CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

ZANKER ROAD RESOURCE MANAGEMENT, LTD.

ZANKER ROAD RESOURCE RECOVERY OPERATION AND LANDFILL
SAN JOSE, SANTA CLARA COUNTY

ORDER NO. R2-2018-XXXX

CONSISTS OF

PART A

AND

PART B

PART A

This Self-Monitoring Program (SMP) specifies monitoring and reporting requirements, including:

a. General monitoring requirements for Landfills and waste management units (Part A);

b. Self-monitoring report content and format (Part A);

c. Self-monitoring report submittal frequency and schedule (Part B);

d. Monitoring locations and frequency (Part B); and

e. Monitoring parameters and analytes (Part B).

A. AUTHORITY AND PURPOSE

For discharges of waste to land, water quality monitoring is required pursuant to the California Code of Regulations (CCR), title 27, §20380 through §20435. The principal purposes of an SMP are: (1) to document compliance with waste discharge requirements (WDRs) and prohibitions established by the Regional Water Board; (2) to facilitate self-policing by waste dischargers in the prevention and abatement of pollution arising from the waste discharge; (3) to develop or assist in the development of effluent standards of performance and toxicity standards; and (4) to assist dischargers in complying with the requirements of title 27.

B. MONITORING REQUIREMENTS

Monitoring refers to the observation, inspection, measurement, and/or sampling of environmental media, the Landfill containment and control facilities, and waste disposed in the Landfill. The following defines the types of monitoring that may be required.

Monitoring of Environmental Media

The Regional Water Board may require monitoring of groundwater, surface water, stormwater, leachate, landfill gas, and any other environmental media that may pose a threat to water quality or provide an indication of a water quality threat at the Landfill.

Sample collection, storage, and analyses shall be performed according to the most recent version of U.S. EPA-approved methods or in accordance with a sampling and analysis plan approved by Regional Water Board staff. Analytical testing of environmental media required by this SMP shall be performed by a State-approved laboratory for the required analyses. The director of the laboratory whose name appears on the certification shall be responsible for supervising all analytical work in his/her laboratory and shall have signing authority for all reports or may designate signing of all such work submitted to the Regional Water Board.

All monitoring instruments and devices used to conduct monitoring in accordance with this SMP shall be maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once every two years.

"Receiving waters" refers to any surface water that actually or potentially receives surface or groundwater that passes over, through, or beneath waste materials or impacted soils. In this case, the groundwater beneath and adjacent to the Landfill and the surface runoff from the Site are considered "receiving waters."

Standard Observations

"Standard observations" refers to observations within the limits of the Landfill, at the Landfill perimeter, and of the receiving waters. Standard observations to be performed and recorded include:

1. The Landfill:

   a. Evidence of ponded water on the Landfill, including a map of approximate locations, and an estimate of the size of the area affected and the volume of water;

   b. Evidence of odors, including presence or absence, characterization, source, and distance of travel from source; and

   c. Evidence of erosion and/or exposed waste, including a map of the approximate location and an assessment of the likelihood that soil or waste was discharged to the waters of the State.

2. Perimeter of the Landfill:

   a. Evidence of liquid leaving or entering the Landfill, estimated size of affected area and flow rate (show affected area on map);

   b. Evidence of odors, including presence or absence, characterization, source, and distance of travel from source;

   c. Evidence of erosion and/or exposed waste;

   d. Vegetation coverage; and

   e. Measurement of groundwater elevations.

3. Receiving Waters:

   a. Floating and suspended materials of waste origin, including their presence or absence, source, and size of affected area;

   b. Discoloration and turbidity: description of color, source, and size of affected area;

   c. Evidence of odors, including presence or absence, characterization, source, and distance of travel from source;

   d. Evidence of beneficial use, such as presence of water associated with wildlife;

   e. Estimated flow rate; and

f. Weather conditions, such as estimated wind direction and velocity, total precipitation.

Facilities Inspections

"Facilities inspections" refers to the inspection of all containment and control structures and devices associated with the Landfill. Containment and control facilities may include the following:

1. Final cover;
2. Stormwater management system elements such as perimeter drainage and diversion channels, ditches and down-chutes, and detention and sedimentation ponds or collection tanks;
3. Landfill gas collection and control system; and
4. Leachate extraction system elements such as leachate storage tanks or sumps, piping, pumps and control equipment.

Quality Assurance/Quality Control Sample Monitoring

The Discharger shall collect duplicate, field blank, equipment blank (if appropriate) and trip blank samples for each semiannual monitoring event at the following frequencies:

1. Duplicate sample – one sample per 20 regular samples;
2. Field blank – one per semiannual monitoring event;
3. Equipment blank – one sample per 10 monitoring stations; and
4. Trip blank – one sample per day of sampling.

C. REPORTING REQUIREMENTS

Reporting responsibilities of waste dischargers are specified in California Water Code §13260, §13267 subdivision (b), and §13383, and this Regional Water Board's Resolution No.73-16 and Order No. 93-113. At a minimum, each Self-Monitoring Report (SMR) shall include the following information:

1. Transmittal Letter: A cover letter transmitting the essential points of the monitoring report shall be included with each monitoring report. The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall also certify the completion of all monitoring requirements. The letter shall be signed by the Discharger's principal executive officer, or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

2. Graphic Presentation: The following maps, figures, and graphs (if applicable) shall be included in each SMR to visually present data collected pursuant to this SMP:

a. Plan-view maps showing all monitoring and sampling locations, waste management units, containment and control structures, treatment facilities, surface water bodies, and site/property boundaries;

b. Groundwater level/piezometric surface contour maps for each groundwater-bearing zone of interest showing inferred groundwater gradients and flow directions under/around the Landfill based upon the past and present water level elevations and pertinent visual observations; and

c. Any other maps, figures, photographs, cross-sections, graphs, and charts necessary to visually demonstrate the appropriateness and effectiveness of sampling, monitoring, characterization, investigation, or remediation activities relative to the goals of this SMP.

3. Tabular Presentation: The following data (if applicable) shall be presented in tabular form and included in each SMR to show a chronological history and allow quick and easy reference:

a. Well designation;

b. Well location coordinates (latitude and longitude);

c. Well construction (including top of well casing elevation, total well depth, screen interval depth below ground surface, and screen interval elevation);

d. Groundwater depths;

e. Groundwater elevations;

f. Current analytical results (including analytical method and detection limits for each constituent);

g. Historical analytical results (including at least the past five years unless otherwise requested); and

h. Measurement dates.

4. Compliance Evaluation Summary and Discussion:

a. A summary and certification of completion of all environmental media monitoring, standard observations, and facilities inspections;

b. The signature of the laboratory director or his/her designee indicating that he/she has supervised all analytical work in his/her laboratory; and

c. A discussion of the field and laboratory results that includes the following information:

i. Data interpretations

ii. Conclusions

iii. Recommendations

iv. Newly implemented or planned investigations and remedial measures

v. Data anomalies

vi. Variations from protocols

vii. Condition of wells, and

viii. Effectiveness of leachate monitoring and control facilities.

5. Appendices: The following information shall be provided as appendices in electronic format only unless requested otherwise by Regional Water Board staff and unless the information is already contained in a sampling and analysis plan approved by Regional Water Board staff:

   a. New boring and well logs;

   b. Method and time of water level measurements;

   c. Purging methods and results, including:

      i. The type of pump used, pump placement in the well, and pumping rate;

      ii. The equipment and methods used to monitor field pH, temperature, and electrical conductivity;

      iii. The calibration of the field equipment used to measure pH, temperature, conductivity, and turbidity; and

      iv. The method of disposing of the purge water;

   d. Sampling procedures, field, equipment, and travel blanks, number and description of duplicate samples, type of sample containers and preservatives used, the date and time of sampling, the name of the person actually taking the samples, and any other relevant observations; and

   e. Documentation of laboratory results, analytical methods, detection limits (DLs) and reporting limits (RLs), and Quality Assurance/Quality Control (QA/QC) procedures for the required sampling.

D. CONTINGENCY REPORTING

1. The Discharger shall report to the Regional Water Board by telephone (510-622-2369) any discharge from the Landfill immediately after it is discovered. The Discharger shall submit a written report with the Regional Water Board within five days of discovery of any discharge. The

written report shall contain the following information:

a. A map showing the location(s) of discharge;

b. Approximate flow rate;

c. Nature of effects (e.g., all pertinent observations and analyses); and

d. Corrective measures underway or proposed.

2. The Discharger shall submit a written report to the Regional Water Board within seven days of determining that a statistically significant difference occurred between a SMP sample set and an approved Water Quality Protection Standard (WQPS). The written report shall indicate which WQPS(s) has been exceeded. If appropriate, within 30 days the Discharger shall resample at the compliance point(s) where this difference occurred.

3. If re-sampling and analysis confirms the earlier finding of a statistically significant difference between SMP results and WQPS(s), the Discharger shall, upon determination by the Executive Officer, submit to the Regional Water Board an amended Report of Waste Discharge (ROWD) for establishment of an Evaluation Monitoring Program (EMP) meeting the requirements of CCR Title 27 §20425.

E. REPORTING REQUIREMENTS

The Discharger shall submit SMRs to Regional Water Board staff in accordance with the schedule indicated in Table B-1. Reports due at the same time may be combined into one report for convenience, as long as monitoring activities and results pertaining to each monitoring period are clearly distinguishable. Reports shall be submitted in accordance with Provision C.3 of the WDRs.

F. MAINTENANCE OF WRITTEN RECORDS

The Discharger shall maintain information required pursuant to this SMP for at least five years. The five-year period of retention shall be extended during the course of any unresolved litigation regarding a discharge or when requested by the Regional Water Board.

PART B

A. MONITORING LOCATIONS AND FREQUENCY

Monitoring locations, frequencies, parameters, and analytes are specified in Table B-1 of this SMP and as indicated below. Monitoring locations are shown in Figure 2.

1. **Environmental Media**

a. Groundwater: Groundwater shall be monitored at the locations specified in Table B-1 and shown on Figure 2. Monitoring frequencies, parameters, and analytes shall be in accordance with Table B-1.

b. Leachate: Leachate shall be monitored at the locations specified in Part A. Monitoring frequencies, parameters, and analytes shall be in accordance with Table B-1.

c. Stormwater: As outlined in the Operations and Maintenance Plan (Provision C.7).

2. **Standard Observations**

Standard observations (described in Part A) shall be made within the Landfill, along the perimeter of the Landfill, and of the water courses and receiving waters beyond their limits. Standard observations shall be conducted at the frequency specified in Table B-1.

3. **Facilities Inspections**

The Discharger shall inspect all containment and control structures and devices associated with the Landfill to ensure proper and safe operation.

4. **Quality Assurance/Quality Control Samples**

The QA/QC samples shall be analyzed for VOCs (field blank, equipment blank and trip blank) or for the same tests as a regular sample (duplicate sample).

B. REPORTING SCHEDULE

The Discharger shall submit SMRs to Regional Water Board staff in accordance with the schedule indicated in Table B-1. Reports due at the same time may be combined into one report for convenience, as long as monitoring activities and results pertaining to each monitoring period are clearly distinguishable.

Attachment: Self-Monitoring Program Table B-1

Table B-1: Self-Monitoring Program **Groundwater (POC) Wells:** G-2, G-3, G-5, G-6R, G-7, G-12 and G-14		
Monitoring Event	**Frequency**	**Parameters**
Constituents of Concern	**Once every five years** beginning 2016 (Report due with 2nd Semi-Annual report for 2016)	**Monitoring Parameters and Volatile Organic Compounds** (Subtitle D Appendix II + 1,4-Dioxane) **Dissolved Metals** (As, Ba, Co, Cr, Hg, Ni, Ag, Sn, V, Zn) **Field Parameters –** pH, electrical conductivity, temperature, turbidity, and dissolved oxygen
Monitoring Parameters (MPs)	**Semi-Annually** 1st Semi-Annual Sampling event – 1st Quarter REPORT DUE April 30 2nd Semi-Annual Sampling event – 3rd Quarter REPORT DUE October 31	**Bicarbonate Alkalinity, Total Kjeldahl Nitrogen, Total Organic Carbon** **Volatile Organic Compounds** (Subtitle D Appendix I + 1,4-Dioxane) **Field Parameters –** pH, electrical conductivity, temperature, turbidity, and dissolved oxygen
Groundwater Levels	**Quarterly**	**As detailed in Part A**
Leachate	**Monthly / Semi-Annually**	The Landfill slopes shall be inspected at least once every month for leachate seeps. Leachate shall be sampled and tested at-least semi-annually for the groundwater MPs.
Standard Observations	**Quarterly**	**As detailed in Part A**