-TCP | TCPR123 | ng/L | Semiannually | Semiannually |
| Nitrate as Nitrogen | NO3N | mg/L | Annually | Annually |
| Dissolved Calcium | CA | mg/L | Annually | Annually |
| Dissolved Magnesium | MG | mg/L | Annually | Annually |
| Dissolved Potassium | K | mg/L | Annually | Annually |
| Dissolved Sodium | NA | mg/L | Annually | Annually |

See Glossary for definitions of terms and abbreviations in table.

- c. **Five-Year COCs**—At least once every five years, the Discharger shall sample and analyze any leachate present in the sump for the Five-Year COCs listed in **Table 12**. Five-Year COCs were last monitored in 2016, and shall be analyzed again in 2021.

Table 12—LCRS Sump Monitoring, Five-Year COCs

| Parameter | GeoTracker Code | Units | Sampling & Reporting Freq. |
|--|-----------------|-------|---|
| Total Organic Carbon | TOC | mg/L | Sampling to be conducted during the 2 nd Semiannual 2021 monitoring period and every 5 years thereafter. |
| Dissolved Inorganics (Attachment B) | (various) | µg/L | (same) |
| Extended List VOCs (Attachment C) | (various) | µg/L | (same) |
| Semi-Volatile Organic Compounds (Attachment D) | (various) | µg/L | (same) |

| Parameter | GeoTracker Code | Units | Sampling & Reporting Freq. |
|---|-----------------|-------|----------------------------|
| Chlorophenoxy Herbicides (Attachment E) | (various) | µg/L | (same) |
| Organophosphorus Compounds (Attachment F) | (various) | µg/L | (same) |

See Glossary for definitions of terms and abbreviations in table.

- Leachate Seepage**—Leachate that seeps to the surface from any landfill WMU shall, immediately upon detection, be sampled and analyzed for the Monitoring Parameters in **Table 13** (*Physical Parameters*) and **Table 14** (*Constituent Parameters*). See **Section E.3** for Reporting Requirements.) In the event of a reported leachate seep, Central Valley Water Board staff may direct additional sampling and analysis pursuant to Water Code section 13267, subdivision (b)(1).

Table 13—Leachate Seep Monitoring, Physical Parameters

| Physical Parameter | GeoTracker Code | Units | Sampling Freq. | Reporting Freq. |
|-------------------------|-----------------|-------------|----------------|-----------------|
| Total Flow | (none) | Gallons | Upon Detection | See MRP, § E.3 |
| Flow Rate | FLOW | Gallons/Day | (same) | (same) |
| Electrical Conductivity | SC | µmhos/cm | (same) | (same) |
| pH | PH | pH Units | (same) | (same) |

See Glossary for definitions of terms and abbreviations in table.

Table 14—Leachate Seep Monitoring, Constituent Parameters

| Constituent Parameter | GeoTracker Code | Units | Sampling Freq. | Reporting Freq. |
|-----------------------|-----------------|-------|----------------|-----------------|
| TDS | TDS | mg/L | Upon Detection | See MRP, § E.3 |
| Chloride | CL | mg/L | (same) | (same) |
| Carbonate | CACO3 | mg/L | (same) | (same) |
| Bicarbonate | BICACO3 | mg/L | (same) | (same) |
| Nitrate as N | NO3N | mg/L | (same) | (same) |
| Sulfate | SO4 | mg/L | (same) | (same) |
| Calcium | CA | mg/L | (same) | (same) |
| Magnesium | MG | mg/L | (same) | (same) |
| Potassium | K | mg/L | (same) | (same) |
| Sodium | NA | mg/L | (same) | (same) |

| Constituent Parameter | GeoTracker Code | Units | Sampling Freq. | Reporting Freq. |
|--|-----------------|-------|----------------|-----------------|
| Short List VOCs (Attachment A) | (various) | µg/L | (same) | (same) |
| 1,2,3-Trichloropropane per Method SRL-524M-TCP | TCPR123 | ng/L | (same) | (same) |

See Glossary for definitions of terms and abbreviations in table.

3. **Regular Visual Inspection**—The Discharger shall perform regular visual inspections at the Facility in accordance with **Table 15** (*Criteria*) and **Table 16** (*Schedule*). Results of these regular visual inspections shall be included in Semiannual Monitoring Reports per **Section E.1**.

Table 15—Criteria for Regular Visual Inspections

| Category | Criteria |
|------------------|---|
| Within Unit | <ul style="list-style-type: none"> Evidence of ponded water at any point on unit outside of any contact storm water/leachate diversions structures on the active face of unit (record affected areas on map). Evidence of erosion and/or of day-lighted refuse. |
| Unit Perimeter | <ul style="list-style-type: none"> Evidence of leachate seep. Estimated size of affected area (record on map) and flow rate. Evidence of erosion and/or of day-lighted refuse. Evidence of leakage from leachate tanks and/or piping. |
| Receiving Waters | <ul style="list-style-type: none"> Floating and suspended materials of waste origin—presence or absence, source and size of affected areas. Discoloration and turbidity—description of color, source and size of affected areas. |

Table 16—Regular Visual Inspection Schedule

| Category | Wet Season (1 Oct. to 30 April) | Dry Season (1 May to 30 Sept.) |
|--------------------------|------------------------------------|-----------------------------------|
| Inactive or Closed Units | Monthly | Quarterly |

- 4. Annual Facility Inspections**—Prior to **30 September** of each year, the Discharger shall inspect the Facility to assess repair and maintenance needs for drainage control systems, cover systems and groundwater monitoring wells; and preparedness for winter conditions (e.g., erosion and sedimentation control). If repairs are made as result of the annual inspection, problem areas shall be photographed before and after repairs. Any necessary construction, maintenance, or repairs shall be completed by 31 October. See **Section E.4** for Reporting Requirements.
- 5. Major Storm Events**—Within **seven days** of any storm event that produces surface runoff or one that is capable of causing damage or significant erosion (Major Storm Event), the Discharger shall inspect the Facility for damage to any precipitation, diversion and drainage facilities, and all landfill side slopes. Necessary repairs shall be completed within 30 days of the inspection. the Discharger shall take photos of any problem areas before and after repairs. See **Section E.5** for Reporting Requirements.
- 6. Five-Year Iso-Settlement Surveys (Closed Landfills)**—Every five years, the Discharger shall conduct an iso-settlement survey of each closed landfill unit and produce an iso-settlement map accurately depicting the estimated total change in elevation of each portion of the final cover's low-hydraulic-conductivity layer. For each portion of the landfill, this map shall show the total lowering of the surface elevation of the final cover, relative to the baseline topographic map. (Title 27, § 21090, subd. (e)(1)-(2).) See **Section E.6** for Reporting Requirements.

E. Reporting Requirements

Table 17—Summary of Required Reports

| Section | Report | Deadline |
|----------------|--|--|
| § E.1 | <i>Semiannual Monitoring Reports (SMRs)</i> | 1 August (1 January to 30 June) 1 February (1 July to 31 December) |
| § E.2 | <i>Annual Monitoring Reports (AMRs)</i> | 1 February |
| § E.3 | <i>Leachate Seep Reporting</i> | Immediately upon Discovery of Seepage (staff notification) Within 7 Days (written report) |
| § E.4 | <i>Annual Facility Inspection Reports</i> | 15 November |
| § E.5 | <i>Major Storm Reporting</i> | Immediately after Damage Discovery (staff notification) Within 14 Days of Completing Repairs (written report, photos) |
| § E.6 | <i>Survey and Iso-Settlement Mapping</i> | Every Five Years (Next Due in 2023) |
| § E.7 | <i>Water Quality Protection Standard Reports</i> | Proposed Revisions (excluding Concentration Limits) |

1. **Semiannual Monitoring Reports (SMRs)**—The Discharger shall submit Semiannual Monitoring Reports (SMRs) by **1 August** (1 Jan. to 30 June) and **1 February** (1 July to 31 Dec.). SMRs shall contain the following materials and information:
 - a. A statement affirming that all sampling activities referenced in the report were conducted in accordance with the approved SCAP (see § A.4).
 - b. Map(s)/aerial photograph(s) depicting locations of all observation stations, monitoring points referenced in the report.
 - c. In tabulated format, all monitoring data required to be reported on a semiannual basis, including Groundwater Conditions and Monitoring Parameters. (See Section E.8.b for additional requirements.)
 - d. For each groundwater monitoring point referenced in the SMR:
 - i. The time each water level measurement was taken;
 - ii. The type of pump or other device used to purge and the elevation of the pump intake relative to the elevation of the screened interval;
 - iii. The purging methods used to stabilize water in the well bore before sampling (including pumping rate);
 - iv. The equipment and methods used for monitoring pH, temperature and electrical conductivity (EC) during purging activity, and the results of such monitoring;
 - v. Methods for disposing of purged water; and
 - vi. The type of device used for sampling, if different than the one used for purging.
 - e. Evaluation of concentrations for all Constituent Parameters and Five-Year COCs (when analyzed), comparison to current Concentration Limits, and results of any Retesting Procedures per Section B.4.h.
 - f. In the event of a verified exceedance of Concentration Limit(s), any actions taken per Section J of the SPRRs (*Response to Release*) for wells and/or constituents not already specifically addressed in Corrective Action Monitoring under this MRP.

- g. Evaluation as to effectiveness of existing leachate monitoring and control facilities, and runoff/run-on control facilities.
 - h. Summaries of all Regular Visual Inspections conducted per Section D.3 during the reporting period.
 - i. For closed landfills, summaries of inspections, leak searches and final cover repairs conducted in accordance with an approved Post-Closure Maintenance Plan per Standard Provisions G.26-29 (*Standard Closure and Post-Closure Maintenance Specifications*).
 - j. Laboratory statements of results of all analyses evaluating compliance with the WDRs.
- 2. Annual Monitoring Reports (AMRs)**—By **1 February** of each year,⁶ the Discharger shall submit an Annual Monitoring Report (AMR) containing following materials and information:
- a. In tabulated format, all monitoring data for which annual reporting is required under this MRP. (See Section E.8.b for additional requirements for monitoring reports.)
 - b. Graphs of historical trends for all Monitoring Parameters and Five-Year COCs (if such analyses were performed) with respect to each monitoring point over the five prior calendar years.⁷
 - c. An evaluation of Monitoring Parameters with regard to the cation/anion balance, and graphical presentation of same in a Stiff diagram, Piper graph, or Schoeller plot.
 - d. All historical monitoring data for which there are detectable results, including data for the previous year, shall be submitted in tabular form in a digital file.
 - e. For each groundwater well, quarterly hydrographs showing the elevation of groundwater with respect to the top and bottom of the screened interval, and the elevation of the pump intake,

⁶ The Annual Monitoring Report may be combined with the Semiannual Monitoring Report for 1 July through 31 December of the same year, provided that the combination is clearly indicated in the title.

⁷ Each graph shall contain individual data points (not mean values) and be appropriately scaled to accurately depict statistically significant trends or variations in water quality.

- f. A comprehensive discussion of the Facility's compliance record, and the result of any corrective actions taken or planned which may be needed to attain full compliance with the WDRs.
 - g. A summary of the monitoring results, indicating any changes made or observed since the previous AMR.
 - h. Annual updates to the Concentration Limits for all Monitoring Parameters and WQPS Monitoring Points, in accordance with Section B.4.g of this Order.
 - i. A discussion of the progress of ongoing Corrective Action at the Facility.
- 3. Leachate Seep Reporting**—Upon discovery of seepage from any disposal area within the Facility, the Discharger shall **immediately notify** the Central Valley Water Board via telephone or email; and **within seven days**, submit a written report with the following information:
- a. Map(s) depicting the location(s) and extent of seepage;
 - b. Estimated flow rate(s);
 - c. A description of the nature of the discharge (e.g., all pertinent observations and analyses);
 - d. Verification that samples have been submitted for analyses of the Monitoring Parameters in Table 13 (*Physical Parameters*) and Table 14 (*Constituent Parameters*), and an estimated date that the results will be submitted to the Central Valley Water Board; and
 - e. Corrective measures underway or proposed, and corresponding time schedule.
- 4. Annual Facility Inspection Report**—By **15 November**, the Discharger shall submit a report with results of the Annual Facility Inspection per **Section D.4**. The report shall discuss any repair measures implemented, any preparations for winter, and include photographs of any problem areas and repairs.
- 5. Major Storm Event Reports**—Immediately following each post-storm inspection described in **Section D.5**, the Discharger shall notify Central Valley Water Board staff of any damage or significant erosion (upon discovery). Subsequent repairs shall be reported to the Central Valley Water Board (together with before and after photos of the repaired areas) **within 14 days** of completion.

6. **Survey and Iso-Settlement Map (Closed Landfill Units)**—The Discharger shall submit all iso settlement maps prepared in accordance with **Section D.6.** (Title 27, § 21090, subd. (e).) The next maps are due on 2023.
7. **Water Quality Protection Standard Report**—Any proposed changes⁸ to the Water Quality Protection Standard (WQPS) components (§ B.4), other than periodic update of the Concentration Limits (§ B.4.g), shall be submitted in a WQPS Report for review and approval. The report shall be certified by a “Qualified Professional” (§ B), and contain the following:
 - a. *Potentially Affected Waterbodies*—An identification of all distinct bodies of surface water and groundwater potentially affected by a WMU release (including, but not limited to, the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the Facility);
 - b. *Map of Monitoring Points*—A map of all groundwater, surface water⁹ and unsaturated zone monitoring points (including all background/upgradient and Point of Compliance monitoring points);
 - c. *Groundwater Movement*—An evaluation of perennial direction(s) of groundwater movement within the uppermost zone(s);
 - d. *Statistical Method for Concentration Limits*—A proposed statistical method for calculating Concentration Limits for Monitoring Parameters and Five-Year COCs (see § B.4.f) detected in at least 10 percent of the background data (naturally-occurring constituents) using a statistical procedure from subdivisions (e)(8)(A)-(D) or (e)(8)(E) of Title 27, section 20415; and
 - e. *Retesting Procedure*—A retesting procedure to confirm or deny measurably significant evidence of a release (Title 27, §§ 20415(e)(8)(E), 20420(j)(1)-(3)).

⁸ If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to onsite waste management activities, the [DISCHARGERS] may request modification of the WQPS.

⁹ To the extent that surface water monitoring is included in the Detection Monitoring Program.

8. General Reporting Provisions

a. **Transmittal Letters**—Each report submitted under this MRP shall be accompanied by a Transmittal Letter providing a brief overview of the enclosed report, as well as the following:

- i. Any violations found since the last report was submitted, a description of all actions undertaken to correct the violation (referencing any previously submitted time schedules for compliance), and whether the violations were corrected; and
- ii. A statement from the submitting party, or its authorized agent, signed under penalty of perjury, certifying that, to the best of the signer's knowledge, the contents of the enclosed report are true, accurate and complete.

b. Monitoring Data and Reports

i. **Electronic Submission via GeoTracker**—All reports with monitoring data (e.g., SMRs and AMRs) shall be submitted electronically via the State Water Board's [GeoTracker Database](https://geotracker.waterboards.ca.gov) (<https://geotracker.waterboards.ca.gov>). After uploading a report, the Discharger shall notify Central Valley Water Board staff via email at CentralValleySacramento@WaterBoards.ca.gov. The following information shall be included in the body of the email:

| | |
|------------------------------|--|
| Attention: | Title 27 Compliance & Enforcement Unit |
| Report Title: | [Title of Report] |
| GeoTracker Upload ID: | [Identification Number] |
| Facility Name: | Loomis Landfill |
| County: | Placer County |
| CIWQS Place ID: | 5A310303001 |

ii. **Data Presentation and Formatting**—In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. Additionally, data shall be summarized in a manner that clearly illustrates compliance/noncompliance with WDRs.

iii. **Non-Detections / Reporting Limits**—Unless the reporting limits (RL) are specified in the same table, non-detections

and sub-RL concentrations shall be reported as “< [limit]” (e.g., “< 5 µg/L”).

- iv. **Units**—Absent specific justification, all monitoring data shall be reported in the units specified herein.
 - c. **Compliance with SPRRs**—All reports submitted under this MRP shall comply with applicable provisions of the SPRRs, including those in Section I (*Standard Monitoring Specifications*) and Section J (*Response to Release*).
 - d. **Additional Requirements for Monitoring Reports**—Every monitoring report submitted under this MRP (e.g., SMRs [§ E.1], AMRs [§ E.2]) shall include a discussion of relevant field and laboratory tests, and the results of all monitoring conducted at the site shall be reported to the Central Valley Water Board in accordance with the reporting schedule above for the calendar period in which samples were taken or observations made.
- F. Record Retention Requirements**—The Discharger shall maintain permanent records of all monitoring information, including without limitation: calibration and maintenance records; original strip chart recordings of continuous monitoring instrumentation; copies of all reports required by this MRP; and records of all data used to complete the application for WDRs. Such records shall be legible, and show the following for each sample:
1. Sample identification and the monitoring point or background monitoring point from which it was taken, along with the identity of the individual who obtained the sample;
 2. Date, time and manner of sampling;
 3. Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;
 4. A complete list of procedures used (including method of preserving the sample, and the identity and volumes of reagents used);
 5. A calculation of results; and
 6. The results of all analyses, as well as the MDL and PQL for each analysis (all peaks shall be reported).

SIGNATURE

This Order is effective as of the date set forth below.

ORDERED BY:

PATRICK PULUPA,
Executive Officer

DATE

LIST OF ATTACHMENTS

Attachment A—Volatile Organic Compounds, Short-List
Attachment B—Dissolved Inorganics (Five-Year COCs)
Attachment C—Volatile Organic Compounds, Extended List (Five-Year COCs)
Attachment D—Semi-Volatile Organic Compounds (Five-Year COCs)
Attachment E—Chlorophenoxy Herbicides (Five-Year COCs)
Attachment F—OrganoPhosphorous Compounds (Five-Year COCs)

ENFORCEMENT

If, in the opinion of the Executive Officer, the Discharger fail to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order may result in the assessment of Administrative Civil Liability of up to \$10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

ADMINISTRATIVE REVIEW

Any person aggrieved by this Central Valley Water Board action may petition the State Water Board for review in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050 et seq. To be timely, the petition must be received by the State Water Board by 5:00 pm on the 30th day after the date of this Order; if the 30th day falls on a Saturday, Sunday or state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. The law and regulations applicable to filing petitions are available on the [State Water Board website](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) (http://www.waterboards.ca.gov/public_notices/petitions/water_quality). Copies will also be provided upon request.

ATTACHMENT A—VOLATILE ORGANIC COMPOUNDS, SHORT-LIST

USEPA Method 8260B

| Constituent | GeoTracker Code |
|--|------------------------|
| Acetone | ACE |
| Acrylonitrile..... | ACRAMD |
| Benzene | BZ |
| Bromochloromethane | BRCLME |
| Bromodichloromethane | BDCME |
| Bromoform (Tribromomethane)..... | TBME |
| Carbon disulfide | CDS |
| Carbon tetrachloride..... | CTCL |
| Chlorobenzene | CLBZ |
| Chloroethane (Ethyl chloride)..... | CLEA |
| Chloroform (Trichloromethane) | TCLME |
| Dibromochloromethane (Chlorodibromomethane) | DBCME |
| 1,2 Dibromo 3 chloropropane (DBCP)..... | DBCP |
| 1,2 Dibromoethane (Ethylene dibromide; EDB) | EDB |
| o Dichlorobenzene (1,2 Dichlorobenzene) | DCBZ12 |
| m Dichlorobenzene (1,3 Dichlorobenzene) | DCBZ13 |
| p Dichlorobenzene (1,4 Dichlorobenzene) | DCBZ14 |
| trans 1,4 Dichloro 2 butene | DCBE14T |
| Dichlorodifluoromethane (CFC-12) | FC12 |
| 1,1 Dichloroethane (Ethylidene chloride)..... | DCA11 |
| 1,2 Dichloroethane (Ethylene dichloride)..... | DCA12 |
| 1,1 Dichloroethylene (1,1 Dichloroethene; Vinylidene chloride) | DCE11 |
| cis 1,2 Dichloroethylene (cis 1,2 Dichloroethene) | DCE12C |
| trans 1,2 Dichloroethylene (trans 1,2 Dichloroethene) | DCE12T |
| 1,2 Dichloropropane (Propylene dichloride) | DCPA12 |
| cis 1,3 Dichloropropene..... | DCP13C |
| trans 1,3 Dichloropropene | DCP13T |

| | |
|--|---------|
| Di-isopropylether (DIPE) | DIPE |
| Ethanol..... | ETHANOL |
| Ethyltertiary butyl ether..... | ETBE |
| Ethylbenzene | EBZ |
| 2 Hexanone (Methyl butyl ketone)..... | HXO2 |
| Hexachlorobutadiene | HCBU |
| Methyl bromide (Bromomethene)..... | BRME |
| Methyl chloride (Chloromethane) | CLME |
| Methylene bromide (Dibromomethane) | DBMA |
| Methylene chloride (Dichloromethane)..... | DCMA |
| Methyl ethyl ketone (MEK: 2 Butanone)..... | MEK |
| Methyl iodide (Iodomethane)..... | IME |
| Methyl t-butyl ether..... | MTBE |
| 4-Methyl 2 pentanone (Methyl isobutylketone)..... | MIBK |
| Naphthalene..... | NAPH |
| Styrene..... | STY |
| Tertiary amyl methyl ether..... | TAME |
| Tertiary butyl alcohol | TBA |
| 1,1,1,2 Tetrachloroethane | TC1112 |
| 1,1,2,2 Tetrachloroethane | PCA |
| Tetrachloroethylene (Tetrachloroethene; Perchloroethylene) | PCE |
| Toluene | BZME |
| 1,2,4-Trichlorobenzene | TCB124 |
| 1,1,1 Trichloroethane (Methylchloroform)..... | TCA111 |
| 1,1,2 Trichloroethane | TCA112 |
| Trichloroethylene (Trichloroethene) | TCE |
| Trichlorofluoromethane (CFC 11)..... | FC11 |

COUNTY OF PLACER

LOOMIS LANDFILL

PLACER COUNTY

ATTACHMENT A—VOLATILE ORGANIC COMPOUNDS, SHORT-LIST

| | |
|------------------------------|---------|
| 1,2,3 Trichloropropane | TCPR123 |
| Vinyl acetate..... | VA |
| Vinyl chloride..... | VC |
| Xylenes | XYLENES |

ATTACHMENT B—DISSOLVED INORGANICS (FIVE-YEAR COCS)

Constituent / Analytical Method..... GeoTracker Code

| | | |
|---------------------------------------|--------------------------------------|---------|
| Aluminum, USEPA Method 6010 | Zinc, USEPA Method 6010..... | AL..... |
| Antimony, USEPA Method 7041 | Iron, USEPA Method 6010..... | SB..... |
| Barium, USEPA Method 6010 | Manganese, USEPA Method 6010..... | BA..... |
| Beryllium, USEPA Method 6010 | Arsenic, USEPA Method 7062..... | BE..... |
| Cadmium, USEPA Method 7131A..... | Lead, USEPA Method 7421..... | CD..... |
| Chromium, USEPA Method 6010 | Mercury, USEPA Method 7470A..... | CR..... |
| Cobalt, USEPA Method 6010 | Nickel, USEPA Method 7521..... | CO..... |
| Copper, USEPA Method 6010 | Selenium, USEPA Method 7742..... | CU..... |
| Silver, USEPA Method 6010 | Thallium, USEPA Method 7841..... | AG..... |
| Tin, USEPA Method 6010 | Cyanide, USEPA Method 9010C..... | SN..... |
| Vanadium, USEPA Method 6010 | Sulfide, USEPA Method 9030Bx..... | V..... |

**ATTACHMENT C—VOLATILE ORGANIC COMPOUNDS, EXTENDED LIST
(FIVE-YEAR COCS)**

**USEPA Method 8260,
Extended List**

| Constituent | GeoTracker Code |
|---|------------------------|
| Acetone | ACE |
| Acetonitrile (Methyl cyanide) | ACCN |
| Acrolein | ACRL |
| Acrylonitrile..... | ACRAMD |
| Allyl chloride (3 Chloropropene) | CLPE3 |
| Benzene | BZ |
| Bromochloromethane (Chlorobromomethane) | BRCLME |
| Bromodichloromethane (Dibromochloromethane)..... | DBCME |
| Bromoform (Tribromomethane)..... | TBME |
| Carbon disulfide | CDS |
| Carbon tetrachloride..... | CTCL |
| Chlorobenzene | CLBZ |
| Chloroethane (Ethyl chloride)..... | CLEA |
| Chloroform (Trichloromethane) | TCLME |
| Chloroprene | CHLOROPRENE |
| Dibromochloromethane (Chlorodibromomethane) | DBCME |
| 1,2 Dibromo 3 chloropropane (DBCP)..... | DBCP |
| 1,2 Dibromoethane (Ethylene dibromide; EDB) | EDB |
| o Dichlorobenzene (1,2 Dichlorobenzene) | DCBZ12 |
| m Dichlorobenzene(1,3 Dichlorobenzene) | DCBZ13 |
| p Dichlorobenzene (1,4 Dichlorobenzene) | DCBZ14 |
| trans 1,4 Dichloro 2 butene | DCBE14T |
| Dichlorodifluoromethane (CFC 12)..... | FC12 |
| 1,1 Dichloroethane (Ethylidene chloride)..... | DCA11 |
| 1,2 Dichloroethane (Ethylene dichloride)..... | DCA12 |
| 1,1 Dichloroethylene (1, I Dichloroethene; Vinylidene chloride) | DCE11 |

ATTACHMENT C—VOLATILE ORGANIC COMPOUNDS, EXTENDED LIST (FIVE YEAR COCS)

| | |
|--|-----------|
| cis 1,2 Dichloroethylene (cis 1,2 Dichloroethene)..... | DCE12C |
| trans 1,2 Dichloroethylene (trans 1,2 Dichloroethene)..... | DCE12T |
| 1,2 Dichloropropane (Propylene dichloride) | DCPA12 |
| 1,3 Dichloropropane (Trimethylene dichloride)..... | DCPA13 |
| 2,2 Dichloropropane (Isopropylidene chloride)..... | DCPA22 |
| 1,1 Dichloropropene | DCP11 |
| cis 1,3 Dichloropropene..... | DCP13C |
| trans 1,3 Dichloropropene | DCP13T |
| Di-isopropylether (DIPE) | DIPE |
| Ethanol..... | ETHANOL |
| Ethyltertiary butyl ether..... | ETBE |
| Ethylbenzene | EBZ |
| Ethyl methacrylate..... | EMETHACRY |
| Hexachlorobutadiene | HCBU |
| 2 Hexanone (Methyl butyl ketone)..... | HXO2 |
| Isobutyl alcohol | ISOBTOH |
| Methacrylonitrile | METHACRN |
| Methyl bromide (Bromomethane)..... | BRME |
| Methyl chloride (Chloromethane) | CLME |
| Methyl ethyl ketone (MEK; 2 Butanone)..... | MEK |
| Methyl iodide (Iodomethane)..... | IME |
| Methyl t-butyl ether..... | MTBE |
| Methyl methacrylate | MMTHACRY |
| 4 Methyl 2 pentanone (Methyl isobutyl ketone) | MIBK |
| Methylene bromide (Dibromomethane) | DBMA |
| Methylene chloride (Dichloromethane)..... | DCMA |
| Naphthalene..... | NAPH |
| Propionitrile (Ethyl cyanide)..... | PACN |
| Styrene..... | STY |
| Tertiary amyl methyl ether..... | TAME |

COUNTY OF PLACER

LOOMIS LANDFILL

PLACER COUNTY

ATTACHMENT C—VOLATILE ORGANIC COMPOUNDS, EXTENDED LIST (FIVE YEAR COCS)

| | |
|---|---------|
| Tertiary butyl alcohol | TBA |
| 1,1,1,2 Tetrachloroethane | TC1112 |
| 1,1,2,2 Tetrachloroethane | PCA |
| Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE) | PCE |
| Toluene | BZME |
| 1,2,4 Trichlorobenzene..... | TCB124 |
| 1,1,1 Trichloroethane (Methylchloroform)..... | TCA111 |
| 1,1,2 Trichloroethane | TCA112 |
| Trichloroethylene (Trichloroethene; TCE) | TCE |
| Trichlorofluoromethane (CFC 11)..... | FC11 |
| 1,2,3 Trichloropropane | TCPR123 |
| Vinyl acetate..... | VA |
| Vinyl chloride (Chloroethene) | VC |
| Xylene (total) | XYLENES |

ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE-YEAR COCS)

**USEPA Methods 8270C or 8270D
(Base, Neutral & Acid Extractables)**

| Constituent | GeoTracker Code |
|--|------------------------|
| Acenaphthene | ACNP |
| Acenaphthylene | ACNPY |
| Acetophenone | ACPHN |
| 2 Acetylaminofluorene (2 AAF) | ACAMFL2 |
| Aldrin | ALDRIN |
| 4 Aminobiphenyl..... | AMINOBP4 |
| Anthracene..... | ANTH |
| Benzo[a]anthracene (Benanthracene)..... | BZAA |
| Benzo[b]fluoranthene | BZBF |
| Benzo[k]fluoranthene | BZKF |
| Benzo[g,h,i]perylene..... | BZGHIP |
| Benzo[a]pyrene | BZAP |
| Benzyl alcohol..... | BZLAL |
| Bis(2 ethylhexyl) phthalate | BIS2EHP |
| alpha BHC..... | BHCALPHA |
| beta BHC..... | BHCBETA |
| delta BHC..... | BHCDELTA |
| gamma BHC (Lindane)..... | BHCGAMMA |
| Bis(2 chloroethoxy) methane..... | BECEM |
| Bis(2 chloroethyl) ether (Dichloroethyl ether) | BIS2CEE |
| Bis(2 chloro 1 methylethyl) ether (Bis(2 chloroisopropyl) ether; DCIP) | BIS2CIE |
| 4 Bromophenyl phenyl ether | BPPE4 |
| Butyl benzyl phthalate (Benzyl butyl phthalate)..... | BBP |
| Chlordane..... | CHLORDANE |
| p Chloroaniline | CLANIL4 |
| Chlorobenzilate | CLBZLATE |

ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE YEAR COCS)

| | |
|---|----------|
| p Chloro m cresol (4 Chloro 3 methylphenol) | C4M3PH |
| 2 Chloronaphthalene | CNPH2 |
| 2 Chlorophenol | CLPH2 |
| 4 Chlorophenyl phenyl ether | CPPE4 |
| Chrysene | CHRYSENE |
| o Cresol (2 methylphenol) | MEPH2 |
| m Cresol (3 methylphenol) | MEPH3 |
| p Cresol (4 methylphenol) | MEPH4 |
| 4,4' DDD | DDD44 |
| 4,4' DDE | DDE44 |
| 4,4' DDT | DDT44 |
| Diallate | DIALLATE |
| Dibenz[a,h]anthracene | DBAHA |
| Dibenzofuran | DBF |
| Di n butyl phthalate | DNBP |
| 3,3' Dichlorobenzidine | DBZD33 |
| 2,4 Dichlorophenol | DCP24 |
| 2,6 Dichlorophenol | DCP26 |
| Dieldrin | DIELDRIN |
| Diethyl phthalate | DEPH |
| p (Dimethylamino) azobenzene | PDMAABZ |
| 7,12 Dimethylbenz[a]anthracene | DMBZA712 |
| 3,3' Dimethylbenzidine | DMBZD33 |
| 2,4 Dimehtylphenol (m Xylenol) | DMP24 |
| Dimethyl phthalate | DMPH |
| m Dinitrobenzene | DNB13 |
| 4,6 Dinitro o cresol (4,6 Dinitro 2 methylphenol) | DN46M |
| 2,4 Dinitrophenol | DNP24 |
| 2,4 Dinitrotoluene | DNT24 |
| 2,6 Dinitrotoluene | DNT26 |

COUNTY OF PLACER

LOOMIS LANDFILL

PLACER COUNTY

ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE YEAR COCS)

| | |
|---------------------------------|-------------|
| Di n octyl phthalate..... | DNOP |
| Diphenylamine | DPA |
| Endosulfan I | ENDOSULFANA |
| Endosulfan II | ENDOSULFANB |
| Endosulfan sulfate..... | ENDOSULFANS |
| Endrin..... | ENDRIN |
| Endrin aldehyde | ENDRINALD |
| Ethyl methanesulfonate..... | EMSULFN |
| Famphur..... | FAMPHUR |
| Fluoranthene | FLA |
| Fluorene | FL |
| Heptachlor..... | HEPTACHLOR |
| Heptachlor epoxide | HEPT-EPOX |
| Hexachlorobenzene | HCLBZ |
| Hexachlorocyclopentadiene | HCCP |
| Hexachloroethane | HCLEA |
| Hexachloropropene | HCPR |
| Indeno(1,2,3 c,d) pyrene | INP123 |
| Isodrin | ISODRIN |
| Isophorone | ISOP |
| Isosafrole..... | ISOSAFR |
| Kepone..... | KEP |
| Methapyrilene..... | MTPYRLN |
| Methoxychlor..... | MTXYCL |
| 3 Methylcholanthrene | MECHLAN3 |
| Methyl methanesulfonate | MMSULFN |
| 2 Methylnaphthalene | MTNPH2 |
| 1,4 Naphthoquinone | NAPHQ14 |
| 1 Naphthylamine | AMINONAPH1 |
| 2 Naphthylamine | AMINONAPH2 |

ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE YEAR COCS)

| | |
|--|-----------|
| o Nitroaniline (2 Nitroaniline) | NO2ANIL2 |
| m Nitroaniline (3 Nitroaniline) | NO2ANIL3 |
| p Nitroaniline (4 Nitroaniline) | NO2ANIL4 |
| Nitrobenzene | NO2BZ |
| o Nitrophenol (2 Nitrophenol) | NTPH2 |
| p Nitrophenol (4 Nitrophenol) | NTPH4 |
| N Nitrosodi n butylamine (Di n butylNitrosamine) | NNSBU |
| N Nitrosodiethylamine (DiethylNitrosamine) | NNSE |
| N Nitrosodimethylamine (DimethylNitrosamine) | NNSM |
| N Nitrosodiphenylamine (DiphenylNitrosamine) | NNSPH |
| N Nitrosodipropylamine (N Nitroso N dipropylamine; Di n propylNitrosamine) | NNSPR |
| N Nitrosomethylethylamine (MethylethylNitrosamine)..... | NNSME |
| N Nitrosopiperidine..... | NNSPPRD |
| N Nitrosopyrrolidine | NNSPYRL |
| 5 Nitro o toluidine | TLDNONT5 |
| Pentachlorobenzene | PECLBZ |
| Pentachloronitrobenzene (PCNB)..... | PECLNO2BZ |
| Pentachlorophenol | PCP |
| Phenacetin | PHNACTN |
| Phenanthrene..... | PHAN |
| Phenol..... | PHENOL |
| p Phenylendiamine..... | ANLNAM4 |
| Polychlorinated biphenyls (PCBs; Aroclors) | PCBS |
| Pronamide..... | PRONAMD |
| Pyrene..... | PYR |
| Safrole..... | SAFROLE |
| 1,2,4,5 Tetrachlorobenzene | C4BZ1245 |
| 2,3,4,6 Tetrachlorophenol | TCP2346 |
| o Toluidine..... | TLDNO |
| Toxaphene | TOXAP |

COUNTY OF PLACER

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ATTACHMENT D—SEMI-VOLATILE ORGANIC COMPOUNDS (FIVE YEAR COCS)

| | |
|---------------------------------------|--------|
| 2,4,5 Trichlorophenol..... | TCP245 |
| 0,0,0 Triethyl phosphorothioate | TEPTH |
| sym Trinitrobenzene..... | TNB135 |

ATTACHMENT E—CHLOROPHENOXY HERBICIDES (FIVE-YEAR COCS)

USEPA Method 8151A

| Constituent | GeoTracker Code |
|--|------------------------|
| Atrazine | ATRAZINE |
| Chlorpyrifos | CLPYRIFOS |
| 0,0-Diethyl 0-2-pyrazinyl phosphorothioate (Thionazin) | ZINOPHOS |
| Diazinon | DIAZ |
| Dimethoate | DIMETHAT |
| Disulfoton..... | DISUL |
| Methyl parathion (Parathion methyl) | PARAM |
| Parathion | PARAE |
| Phorate..... | PHORATE |
| Simazine..... | SIMAZINE |

ATTACHMENT F—ORGANOPHOSPHOROUS COMPOUNDS (FIVE-YEAR COCS)

USEPA Method 8141B

| Constituent | GeoTracker Code |
|---|------------------------|
| 2,4 D (2,4 Dichlorophenoxyacetic acid)..... | 24D |
| Dinoseb (DNBP; 2 sec Butyl 4,6 dinitrophenol) | DINOSEB |
| Silvex (2,4,5 Trichlorophenoxypropionic acid; 2,4,5 TP) | SILVEX |
| 2,4,5 T (2,4,5 Trichlorophenoxyacetic acid) | 245T |