

SERVICE AGREEMENT

This Service Agreement ("Agreement") is dated July 12, 2022 and is between Geo-Logic Associates, a California corporation ("Contractor"), and the County of Fresno, a political subdivision of the State of California ("County").

Recitals

A. The Department of Public Works and Planning – Resources Division ("Department") requires specialized consultant services to conduct the State-required detection monitoring services to meet the regulatory compliance and notifications based on site specific Waste Discharge Requirements (WDR) and Regional Water Quality Control Board (RWQCB) for the American Avenue Municipal Solid Waste Landfill, Coalinga Disposal Site Landfill, and Southeast Regional Disposal Site Landfill.

B. The County released Request for Quotation No. 22-052 (RFQ) for State-Required Detection Monitoring Reports on March 22, 2022 and ended on April 22, 2022. Contractor's bid response satisfied the requirements of the Department.

C. The Contractor is qualified and willing to provide the County the professional services required to meet the preparation and submittal of semi-annual and annual Detection Monitoring Reports. The following work is to be performed for the American Avenue Municipal Solid Waste Landfill Class III Landfill, Coalinga Solid Waste Disposal Site Class III Landfill, and the Southeast Regional Disposal Site Class III Landfill.

The parties therefore agree as follows:

Article 1

Contractor's Services

1.1 **Scope of Services.** The Contractor shall perform all of the services provided in Exhibit A to this Agreement, titled "Scope of Services."

1.2 **Representation.** The Contractor represents that it is qualified, ready, willing, and able to perform all of the services provided in this Agreement.

1.3 **Compliance with Laws.** The Contractor shall, at its own cost, comply with all applicable federal, state, and local laws and regulations in the performance of its obligations

under this Agreement, including but not limited to workers compensation, labor, and confidentiality laws and regulations.

Article 2

County's Responsibilities

2.1 The County shall perform monitoring and sampling of applicable mediums. Samples will be submitted by County to a certified laboratory for analysis; samples for each site will be submitted individually to the laboratory and at different times. Therefore, the samples for the different sites will be staggered, with samples for all sites usually being submitted to the laboratory within a period of four to five weeks. However, overlapping is possible due to some sites having more wells to be sampled than others. The County will provide field monitoring data to Contractor. The County will review and approve all reports and data prior to Contractor submitting into the GeoTracker system. The reviewing process for each report could take the County up to three (3) weeks to complete.

2.2 The COUNTY shall:

(A) Compensate the Contractor as provided in this Agreement.

(B) Provide a "County Representative" who will represent the County and who will cooperate with the Contractor as necessary or appropriate to facilitate the Contractor's performance under the provisions of this Agreement. The County Representative will be the Director of the Department of Public Works and Planning or his/her designee. The Contractor shall communicate and coordinate with the County Representative who will provide the following services:

(1) Examine documents submitted to the County by the Contractor and timely render decisions pertaining thereto.

(2) Provide communication between the Contractor and County officials and commissions (including user Department).

(3) Provide right of entry on designated property, if required.

(C) Give reasonably prompt consideration to all matters submitted by the Contractor for approval to the end that there will be no substantial delays in the Contractor's

1 program of work. An approval, authorization or request to the Contractor given by the
2 County will only be binding upon the County under the terms of this Agreement if in
3 writing and signed on behalf of the County by the County Representative or a designee.

4 (D) Perform all groundwater sampling at each landfill.

5 (E) Transport samples to laboratory for analysis.

6 (F) Provide Contractor a hard copy of field parameter notes for each sampling event
7 at each disposal site.

8 (G) Provide Contractor copies of revised WDR's upon County receipt of WDR's from
9 the RWQCB.

10 **Article 3**

11 **Compensation, Invoices, and Payments**

12 3.1 The County agrees to pay, and the Contractor agrees to receive, compensation for
13 the performance of its services under this Agreement as described in Exhibit B to this
14 Agreement, titled "Compensation."

15 3.2 **Maximum Compensation.** The maximum compensation payable to the Contractor
16 under this Agreement is \$245,620. In no event shall the total cumulative amount of
17 compensation paid to Contractor for services performed under this Agreement be excess
18 \$245,620 which comprise of Basic Fee and Extra Services. The Contractor acknowledges that
19 the County is a local government entity and does so with notice that the County's powers are
20 limited by the California Constitution and by State law, and with notice that the Contractor may
21 receive compensation under this Agreement only for services performed according to the terms
22 of this Agreement and while this Agreement is in effect, and subject to the maximum amount
23 payable under this section. The Contractor further acknowledges that County employees have
24 no authority to pay the Contractor except as expressly provided in this Agreement.

25 3.3 **Invoices.** The Contractor shall submit monthly invoices to Public Works and
26 Planning – Resources Division via email PWPBusinessOffice@fresnocountyca.gov or send
27 invoice to the following address below. Each invoice shall specifically identify this Agreement
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number, the Disposal Site and Task number to which the work pertains and shall clearly identify any and all charges for tasks authorized as Extra Services.

Public Works and Planning - Resources Division

Attention: Landfill Operations Manager

2220 Tulare St, Sixth Floor

Fresno, CA 93721-2106

PWPBusinessOffice@fresnocountyca.gov

The Contractor shall submit each invoice within 60 days after the month in which the Contractor performs services and in any case within 60 days after the end of the term or termination of this Agreement.

3.4 Payment. The County shall pay each Contractor correctly completed and timely submitted invoice within 45 days after receipt and approval of the Contractor's semi-annual invoices based on the County's evaluation of the completion of the respective components of the projects(s).

(A) Upon receipt of a proper invoice, the County Department of Public Works and Planning will take a maximum of ten (10) working days to review, approve, and submit to the County Auditor-Controller/Treasurer-Tax Collector. Unsatisfactory or inaccurate invoices may be returned to the Contractor for correction and resubmittal. Payment will be issued to Contractor within forty (45) calendar days of the date the Auditor-Controller/Treasurer-Tax Collector receives the approved invoice.

(B) An unresolved dispute over a possible error or omission may cause payment of Contractor fees in the disputed amount to be withheld by the County.

(C) Concurrently with the invoices, the Contractor shall provide its certification acceptable to the County, and shall provide, on County request, copies of issued checks, receipts, or other County pre-approved documentation, that complete payment has been made to all subcontractors as provided herein for all previous invoices paid by the County.

1 (D) Final invoice shall be submitted to County no later than sixty (60) days after project
2 is completed. Payment shall not be made until all post-project services are completed,
3 including but not limited to furnishing of required reports.

4 (E) In the event the County reduces the scope of the project, the Contractor will be
5 compensated on a pro rata basis for actual work completed and accepted by the County in
6 accordance with the terms of this Agreement.

7 3.5 **Incidental Expenses.** The Contractor is solely responsible for all of its costs and
8 expenses that are not specified as payable by the County under this Agreement.

9 **Article 4**

10 **Term of Agreement**

11 4.1 **Term.** This Agreement is effective on July 12, 2022 and terminates on July 12, 2025,
12 except as provided in section 4.2, "Extension," or Article 6, "Termination and Suspension,"
13 below.

14 4.2 **Extension.** The term of this Agreement may be extended for no more than two, one-
15 year periods only upon written approval of both parties at least 30 days before the first day of
16 the next one-year extension period. The Director of Public Works and Planning or his or her
17 designee is authorized to sign the written approval on behalf of the County based on the
18 Contractor's satisfactory performance. The extension of this Agreement by the County is not a
19 waiver or compromise of any default or breach of this Agreement by the Contractor existing at
20 the time of the extension whether or not known to the County.

21 **Article 5**

22 **Notices**

23 5.1 **Contact Information.** The persons and their addresses having authority to give and
24 receive notices provided for or permitted under this Agreement include the following:

25 **For the County:**
26 Landfill Operations Manager
27 County of Fresno
28 2220 Tulare St, Sixth Floor
Fresno, CA 93721-2106
Email: landfill@fresnocountyca.gov
Phone: (559) 600-4259

For the Contractor:
Principal Hydrogeologist
Michael Reason, PG, CHG
2777 E. Guasti Road
Ontario, CA 91761
Email: mdreason@geo-logic.com
Phone: (909) 626-2282

5.2 Change of Contact Information. Either party may change the information in section 5.1 by giving notice as provided in section 5.3.

5.3 Method of Delivery. Each notice between the County and the Contractor provided for or permitted under this Agreement must be in writing, state that it is a notice provided under this Agreement, and be delivered either by personal service, by first-class United States mail, by an overnight commercial courier service, by telephonic facsimile transmission, or by Portable Document Format (PDF) document attached to an email.

(A) A notice delivered by personal service is effective upon service to the recipient.

(B) A notice delivered by first-class United States mail is effective three County business days after deposit in the United States mail, postage prepaid, addressed to the recipient.

(C) A notice delivered by an overnight commercial courier service is effective one County business day after deposit with the overnight commercial courier service, delivery fees prepaid, with delivery instructions given for next day delivery, addressed to the recipient.

(D) A notice delivered by telephonic facsimile transmission or by PDF document attached to an email is effective when transmission to the recipient is completed (but, if such transmission is completed outside of County business hours, then such delivery is deemed to be effective at the next beginning of a County business day), provided that the sender maintains a machine record of the completed transmission.

5.4 Claims Presentation. For all claims arising from or related to this Agreement, nothing in this Agreement establishes, waives, or modifies any claims presentation requirements or procedures provided by law, including the Government Claims Act (Division 3.6 of Title 1 of the Government Code, beginning with section 810).

1 **Article 6**

2 **Termination and Suspension**

3 6.1 **Termination for Non-Allocation of Funds.** The terms of this Agreement are
4 contingent on the approval of funds by the appropriating government agency. If sufficient funds
5 are not allocated, then the County, upon at least 30 days' advance written notice to the
6 Contractor, may:

7 (A) Modify the services provided by the Contractor under this Agreement; or

8 (B) Terminate this Agreement.

9 6.2 **Termination for Breach.**

10 (A) Upon determining that a breach (as defined in paragraph (C) below) has
11 occurred, the County may give written notice of the breach to the Contractor. The written
12 notice may suspend performance under this Agreement, and must provide at least 30
13 days for the Contractor to cure the breach.

14 (B) If the Contractor fails to cure the breach to the County's satisfaction within the
15 time stated in the written notice, the County may terminate this Agreement immediately.

16 (C) For purposes of this section, a breach occurs when, in the determination of the
17 County, the Contractor has:

18 (1) Obtained or used funds illegally or improperly;

19 (2) Failed to comply with any part of this Agreement;

20 (3) Submitted a substantially incorrect or incomplete report to the County; or

21 (4) Improperly performed any of its obligations under this Agreement.

22 6.3 **Termination without Cause.** In circumstances other than those set forth above, the
23 County may terminate this Agreement by giving at least 30 days advance written notice to the
24 Contractor.

25 6.4 **No Penalty or Further Obligation.** Any termination of this Agreement by the County
26 under this Article 6 is without penalty to or further obligation of the County.

27 6.5 **County's Rights upon Termination.** Upon termination for breach under this Article
28 6, the County may demand repayment by the Contractor of any monies disbursed to the

Contractor under this Agreement that, in the County's sole judgment, were not expended in compliance with this Agreement. The Contractor shall promptly refund all such monies upon demand. This section survives the termination of this Agreement.

Article 7

Independent Contractor

7.1 **Status.** In performing under this Agreement, the Contractor, including its officers, agents, employees, and volunteers, is at all times acting and performing as an independent contractor, in an independent capacity, and not as an officer, agent, servant, employee, joint venturer, partner, or associate of the County.

7.2 **Verifying Performance.** The County has no right to control, supervise, or direct the manner or method of the Contractor's performance under this Agreement, but the County may verify that the Contractor is performing according to the terms of this Agreement.

7.3 **Benefits.** Because of its status as an independent contractor, the Contractor has no right to employment rights or benefits available to County employees. The Contractor is solely responsible for providing to its own employees all employee benefits required by law. The Contractor shall save the County harmless from all matters relating to the payment of Contractor's employees, including compliance with Social Security withholding and all related regulations.

7.4 **Services to Others.** The parties acknowledge that, during the term of this Agreement, the Contractor may provide services to others unrelated to the County.

Article 8

Indemnity and Defense

8.1 **Indemnity.** The Contractor shall indemnify and hold harmless and defend the County (including its officers, agents, employees, and volunteers) against all claims, demands, injuries, damages, costs, expenses (including attorney fees and costs), fines, penalties, and liabilities of any kind to the County, the Contractor, or any third party that arise from or relate to the performance or failure to perform by the Contractor (or any of its officers, agents, subcontractors, or employees) under this Agreement. The County may conduct or participate in

1 its own defense without affecting the Contractor's obligation to indemnify and hold harmless or
2 defend the County.

3 8.2 **Survival.** This Article 8 survives the termination of this Agreement.

4 **Article 9**

5 **Insurance**

6 9.1 The Contractor shall comply with all the insurance requirements in Exhibit D to this
7 Agreement.

8 **Article 10**

9 **Inspections, Audits, and Public Records**

10 10.1 **Inspection of Documents.** The Contractor shall make available to the County, and
11 the County may examine at any time during business hours and as often as the County deems
12 necessary, all of the Contractor's records and data with respect to the matters covered by this
13 Agreement, excluding attorney-client privileged communications. The Contractor shall, upon
14 request by the County, permit the County to audit and inspect all of such records and data to
15 ensure the Contractor's compliance with the terms of this Agreement.

16 10.2 **State Audit Requirements.** If the compensation to be paid by the County under this
17 Agreement exceeds \$10,000, the Contractor is subject to the examination and audit of the
18 California State Auditor, as provided in Government Code section 8546.7, for a period of three
19 years after final payment under this Agreement. This section survives the termination of this
20 Agreement.

21 10.3 **Public Records.** The County is not limited in any manner with respect to its public
22 disclosure of this Agreement or any record or data that the Contractor may provide to the
23 County. The County's public disclosure of this Agreement or any record or data that the
24 Contractor may provide to the County may include but is not limited to the following:

25 (A) The County may voluntarily, or upon request by any member of the public or
26 governmental agency, disclose this Agreement to the public or such governmental
27 agency.
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1 (B) The County may voluntarily, or upon request by any member of the public or
2 governmental agency, disclose to the public or such governmental agency any record or
3 data that the Contractor may provide to the County, unless such disclosure is prohibited
4 by court order.

5 (C) This Agreement, and any record or data that the Contractor may provide to the
6 County, is subject to public disclosure under the Ralph M. Brown Act (California
7 Government Code, Title 5, Division 2, Part 1, Chapter 9, beginning with section 54950).

8 (D) This Agreement, and any record or data that the Contractor may provide to the
9 County, is subject to public disclosure as a public record under the California Public
10 Records Act (California Government Code, Title 1, Division 7, Chapter 3.5, beginning
11 with section 6250) ("CPRA").

12 (E) This Agreement, and any record or data that the Contractor may provide to the
13 County, is subject to public disclosure as information concerning the conduct of the
14 people's business of the State of California under California Constitution, Article 1,
15 section 3, subdivision (b).

16 (F) Any marking of confidentiality or restricted access upon or otherwise made with
17 respect to any record or data that the Contractor may provide to the County shall be
18 disregarded and have no effect on the County's right or duty to disclose to the public or
19 governmental agency any such record or data.

20 **10.4 Public Records Act Requests.** If the County receives a written or oral request
21 under the CPRA to publicly disclose any record that is in the Contractor's possession or control,
22 and which the County has a right, under any provision of this Agreement or applicable law, to
23 possess or control, then the County may demand, in writing, that the Contractor deliver to the
24 County, for purposes of public disclosure, the requested records that may be in the possession
25 or control of the Contractor. Within five business days after the County's demand, the
26 Contractor shall (a) deliver to the County all of the requested records that are in the Contractor's
27 possession or control, together with a written statement that the Contractor, after conducting a
28 diligent search, has produced all requested records that are in the Contractor's possession or

1 control, or (b) provide to the County a written statement that the Contractor, after conducting a
2 diligent search, does not possess or control any of the requested records. The Contractor shall
3 cooperate with the County with respect to any County demand for such records. If the
4 Contractor wishes to assert that any specific record or data is exempt from disclosure under the
5 CPRA or other applicable law, it must deliver the record or data to the County and assert the
6 exemption by citation to specific legal authority within the written statement that it provides to
7 the County under this section. The Contractor's assertion of any exemption from disclosure is
8 not binding on the County, but the County will give at least 10 days' advance written notice to
9 the Contractor before disclosing any record subject to the Contractor's assertion of exemption
10 from disclosure. The Contractor shall indemnify the County for any court-ordered award of costs
11 or attorney's fees under the CPRA that results from the Contractor's delay, claim of exemption,
12 failure to produce any such records, or failure to cooperate with the County with respect to any
13 County demand for any such records.

14 **Article 11**

15 **Disclosure of Self-Dealing Transactions**

16 11.1 **Applicability.** This Article 11 applies if the Contractor is operating as a corporation,
17 or changes its status to operate as a corporation.

18 11.2 **Duty to Disclose.** If any member of the Contractor's board of directors is party to a
19 self-dealing transaction, he or she shall disclose the transaction by completing and signing a
20 "Self-Dealing Transaction Disclosure Form" (Exhibit C to this Agreement) and submitting it to
21 the County before commencing the transaction or immediately after.

22 11.3 **Definition.** "Self-dealing transaction" means a transaction to which the Contractor is
23 a party and in which one or more of its directors, as an individual, has a material financial
24 interest.

25 **Article 12**

26 **General Terms**

27 12.1 **Modification.** Except as provided in Article 6, "Termination and Suspension," this
28 Agreement may not be modified, and no waiver is effective, except by written agreement signed

by both parties. The Contractor acknowledges that County employees have no authority to modify this Agreement except as expressly provided in this Agreement.

12.2 **Non-Assignment.** Neither party may assign its rights or delegate its obligations under this Agreement without the prior written consent of the other party.

12.3 **Governing Law.** The laws of the State of California govern all matters arising from or related to this Agreement.

12.4 **Jurisdiction and Venue.** This Agreement is signed and performed in Fresno County, California. Contractor consents to California jurisdiction for actions arising from or related to this Agreement, and, subject to the Government Claims Act, all such actions must be brought and maintained in Fresno County.

12.5 **Construction.** The final form of this Agreement is the result of the parties' combined efforts. If anything in this Agreement is found by a court of competent jurisdiction to be ambiguous, that ambiguity shall not be resolved by construing the terms of this Agreement against either party.

12.6 **Days.** Unless otherwise specified, "days" means calendar days.

12.7 **Headings.** The headings and section titles in this Agreement are for convenience only and are not part of this Agreement.

12.8 **Severability.** If anything in this Agreement is found by a court of competent jurisdiction to be unlawful or otherwise unenforceable, the balance of this Agreement remains in effect, and the parties shall make best efforts to replace the unlawful or unenforceable part of this Agreement with lawful and enforceable terms intended to accomplish the parties' original intent.

12.9 **Nondiscrimination.** During the performance of this Agreement, the Contractor shall not unlawfully discriminate against any employee or applicant for employment, or recipient of services, because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, military status or veteran status pursuant to all applicable State of California and federal statutes and regulation.

1 12.10 **No Waiver.** Payment, waiver, or discharge by the County of any liability or obligation
2 of the Contractor under this Agreement on any one or more occasions is not a waiver of
3 performance of any continuing or other obligation of the Contractor and does not prohibit
4 enforcement by the County of any obligation on any other occasion.

5 12.11 **Entire Agreement.** This Agreement, including its exhibits, is the entire agreement
6 between the Contractor and the County with respect to the subject matter of this Agreement,
7 and it supersedes all previous negotiations, proposals, commitments, writings, advertisements,
8 publications, and understandings of any nature unless those things are expressly included in
9 this Agreement. If there is any inconsistency between the terms of this Agreement without its
10 exhibits and the terms of the exhibits, then the inconsistency will be resolved by giving
11 precedence first to the terms of this Agreement without its exhibits, and then to the terms of the
12 exhibits.

13 12.12 **No Third-Party Beneficiaries.** This Agreement does not and is not intended to
14 create any rights or obligations for any person or entity except for the parties.

15 12.13 **Authorized Signature.** The Contractor represents and warrants to the County that:

16 (A) The Contractor is duly authorized and empowered to sign and perform its
17 obligations under this Agreement.

18 (B) The individual signing this Agreement on behalf of the Contractor is duly
19 authorized to do so and his or her signature on this Agreement legally binds the
20 Contractor to the terms of this Agreement.

21 12.14 **Electronic Signatures.** The parties agree that this Agreement may be executed by
22 electronic signature as provided in this section.

23 (A) An "electronic signature" means any symbol or process intended by an individual
24 signing this Agreement to represent their signature, including but not limited to (1) a
25 digital signature; (2) a faxed version of an original handwritten signature; or (3) an
26 electronically scanned and transmitted (for example by PDF document) version of an
27 original handwritten signature.
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1 (B) Each electronic signature affixed or attached to this Agreement (1) is deemed
2 equivalent to a valid original handwritten signature of the person signing this Agreement
3 for all purposes, including but not limited to evidentiary proof in any administrative or
4 judicial proceeding, and (2) has the same force and effect as the valid original
5 handwritten signature of that person.

6 (C) The provisions of this section satisfy the requirements of Civil Code section
7 1633.5, subdivision (b), in the Uniform Electronic Transaction Act (Civil Code, Division 3,
8 Part 2, Title 2.5, beginning with section 1633.1).

9 (D) Each party using a digital signature represents that it has undertaken and
10 satisfied the requirements of Government Code section 16.5, subdivision (a),
11 paragraphs (1) through (5), and agrees that each other party may rely upon that
12 representation.

13 (E) This Agreement is not conditioned upon the parties conducting the transactions
14 under it by electronic means and either party may sign this Agreement with an original
15 handwritten signature.

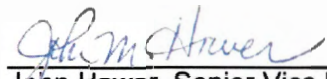
16 12.15 **Counterparts.** This Agreement may be signed in counterparts, each of which is an
17 original, and all of which together constitute this Agreement.

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The parties are signing this Agreement on the date stated in the introductory clause.

Geo-Logic Associates

COUNTY OF FRESNO



John Hower, Senior Vice President



Brian Pacheco, Chairman of the Board of
Supervisors of the County of Fresno

2777 E. Guasti Road
Ontario, CA 91761

Attest:
Bernice E. Seidel
Clerk of the Board of Supervisors
County of Fresno, State of California

By: 

Deputy

For accounting use only:

Org No.:	9020	9026	9028
Account No.:	7295	7295	7295
Fund No.:	0720	0700	0710
Subclass No.:	15000	15000	15000

Exhibit A

Scope of Services

The Contractor is expected to provide services for the preparation and submittal of semi-annual and annual Detection Monitoring Reports. Contractor will provide sample analysis for each respective site, recommendations for regulatory compliance and notifications based on site specific Waste Discharge Requirements (WDR), which may be revised during the term of this agreement. Additionally, Contractor is expected to respond to all comments from the Regional Water Quality Control Board (RWQCB) and all other reviewing agencies. Comments are considered to include changes to the report submitted based on errors or omissions, and/or preference in wording descriptions by the RWQCB and all other reviewing agencies. The regulatory compliance and notification recommendations and responses shall be at no additional cost to the County and shall be completed in the time frame specified by the RWQCB and/or all other reviewing agencies

A. Summary of Tasks:

- | | |
|--------|--|
| Task 1 | Coordinate with County's contracted laboratory for electronic delivery of laboratory analytical data; |
| Task 2 | Preparation and submittal of semi-annual detection monitoring reports and annual monitoring summary report for the American Avenue Landfill. Address issues from regulatory agencies as defined below Exhibit A Section C.1; |
| Task 3 | Preparation and submittal of semi-annual detection monitoring reports and annual monitoring summary report for the Coalinga Disposal Site. Address issues from regulatory agencies as defined below Exhibit A Section C.1; |
| Task 4 | Preparation and submittal of semi-annual detection monitoring reports and annual monitoring summary report for the Southeast Regional Solid Waste Landfill. Address issues from regulatory agencies as defined in the immediately following paragraph. |

B. Description of Tasks:

Exhibit A

Task 1 – Coordinate with County's contracted laboratory for electronic delivery of laboratory analytical data

Contractor shall make arrangements with County's contracted laboratory to have all laboratory analytical data delivered to Contractor. Preferred method of transfer and format are at the Contractor's discretion, providing that the agreed upon format is compatible with County software and conforming to AB 2886 GeoTracker requirements in accordance with Title 23 of the California Code of Regulations (CCR) Section 3893 and all other applicable laws and regulations. The contracted laboratory is obligated to the County through an Agreement, with deadlines to be met for submittal of necessary analytical data.

Task 2 – Detection Monitoring Reports for American Avenue Landfill

(A) Semi-Annual Monitoring Reports

Each report is to be prepared in accordance with the Monitoring and Reporting Program No. R5-2012-0064 of WDR Order R5-2012-0064 (the relevant pages of which have been excerpted and are attached hereto as Exhibit E) and in full compliance with all applicable provisions of Title 27 of the CCR. A Semi-Annual Evaluation Report of the Corrective Action Program in accordance with Title 27 CCR Section 20430(h) will be prepared by an independent firm based upon its own review, conducted under separate contract with County and included as an Appendix to Contractor's Detection Monitoring Report. Said report will be prepared in two (2) hard copies each in a three ring "D" binder not to exceed 4" in width. Each copy of the report will include data media in the format of the RWQCB letter be dated 8 November, 2000 (a true and correct copy of which is attached hereto as Exhibit I) and one (1) copy of all data in its entirety in Portable Document File (PDF) format on a USB Flash Drive (USB). Additionally, the USB will contain a searchable PDF of the report. Two (2) additional copies of the forementioned USB will be provided for the County use. The Spine of the hard copies will clearly display the title of the report and reporting period.

(B) Annual Monitoring Summary Report

Each report is to be prepared in accordance with Exhibit H. An Annual (Second Semi-Annual) Evaluation Report of the Corrective Action Program in accordance with Title 27 CCR

Exhibit A

Section 20430(h) will be prepared by an independent firm based upon its own review, conducted under separate contract with County and included as an Appendix to Contractor's Detection Monitoring Report. Said report will be prepared in two (2) hard copies each in a three ring "D" binder not to exceed 4" in width. Each copy of the report will include data media in the format of the RWQCB letter be dated 8 November, 2000 (a true and correct copy of which is attached hereto as Exhibit I) and one (1) copy of all data in its entirety in Portable Document File (PDF) format on a USB Flash Drive (USB). Additionally, the USB will contain a searchable PDF of the report. Two (2) additional copies of the forementioned USB will be provided for the County use. The Spine of the hard copies will clearly display the title of the report and reporting period.

The second semi-annual period report and annual report for the respective year may be combined into a single report submittal.

(C) Compilation of Information in the Required Format for Electronic Submittal (GeoTracker)

All reports are to follow the format outlined in the State Water Resources Control Board's (SWRCB) website:
<http://www.waterboards.ca.gov/rwqcb4/docs/ElectronicSubmittalofInformation.pdf>, (see link on website entitled "Electronic Reporting Roles and Responsibilities"), and as required by Title 23 of the CCR, Division 3, Chapter 30 (see particularly Article 2 of said Chapter 30, entitled "Electronic Submittal of Information"), and by Title 27 of the CCR, Division 3 (also entitled "Electronic Submittal of Information"). Contractor also shall consider the letter dated 12 January, 2005 from the RWQCB regarding electronic submittal of information, a true and correct copy of which is attached hereto as Exhibit H.

(D) Submittal of Data and Reports

Reports shall be submitted to the County for review and approval. Final data also shall be submitted to the County for approval, and then the approved data shall be uploaded by Contractor into the GeoTracker system, in accordance with the regulations promulgated pursuant to California Assembly Bill 2886 (Cal. Stats 2000, Chapter 727, referenced herein as

Exhibit A

“AB 2886”), which regulations are set forth in Title 23 and in Title 27 of the CCR, as referenced above.

Task 3 – Detection Monitoring Reports for Coalinga Disposal Site

(A) Semi-Annual Monitoring Reports

Each report is to be prepared in accordance with the Monitoring and Reporting Program No. R5-2014-0058 of WDR Order R5-2014-0058 (the relevant pages of which have been excerpted and are attached hereto as Exhibit F) and in full compliance with Title 27 of the CCR. Said report will be prepared in two (2) hard copies each in a three ring “D” binder not to exceed 4” in width. Each copy of the report will include data media in the format of the RWQCB letter be dated 8 November, 2000 (a true and correct copy of which is attached hereto as Exhibit I) and one (1) copy of all data in its entirety in Portable Document File (PDF) format on a USB Flash Drive (USB). Additionally, the USB will contain a searchable PDF of the report. Two (2) additional copies of the forementioned USB will be provided for the County use. The Spine of the hard copies will clearly display the title of the report and reporting period.

(B) Annual Monitoring Summary Report

Each report is to be prepared in accordance with Exhibit B. Said report will be prepared in two (2) hard copies each in a three ring “D” binder not to exceed 4” in width. Each copy of the report will include data media in the format of the RWQCB letter be dated 8 November, 2000 (a true and correct copy of which is attached hereto as Exhibit I) and one (1) copy of all data in its entirety in Portable Document File (PDF) format on a USB Flash Drive (USB). Additionally, the USB will contain a searchable PDF of the report. Two (2) additional copies of the forementioned USB will be provided for the County use. The Spine of the hard copies will clearly display the title of the report and reporting period.

The second semi-annual period report and annual report for the respective year may be combined into a single report submittal.

(C) Compilation of Information in the Required Format for Electronic Submittal

(GeoTracker)

Exhibit A

All reports are to follow the format outlined in the SWRCB's website and as required by Title 23 and Title 27 of the CCR, as referenced hereinabove.

(D) Submittal of Data and Reports

Reports shall be submitted to the County for review and approval. Final data also shall be submitted to the County for approval, and then the approved data shall be uploaded by Contractor into the GeoTracker system, in accordance with AB 2886 and the implementing regulations set forth in Title 23 and Title 27 of the CCR, as referenced hereinabove.

Task 4 – Detection Monitoring Reports for Southeast Regional Solid Waste Landfill

(A) Semi-Annual Monitoring Reports

Each report is to be prepared in accordance with the Monitoring and Reporting Program WDR R5-2018-0053 (the relevant pages of which have been excerpted and are attached hereto as Exhibit G) and in full compliance with all applicable provisions of Title 27 of the CCR. A Semi-Annual Evaluation Report of the Corrective Action Program in accordance with Title 27 CCR Section 20430(h) will be prepared by an independent firm based upon its own review, conducted under separate contract with County and included as an Appendix to Contractor's Detection Monitoring Report. Said report will be prepared in two (2) hard copies each in a three ring "D" binder not to exceed 4" in width. Each copy of the report will include data media in the format of the RWQCB letter be dated 8 November, 2000 (a true and correct copy of which is attached hereto as Exhibit I) and one (1) copy of all data in its entirety in Portable Document File (PDF) format on a USB Flash Drive (USB). Additionally, the USB will contain a searchable PDF of the report. Two (2) additional copies of the forementioned USB will be provided for the County use. The Spine of the hard copies will clearly display the title of the report and reporting period.

(B) Annual Monitoring Summary Report

Each report is to be prepared in accordance with Exhibit G. An Annual (Second Semi-Annual) Evaluation Report of the Corrective Action Program in accordance with Title 27 CCR Section 20430(h) will be prepared by an independent firm based upon its own review, conducted under separate contract with County and included as an Appendix to Contractor's

Exhibit A

Detection Monitoring Report. Said report will be prepared in two (2) hard copies each in a three ring "D" binder not to exceed 4" in width. Each copy of the report will include data media in the format of the RWQCB letter be dated 8 November, 2000 (a true and correct copy of which is attached hereto as Exhibit I) and one (1) copy of all data in its entirety in Portable Document File (PDF) format on a USB Flash Drive (USB). Additionally, the USB will contain a searchable PDF of the report. Two (2) additional copies of the forementioned USB will be provided for the County use. The Spine of the hard copies will clearly display the title of the report and reporting period.

The second semi-annual period report and annual report for the respective year may be combined into a single report submittal.

(C) Compilation of Information in the Required Format for Electronic Submittal (GeoTracker)

All reports are to follow the format outlined in the SWRCB's website and as required by Title 23 and Title 27 of the CCR, as referenced hereinabove.

(D) Submittal of Data and Reports

Reports shall be submitted to the County for review and approval. Final data also shall be submitted to the County for approval, and then the approved data shall be uploaded by Contractor into the GeoTracker system, in accordance with AB 2886 and the implementing regulations set forth in Title 23 and Title 27 of the CCR, as referenced hereinabove.

All reports required under Tasks 2 through 4, inclusive, shall be submitted to the County within fifteen (15) working days of Contractor's receipt of all appropriate data. (In the event the County's contracted laboratory fails to send all of its analytical data according to schedule, the Contractor shall notify the County promptly of such failure.) Should the Contractor not submit a report within the deadline for its submission as specified herein, the Contractor will incur a penalty for each late report as follows: twenty-percent (20%) of the report cost for the first late report; forty-percent (40%) of the report cost for the second late report; and fifty-percent (50%) of the report cost for the third and each successive late report. The penalties are cumulative

Exhibit A

and shall be applicable as to all reports required during any contract year under Tasks 2 through 4, inclusive. The specified percentages will reset at the beginning of a new contract year.

Contractor understands and agrees that the County shall retain full ownership rights of the reports and the work-product of Contractor for the project, to the fullest extent permitted by law. All documents, including electronic data files, required in performing services under this Agreement shall be submitted to, and shall remain the property of the County.

Contractor is expected to provide recommendations to County for regulatory compliance and notifications based on site specific Waste Discharge Requirements (WDR) and sample analysis for each respective site. Additionally, Contractor is expected to respond to all comments from the Regional Water Quality Control Board (RWQCB) and all other reviewing agencies. The term "comments" in that context shall include requested changes to the report as initially submitted, whether based on perceived errors or omissions, and/or the commenting agency's preference in word choice or descriptions. These responses shall be provided by Contractor at no additional cost to the County and shall be completed in the time frame specified by the RWQCB and/or all other reviewing agencies.

If this project requires services that are not part of the Basic Services specified Exhibit A Section C.1. of the Agreement, the Contractor may be requested by the County to provide Extra Services. These Extra Services must be pre-approved and authorized in writing by the COUNTY Representative before work can commence. Extra Services provisions are included in Exhibit B "Compensation" of this Agreement.

C. Contractor's Basic Fee Services:

Throughout the length of the project, the Contractor shall consult, communicate and meet with County's project committee and staff as often as necessary in order to verify, refine, and complete the project requirements and review the progress of the project. Contractor shall prepare brief minutes of the meetings attended and shall provide a copy of all such minutes to the County.

Services required of the Contractor for each of the three (3) disposal sites shall include, but are not necessarily limited to the following items (as more thoroughly described in the

Exhibit A

immediately preceding Exhibit B Section B) related to the preparation of necessary reports and/or the Electronic Submittal of Information (ESI) to the State's GeoTracker system:

1) General Reporting Tasks:

- a) Obtain data electronically from the Lab;
- b) Compile analytical results into tables;
- c) Analyze data noting any significant results, such as detections, changes from historical results, etc.;
- d) Notify the County representative if such results trigger regulatory required action by the County;
- e) Perform statistical analysis of applicable groundwater quality data as required by the regulations, using the computer software program SANITAS by NIC (formerly IDT, Inc) – No software substitutions will be allowed. SANITAS is a state-of-the art statistical analysis software program designed to evaluate and analyze specific data. SANITAS provides state-specific statistical procedures to ensure that a facility's ground water quality statistical analysis procedures meet all relevant regulations. NIC has built SANITAS to provide rapid and cost-effective ground water quality statistical analyses;
- f) Prepare the quarterly, semi-annual, and/or annual detection monitoring reports to comply with all regulations, orders, programs, etc., applicable for each respective disposal site;
- g) Provide recommendations to the County regarding County's efforts to comply with the Detection Monitoring Program at each disposal site, if deemed appropriate by the Contractor.

2) Electronic Submittal of Information (ESI):

- a) Check electronic data received from the Lab to make sure it agrees with the hard copy of Lab reports (this includes a QA/QC check of the EDF file from the Lab);

Exhibit A

- b) Analyze data and if anomalous results are found, confirm the results in question with the Lab;
- c) Ensure that the data is in the correct format for electronic submittal and that it will be accepted by the GeoTracker system. The data format is to be checked by using the Electronic Deliverable Consistency Check (EDCC) program, which is designed to check the consistency of file formats of reports produced in the Electronic Deliverable Format (EDF) as Electronic Data Deliverables (EDDs);
- d) Obtain access and submit final data into the GeoTracker system (after it is approved by the County), in accordance with the regulations promulgated pursuant to California Assembly Bill 2886 (Cal. Stats 2000, Chapter 727, referenced herein as "AB 2886"), which regulations are set forth in Title 23 and in Title 27 of the CCR, as referenced above. The Contractor's basic steps for ESI are outlined below:
 - I. Upload groundwater monitoring data received from the Lab (EDF data);
 - II. Upload groundwater depth information (Geo_Well data) for each well;
 - III. Upload each Detection Monitoring Report in its entirety (Geo_Report data), in PDF format.

Exhibit B

Compensation

The Contractor will be compensated for performance of its services under this Agreement as provided in this Exhibit B. The Contractor is not entitled to any compensation except as expressly provided in this Exhibit B.

County agrees to pay Contractor and Contractor agrees to receive compensation as follows:

A. Total Fee:

- 1) The total fee includes both Basic Fee and Extra Services. Basic Fee services will be subject to an annual maximum compensation amount specified in Exhibit B, Section B. The cumulative amount payable under this Agreement for Extra Services provided under Exhibit B Section C, however will not be subject to an annual maximum. The Agreement allows payment for performance of Extra Services in such amount as is required during the contract year, so long as the maximum cumulative amount of the Total Fee is not exceeded.
- 2) The maximum cumulative amount of the Total Fee for the original three-year term of this Agreement shall be \$117,372; and it is further hereby provided that if the Agreement is renewed, then the maximum cumulative amount of the Total Fee, which includes both the Basic Fee and Extra Services allocations, shall be increased as provided below.

B. Basic Fee:

Notwithstanding any other provision in this Agreement, the Basic Fee for the Basic Services required of the Contractor as specified in Exhibit B, shall be paid at the rates shown in the Contractor's response to the County's Request for Quotation No. 22-052 (a true and correct copy of which is listed below and incorporated by this reference) and shall not exceed an annual maximum of \$39,124.00 for each contract year. These rates as listed below are to remain in effect for the entire duration of this Agreement. In no event shall services perform under this

Exhibit B

Agreement be excess of \$245,620 over the entire potential five-year term of this Agreement, comprise of Basic Fee (Task 1 to Task 4) and Extra Services.

Upon written agreement and authorization by both COUNTY and CONTRACTOR, the Task amounts listed in Exhibit B may be modified within the maximum limits of the Total Basic Fee for any contract year.

Task 1 Electronic Transfer / Delivery

Cost to be apportioned as follows:

	<u>Per Period</u>	<u>No. of Periods</u>	<u>Total Amount</u>
American Avenue	\$375	2	\$750
Municipal Solid Waste Landfill Class III Landfill			
Coalinga Disposal Site Class III Landfill	\$150	2	\$300
Southeast Regional Disposal Site Class III Landfill	\$225	2	\$450

Task 1 Combined Total for All Sites: \$1,500

Task 2 American Avenue Municipal Solid Waste Landfill Class III Landfill

	<u>Total Amount</u>
Semi-Annual Report:	\$8,051

Exhibit B

Annual Report: \$8667

Task 2 Total Fee: \$16,728

Task 3 Coalinga Disposal Site Class III Landfill

Total Amount

Semi-Annual Report: \$4,621

Annual Report: \$4,947

Task 3 Total Fee: \$9,568

Task 4 Southeast Regional Disposal Site Class III Landfill

Total Amount

Semi-Annual Report: \$5,651

Annual Report: \$5,677

Task 4 Total Fee: \$11,328

Grand Total Basic Fee (Tasks 1-4): \$39,124

Exhibit B

C. Extra Services:

- 1) A maximum cumulative allocation of \$50,000 to pay for authorized Extra Services is provided herein by this Agreement. Payment of Extra Services in excess of \$50,000 is prohibited except upon a written Amendment to this Agreement pursuant to the provisions specified herein.
- 2) The Contractor shall submit a request for authorization to perform Extra Services and an appropriate fee schedule for said Extra Services. The Contractor shall not undertake any Extra Services without the advance written authorization of the County Representative. The Contractor and the County shall expressly confirm in writing the authorization and maximum cost for any such Extra Services before the Contractor is compensated for any work thereon.
- 3) Payment for Extra Services will be at the identical hourly and cost rates set forth below of this Agreement.
- 4) The following are Contractor services which are considered as not included herein, but may be required and thus considered Extra Services.
 - a) Providing unforeseen, extraordinary, or unique services or items that are not covered nor ordinarily included in the Basic Fee, but which have been specifically authorized by the County Representative. Making changes to documents, which are ordered by the County subsequent to County approval thereof (excludes changes to documents resulting from comments by regulatory agencies).
- 5) In the event County Representative expressly authorizes Extra Services, Contractor shall keep complete records showing the hours and description of activities worked by each person who works on the project and all costs and charges applicable to the Extra Services work authorized. Should there be a claim for Extra Services, the Contractor hereby acknowledges and agrees that he shall identify the activity, performer of the activity, reason for the activity, and

Exhibit B

County official requesting the activity or the claim will be denied. Contractor shall be responsible for all subcontractors (if any are approved in accordance with Article 7) keeping similar records. The Contractor shall not stop the work, including the work in other areas unrelated to the Extra Services request or claim, unless it can be shown the project work cannot proceed while a claim or request for Extra Services is being evaluated.

6) Contractor shall submit separate invoices for Extra Services, accompanied by copies of invoices for work performed by any approved subcontractors and costs for approved incidentals.

7) In no event shall services performed under this Agreement exceed the maximum \$245,620 over the entire potential five-year term of this Agreement, comprise of Basic Fee (Task 1 to Task 4) and Extra Services. It is understood that all expenses incidental to Contractor's performance of services under this Agreement shall be borne by Contractor.

2022 Fee Schedule

PROFESSIONAL STAFF

Staff Professional I	\$135.00/Hour
Staff Professional II	\$150.00/Hour
Staff Professional III	\$160.00/Hour
Project Professional I	\$177.00/Hour
Project Professional II.....	\$192.00/Hour
Project Professional III.....	\$206.00/Hour
Senior Professional I	\$227.00/Hour
Supervising Professional/Senior Professional II	\$254.00/Hour
Principal Professional I	\$276.00/Hour
Principal Professional II	\$276.00/Hour
Court Appearance (Expert Witness, Deposition, etc.; four-hour minimum	\$2 X Hourly Rate

FIELD/LABORATORY STAFF

Exhibit B

1	Technician I	\$104.00/Hour
2	Technician II	\$112.00/Hour
3	Technician III (or Minimum Prevailing Wage)	\$124.00/Hour
4	Technician IV	\$150.00/Hour
5	Laboratory Manager	\$165.00/Hour
6	Principal Technician	\$190.00/Hour
7	<u>CADD/GIS</u>	
8	CADD/GIS/Database Manager I	\$108.00/Hour
9	CADD/GIS/Database Manager II	\$130.00/Hour
10	CADD Designer	\$143.00/Hour
11	GIS Specialist	\$175.00/Hour
12	<u>SUPPORT STAFF</u>	
13	Administrative Assistant I	\$95.00/Hour
14	Administrative Assistant II	\$120.00/Hour
15	Technical Editor	\$120.00/Hour
16	Senior Technical Editor	\$150.00/Hour
17	*Overtime Premium is 35% of PERSONNEL CHARGE	
18	<u>EQUIPMENT CHARGES</u>	
19	BAT Permeameter	\$200.00/Day
20	Compaction Testing Equipment & Supplies	\$50.00/Day
21	Peel & Shear Strength Apparatus (FML Seams)	\$900.00/Month
22	Portable Laboratory (8' x 32' trailer) with equipment	\$1,200/Month
23	Portable Laboratory (mobilization / demobilization)	\$1,500.00
24	ReMi/Refraction	
25	Seismograph	\$600.00/Day
26	Sealed Single Ring Infiltrometer (SSRI)	\$200.00/Day or \$750.00/Month
27	Sealed Double Ring Infiltrometer (SDRI)	Call for Quote
28	Slope Inclinometer.....	\$250.00/Day

Exhibit B

Unmanned Aerial Vehicle (Drone) Reconnaissance\$130.00/Day

EXPENSES

Vehicle Use for Field Services\$15.00/Hour or \$350.00/week

Soil Sampling Equipment & Drilling Supplies\$5.00/Hour

Groundwater Sampling Equipment and Supplies\$15.00/Hour

Per DiemLesser of (Cost +15%) or (Local Government Rate)

Outside Services (Consultants, Surveys, Chemical lab Tests, etc.).....Cost + 15%

Reimbursables (Maps, Photos, Permits, Expendable Supplies, etc.)Cost + 15%

Outside Equipment (Drill Rig, Backhoe, Monitoring Equipment, etc.)Cost + 15%

D. Compensation Records:

The Contractor shall keep complete records showing the hours and description of activities performed by each person who works on the project and all associated costs or charges applicable to work covered by the Basic Fee and approved Extra Services. The Contractor will be responsible for all subcontractors keeping similar records.

Exhibit C

Self-Dealing Transaction Disclosure Form

In order to conduct business with the County of Fresno ("County"), members of a contractor's board of directors ("County Contractor"), must disclose any self-dealing transactions that they are a party to while providing goods, performing services, or both for the County. A self-dealing transaction is defined below:

"A self-dealing transaction means a transaction to which the corporation is a party and in which one or more of its directors has a material financial interest."

The definition above will be used for purposes of completing this disclosure form.

Instructions

- (1) Enter board member's name, job title (if applicable), and date this disclosure is being made.
- (2) Enter the board member's company/agency name and address.
- (3) Describe in detail the nature of the self-dealing transaction that is being disclosed to the County. At a minimum, include a description of the following:
 - a. The name of the agency/company with which the corporation has the transaction; and
 - b. The nature of the material financial interest in the Corporation's transaction that the board member has.
- (4) Describe in detail why the self-dealing transaction is appropriate based on applicable provisions of the Corporations Code.

The form must be signed by the board member that is involved in the self-dealing transaction described in Sections (3) and (4).

Exhibit C

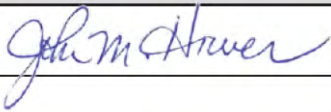
(1) Company Board Member Information:			
Name:	N/A	Date:	June 8, 2022
Job Title:	N/A		
(2) Company/Agency Name and Address:			
GeoLogic Associates, Inc. 2777 East Guasti Road, Suite 1 Ontario, California 91761			
(3) Disclosure (Please describe the nature of the self-dealing transaction you are a party to)			
GeoLogic Associates, Inc. has no transactions with Fresno County to which the corporation is a party and to which any of its directors has a material or financial interest.			
(4) Explain why this self-dealing transaction is consistent with the requirements of Corporations Code § 5233 (a)			
N/A			
(5) Authorized Signature			
Signature:		Date:	June 8, 2022

Exhibit D

Insurance Requirements

1. Required Policies

Without limiting the County's right to obtain indemnification from the Contractor or any third parties, Contractor, at its sole expense, shall maintain in full force and effect the following insurance policies throughout the term of this Agreement.

- (A) **Commercial General Liability.** Commercial general liability insurance with limits of not less than Two Million Dollars (\$2,000,000) per occurrence and an annual aggregate of Four Million Dollars (\$4,000,000). This policy must be issued on a per occurrence basis. Coverage must include products, completed operations, property damage, bodily injury, personal injury, and advertising injury. The Contractor shall obtain an endorsement to this policy naming the County of Fresno, its officers, agents, employees, and volunteers, individually and collectively, as additional insureds, but only insofar as the operations under this Agreement are concerned. Such coverage for additional insureds will apply as primary insurance and any other insurance, or self-insurance, maintained by the County is excess only and not contributing with insurance provided under the Contractor's policy.
- (B) **Automobile Liability.** Automobile liability insurance with limits of not less than One Million Dollars (\$1,000,000) per occurrence for bodily injury and for property damages. Coverage must include any auto used in connection with this Agreement.
- (C) **Workers Compensation.** Workers compensation insurance as required by the laws of the State of California with statutory limits.
- (D) **Employer's Liability.** Employer's liability insurance with limits of not less than One Million Dollars (\$1,000,000) per occurrence for bodily injury and for disease.
- (E) **Professional Liability.** Professional liability insurance with limits of not less than One Million Dollars (\$1,000,000) per occurrence and an annual aggregate of Three Million Dollars (\$3,000,000). If this is a claims-made policy, then (1) the retroactive date must be prior to the date on which services began under this Agreement; (2) the Contractor shall maintain the policy and provide to the County annual evidence of insurance for not less than five years after completion of services under this Agreement; and (3) if the policy is canceled or not renewed, and not replaced with another claims-made policy with a retroactive date prior to the date on which services begin under this Agreement, then the Contractor shall purchase extended reporting coverage on its claims-made policy for a minimum of five years after completion of services under this Agreement.

2. Additional Requirements

- (A) **Verification of Coverage.** Within 30 days after the Contractor signs this Agreement, and at any time during the term of this Agreement as requested by the County's Risk Manager or the County Administrative Office, the Contractor shall deliver, or cause its broker or producer to deliver, to the County Risk Manager, at 2220 Tulare Street, 16th Floor, Fresno, California 93721, or HRRiskManagement@fresnocountyca.gov, and by mail or email to the person identified to receive notices under this Agreement,

Exhibit D

certificates of insurance and endorsements for all of the coverages required under this Agreement.

- (i) Each insurance certificate must state that: (1) the insurance coverage has been obtained and is in full force; (2) the County, its officers, agents, employees, and volunteers are not responsible for any premiums on the policy; and (3) the Contractor has waived its right to recover from the County, its officers, agents, employees, and volunteers any amounts paid under any insurance policy required by this Agreement and that waiver does not invalidate the insurance policy.
 - (ii) The commercial general liability insurance certificate must also state, and include an endorsement, that the County of Fresno, its officers, agents, employees, and volunteers, individually and collectively, are additional insureds insofar as the operations under this Agreement are concerned. The commercial general liability insurance certificate must also state that the coverage shall apply as primary insurance and any other insurance, or self-insurance, maintained by the County shall be excess only and not contributing with insurance provided under the Contractor's policy.
 - (iii) The automobile liability insurance certificate must state that the policy covers any auto used in connection with this Agreement.
 - (iv) The professional liability insurance certificate, if it is a claims-made policy, must also state the retroactive date of the policy, which must be prior to the date on which services began under this Agreement.
- (B) **Acceptability of Insurers.** All insurance policies required under this Agreement must be issued by admitted insurers licensed to do business in the State of California and possessing at all times during the term of this Agreement an A.M. Best, Inc. rating of no less than A: VII.
- (C) **Notice of Cancellation or Change.** For each insurance policy required under this Agreement, the Contractor shall provide to the County, or ensure that the policy requires the insurer to provide to the County, written notice of any cancellation or change in the policy as required in this paragraph. For cancellation of the policy for nonpayment of premium, the Contractor shall, or shall cause the insurer to, provide written notice to the County not less than 10 days in advance of cancellation. For cancellation of the policy for any other reason, and for any other change to the policy, the Contractor shall, or shall cause the insurer to, provide written notice to the County not less than 30 days in advance of cancellation or change. The County in its sole discretion may determine that the failure of the Contractor or its insurer to timely provide a written notice required by this paragraph is a breach of this Agreement.
- (D) **County's Entitlement to Greater Coverage.** If the Contractor has or obtains insurance with broader coverage, higher limits, or both, than what is required under this Agreement, then the County requires and is entitled to the broader coverage, higher limits, or both. To that end, the Contractor shall deliver, or cause its broker or producer to deliver, to the County's Risk Manager certificates of insurance and endorsements for

Exhibit D

all of the coverages that have such broader coverage, higher limits, or both, as required under this Agreement.

- (E) **Waiver of Subrogation.** The Contractor waives any right to recover from the County, its officers, agents, employees, and volunteers any amounts paid under the policy of worker's compensation insurance required by this Agreement. The Contractor is solely responsible to obtain any policy endorsement that may be necessary to accomplish that waiver, but the Contractor's waiver of subrogation under this paragraph is effective whether or not the Contractor obtains such an endorsement.
- (F) **County's Remedy for Contractor's Failure to Maintain.** If the Contractor fails to keep in effect at all times any insurance coverage required under this Agreement, the County may, in addition to any other remedies it may have, suspend or terminate this Agreement upon the occurrence of that failure, or purchase such insurance coverage, and charge the cost of that coverage to the Contractor. The County may offset such charges against any amounts owed by the County to the Contractor under this Agreement.
- (G) **Subcontractors.** The Contractor shall require and verify that all subcontractors used by the Contractor to provide services under this Agreement maintain insurance meeting all insurance requirements provided in this Agreement. This paragraph does not authorize the Contractor to provide services under this Agreement using subcontractors.

Exhibit E

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2012-0064 FOR COUNTY OF FRESNO AMERICAN AVENUE MUNICIPAL SOLID WASTE LANDFILL CLASS III LANDFILL CONSTRUCTION, OPERATION, AND CORRECTIVE ACTION FRESNO COUNTY

This monitoring and reporting program (MRP) is issued pursuant to California Water Code section 13267 and incorporates requirements for groundwater, surface water, and unsaturated zone monitoring and reporting; facility monitoring, maintenance, and reporting; and financial assurances reporting contained in California Code of Regulations, Title 27, section 20005, et seq. (hereafter Title 27), Waste Discharge Requirements (WDRs) Order No. R5-2012-0064, and the Standard Provisions and Reporting Requirements (SPRRs) dated January 2012. Compliance with this MRP is ordered by the WDRs and the Discharger shall not implement any changes to this MRP unless a revised MRP is issued by the Central Valley Water Board or the Executive Officer.

A. MONITORING

The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater, surface water, and the unsaturated zone in accordance with Standard Monitoring Specifications in Section I of the SPRRs and the Monitoring Specifications in Section F of the WDRs. All monitoring shall be conducted in accordance with the approved 27 November 1996 (revised 25 May 2011) *Sample Collection and Analysis Plan*, which includes quality assurance/quality control standards.

All compliance monitoring wells established for the detection monitoring program shall constitute the monitoring points for the groundwater Water Quality Protection Standard. All detection monitoring program groundwater monitoring wells, unsaturated zone monitoring devices, leachate, and surface water monitoring points shall be sampled and analyzed for monitoring parameters and constituents of concern (COCs) as indicated and listed in Tables I through VI.

The Discharger may use alternative analytical test methods, including new USEPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this Monitoring and Reporting Program, are approved by the Executive Officer, and are incorporated into the Sample Collection and Analysis Plan.

The monitoring program of this MRP includes:

<u>Section</u>	<u>Monitoring Program</u>
A.1	Groundwater Monitoring
A.2	Unsaturated Zone Monitoring
A.3	Leachate Monitoring, Seep Monitoring, and LCRS Testing
A.4	Facility Monitoring
A.5	Corrective Action Monitoring

1. Groundwater Monitoring

The Discharger shall operate and maintain a groundwater detection monitoring system that complies with the applicable provisions of Title 27, sections 20415 and 20420. The detection monitoring system shall be certified by a California-licensed professional civil engineer or geologist as meeting the requirements of Title 27. The current groundwater detection monitoring system meets the applicable requirements of Title 27. The Discharger shall revise the groundwater detection monitoring system (after review and approval by Central Valley Water Board staff) as needed each time a new landfill cell or module is constructed.

The current groundwater monitoring network shall consist of the following:

<u>Well</u>	<u>Status</u>	<u>Zone</u>	<u>Units Being Monitored</u>
BMW-1,2	Background	Saturated	Phase I, II & III
BMW-3, DMW-16,17	Reclassified as Background	Saturated	Phase I, II & III
DMW-6,10	Detection	Saturated	Phase I & II
DMW-18, 19	Detection	Saturated	Phase II
DMW-21, 22, 23, 24	Detection	Saturated	Phase III
DMW-2, 4, 8, 12, 20, 25	Corrective Action	Saturated	Phase I & II

Groundwater samples shall be collected from the background wells, detection monitoring wells, corrective action monitoring wells and any additional wells added as part of the approved groundwater monitoring system. The collected samples shall be analyzed for the parameters and constituents listed in Table I in accordance with the specified methods and frequencies. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan.

Once per quarter, including the times of expected highest and lowest elevations of the water levels in the wells, the Discharger shall measure the groundwater elevation in each well, determine groundwater flow direction, and estimate groundwater flow rates in the uppermost aquifer and in any zones of perched water and in any additional portions of the zone of saturation monitored, pursuant to Title 27, section 20415(e)(15). The results shall be reported semiannually.

Samples collected for the COC monitoring specified in Table I shall be collected and analyzed in accordance with the methods listed in Table VI every five years. Five-year COCs were last monitored in 2007 and shall be monitored again in **2012** and reported in **2013**. The results shall be reported in the Annual Monitoring Report for the year in which the samples were collected.

2. Unsaturated Zone Monitoring

The Discharger shall operate and maintain an unsaturated zone detection monitoring system that complies with the applicable provisions of Title 27, sections 20415 and 20420. The current unsaturated zone detection monitoring system meets the applicable requirements of Title 27. The Discharger shall install unsaturated zone monitoring devices (after review and approval by Central Valley Water Board staff) each time the landfill constructs a new cell or module.

The current unsaturated zone monitoring network shall consist of:

<u>Mon Pt.</u>	<u>Status</u>	<u>Units Being Monitored</u>
M1L1, M1L2, M1L3, & M1L4	Detection	Phase II, Module 1
M2L1, M2L2, M2L3, & M2L4	Detection	Phase II, Module 2
M3L1, M3L2, M3L3, & M3L4	Detection	Phase II, Module 3
M4L1, M4L2, M4L3, & M4L4	Detection	Phase II, Module 4

<u>Mon Pt</u>	<u>Status</u>	<u>Units Being Monitored</u>
M5L1	Detection	Phase II, Module 6
M6L1	Detection	Phase II, Module 6
M7L1	Detection	Phase II, Module 7
M8L1	Detection	Phase II, Module 8
P3M1LYS	Detection	Phase III, Module 1
P3M2LYS	Detection	Phase III, Module 2
P3M3LYS	Detection	Phase III, Module 3

Unsaturated zone samples shall be collected from the monitoring network listed above and shall be analyzed for the parameters and constituents listed in Table II in accordance with the specified methods and frequencies (pan lysimeters need only be sampled when liquid is present). Pan lysimeters shall be inspected for the presence of liquid **monthly**. If liquid is detected in a previously dry pan lysimeter, the Discharger shall verbally notify Central Valley Water Board staff within **seven days** and shall immediately sample and test the liquid for Field and Monitoring Parameters listed in Table II. Samples collected for the 5-year COC analyses specified in Table II shall be collected and analyzed in accordance with the methods listed in Table VI every five years, beginning again in **2012** (does not include soil-pore gas).

The Discharger shall collect, preserve, and transport samples in accordance with the quality assurance/quality control standards contained in the approved Sample Collection and Analysis Plan.

Monitoring results for the unsaturated zone shall be included in monitoring reports and shall include an evaluation of potential impacts of the facility on the unsaturated zone and compliance with the Water Quality Protection Standard.

3. Leachate Monitoring, Seep Monitoring, and Annual LCRS Testing

Leachate Monitoring: The Discharger shall operate and maintain leachate collection and removal system (LCRS) sumps, conduct monitoring of any detected leachate seeps, and conduct annual testing of each LCRS in accordance with Title 27 and this monitoring program.

The current LCRS leachate sump monitoring points are:

<u>Mon Pt.</u>	<u>Unit Where Sump is Located</u>
Sump 1	Phase II, Module 1
Sump 2	Phase II, Module 2
Sump 3	Phase II, Module 3
Sump 4	Phase II, Module 4
Sump 5	Phase II, Module 5
Sump 6	Phase II, Module 6
Sump 7	Phase II, Module 7
Sump 8	Phase II, Module 8
P3M1LCH	Phase III, Module 1
P3M2LCH	Phase III, Module 2
P3M3LCH	Phase III, Module 3

All LCRS sumps shall be inspected monthly for the presence of leachate, and flow shall be recorded in accordance with Table III. If leachate is detected in a previously dry sump, the Discharger shall verbally notify Central Valley Water Board staff within **seven days** and shall immediately sample and test the leachate for Field and Monitoring Parameters listed in Table III. Leachate in the LCRS sump shall then be sampled for all parameters and constituents in accordance with the frequencies listed in Table III whenever liquid is present. All LCRS sump samples shall be analyzed for the 5-year COCs specified in Table III every five years, beginning again in **2012**.

Seep Monitoring: Leachate that seeps to the surface from a landfill unit shall be sampled and analyzed for the Field and Monitoring Parameters listed in Table III upon detection. The quantity of leachate shall be estimated and reported as Leachate Flow Rate (in gallons/day). Reporting for leachate seeps shall be conducted as required in Section B.3 of this MRP, below.

Annual LCRS Testing: All LCRSs shall be tested annually pursuant to Title 27, section 20340(d) to demonstrate proper operation. The results of these tests shall be reported to the Central Valley Water Board in the Annual Monitoring Report and shall include comparisons with earlier tests made under comparable conditions.

4. Facility Monitoring

a. Annual Facility Inspection

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess repair and maintenance needed for drainage control systems, cover systems, and groundwater monitoring wells; and shall assess preparedness for winter conditions (including but not limited to erosion and sedimentation control). The Discharger shall take photos of any problems areas before and after repairs. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. Annual facility inspection reporting shall be submitted as required in Section B.4 of this MRP.

b. Major Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities and all landfill side slopes for damage **within 7 days** following major storm events capable of causing damage or significant erosion. The Discharger shall take photos of any problems areas before and after repairs. Necessary repairs shall be completed **within 30 days** of the inspection. Notification and reporting requirements for major storm events shall be conducted as required in Section B.5 of this MRP.

c. Standard Observations

The Discharger shall conduct Standard Observations at the landfill in accordance with this section of the MRP. Standard observations shall be conducted in accordance with the following schedule:

<u>Landfill Unit Type</u>	<u>Frequency</u>	<u>Season</u>
Active	Weekly	Wet: 1 October to 30 April
Active	Monthly	Dry: 1 May to 30 September
Inactive/Closed	Monthly	Wet: 1 October to 30 April
Inactive/Closed	Quarterly	Dry: 1 May to 30 September

The Standard Observations shall include:

1) For the landfill units:

- a) Evidence of ponded water at any point on the landfill outside of any contact storm water/leachate diversions structures on the active face (show affected area on map); and
- b) Evidence of erosion and/or of day-lighted refuse.

- 2) Along the perimeter of the landfill units:
 - a) Evidence of leachate seeps, estimated size of affected area, and flow rate (show affected area on map); and
 - b) Evidence of erosion and/or of day-lighted refuse.
- 3) For receiving waters:
 - a) Floating and suspended materials of waste origin - presence or absence, source, and size of affected area; and
 - b) Discoloration and turbidity - description of color, source, and size of affected area.

Results of Standard Observations shall be submitted in the semiannual monitoring reports required in Section B.1 of this MRP.

5. Corrective Action Monitoring

The Discharger shall conduct corrective action monitoring to demonstrate the effectiveness of corrective action in accordance with Title 27, section 20430 and this MRP. Groundwater monitoring wells that are in a corrective action monitoring program shall be monitored in accordance with the groundwater monitoring requirements in parts A.1 and A.2 of this MRP.

Corrective Action Monitoring data analysis shall include the following:

- a. Nature and Extent
 - 1) Comparisons with concentration limit to identify any new or previously undetected constituents at a monitoring point.
- b. Effectiveness of Corrective Action
 - 1) Preparation of time series plots for representative waste constituents.
 - 2) Trend analysis for each waste constituent.
 - 3) The need for additional corrective action measures and/or monitoring wells.
 - 4) Submit a comprehensive effectiveness evaluation report every five years; to be submitted with the five year COC analyses.

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

B. REPORTING

The Discharger shall submit the following reports in accordance with the required schedule:

Reporting Schedule

<u>Section</u>	<u>Report</u>	<u>End of Reporting Period</u>	<u>Due Date</u>
B.1	Semiannual Monitoring Report	30 June, 31 December	31 August, 28 February
B.2	Annual Monitoring Report	31 December	28 February
B.3	Seep Reporting	Continuous	Immediately & 7 Days
B.4	Annual Facility Inspection Report	31 October	15 November
B.5	Major Storm Event Reporting	Continuous	7 days from damage discovery
B.6	Survey and Iso-Settlement Map for Closed Landfills	Every Five Years	At Closure Completion and Every Five Years
B.7	Financial Assurances Report	31 December	1 June

Reporting Requirements

The Discharger shall submit monitoring reports **semiannually** with the data and information as required in this Monitoring and Reporting Program and as required in WDRs Order No. R5-2012-0064 and the Standard Provisions and Reporting Requirements (particularly Section I: "Standard Monitoring Specifications" and Section J: "Response to a Release"). In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Data shall also be submitted in a digital format, such as a computer disk.

Field and laboratory tests shall be reported in each monitoring report. Semiannual and annual monitoring reports shall be submitted to the Central Valley Water Board in accordance with the above schedule for the calendar period in which samples were

taken or observations made. In addition, the Discharger shall enter all monitoring data and monitoring reports into the online Geotracker database as required by Division 3 of Title 27.

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.

The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained throughout the life of the facility including the post-closure period. Such records shall be legible and shall show the following for each sample:

- a) 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;
- b) Date, time, and manner of sampling;
- c) Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;
- d) Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
- e) Calculation of results; and
- f) Results of analyses, and the MDL and PQL for each analysis. All peaks shall be reported.

Required Reports

1. **Semiannual Monitoring Report:** Monitoring reports shall be submitted semiannually and are due on **31 August** and **28 February**. Each semiannual monitoring report shall contain at least the following:
 - a) For each groundwater monitoring point addressed by the report, a description of:
 - 1) The time of water level measurement;
 - 2) The type of pump - or other device - used for purging and the elevation of the pump intake relative to the elevation of the screened interval;
 - 3) The method of purging used to stabilize water quality indicators in the well bore before the sample is taken including the pumping rate; the equipment and methods used to monitor field pH, temperature, and conductivity during

purging; results of pH, temperature, conductivity, and turbidity testing; and the method of disposing of the purge water;

- 4) The type of pump - or other device - used for sampling, if different than the pump or device used for purging; and
 - 5) A statement that the sampling procedure was conducted in accordance with the approved Sample Collection and Analysis Plan.
- b) A map or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points.
 - c) The estimated quarterly groundwater flow rate and direction in the uppermost aquifer, in any zones of perched water, and in 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, section 20415(e)(15)].
 - d) Cumulative tabulated monitoring data for all monitoring points and constituents for groundwater, unsaturated zone, leachate, and surface water.
Concentrations below the laboratory reporting limit shall not be reported as "ND" unless the reporting limit is also given in the table. Otherwise they shall be reported "<" the reporting limit (e.g., <0.10). Units shall be as required in Tables I through IV unless specific justification is given to report in other units. Refer to the SPRRs Section I "Standard Monitoring Specifications" for requirements regarding MDLs and PQLs.
 - e) Laboratory statements of results of all analyses evaluating compliance with requirements.
 - f) An evaluation of the concentration of each monitoring parameter (or 5-year COC when five year COC sampling is conducted) as compared to the current concentration limits, and the results of any required verification testing for constituents exceeding a concentration limit. Report any actions taken under Section J: Response to a Release for verified exceedances of a concentration limit.
 - g) An evaluation of the effectiveness of the leachate monitoring and control facilities, and of the run-off/run-on control facilities. Include a summary of any instances where leachate depth on an MSW landfill liner system exceeded 30 cm (excluding the leachate sump), and information about the required notification and corrective action in Standard Facility Specification E.13 of the SPRRs.
 - h) A summary of all Standard Observations for the reporting period required in Section A.4.c of this MRP.
 - i) A summary of inspection, leak search, and repair of final covers on any closed landfill units in accordance with an approved final post-closure maintenance

plan as required by Standard Closure and Post-Closure Maintenance Specifications G.26 through G.29 of the SPRRs.

2. **Annual Monitoring Report:** The Discharger shall submit an Annual Monitoring Report to the Central Valley Water Board by **28 February** covering the reporting period of the previous monitoring year. If desired, the Annual Monitoring Report may be combined with the second semiannual report, but if so, shall clearly state that it is both a semi-annual and annual monitoring report in its title. Each Annual Monitoring Report shall contain the following information:
- a) All detected monitoring parameters shall be graphed to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. If a 5-year COC event was performed, then these parameters shall also be graphically presented. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. Graphical analysis of monitoring data may be used to provide significant evidence of a release.
 - b) An evaluation of the monitoring parameters with regards to the cation/anion balance, and a graphical presentation using a Stiff diagram, a Piper graph, or a Schoeller plot.
 - c) 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 format such as a computer disk. The Central Valley Water Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [Title 27, section 20420(h)], that facilitates periodic review by the Central Valley Water Board.
 - d) Hydrographs of each well showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted annually.
 - e) A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements.
 - f) A map showing the area and elevations in which filling has been completed during the previous calendar year and a comparison to final closure design contours, and include a projection of the year in which each discrete landfill module will be filled.
 - g) A written summary of the monitoring results, indicating any changes made or observed since the previous Annual Monitoring Report.

- h) The results of the annual testing of leachate collection and removal systems required under Standard Facility Specification E.14 of the SPRRs.
 - i) Updated concentration limits for each monitoring parameter at each monitoring well based on the new data set.
 - j) A comprehensive discussion of any Corrective Action Program required by this MRP under Section A.6.
3. **Seep Reporting:** The Discharger shall report by telephone any seepage from the disposal area **immediately** after it is discovered. A written report shall be filed with the Central Valley Water Board **within seven days**, containing at least the following information:
- a) A map showing the location(s) of seepage;
 - b) An estimate of the flow rate;
 - 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 Field Parameters and Monitoring Parameters listed in Table III of this MRP, 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 Reporting:** By **15 November** of each year, the Discharger shall submit a report describing the results of the inspection and the repair measures implemented, preparations for winter, and include photographs of any problem areas and the repairs. Refer to Section A.4.a of this MRP, above.
5. **Major Storm Event Reporting:** Following major storm events capable of causing damage or significant erosion, the Discharger **immediately** shall notify Central Valley Water Board staff of any damage or significant erosion upon discovery and report subsequent repairs within **14 days** of completion of the repairs, including photographs of the problem and the repairs. Refer to Section A.4.b of this MRP, above.
6. **Financial Assurances Report:** By **1 June** of each year, the Discharger shall submit a copy of the annual financial assurances report due to CalRecycle that updates the financial assurances for closure, post-closure maintenance, and corrective action. Refer to Financial Assurances Specifications E.1 through E.3 of the WDRs.

C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

1. Water Quality Protection Standard Report

For each waste management unit, the Water Quality Protection Standard shall consist of all COCs, the concentration limit for each constituent of concern, the verification retesting procedure to confirm measurably significant evidence of a release, the point of compliance, and all water quality monitoring points for each monitored medium.

The Water Quality Protection Standard for naturally occurring waste constituents consists of the COCs, the concentration limits, and the point of compliance and all monitoring points. Any proposed changes to the Water Quality Protection Standard other than annual update of the concentration limits shall be submitted in a report for review and approval.

The report shall:

- a. Identify **all distinct bodies of surface and ground water** that could be affected in the event of a release from a waste management unit or portion of a unit. This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the facility.
- b. Include a map showing the monitoring points and background monitoring points for the surface water monitoring program, groundwater monitoring program, and the unsaturated zone monitoring program. The map shall include the point of compliance in accordance with Title 27, section 20405.
- c. Evaluate the perennial direction(s) of groundwater movement within the uppermost groundwater zone(s).
- d. Include a proposed statistical method for calculating concentration limits for monitoring parameters and constituents of concern that are detected in 10% or greater of the background data (naturally-occurring constituents) using a statistical procedure from Title 27, section 20415(e)(8)(A-D)] or section 20415(e)(8)(E).
- e. Include a retesting procedure to confirm or deny measurably significant evidence of a release pursuant to Title 27, section 20415(e)(8)(E) and section 20420(j)(1-3).

The Water Quality Protection Standard shall be certified by a California-registered civil engineer or geologist as meeting the requirements of Title 27. If subsequent sampling of the background monitoring point(s) indicates significant

water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the Water Quality Protection Standard.

The Discharger proposed the methods for calculating concentration limits in the 20 February 2002 (revised 15 May 2002) *Water Quality Protection Standard Report*. The WQPS report proposed the use of Interwell data analysis to calculate tolerance limits for the monitored constituents.

The Water Quality Protection Standard shall be updated, at a minimum, every five years; or as required by natural changes in background water quality.

2. Monitoring Parameters

Monitoring parameters are a select group of constituents that are monitored during each monitoring event that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a waste management unit. The monitoring parameters for all waste management units are those listed in Tables I through V for the specified monitored medium.

3. Constituents of Concern (COCs)

The COCs include a larger group of waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the waste management unit, and are required to be monitored every five years [Title 27, sections 20395 and 20420(g)]. The COCs for all waste management units at the facility are those listed in Tables I through IV for the specified monitored medium, and Table VI. The Discharger shall monitor all COCs every five years, or more frequently as required in accordance with a Corrective Action Program. The last 5-year COC report was submitted to the Central Valley Water Board in the 2008 *Annual Monitoring Report*, and 5-year COCs are due to be monitored again in **2013**.

4. Concentration Limits

For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method pursuant to Title 27, section 20415(e)(8); or
- b. By an alternate statistical method meeting the requirements of Title 27, section 20415(e)(8)(E).

5. Retesting Procedures for Confirming Evidence of a Release

If monitoring results indicate measurably significant evidence of a release, as described in Standard Monitoring Specification I.45 of the SPRRs, then:

- a. For analytes that are detected in less than 10% of the background samples (such as non-naturally occurring constituents), the Discharger shall use the non-statistical retesting procedure required in Standard Monitoring Specification I.46 of the SPRRs.
- b. For analytes that are detected in 10% or greater of the background samples (naturally occurring constituents), the Discharger shall use one of the statistical retesting procedure as required in Standard Monitoring Specification I.47 of the SPRRs.

6. Point of Compliance

The point of compliance for the water standard at each waste management unit is a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the unit. The monitoring locations are those approved in the Detection Monitoring Program approved by the Executive Officer.

7. Compliance Period

The compliance period for each waste management 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 waste management unit. The compliance period shall begin anew each time the Discharger initiates an evaluation monitoring program [Title 27, section 20410].

8. Monitoring Points

A monitoring point is a well, device, or location specified in the waste discharge requirements at which monitoring is conducted and at which the water quality protection standard applies. The monitoring points for each monitored medium are listed in Section A of this MRP.

D. TRANSMITTAL LETTER FOR ALL REPORTS

A transmittal letter explaining the essential points shall accompany each report. At a minimum, the transmittal letter shall identify any violations found since the last report was submitted, and whether the violations were corrected. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. The

transmittal letter shall also state that a discussion of any violations found since the last report was submitted, and a description of the actions taken or planned for correcting those violations, including any references to previously submitted time schedules, is contained in the accompanying report. The transmittal letter shall 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.

The Discharger shall implement the above monitoring program on the effective date of this Program.

Ordered by 
for PAMELA C. CREEDON, Executive Officer

8 June 2012
(Date)

TABLE I
GROUNDWATER DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Field Parameters			
Groundwater Elevation	Ft. & 100ths, M.S.L.	Quarterly	Semiannual
Temperature	°F	Semiannual	Semiannual
Electrical Conductivity	umhos/cm	Semiannual	Semiannual
pH	pH units	Semiannual	Semiannual
Turbidity	Turbidity units	Semiannual	Semiannual

Monitoring Parameters

Total Dissolved Solids (TDS)	mg/L ¹	Semiannual	Semiannual
Chloride	mg/L	Semiannual	Semiannual
Carbonate	mg/L	Semiannual	Semiannual
Bicarbonate	mg/L	Semiannual	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual	Semiannual
Sulfate	mg/L	Semiannual	Semiannual
Calcium	mg/L	Semiannual	Semiannual
Magnesium	mg/L	Semiannual	Semiannual
Potassium	mg/L	Semiannual	Semiannual
Sodium	mg/L	Semiannual	Semiannual
Volatile Organic Compounds	ug/L ²	Semiannual	Semiannual
(USEPA Method 8260B, short list, see Table V)			

5-Year Constituents of Concern (see Table VI)

Total Organic Carbon	mg/L	5 years	2013
Inorganics (dissolved)	ug/L	5 years	and every 5 years
Volatile Organic Compounds	ug/L	5 years	thereafter
(USEPA Method 8260B, extended list)			
Semi-Volatile Organic Compounds	ug/L	5 years	" "
(USEPA Method 8270D)			
Chlorophenoxy Herbicides	ug/L	5 years	" "
(USEPA Method 8151A)			
Organophosphorus Compounds	ug/L	5 years	" "
(USEPA Method 8141B)			

¹ Milligrams per liter

² Micrograms per liter

TABLE II
UNSATURATED ZONE DETECTION MONITORING PROGRAM

PAN LYSIMETERS¹ (or other vadose zone monitoring device)

<u>Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Field Parameters			
Electrical Conductivity	umhos/cm	Semiannual	Semiannual
pH	pH units	Semiannual	Semiannual
Volume of liquid removed	gallons	Monthly	Semiannual
Monitoring Parameters			
Total Dissolved Solids (TDS)	mg/L	Semiannual	Semiannual
Chloride	mg/L	Semiannual	Semiannual
Carbonate	mg/L	Semiannual	Semiannual
Bicarbonate	mg/L	Semiannual	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual	Semiannual
Sulfate	mg/L	Semiannual	Semiannual
Calcium	mg/L	Semiannual	Semiannual
Magnesium	mg/L	Semiannual	Semiannual
Potassium	mg/L	Semiannual	Semiannual
Sodium	mg/L	Semiannual	Semiannual
Volatile Organic Compounds (USEPA Method 8260B, short list, see Table V)	ug/L	Semiannual	Semiannual
5-Year Constituents of Concern (see Table VI)			
Total Organic Carbon	mg/L	5 years	2013
Inorganics (dissolved)	ug/L	5 years	and every 5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)	ug/L	5 years	thereafter
Semi-Volatile Organic Compounds (USEPA Method 8270D)	ug/L	5 years	" "
Chlorophenoxy Herbicides (USEPA Method 8151A)	ug/L	5 years	" "
Organophosphorus Compounds (USEPA Method 8141B)	ug/L	5 years	" "

¹ Pan lysimeters shall be inspected for the presence of liquid **monthly**. If liquid is detected in a previously dry pan lysimeter, the Discharger shall verbally notify Central Valley Water Board staff within **seven days** and shall immediately sample and test the liquid for Field and Monitoring Parameters listed in Table II.

TABLE III
LEACHATE MONITORING ¹, SEEP MONITORING ², AND LCRS TESTING ³

<u>Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Field Parameters			
Total Flow	Gallons	Monthly	Semiannual
Flow Rate	Gallons/Day	Monthly	Semiannual
Electrical Conductivity	umhos/cm	Quarterly	Semiannual
pH	pH units	Quarterly	Semiannual
Monitoring Parameters			
Total Dissolved Solids (TDS)	mg/L	Annually	Annually
Chloride	mg/L	Annually	Annually
Carbonate	mg/L	Annually	Annually
Bicarbonate	mg/L	Annually	Annually
Nitrate - Nitrogen	mg/L	Annually	Annually
Sulfate	mg/L	Annually	Annually
Calcium	mg/L	Annually	Annually
Magnesium	mg/L	Annually	Annually
Potassium	mg/L	Annually	Annually
Sodium	mg/L	Annually	Annually
Volatile Organic Compounds (USEPA Method 8260B, short list, see Table V)	ug/L	Annually	Annually
5-Year Constituents of Concern (see Table VI)			
Total Organic Carbon	mg/L	5 years	2013
Inorganics (dissolved)	ug/L	5 years	and every 5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)	ug/L	5 years	thereafter
Semi-Volatile Organic Compounds (USEPA Method 8270D)	ug/L	5 years	" "
Chlorophenoxy Herbicides (USEPA Method 8151A)	ug/L	5 years	" "
Organophosphorus Compounds (USEPA Method 8141B)	ug/L	5 years	" "
LCRS Testing ³	---	Annually	Annually

¹ If leachate is detected in a previously dry sump, the Discharger shall verbally notify Central Valley Water Board staff within **seven days** and shall immediately sample and test the leachate for Field and Monitoring Parameters listed in Table III. Leachate in the LCRS sump shall then be sampled for all parameters and constituents in accordance with the frequencies listed in Table III whenever liquid is present.

² Leachate seeps shall be sampled and analyzed for the Field and Monitoring Parameters in this table upon detection. The quantity of leachate shall be estimated and reported in gallons/day. Also, refer to Section B.3

³ The Discharger shall test each LCRS annually pursuant to Title 27, section 20340(d) to demonstrate proper operation. The results of the tests shall be compared with earlier tests made under comparable conditions.

TABLE IV
SURFACE WATER DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u> ¹	<u>Reporting Frequency</u>
Field Parameters			
Electrical Conductivity	umhos/cm	Semiannual	Semiannual
pH	pH units	Semiannual	Semiannual
Turbidity	Turbidity units	Semiannual	Semiannual
Flow to Waters of U.S.	Yes or No	Semiannual	Semiannual
Monitoring Parameters			
Total Dissolved Solids (TDS)	mg/L	Semiannual	Semiannual
Carbonate	mg/L	Semiannual	Semiannual
Bicarbonate	mg/L	Semiannual	Semiannual
Chloride	mg/L	Semiannual	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual	Semiannual
Sulfate	mg/L	Semiannual	Semiannual
Calcium	mg/L	Semiannual	Semiannual
Magnesium	mg/L	Semiannual	Semiannual
Potassium	mg/L	Semiannual	Semiannual
Sodium	mg/L	Semiannual	Semiannual
Volatile Organic Compounds (USEPA Method 8260B, short list, see Table V)	ug/L	Semiannual	Semiannual
5-Year Constituents of Concern (see Table VI)			
Total Organic Carbon	mg/L	5 years	2013
Inorganics (dissolved)	ug/L	5 years	and every 5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)	ug/L	5 years	thereafter
Semi-Volatile Organic Compounds (USEPA Method 8270D)	ug/L	5 years	" "
Chlorophenoxy Herbicides (USEPA Method 8151A)	ug/L	5 years	" "
Organophosphorus Compounds (USEPA Method 8141B)	ug/L	5 years	" "

¹ Semiannual surface water monitoring is required twice per year when there is water present at the designated surface water monitoring point any time during the reporting period (1 January to 30 June or 1 July to 31 December). Reporting shall include whether there was flow from the facility to waters of the U.S. when the samples were collected.

TABLE V

MONITORING PARAMETERS FOR DETECTION MONITORING

Surrogates for Metallic Constituents:

pH
Total Dissolved Solids
Electrical Conductivity
Chloride
Sulfate
Nitrate nitrogen

Volatile Organic Compounds, short list:

USEPA Method 8260B

Acetone
Acrylonitrile
Benzene
Bromochloromethane
Bromodichloromethane
Bromoform (Tribromomethane)
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane (Ethyl chloride)
Chloroform (Trichloromethane)
Dibromochloromethane (Chlorodibromomethane)
1,2-Dibromo-3-chloropropane (DBCP)
1,2-Dibromoethane (Ethylene dibromide; EDB)
o-Dichlorobenzene (1,2-Dichlorobenzene)
m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
trans-1,4-Dichloro-2-butene
Dichlorodifluoromethane (CFC-12)
1,1-Dichloroethane (Ethylidene chloride)
1,2-Dichloroethane (Ethylene dichloride)
1,1 -Dichloroethylene (1,1 -Dichloroethene; Vinylidene chloride)
cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)
1,2-Dichloropropane (Propylene dichloride)
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Di-isopropylether (DIPE)
Ethanol
Ethyltertiary butyl ether
Ethylbenzene
2-Hexanone (Methyl butyl ketone)
Hexachlorobutadiene
Methyl bromide (Bromomethene)
Methyl chloride (Chloromethane)

TABLE V
MONITORING PARAMETERS FOR DETECTION MONITORING

Continued

Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Methyl ethyl ketone (MEK: 2-Butanone)
Methyl iodide (Iodomethane)
Methyl t-butyl ether
4-Methyl-2-pentanone (Methyl isobutylketone)
Naphthalene
Styrene
Tertiary amyl methyl ether
Tertiary butyl alcohol
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)
Toluene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane (Methylchloroform)
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride
Xylenes

TABLE VI
5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Inorganics (dissolved):

USEPA Method

Aluminum	6010
Antimony	7041
Barium	6010
Beryllium	6010
Cadmium	7131A
Chromium	6010
Cobalt	6010
Copper	6010
Silver	6010
Tin	6010
Vanadium	6010
Zinc	6010
Iron	6010
Manganese	6010
Arsenic	7062
Lead	7421
Mercury	7470A
Nickel	7521
Selenium	7742
Thallium	7841
Cyanide	9010C
Sulfide	9030B

Volatile Organic Compounds, extended list:

USEPA Method 8260B

Acetone
Acetonitrile (Methyl cyanide)
Acrolein
Acrylonitrile
Allyl chloride (3-Chloropropene)
Benzene
Bromochloromethane (Chlorobromomethane)
Bromodichloromethane (Dibromochloromethane)
Bromoform (Tribromomethane)
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)

TABLE VI

5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
trans- 1,4-Dichloro-2-butene
Dichlorodifluoromethane (CFC 12)
1,1 -Dichloroethane (Ethylidene chloride)
1,2-Dichloroethane (Ethylene dichloride)
1,1 -Dichloroethylene (1, 1-Dichloroethene; Vinylidene chloride)
cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)
trans- 1,2-Dichloroethylene (trans- 1,2-Dichloroethene)
1,2-Dichloropropane (Propylene dichloride)
1,3-Dichloropropane (Trimethylene dichloride)
2,2-Dichloropropane (Isopropylidene chloride)
1,1 -Dichloropropene
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Di-isopropylether (DIPE)
Ethanol
Ethyltertiary butyl ether
Ethylbenzene
Ethyl methacrylate
Hexachlorobutadiene
2-Hexanone (Methyl butyl ketone)
Isobutyl alcohol
Methacrylonitrile
Methyl bromide (Bromomethane)
Methyl chloride (Chloromethane)
Methyl ethyl ketone (MEK; 2-Butanone)
Methyl iodide (Iodomethane)
Methyl t-butyl ether
Methyl methacrylate
4-Methyl-2-pentanone (Methyl isobutyl ketone)
Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Naphthalene
Propionitrile (Ethyl cyanide)
Styrene
Tertiary amyl methyl ether
Tertiary butyl alcohol
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE)
Toluene
1,2,4-Trichlorobenzene

TABLE VI

5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

1,1,1 -Trichloroethane (Methylchloroform)
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene; TCE)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride (Chloroethene)
Xylene (total)

Semi-Volatile Organic Compounds:

USEPA Method 8270D - base, neutral, & acid extractables

Acenaphthene
Acenaphthylene
Acetophenone
2-Acetylaminofluorene (2-AAF)
Aldrin
4-Aminobiphenyl
Anthracene
Benzo[a]anthracene (Benanthracene)
Benzo[b]fluoranthene
Benzo[k]fluoranthene
Benzo[g,h,i]perylene
Benzo[a]pyrene
Benzyl alcohol
Bis(2-ethylhexyl) phthalate
alpha-BHC
beta-BHC
delta-BHC
gamma-BHC (Lindane)
Bis(2-chloroethoxy)methane
Bis(2-chloroethyl) ether (Dichloroethyl ether)
Bis(2-chloro-1-methylethyl) ether (Bis(2-chloroisopropyl) ether; DCIP)
4-Bromophenyl phenyl ether
Butyl benzyl phthalate (Benzyl butyl phthalate)
Chlordane
p-Chloroaniline
Chlorobenzilate
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)

TABLE VI

5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

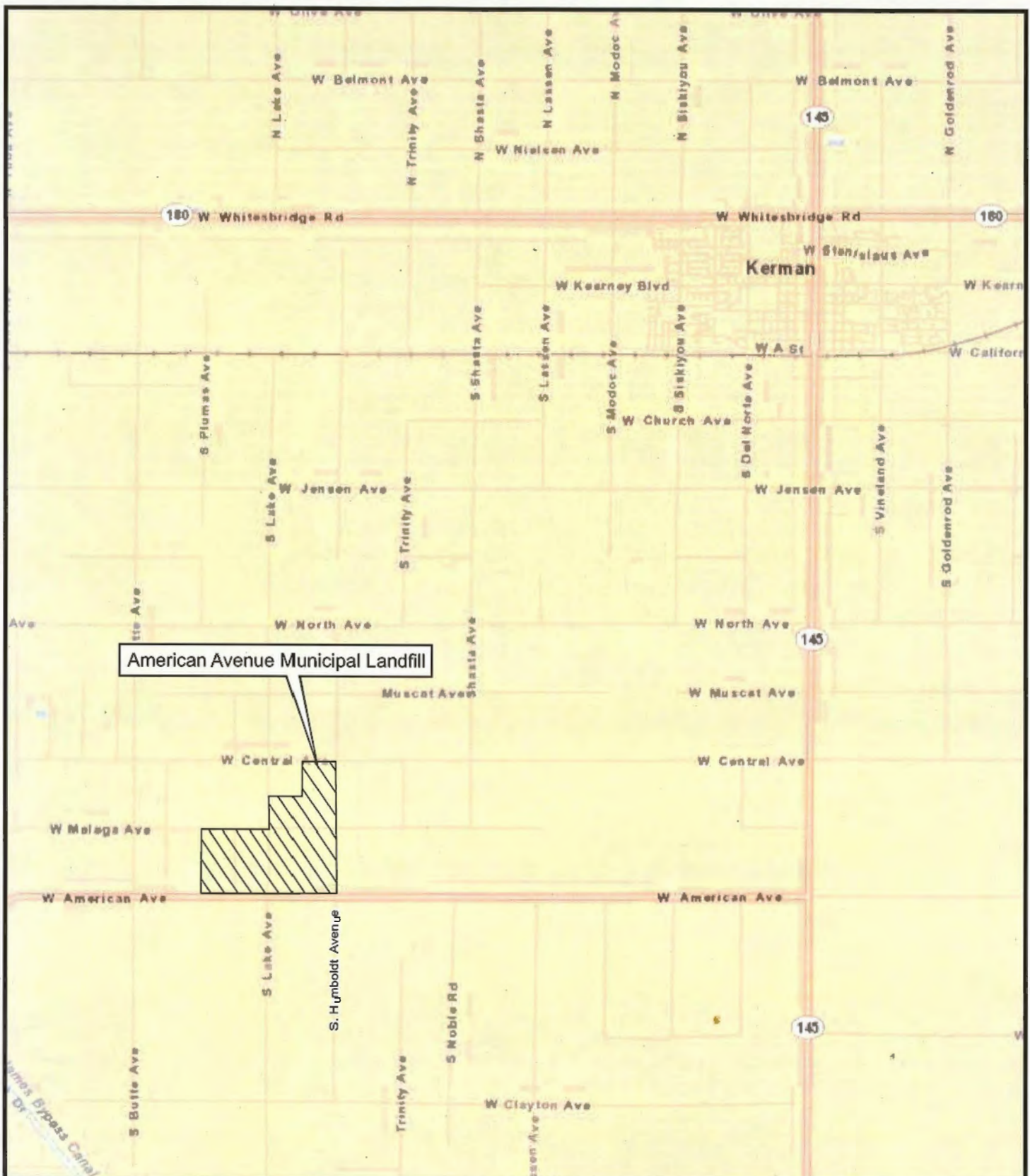
4,4'-DDD
4,4'-DDE
4,4'-DDT
Diallate
Dibenz[a,h]anthracene
Dibenzofuran
Di-n-butyl phthalate
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Dieldrin
Diethyl phthalate
p-(Dimethylamino)azobenzene
7,12-Dimethylbenz[a]anthracene
3,3'-Dimethylbenzidine
2,4-Dimethylphenol (m-Xylenol)
Dimethyl phthalate
m-Dinitrobenzene
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate
Diphenylamine
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Ethyl methanesulfonate
Famphur
Fluoranthene
Fluorene
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloropropene
Indeno(1,2,3-c,d)pyrene
Isodrin
Isophorone
Isosafrole
Kepone
Methapyrilene
Methoxychlor
3-Methylcholanthrene

TABLE VI

5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

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-butyl nitrosamine)
N-Nitrosodiethylamine (Diethyl nitrosamine)
N-Nitrosodimethylamine (Dimethyl nitrosamine)
N-Nitrosodiphenylamine (Diphenyl nitrosamine)
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propyl nitrosamine)
N-Nitrosomethylethylamine (Methylethyl nitrosamine)
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
Toxaphene
2,4,5-Trichlorophenol
0,0,0-Triethyl phosphorothioate
sym-Trinitrobenzene



Map Source:
 ESRI's ArcGIS Online premium services
 Sections 32 & 33, T14S, R17E, MDB&M



LOCATION MAP

ORDER NO. R5-2012-0064

WASTE DISCHARGE REQUIREMENTS

FOR

COUNTY OF FRESNO

AMERICAN AVENUE MUNICIPAL SOLID WASTE LANDFILL

CLASS III LANDFILL

CONSTRUCTION, OPERATION, AND CORRECTIVE ACTION

FRESNO COUNTY

ATTACHMENT A



SITE MAP

ORDER NO. R5-2012-0064

WASTE DISCHARGE REQUIREMENTS

FOR

COUNTY OF FRESNO

AMERICAN AVENUE MUNICIPAL SOLID WASTE LANDFILL

CLASS III LANDFILL

CONSTRUCTION, OPERATION, AND CORRECTIVE ACTION

FRESNO COUNTY

ATTACHMENT B

INFORMATION SHEET

WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2012-0064
FOR COUNTY OF FRESNO
CONSTRUCTION, OPERATION, AND CORRECTIVE ACTION
AMERICAN AVENUE MUNICIPAL SOLID WASTE LANDFILL
FRESNO COUNTY

The County of Fresno (hereafter Discharger) owns and operates the American Avenue Municipal Solid Waste Landfill, at 18950 W. American Ave, about five miles southwest of the City of Kerman.

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board) adopted Order 5-2005-0067 on 29 April 2005, which classified the Unit as a Class III landfill as defined in Title 27, California Code of Regulations, Section 20005 et seq. (hereafter Title 27). The proposed Order revises the existing Waste Discharge Requirements to provide for changes in the monitoring and reporting program, allow for future expansion, allow excavation of an existing unlined waste management unit (Phase 1), and implement corrective action.

The landfill consists of a closed unlined waste management unit (WMU) covering 30 acres (Phase I), and active-composite-lined WMU covering 160 acres (Phase II 8 modules), and a 250 acre composite lined WMU (Phase III) comprised of active Modules 1-3 and future Modules 4-12.

The facility is located near the trough of the San Joaquin Valley, which is the southern portion of the Central Valley of California. The Central Valley is a large, northwest trending structural trough bounded by the Sierra Nevada to the east and the Coast Ranges to the west, and filled with both marine and continental deposits of Jurassic to Holocene age.

The first encountered groundwater ranges from about 112 feet to 140 feet below the native ground surface. Groundwater elevations range from 48 feet MSL to 70 feet MSL. The groundwater is unconfined. The depth to groundwater fluctuates seasonally as much as 10 feet. The direction of groundwater flow is generally toward the southeast. The direction of groundwater flow varies seasonally and periodically flows toward the south. The estimated average groundwater gradient is approximately 0.0016 feet per foot

Volatile organic compounds (VOCs) were first detected in groundwater when the detection monitoring wells were installed in 1987. Several waste constituents were detected in 1987 at concentrations below primary water quality standards including: chloroethane; chloromethane; dichlorodifluoromethane; cis-1,3-dichloropropylene; tetrachloroethylene; 1,1,1-trichloroethane; trichloroethylene;

and trichlorofluoromethane. These and other volatile organics continue to be detected sporadically in detection monitoring wells at concentrations below primary water quality standards.

The Discharger submitted an Addendum to the Evaluation Monitoring Program dated November 2009, to the original Evaluation Monitoring Program (1 February 2006), detailing the current release of waste constituents to groundwater, which are: 1,2,3-trichloropropane, 1,2-dichloropropane, dichlorodifluoromethane, trichlorofluoromethane, 1,1-dichloroethane, tetrachloroethene, and trichloroethene.

The Discharger completed an Evaluation Monitoring Program for the release of waste constituents to the groundwater. The nature of the release was demonstrated to be volatile organic compounds that originated from landfill gas. The extent of the release is a plume downgradient from the Phase I waste management unit approximately 2,400 feet to the eastern boundary of the facility.

The Discharger completed an Engineering Feasibility Study in accordance with Section 20425 (c) of Title 27. The Engineering Feasibility Study concluded that the most technically and economically feasible corrective action alternative is monitored natural attenuation in conjunction with landfill gas extraction. The Discharger submitted an Amended Report of Waste Discharge for Corrective Action in accordance with Section 20425(d) of Title 27.

Section 20080(b) of Title 27 allows the Central Valley Water Board to consider the approval of an engineered alternative to the prescriptive standard for landfill liner systems. In order to approve an engineered alternative in accordance with Title 27, sections 20080(c)(1) and (2), the Discharger must demonstrate that the prescriptive design is unreasonably and unnecessarily burdensome and will cost substantially more than an alternative which will meet the criteria contained in Title 27, section 20080(b), or would be impractical and would not promote attainment of applicable performance standards.

The Discharger demonstrated that the proposed engineered alternative liner system is consistent with the performance goal addressed by the particular prescriptive standard, and provides protection against water quality impairment equivalent to the prescriptive standard in accordance with Title 27, section 20080(b)(2).

The engineered alternative liner proposed by the Discharger for the bottom liner of the future landfill modules consists of, in ascending order: subgrade; geosynthetic clay liner (GCL); 60-mil HDPE single sided textured geomembrane; geonet drainage layer, non-woven filter geotextile, two-foot thick soil operations

layer, and an LCRS. The components for the side slope are proposed to be constructed of the same materials and in the same sequence and manner as the bottom liner system, with the exception of the subgrade. The subgrade for the side slopes will not be over excavated and replaced with an engineered fill. It will be prepared in an appropriate manner using accepted engineering and construction methods so as to provide a surface that is smooth and free from rocks, sticks, and other debris that could damage or otherwise limit the performance of the geosynthetic clay layers and/or geomembranes.

The action to revise waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resource Code section 21000, et seq., and the CEQA guidelines, in accordance with Title 14, section 15301.

This order requires full containment of wastes and does not permit degradation of surface or groundwater. Further antidegradation analysis is therefore not needed. The discharge is consistent with the antidegradation provisions of State Water Resource Control Board Resolution No. 68-16.

Exhibit F

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2014-0058 FOR COUNTY OF FRESNO AND CHEVRON USA, INC. COALINGA SOLID WASTE DISPOSAL SITE CLASS III LANDFILL CLOSURE AND POST-CLOSURE MAINTENANCE FRESNO COUNTY

This monitoring and reporting program (MRP) is issued pursuant to California Water Code section 13267 and incorporates requirements for groundwater monitoring and reporting; facility monitoring, maintenance, and reporting; and financial assurances reporting contained in California Code of Regulations, title 27, section 20005, et seq. (hereafter Title 27), Waste Discharge Requirements (WDRs) Order No. R5-2014-0058, and the Standard Provisions and Reporting Requirements (SPRRs) dated January 2012. Compliance with this MRP is ordered by the WDRs and the Discharger shall not implement any changes to this MRP unless a revised MRP is issued by the Central Valley Water Board or the Executive Officer.

A. MONITORING

The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater in accordance with Standard Monitoring Specifications in Section I of the SPRRs and the Monitoring Specifications in Section G of the WDRs. All monitoring shall be conducted in accordance with the approved 27 November 1996 *Sample Collection and Analysis Plan*, and the 25 May 2011 *Amendment to Sampling and Analysis Plan*, which includes quality assurance/quality control standards.

All compliance monitoring wells established for the detection monitoring program shall constitute the monitoring points for the groundwater Water Quality Protection Standard. All detection monitoring program groundwater monitoring wells, and leachate seeps shall be sampled and analyzed for monitoring parameters and constituents of concern (COCs) as indicated and listed in Tables I through IV.

The Discharger may use alternative analytical test methods, including new USEPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this Monitoring and Reporting Program, and are identified in the approved Sample Collection and Analysis Plan.

The monitoring program of this MRP includes:

<u>Section</u>	<u>Monitoring Program</u>
A.1	Groundwater Monitoring
A.2	Leachate Seep Monitoring
A.3	Facility Monitoring

1. Groundwater Monitoring

The Discharger shall operate and maintain a groundwater detection monitoring system that complies with the applicable provisions of Title 27, sections 20415 and 20420. The detection monitoring system shall be certified by a California-licensed professional civil engineer or geologist as meeting the requirements of Title 27. The current groundwater detection monitoring system meets the applicable requirements of Title 27.

The current groundwater monitoring network shall consist of the following:

<u>Well</u>	<u>Status</u>
CMW-1	Active – DMP well
CMW-2A	Active – DMP well
CMW-3	Active – Non DMP well
CMW-4	Active – DMP well
CMW-5	Active – Non DMP well
CMW-6	Active – Non DMP well
CMW-7	Active – DMP well

Groundwater samples shall be collected from the detection monitoring wells, and any additional wells added as part of the approved groundwater monitoring system. The collected samples shall be analyzed for the parameters and constituents listed in Table I in accordance with the specified methods and frequencies. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan.

Once per quarter, the Discharger shall measure the groundwater elevation in each well, determine groundwater flow direction, and estimate groundwater flow rates in the uppermost aquifer and in any zones of perched water and in any additional portions of the zone of saturation monitored. The results shall be reported semiannually, including the times of expected highest and lowest elevations of the water levels in the wells, pursuant to Title 27, section 20415(e)(15).

Samples collected for the COC monitoring specified in Table I shall be collected and analyzed in accordance with the methods listed in Table IV every five years. Five-year COCs were last monitored in 2012 and shall be monitored again in **2017**. The results shall be reported in the Annual Monitoring Report for the year in which the samples were collected.

2. Leachate Seep Monitoring

Seep Monitoring: Leachate that seeps to the surface from a landfill unit shall be sampled and analyzed for the Field and Monitoring Parameters listed in Table II upon detection. The quantity of leachate shall be estimated and reported as Leachate Flow Rate (in gallons/day). Reporting for leachate seeps shall be conducted as required in Section B.3 of this MRP, below.

3. Facility Monitoring

a. Annual Facility Inspection

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility. The inspection shall assess repair and maintenance needed for drainage control systems, cover systems, and groundwater monitoring wells; and shall assess preparedness for winter conditions (including but not limited to erosion and sedimentation control). The Discharger shall take photos of any problems areas before and after repairs. Any necessary construction, maintenance, or repairs shall be completed by **31 October**. Annual facility inspection reporting shall be submitted as required in Section B.4 of this MRP.

b. Major Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities and all landfill side slopes for damage **within 7 days** following major storm events capable of causing damage or significant erosion. The Discharger shall take photos of any problems areas before and after repairs. Necessary repairs shall be completed **within 30 days** of the inspection. Notification and reporting requirements for major storm events shall be conducted as required in Section B.5 of this MRP.

c. Five-Year Iso-Settlement Survey for Closed Units

For closed landfill units, the Discharger shall conduct a five-year iso-settlement survey 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, section 21090(e)(1 & 2)]. Reporting shall be in accordance with Section B.6 of this MRP.

d. **Standard Observations**

The Discharger shall conduct Standard Observations at the landfill in accordance with this section of the MRP. Standard observations shall be conducted in accordance with the following schedule:

<u>Landfill Unit Type</u>	<u>Frequency</u>	<u>Season</u>
Active	Weekly	Wet: 1 October to 30 April
Active	Monthly	Dry: 1 May to 30 September
Inactive/Closed	Monthly	Wet: 1 October to 30 April
Inactive/Closed	Quarterly	Dry: 1 May to 30 September

The Standard Observations shall include:

- 1) For the landfill units:
 - a) Evidence of ponded water at any point on the landfill outside of any contact storm water/leachate diversions structures on the active face (show affected area on map); and
 - b) Evidence of erosion and/or of day-lighted refuse.
- 2) Along the perimeter of the landfill units:
 - a) Evidence of leachate seeps, estimated size of affected area, and flow rate (show affected area on map); and
 - b) Evidence of erosion and/or of day-lighted refuse.
- 3) For receiving waters:
 - a) Floating and suspended materials of waste origin - presence or absence, source, and size of affected area; and
 - b) Discoloration and turbidity - description of color, source, and size of affected area.

Results of Standard Observations shall be submitted in the semiannual monitoring reports required in Section B.1 of this MRP.

B. REPORTING

The Discharger shall submit the following reports in accordance with the required schedule:

Reporting Schedule

<u>Section</u>	<u>Report</u>	<u>End of Reporting Period</u>	<u>Due Date</u>
B.1	Semiannual Monitoring Report	30 June, 31 December	1 August, 1 February
B.2	Annual Monitoring Report	31 December	1 February
B.3	Seep Reporting	Continuous	Immediately & 7 Days
B.4	Annual Facility Inspection Report	31 October	15 November
B.5	Major Storm Event Reporting	Continuous	Immediately upon damage discovery & 14 days after repair completion
B.6	Survey and Iso-Settlement Map for Closed Landfills	Every Five Years	At Closure Completion and Every Five Years
B.7	Financial Assurances Report	31 December	1 June

Reporting Requirements

The Discharger shall submit monitoring reports **semiannually** with the data and information as required in this Monitoring and Reporting Program and as required in WDRs Order No. R5-2014-0058 and the Standard Provisions and Reporting Requirements (particularly Section I: "Standard Monitoring Specifications" and Section J: "Response to a Release"). In reporting the monitoring data required by this program, the Discharger shall arrange the data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with waste discharge requirements or the lack thereof. Data shall also be submitted in a digital format, such as a computer disk.

Field and laboratory tests shall be reported in each monitoring report. Semiannual and annual monitoring reports shall be submitted to the Central Valley Water Board in accordance with the above schedule for the calendar period in which samples were taken or observations made. In addition, the Discharger shall enter all monitoring data and monitoring reports into the online Geotracker database as required by Division 3 of Title 27.

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.

The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained throughout the life of the facility including the post-closure period. Such records shall be legible and shall show the following for each sample:

- a) 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;
- b) Date, time, and manner of sampling;
- c) Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;
- d) Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
- e) Calculation of results; and
- f) Results of analyses, and the MDL and PQL for each analysis. All peaks shall be reported.

Required Reports

1. **Semiannual Monitoring Report:** Monitoring reports shall be submitted semiannually and are due on **1 August** and **1 February**. Each semiannual monitoring report shall contain at least the following:
 - a) For each groundwater monitoring point addressed by the report, a description of:
 - 1) The time of water level measurement;
 - 2) The type of pump - or other device - used for purging and the elevation of the pump intake relative to the elevation of the screened interval;

- 3) The method of purging used to stabilize water in the well bore before the sample is taken including the pumping rate; the equipment and methods used to monitor field pH, temperature, and conductivity during purging; results of pH, temperature, conductivity, and turbidity testing; and the method of disposing of the purge water;
 - 4) The type of pump - or other device - used for sampling, if different than the pump or device used for purging; and
 - 5) A statement that the sampling procedure was conducted in accordance with the approved Sample Collection and Analysis Plan.
- b) A map or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points.
 - c) The estimated quarterly groundwater flow rate and direction in the uppermost aquifer, in any zones of perched water, and in 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, section 20415(e)(15)].
 - d) Cumulative tabulated monitoring data for all monitoring points and constituents for groundwater, and leachate. Concentrations below the laboratory reporting limit shall not be reported as "ND" unless the reporting limit is also given in the table. Otherwise they shall be reported "<" the reporting limit (e.g., <0.10). Units shall be as required in Tables I and II unless specific justification is given to report in other units. Refer to the SPRRs Section I "Standard Monitoring Specifications" for requirements regarding MDLs and PQLs.
 - e) Laboratory statements of results of all analyses evaluating compliance with requirements.
 - f) An evaluation of the concentration of each monitoring parameter (or 5-year COC when five year COC sampling is conducted) as compared to the current concentration limits, and the results of any required verification testing for constituents exceeding a concentration limit. Report any actions taken under Section J: Response to a Release for verified exceedances of a concentration limit.
 - g) An evaluation of the effectiveness of run-off/run-on control facilities.
 - h) A summary of all Standard Observations for the reporting period required in Section A.3.d of this MRP.
 - i) A summary of inspection, leak search, and repair of final covers on any closed landfill units in accordance with an approved final post-closure maintenance plan as required by Standard Closure and Post-Closure Maintenance Specifications G.26 through G.29 of the SPRRs.

2. **Annual Monitoring Report:** The Discharger shall submit an Annual Monitoring Report to the Central Valley Water Board by **1 February** covering the reporting period of the previous monitoring year. If desired, the Annual Monitoring Report may be combined with the second semiannual report, but if so, shall clearly state that it is both a semi-annual and annual monitoring report in its title. Each Annual Monitoring Report shall contain the following information:
- a) All monitoring parameters shall be graphed to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. If a 5-year COC event was performed, then these parameters shall also be graphically presented. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. Graphical analysis of monitoring data may be used to provide significant evidence of a release.
 - b) An evaluation of the monitoring parameters with regards to the cation/anion balance, and a graphical presentation using a Stiff diagram, a Piper graph, or a Schoeller plot.
 - c) 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 format such as a computer disk. The Central Valley Water Board regards the submittal of data in hard copy and in digital format as "...the form necessary for..." statistical analysis [Title 27, section 20420(h)], that facilitates periodic review by the Central Valley Water Board.
 - d) Hydrographs of each well showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted annually.
 - e) A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements.
 - f) A written summary of the monitoring results, indicating any changes made or observed since the previous Annual Monitoring Report.
 - g) Updated concentration limits for each monitoring parameter at each monitoring well based on the new data set.
3. **Seep Reporting:** The Discharger shall report by telephone any seepage from the disposal area **immediately** after it is discovered. A written report shall be filed with the Central Valley Water Board **within seven days**, containing at least the following information:

- a) A map showing the location(s) of seepage;
 - b) An estimate of the flow rate;
 - 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 Field Parameters and Monitoring Parameters listed in Table II of this MRP, 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 Reporting:** By **15 November** of each year, the Discharger shall submit a report describing the results of the inspection and the repair measures implemented, preparations for winter, and include photographs of any problem areas and the repairs. Refer to Section A.3.a of this MRP, above.
5. **Major Storm Event Reporting:** Following major storm events capable of causing damage or significant erosion, the Discharger **immediately** shall notify Central Valley Water Board staff of any damage or significant erosion upon discovery and report subsequent repairs within **14 days** of completion of the repairs, including photographs of the problem and the repairs. Refer to Section A.3.b of this MRP, above.
6. **Survey and Iso-Settlement Map for Closed Landfills:** The Discharger shall conduct a survey and submit an iso-settlement map for each closed area of the landfill every five years pursuant to Title 27, section 21090(e). Refer to Section A.3.c of this MRP, above.
7. **Financial Assurances Report:** By **1 June** of each year, the Discharger shall submit a copy of the annual financial assurances report due to CalRecycle that updates the financial assurances for closure, post-closure maintenance, and corrective action. Refer to Financial Assurances Specifications F.1 through F.3 of the WDRs.

C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

1. Water Quality Protection Standard Report

For each waste management unit, the Water Quality Protection Standard shall consist of all COCs, the concentration limit for each constituent of concern, the verification retesting procedure to confirm measurably significant evidence of a release, the point of compliance, and all water quality monitoring points for each monitored medium.

The Water Quality Protection Standard for naturally occurring waste constituents consists of the COCs, the concentration limits, and the point of compliance and all monitoring points. Any proposed changes to the Water Quality Protection Standard other than annual update of the concentration limits shall be submitted in a report for review and approval.

The report shall:

- a. Identify **all distinct bodies of surface and ground water** that could be affected in the event of a release from a waste management unit or portion of a unit. This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the facility.
- b. Include a map showing the monitoring points and background monitoring points for the groundwater monitoring program. The map shall include the point of compliance in accordance with Title 27, section 20405.
- c. Evaluate the perennial direction(s) of groundwater movement within the uppermost groundwater zone(s).
- d. Include a proposed statistical method for calculating concentration limits for monitoring parameters and constituents of concern that are detected in 10% or greater of the background data (naturally-occurring constituents) using a statistical procedure from Title 27, section 20415(e)(8)(A-D)] or section 20415(e)(8)(E).
- e. Include a retesting procedure to confirm or deny measurably significant evidence of a release pursuant to Title 27, section 20415(e)(8)(E) and section 20420(j)(1-3).

The Water Quality Protection Standard shall be certified by a California-registered civil engineer or geologist as meeting the requirements of Title 27. If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the Water Quality Protection Standard.

The Discharger proposed the methods for calculating concentration limits in the 21 January 2009 *Water Quality Protection Standard Report*. The WQPS report proposed to use Intrawell data analysis to calculate tolerance limits for the monitored constituents.

The Water Quality Protection Standard shall be updated annually for each monitoring well using new and historical monitoring data.

2. Monitoring Parameters

Monitoring parameters are a select group of constituents that are monitored during each monitoring event that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a waste management unit. The monitoring parameters for all waste management units are those listed in Tables I through III for the specified monitored medium.

3. Constituents of Concern (COCs)

The COCs include a larger group of waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the waste management unit, and are required to be monitored every five years [Title 27, sections 20395 and 20420(g)]. The COCs for all waste management units at the facility are those listed in Tables I and II for the specified monitored medium, and Table IV. The Discharger shall monitor all COCs every five years, or more frequently as required in accordance with a Corrective Action Program. The last 5-year COC report was submitted to the Central Valley Water Board in the 2012 *Annual Monitoring Report*, and 5-year COCs are due to be monitored again in **2017**.

4. Concentration Limits

For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method pursuant to Title 27, section 20415(e)(8); or
- b. By an alternate statistical method meeting the requirements of Title 27, section 20415(e)(8)(E).

The methods for calculating concentration limits were included in the 21 January 2009 *Water Quality Protection Standard Report*. The WQPS report proposed to use Intrawell data analysis to calculate tolerance limits for the monitored constituents.

5. Retesting Procedures for Confirming Evidence of a Release

If monitoring results indicate measurably significant evidence of a release, as described in Standard Monitoring Specification I.45 of the SPRRs, then:

- a. For analytes that are detected in less than 10% of the background samples (such as non-naturally occurring constituents), the Discharger shall use the

non-statistical retesting procedure required in Standard Monitoring Specification I.46 of the SPRRs.

- b. For analytes that are detected in 10% or greater of the background samples (naturally occurring constituents), the Discharger shall use one of the statistical retesting procedure as required in Standard Monitoring Specification I.47 of the SPRRs.

6. Point of Compliance

The point of compliance for the water standard at each waste management unit is a vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the unit. The following are monitoring locations at the point of compliance:

Point of Compliance Monitoring Wells

CMW-1
CMW-2A
CMW-4
CMW-7

7. Compliance Period

The compliance period for each waste management 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 waste management unit. The compliance period shall begin anew each time the Discharger initiates an evaluation monitoring program [Title 27, section 20410].

8. Monitoring Points

A monitoring point is a well, device, or location specified in the waste discharge requirements, which monitoring is conducted and at which the water quality protection standard applies. The monitoring points for each monitored medium are listed in Section A of this MRP.

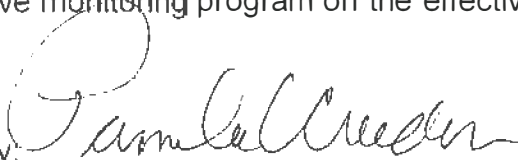
D. TRANSMITTAL LETTER FOR ALL REPORTS

A transmittal letter explaining the essential points shall accompany each report. At a minimum, the transmittal letter shall identify any violations found since the last report was submitted, and if the violations were corrected. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. The transmittal letter shall also state that a discussion of any violations found since the last report was submitted, and a description of the actions taken or planned for correcting those

violations, including any references to previously submitted time schedules, is contained in the accompanying report. The transmittal letter shall 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.

The Discharger shall implement the above monitoring program on the effective date of this Program.

Ordered by:



PAMELA C. CREEDON, Executive Officer

3/28/14

(Date)

TABLE I
GROUNDWATER DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Field Parameters			
Groundwater Elevation	Ft. & 100ths, M.S.L.	Quarterly	Semiannual
Temperature	°F	Semiannual	Semiannual
Electrical Conductivity	umhos/cm	Semiannual	Semiannual
pH	pH units	Semiannual	Semiannual
Turbidity	Turbidity units	Semiannual	Semiannual
Monitoring Parameters			
Total Dissolved Solids (TDS)	mg/L ¹	Semiannual	Semiannual
Chloride	mg/L	Semiannual	Semiannual
Carbonate	mg/L	Semiannual	Semiannual
Bicarbonate	mg/L	Semiannual	Semiannual
Nitrate - Nitrogen	mg/L	Semiannual	Semiannual
Sulfate	mg/L	Semiannual	Semiannual
Calcium	mg/L	Semiannual	Semiannual
Magnesium	mg/L	Semiannual	Semiannual
Potassium	mg/L	Semiannual	Semiannual
Sodium	mg/L	Semiannual	Semiannual
Volatile Organic Compounds (USEPA Method 8260B, short list, see Table IV)	ug/L ²	Semiannual	Semiannual
5-Year Constituents of Concern (see Table V)			
Total Organic Carbon	mg/L	5 years	5 years
Inorganics (dissolved)	ug/L	5 years	5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)	ug/L	5 years	5 years
Semi-Volatile Organic Compounds (USEPA Method 8270D)	ug/L	5 years	5 years
Chlorophenoxy Herbicides (USEPA Method 8151A)	ug/L	5 years	5 years
Organophosphorus Compounds (USEPA Method 8141B)	ug/L	5 years	5 years

¹ Milligrams per liter

² Micrograms per liter

TABLE II
LEACHATE SEEP MONITORING ¹

<u>Parameter</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Field Parameters			
Total Flow	Gallons	Monthly	Semiannual
Flow Rate	Gallons/Day	Monthly	Semiannual
Electrical Conductivity	umhos/cm	Quarterly	Semiannual
pH	pH units	Quarterly	Semiannual
Monitoring Parameters			
Total Dissolved Solids (TDS)	mg/L	Annually	Annually
Chloride	mg/L	Annually	Annually
Carbonate	mg/L	Annually	Annually
Bicarbonate	mg/L	Annually	Annually
Nitrate - Nitrogen	mg/L	Annually	Annually
Sulfate	mg/L	Annually	Annually
Calcium	mg/L	Annually	Annually
Magnesium	mg/L	Annually	Annually
Potassium	mg/L	Annually	Annually
Sodium	mg/L	Annually	Annually
Volatile Organic Compounds	ug/L	Annually	Annually
(USEPA Method 8260B, short list, see Table IV)			
5-Year Constituents of Concern (see Table V)			
Total Organic Carbon	mg/L	5 years	5 years
Inorganics (dissolved)	ug/L	5 years	5 years
Volatile Organic Compounds	ug/L	5 years	5 years
(USEPA Method 8260B, extended list)			
Semi-Volatile Organic Compounds	ug/L	5 years	5 years
(USEPA Method 8270D)			
Chlorophenoxy Herbicides	ug/L	5 years	5 years
(USEPA Method 8151A)			
Organophosphorus Compounds	ug/L	5 years	5 years
(USEPA Method 8141B)			

¹ Leachate seeps shall be sampled and analyzed for the Field and Monitoring Parameters in this table upon detection. The quantity of leachate shall be estimated and reported in gallons/day. Also, refer to Section B.3

TABLE III

MONITORING PARAMETERS FOR DETECTION MONITORING

Surrogates for Metallic Constituents:

pH
Total Dissolved Solids
Electrical Conductivity
Chloride
Sulfate
Nitrate nitrogen

Volatile Organic Compounds, short list:

USEPA Method 8260B

Acetone
Acrylonitrile
Benzene
Bromochloromethane
Bromodichloromethane
Bromoform (Tribromomethane)
Carbon disulfide
Carbon tetrachloride
Chlorobenzene
Chloroethane (Ethyl chloride)
Chloroform (Trichloromethane)
Dibromochloromethane (Chlorodibromomethane)
1,2-Dibromo-3-chloropropane (DBCP)
1,2-Dibromoethane (Ethylene dibromide; EDB)
o-Dichlorobenzene (1,2-Dichlorobenzene)
m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
trans-1,4-Dichloro-2-butene
Dichlorodifluoromethane (CFC-12)
1,1-Dichloroethane (Ethylidene chloride)
1,2-Dichloroethane (Ethylene dichloride)
1,1 -Dichloroethylene (1,1 -Dichloroethene; Vinylidene chloride)
cis- 1,2-Dichloroethylene (cis- 1,2-Dichloroethene)
trans-1,2-Dichloroethylene (trans-1,2-Dichloroethene)
1,2-Dichloropropane (Propylene dichloride)
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Di-isopropylether (DIPE)
Ethanol
Ethyltertiary butyl ether
Ethylbenzene
2-Hexanone (Methyl butyl ketone)
Hexachlorobutadiene
Methyl bromide (Bromomethene)
Methyl chloride (Chloromethane)

TABLE III
MONITORING PARAMETERS FOR DETECTION MONITORING
Continued

Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Methyl ethyl ketone (MEK: 2-Butanone)
Methyl iodide (Iodomethane)
Methyl t-butyl ether
4-Methyl-2-pentanone (Methyl isobutylketone)
Naphthalene
Styrene
Tertiary amyl methyl ether
Tertiary butyl alcohol
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene)
Toluene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane (Methylchloroform)
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride
Xylenes

TABLE IV
5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

<u>Inorganics (dissolved):</u>	<u>USEPA Method</u>
Aluminum	6010
Antimony	7041
Barium	6010
Beryllium	6010
Cadmium	7131A
Chromium	6010
Cobalt	6010
Copper	6010
Silver	6010
Tin	6010
Vanadium	6010
Zinc	6010
Iron	6010
Manganese	6010
Arsenic	7062
Lead	7421
Mercury	7470A
Nickel	7521
Selenium	7742
Thallium	7841
Cyanide	9010C
Sulfide	9030B

Volatile Organic Compounds, extended list:

USEPA Method 8260B

Acetone
Acetonitrile (Methyl cyanide)
Acrolein
Acrylonitrile
Allyl chloride (3-Chloropropene)
Benzene
Bromochloromethane (Chlorobromomethane)
Bromodichloromethane (Dibromochloromethane)
Bromoform (Tribromomethane)
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)

TABLE IV
5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

m-Dichlorobenzene (1,3-Dichlorobenzene)
p-Dichlorobenzene (1,4-Dichlorobenzene)
trans- 1,4-Dichloro-2-butene
Dichlorodifluoromethane (CFC 12)
1,1 -Dichloroethane (Ethylidene chloride)
1,2-Dichloroethane (Ethylene dichloride)
1,1 -Dichloroethylene (1, I-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 (Trimethylene dichloride)
2,2-Dichloropropane (Isopropylidene chloride)
1,1 -Dichloropropene
cis- 1,3-Dichloropropene
trans- 1,3-Dichloropropene
Di-isopropylether (DIPE)
Ethanol
Ethyltertiary butyl ether
Ethylbenzene
Ethyl methacrylate
Hexachlorobutadiene
2-Hexanone (Methyl butyl ketone)
Isobutyl alcohol
Methacrylonitrile
Methyl bromide (Bromomethane)
Methyl chloride (Chloromethane)
Methyl ethyl ketone (MEK; 2-Butanone)
Methyl iodide (Iodomethane)
Methyl t-butyl ether
Methyl methacrylate
4-Methyl-2-pentanone (Methyl isobutyl ketone)
Methylene bromide (Dibromomethane)
Methylene chloride (Dichloromethane)
Naphthalene
Propionitrile (Ethyl cyanide)
Styrene
Tertiary amyl methyl ether
Tertiary butyl alcohol
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethylene (Tetrachloroethene; Perchloroethylene; PCE)
Toluene

TABLE IV

5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

1,2,4-Trichlorobenzene
1,1,1 -Trichloroethane (Methylchloroform)
1,1,2-Trichloroethane
Trichloroethylene (Trichloroethene; TCE)
Trichlorofluoromethane (CFC- 11)
1,2,3-Trichloropropane
Vinyl acetate
Vinyl chloride (Chloroethene)
Xylene (total)

Semi-Volatile Organic Compounds:

USEPA Method 8270D - base, neutral, & acid extractables

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

TABLE IV

5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

p-Cresol (4-methylphenol)
4,4'-DDD
4,4'-DDE
4,4'-DDT
Diallate
Dibenz[a,h]anthracene
Dibenzofuran
Di-n-butyl phthalate
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Dieldrin
Diethyl phthalate
p-(Dimethylamino)azobenzene
7,12-Dimethylbenz[a]anthracene
3,3'-Dimethylbenzidine
2,4-Dimethylphenol (m-Xylenol)
Dimethyl phthalate
m-Dinitrobenzene
4,6-Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octyl phthalate
Diphenylamine
Endosulfan I
Endosulfan II
Endosulfan sulfate
Endrin
Endrin aldehyde
Ethyl methanesulfonate
Famphur
Fluoranthene
Fluorene
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloropropene
Indeno(1,2,3-c,d)pyrene
Isodrin
Isophorone
Isosafrole
Kepone
Methapyrilene
Methoxychlor

TABLE IV

5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

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-Nitrosopyrrolidine
5-Nitro-o-toluidine
Pentachlorobenzene
Pentachloronitrobenzene (PCNB)
Pentachlorophenol
Phenacetin
Phenanthrene
Phenol
p-Phenylenediamine
Polychlorinated biphenyls (PCBs; Aroclors)
Pronamide
Pyrene
Safrole
1,2,4,5-Tetrachlorobenzene
2,3,4,6-Tetrachlorophenol
o-Toluidine
Toxaphene
2,4,5-Trichlorophenol
0,0,0-Triethyl phosphorothioate
sym-Trinitrobenzene

TABLE IV

5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

Chlorophenoxy Herbicides:

USEPA Method 8151A

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

Organophosphorus Compounds:

USEPA Method 8141B

Atrazine
Chlorpyrifos
0,0-Diethyl 0-2-pyrazinyl phosphorothioate (Thionazin)
Diazinon
Dimethoate
Disulfoton
Methyl parathion (Parathion methyl)
Parathion
Phorate
Simazine

INFORMATION SHEET

ORDER R5-2014-0058
COUNTY OF FRESNO AND CHEVRON USA, INC.
CLOSURE AND POST-CLOSURE MAINTENANCE
COALINGA SOLID WASTE DISPOSAL SITE
FRESNO COUNTY

The County of Fresno operates and Chevron USA, Inc., (a Delaware Corporation) (landowner), hereinafter referred to jointly as "Discharger", own and operate the Coalinga Solid Waste Disposal Site (facility) about two miles south of Coalinga. The City of Coalinga leased the site from Chevron USA and began landfill operations from 1961 until 1969. In 1969, the County of Fresno took over operations until the landfill ceased accepting waste on 10 November 2009.

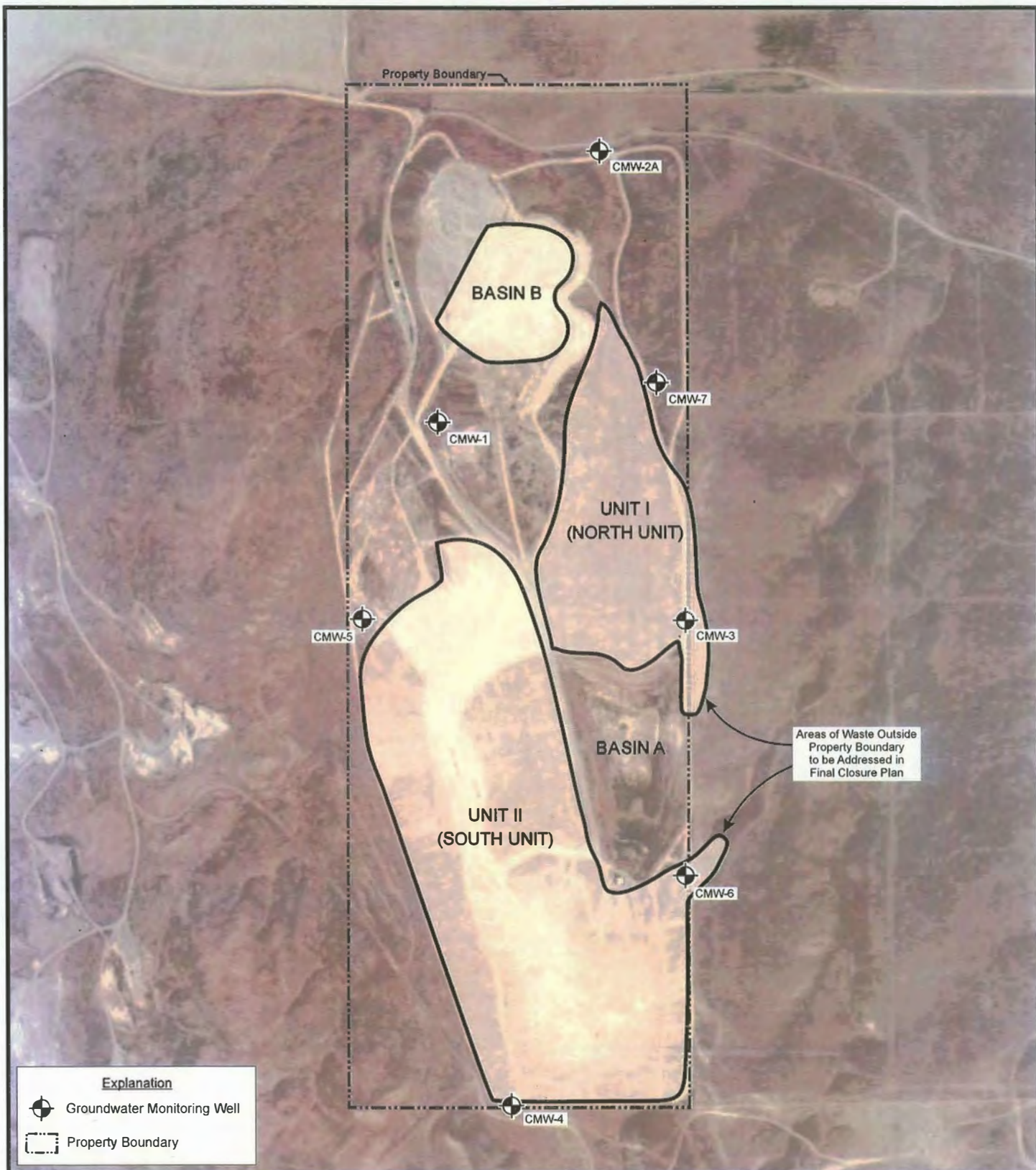
The proposed Order revises the existing WDRs to provide for closure and post-closure maintenance. The facility contains two unlined units, the northern unit covers approximately 14 acres, and the southern unit covers approximately 38 acres.

The facility is located along the eastern edge of the Coast Ranges adjacent to the southern San Joaquin Valley and on the northeast flank of a northwest plunging anticline. The Tulare and San Joaquin Formations are exposed at the site. The Plio-Pleistocene Tulare Formation is exposed in the northern half of the site and consists generally of stream deposited, crossbedded silty sandstone and conglomerate. Some thin-bedded sandstone, clays, and limestones representing lake deposits are also present in this formation. The base of the Tulare Formation consists of diatomaceous white silty clay located just above a pelecypod deposit containing *Mya* species. The underlying Pliocene age San Joaquin Formation is exposed in the southern half of the site and consists of marine deposited, fine-grained silty sandstone, silt, and clay. The base of the San Joaquin Formation is comprised of the Cascajo Conglomerate layer, which is blue colored conglomerate and sandstone averaging about 50 feet in thickness. The formations dip approximately 17 degrees to the north.

Based upon the most recent monitoring report (1st Semiannual 2013), the first encountered groundwater ranges from about 146 feet to 206 feet below the native ground surface. Groundwater elevations range from about 514 feet MSL to 689 feet MSL. The direction of groundwater flow is generally toward the northeast. The estimated average groundwater gradient is approximately 0.044 feet per foot. The estimated average groundwater flow rate is 30.3 feet per year.

The detection monitoring system has been operating at the facility since 1990. To date, no releases from the Units have been confirmed.

The Discharger submitted a report titled Design of Evapotranspirative Final (ET) Cover in December 2011. Central Valley Water Board staff, in a letter dated 11 July 2012, concurred with the Dischargers ET final cover design proposal. The proposed final cover consists of an ET cover, which is an engineered alternative. In an ET cover design, the low-hydraulic conductivity layer is replaced by a vegetated soil layer that is engineered and constructed to absorb moisture during precipitation events and expel moisture by evaporation and transpiration before it flows through the base of the cover. The proposed ET final cover consists of a 3.5-foot thick evapotranspirative cover and vegetative layer that incorporates the existing 1.8-foot thick interim soil cover. The Discharge submitted a Final Closure/Post-Closure Maintenance Plan in January 2013. Staff found the Final Closure/Post-Closure Maintenance Plan complete and adequate in a letter dated 18 October 2013.



Map Source:
 ESRI's ArcGIS Online premium services
 Section 9, T21S, R15E, MDB&M



SITE MAP
 ORDER NO. R5-2014-0058
 WASTE DISCHARGE REQUIREMENTS
 FOR
 COUNTY OF FRESNO
 AND CHEVRON USA, INC.
 COALINGA SOLID WASTE DISPOSAL SITE
 CLASS III LANDFILL
 CLOSURE AND POST-CLOSURE MAINTENANCE
 FRESNO COUNTY

ATTACHMENT B

Exhibit G

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM R5-2018-0053 FOR SOUTHEAST REGIONAL SOLID WASTE COMMISSION SOUTHEAST REGIONAL DISPOSAL SITE CLASS III LANDFILL POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION FRESNO COUNTY

This Monitoring and Reporting Program (MRP) is issued pursuant to Water Code section 13267, and incorporated as part of Waste Discharge Requirements (WDRs) Order No. R5-2018-0053. This MRP requires (a) groundwater monitoring; leachate and seep monitoring and LCRS testing; (b) facility monitoring, maintenance, and reporting; and (c) financial assurances reporting pursuant to California Code of Regulations, title 27 (Title 27), section 20005 et seq., as well as WDRs Order No. R5-2018-0053 and the Standard Provisions and Reporting Requirements dated December 2015 (SPRRs) attached thereto.

Pursuant to WDRs Order No. R5-2018-0053, the Discharger is ordered to comply with this MRP. The Discharger shall not implement any changes to this MRP unless a revised version is issued by the Central Valley Water Board or the Executive Officer.

A. MONITORING

The Discharger shall comply with the detection monitoring program provisions of Title 27 for groundwater in accordance with Standard Monitoring Specifications in Section I of the SPRRs and the Monitoring Specifications in Section F of the WDRs. All monitoring shall be conducted in accordance with the most recently approved *Sample Collection and Analysis Plan*, which includes quality assurance/quality control standards.

All compliance monitoring wells established for the detection monitoring program (DMP) shall constitute the monitoring points for the groundwater Water Quality Protection Standard (WQPS). All detection monitoring program groundwater monitoring wells and leachate monitoring points shall be sampled and analyzed for monitoring parameters and Constituents of Concern (COCs) as set forth in Tables I-IV, below.

The Discharger may use alternative analytical test methods, including new USEPA approved methods, provided the methods have method detection limits equal to or lower than the analytical methods specified in this MRP, and are identified in the most recently approved *Sample Collection and Analysis Plan*.

The monitoring program of this MRP includes:

Section	Monitoring Program
A.1	Groundwater Monitoring
A.2	Leachate Monitoring, Seep Monitoring, and LCRS Testing
A.3	Facility Monitoring
A.4	Corrective Action Monitoring

1. Groundwater Monitoring

The Discharger shall operate and maintain a groundwater detection monitoring system that complies with the applicable provisions of Title 27, sections 20415 and 20420. The detection monitoring system shall be certified by a California licensed professional civil engineer or geologist meeting the requirements of Title 27.

The current groundwater detection monitoring system meets the applicable requirements of Title 27. The Discharger shall revise the groundwater detection monitoring system (after review and approval by Central Valley Water Board staff) as needed.

The current groundwater monitoring network consists of the following:

Well	Status
BMW-2	Background
MW-18	Detection
MW-19	Detection
MW-22	Detection
MW-23	Detection
MW-24	Detection
MW/EW-14	Detection
MW/EW-16	Detection

Groundwater samples shall be collected from the background wells, detection monitoring wells, corrective action monitoring wells, and any additional wells added as part of the approved groundwater monitoring system. The collected samples shall be analyzed for the parameters and constituents set forth in Table I, in accordance with the specified methods and frequencies. The Discharger shall collect, preserve, and transport groundwater samples in accordance with the approved Sample Collection and Analysis Plan.

The Discharger has successfully cleaned up waste constituent's on-site, see WDRs Groundwater Conditions Section for more information. Further off-site investigation needs to be conducted in order to determine the lateral and vertical extent of the off-site plume. The Discharger needs to submit a Work Plan for our Office's review and approval detailing additional investigation work to be completed to delineate the off-site plume.

Once per quarter, the Discharger shall measure the groundwater elevation in each well, determine groundwater flow direction, and estimate groundwater flow rates in the uppermost aquifer and in any zones of perched water and in any additional portions of the zone of saturation monitored. The results shall be reported semiannually, including the times of expected highest and lowest elevations of the water levels in the wells, pursuant to Title 27, section 20415, subdivision (e)(15).

Every five-year samples collected for the COC monitoring specified in Table I shall be collected and analyzed in accordance with the methods listed in Table IV. Five-year COCs were last monitored in **2017** and shall be monitored again in **2022**. The results shall be reported in the Annual Monitoring Report for the year in which the samples were collected.

2. Leachate Monitoring, Seep Monitoring, and Annual LCRS Testing

a. Leachate Monitoring

The Discharger shall operate and maintain leachate collection and removal system (LCRS) sumps, conduct monitoring of any detected leachate seeps, and conduct annual testing of each LCRS in accordance with Title 27 and this monitoring program.

The current LCRS leachate sump monitoring points are:

Mon Pt.
Sump A
Sump B
Sump C

All LCRS sumps shall be inspected monthly for the presence of leachate, and flow shall be recorded in accordance with Table II. If leachate is detected in a previously dry sump, the Discharger shall verbally notify Central Valley Water Board staff within **seven days** and shall immediately sample and test the leachate for Field and Monitoring Parameters listed in Table II. Leachate in the LCRS sump shall then be sampled for all parameters and constituents in accordance with the frequencies listed in Table II whenever liquid is present. All LCRS sump samples shall be analyzed for the 5-year COCs specified in Table II every five years, beginning again in **2022**.

b. Seep Monitoring

Upon detection, leachate that seeps to the surface from a landfill unit shall be sampled and analyzed for the Field and Monitoring Parameters listed in Table II. The quantity of leachate shall be estimated and reported as Leachate Flow Rate (in gallons/day). Reporting for leachate seeps shall be conducted per MRP Section B.3, below.

c. Annual LCRS Testing

All LCRSs shall be tested annually pursuant to Title 27, section 20340, subdivision (d) to demonstrate proper operation. The results of these tests shall be reported to the Central Valley Water Board in the Annual Monitoring Report and shall include comparisons with earlier tests made under comparable conditions.

3. Facility Monitoring

a. Annual Facility Inspection

Annually, prior to the anticipated rainy season, but no later than 30 September, the Discharger shall conduct an inspection of the facility. The inspection shall assess repair and maintenance needed for drainage control systems, cover systems, and groundwater monitoring wells; and shall assess preparedness for winter conditions (including but not limited to erosion and sedimentation control). The Discharger shall take photos of any problems areas before and after repairs. Any necessary construction, maintenance, or

repairs shall be completed by **31 October**. Annual facility inspection reporting shall be submitted per MRP Section B.4, below.

b. Major Storm Events

The Discharger shall inspect all precipitation, diversion, and drainage facilities and all landfill side slopes for damage **within 7 days** following major storm events capable of causing damage or significant erosion. The Discharger shall take photos of any problems areas before and after repairs. Necessary repairs shall be completed **within 30 days** of the inspection. Notification and reporting requirements for major storm events shall be conducted per MRP Section B.5, below.

c. Standard Observations

The Discharger shall conduct **Standard Observations** at the landfill in accordance with this section. Standard observations shall be conducted in accordance with the following schedule:

<u>Frequency</u>	<u>Season</u>
Monthly	Wet: 1 October to 30 April
Quarterly	Dry: 1 May to 30 September

The Standard Observations shall include:

- 1) For the landfill units:
 - a) Evidence of ponded water at any point on the landfill outside of any contact storm water/leachate diversions structures on the active face (show affected area on map); and
 - b) Evidence of erosion and/or of day-lighted refuse.
- 2) Along the perimeter of the landfill units:
 - a) Evidence of leachate seeps, estimated size of affected area, and flow rate (show affected area on map); and
 - b) Evidence of erosion and/or of day-lighted refuse.

Results of Standard Observations shall be submitted in the semiannual monitoring reports required in MRP section B.1, below.

4. Corrective Action Monitoring

The Discharger shall conduct corrective action monitoring to demonstrate the effectiveness of corrective action in accordance with Title 27, section 20430 and this MRP. Groundwater monitoring wells that are in a corrective action monitoring program shall be monitored in accordance with the groundwater monitoring requirements in part A.1 of this MRP, except as modified in this part of the MRP for any additional constituents or modified monitored frequencies.

The current off-site down gradient groundwater sampling program includes the following domestic/irrigation wells:

<u>Well Location</u>
12464 E. Dinuba
12475 E. Dinuba
12735 E. Dinuba
12198 E. Hunstman Ave

B. REPORTING

The Discharger shall submit the following reports in accordance with the required schedule:

Reporting Schedule

<u>Section</u>	<u>Report</u>	<u>End of Reporting Period</u>	<u>Due Date</u>
B.1	Semiannual Monitoring Report	30 June, 31 December	31 August, 28 February
B.2	Annual Monitoring Report	31 December	28 February
B.3	Seep Reporting	Continuous	Immediately & 7 Days
B.4	Annual Facility Inspection Report	31 October	15 November
B.5	Major Storm Event Reporting	Continuous	7 days from damage discovery
B.6	Financial Assurances Report	31 December	1 June

The Discharger shall enter all monitoring data and reports into the online GeoTracker database as required by Division 3 of Title 27 and Chapter 30, Division 3 of Title 23. Notification of the GeoTracker upload shall be emailed to the Central Valley Water Board at: centralvalleyfresno@waterboards.ca.gov. To ensure that the submittal is routed to the appropriate staff as quickly as possible, the following information shall be included in the body of the email:

Attention:	Title 27 Unit
Report Title	
GeoTracker Upload ID	L10006130984
Discharger name:	Southeast Regional Solid Waste Commission
Facility name:	Southeast Regional Disposal Site
County:	Fresno
CIWQS place ID:	257926

Reporting Requirements

The Discharger shall submit monitoring reports **semiannually** with the data and information as required herein, and as required per WDRs Order No. R5-2018-0053 and the SPRRs attached thereto (particularly § I [Standard Monitoring Specifications] and § J [Response to a Release]).

The Discharger shall arrange its reported monitoring data in tabular form so that the date, the constituents, the concentrations, and the units are readily discernible. The data shall be summarized in such a manner so as to illustrate clearly the compliance with WDRs or the lack thereof.

The Dischargers shall submit all reports required under the MRP, including discharge location data, and pdf monitoring reports to the State Water Resources Control Board (State Water Board) GeoTracker database.

Field and laboratory tests shall be reported in each monitoring report. Semiannual and annual monitoring reports shall be submitted to the Central Valley Water Board in accordance with the above schedule for the calendar period in which samples were taken or observations made. In addition, the Discharger shall enter all monitoring data and monitoring reports into the online Geotracker database as required by Division 3 of Title 27 and Chapter 30, Division 3 of Title 23.

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.

The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order. Records shall be maintained throughout the life of the facility including the post-closure period. Such records shall be legible and shall show the following for each sample:

- a) 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;
- b) Date, time, and manner of sampling;
- c) Date and time that analyses were started and completed, and the name of the personnel and laboratory performing each analysis;
- d) Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;
- e) Calculation of results; and
- f) Results of analyses, and the MDL and PQL for each analysis. All peaks shall be reported.

Required Reports

1. **Semiannual Monitoring Report:** Monitoring reports shall be submitted semiannually and are due on **31 August** and **28 February**. Each semiannual monitoring report shall contain at least the following:
 - a) For each groundwater monitoring point addressed by the report, descriptions of:
 - 1) The time of water level measurement;

- 2) The type of pump - or other device - used for purging and the elevation of the pump intake relative to the elevation of the screened interval;
 - 3) The method of purging used to stabilize water in the well bore before the sample is taken including the pumping rate; the equipment and methods used to monitor field pH, temperature, and conductivity during purging; results of pH, temperature, conductivity, and turbidity testing; and the method of disposing of the purge water;
 - 4) The type of pump (or other device) used for sampling, if different than the pump or device used for purging; and
 - 5) A statement that the sampling procedure was conducted in accordance with the approved Sample Collection and Analysis Plan.
- b) A map or aerial photograph showing the locations of observation stations, monitoring points, and background monitoring points.
 - c) The estimated quarterly groundwater flow rate and direction in the uppermost aquifer, in any zones of perched water, and in 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 (See Title 27, § 20415, subd. (e)(15)).
 - d) Cumulative tabulated monitoring data for all monitoring points and constituents for groundwater, and leachate. Concentrations below the laboratory reporting limit shall not be reported as "ND" unless the reporting limit is also given in the table. Otherwise they shall be reported "<" the reporting limit (e.g., <0.10). Units shall be as required in Tables I and II unless specific justification is given to report in other units. Refer to the SPRRs Section I ("Standard Monitoring Specifications") for requirements regarding MDLs and PQLs.
 - e) Laboratory statements of results of all analyses evaluating compliance with requirements.
 - f) An evaluation of the concentration of each monitoring parameter (or 5-year COC when five-year COC sampling is conducted) as compared to the current concentration limits, and the results of any required verification testing for constituents exceeding a concentration limit. Report any actions taken under Section J ("Response to a Release") for verified exceedances of a concentration limit for wells/constituents not already in corrective action monitoring.
 - g) An evaluation of the effectiveness of the leachate monitoring and control facilities, and of the run-off/run-on control facilities. Include a summary of any instances where leachate depth on an MSW landfill liner system exceeded 30 cm (excluding the leachate sump), and information about the required notification and corrective action in Standard Facility Specification E.13 of the SPRRs.
 - h) A summary of all Standard Observations for the reporting period required in MRP Section A.3.c, above.
 - i) A summary of inspection, leak search, and repair of final covers on any closed landfill units in accordance with an approved final post-closure maintenance plan as required by Standard Closure and Post-Closure Maintenance Specifications G.26 through G.29 of the SPRRs.

- j) A comprehensive discussion of any Corrective Action program required by this MRP under Section A.4.
2. **Annual Monitoring Report:** The Discharger shall submit an Annual Monitoring Report to the Central Valley Water Board by **28 February** covering the reporting period of the previous monitoring year. If desired, the Annual Monitoring Report may be combined with the second semiannual report, but if so, shall clearly state that it is both a semi-annual and annual monitoring report in its title. Each Annual Monitoring Report shall contain the following information:
- a) All monitoring parameters shall be graphed to show historical trends at each monitoring point and background monitoring point, for all samples taken within at least the previous five calendar years. If a 5-year COC event was performed, then these parameters shall also be graphically presented. Each such graph shall plot the concentration of one or more constituents for the period of record for a given monitoring point or background monitoring point, at a scale appropriate to show trends or variations in water quality. The graphs shall plot each datum, rather than plotting mean values. Graphical analysis of monitoring data may be used to provide significant evidence of a release.
 - b) An evaluation of the monitoring parameters with regards to the cation/anion balance, and a graphical presentation using a Stiff diagram, Piper graph or Schoeller plot.
 - c) 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 format such as a computer disk. The Central Valley Water Board regards the submittal of data in hard copy and in digital format as the forms necessary for statistical analysis, facilitating periodic review. (See Title 27, § 20420, subd. (h).)
 - d) Hydrographs of each well showing the elevation of groundwater with respect to the elevations of the top and bottom of the screened interval and the elevation of the pump intake. Hydrographs of each well shall be prepared quarterly and submitted annually.
 - e) A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned needed to bring the Discharger into full compliance with the WDRs.
 - f) A written summary of the monitoring results, indicating any changes made or observed since the previous Annual Monitoring Report.
 - g) The results of the annual testing of leachate collection and removal systems required under Standard Facility Specification E.14 of the SPRRs.
 - h) Updated concentration limits for each monitoring parameter at each monitoring well based on the new data set.
3. **Seep Reporting:** The Discharger shall report by telephone any seepage from the disposal area **immediately** after it is discovered. A written report shall be filed with the Central Valley Water Board **within seven days**, containing at least the following information:
- a) A map showing the location(s) of seepage;
 - b) An estimate of the flow rate;

- 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 Field Parameters and Monitoring Parameters listed in Table II (see below), and an estimated date that the results will be submitted to the Central Valley Water Board; and
4. **Annual Facility Inspection Reporting:** By **15 November** of each year, the Discharger shall submit a report describing the results of the inspection and the repair measures implemented, preparations for winter, and include photographs of any problem areas and the repairs. (See MRP § A.3.a of this MRP, above.)
5. **Major Storm Event Reporting:** Following major storm events capable of causing damage or significant erosion, the Discharger shall notify Central Valley Water Board staff **immediately upon discovery** of any damage or significant erosion; and report subsequent repairs **within 14 days** of completion of the repairs. Photographs of problem(s) and repairs performed shall be submitted with the report. (See MRP § A.3.b, above.)
6. **Financial Assurances Report:** By **1 June** of each year, the Discharger shall submit a copy of the annual financial assurances report due to CalRecycle that updates the financial assurances for post-closure maintenance. Refer to Financial Assurances Specification E.1 of the WDRs.

C. WATER QUALITY PROTECTION STANDARD AND COMPLIANCE PERIOD

1. Water Quality Protection Standard (WQPS) Report

For each Waste Management Unit (WMU), the WQPS shall consist of all COCs, the concentration limit for each constituent of concern, the verification retesting procedure to confirm measurably significant evidence of a release, the point of compliance, and all water quality monitoring points for each monitored medium.

The WQPS for naturally occurring waste constituents consists of the COCs, the concentration limits, and the point of compliance and all monitoring points. Any proposed changes to the WQPS other than annual update of the concentration limits shall be submitted in a report for review and approval.

The report shall:

- a. Identify **all distinct bodies of surface and ground water** that could be affected in the event of a release from a WMU or portion of a unit. This list shall include at least the uppermost aquifer and any permanent or ephemeral zones of perched groundwater underlying the facility.
- b. Include a map showing the monitoring points and background monitoring points for the surface water monitoring program, groundwater monitoring program, and the unsaturated zone monitoring program. The map shall include the point of compliance in accordance with Title 27, section 20405.
- c. Evaluate the perennial direction(s) of groundwater movement within the uppermost groundwater zone(s).

- d. Include a proposed statistical method for calculating concentration limits for monitoring parameters and constituents of concern that are detected in 10 percent or greater of the background data (naturally-occurring constituents) using a statistical procedure from Title 27, section 20415, subdivision (e)(8)(A)-(E).
- e. Include a retesting procedure to confirm or deny measurably significant evidence of a release pursuant to section 20415, subdivision (e)(8)(E) and section 20420, subdivisions (j)(1)-(3) of Title 27.

The WQPS shall be certified by a California-registered civil engineer or geologist as meeting the requirements of Title 27. If subsequent sampling of the background monitoring point(s) indicates significant water quality changes due to either seasonal fluctuations or other reasons unrelated to waste management activities at the site, the Discharger may request modification of the WQPS.

The Discharger proposed the methods for calculating concentration limits in the May 2002 *Water Quality Protection Standard Report*. The WQPS report proposed to use interwell data analysis to calculate concentration limits for the monitored constituents.

The WQPS shall be updated annually for each monitoring well using new and historical monitoring data.

2. Monitoring Parameters

Monitoring parameters are a select group of constituents that are monitored during each monitoring event that are the waste constituents, reaction products, hazardous constituents, and physical parameters that provide a reliable indication of a release from a WMU. The monitoring parameters for all waste management units are those listed in Tables I - III for the specified monitored medium.

3. Constituents of Concern (COCs)

COCs include a larger group of waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the WMU, and are required to be monitored every five years. (See Title 27, §§ 20395, 20420, subd. (g).). The COCs for all waste management units at the facility are those listed in Tables I and II for the specified monitored medium, and Table IV. The Discharger shall monitor all COCs every five years, or more frequently as required in accordance with a Corrective Action Program. The last 5-year COC report was submitted to the Central Valley Water Board in the 2018 *Annual Monitoring Report*, and 5-year COCs are due to be monitored again in **2022**.

4. Concentration Limits

For a naturally occurring constituent of concern, the concentration limit for each constituent of concern shall be determined as follows:

- a. By calculation in accordance with a statistical method pursuant to Title 27, section 20415, subdivision (e)(8); or

- b. By an alternate statistical method meeting the requirements of Title 27, section 20415, subdivision (e)(8)(E).

The approved method for calculating concentration limits were included in the 2002 *Water Quality Protection Standard Report*. The WQPS report proposed to use interwell data analysis to calculate concentration limits for the monitored constituents.

5. Retesting Procedures for Confirming Evidence of a Release

If monitoring results indicate measurably significant evidence of a release, as described in Standard Monitoring Specification I.45 of the SPRRs, then:

- a. For analytes that are detected in less than 10 percent of the background samples (such as non-naturally occurring constituents), the Discharger shall use the non-statistical retesting procedure required in Standard Monitoring Specification I.46 of the SPRRs.
- b. For analytes that are detected in 10 percent or greater of the background samples (naturally occurring constituents), the Discharger shall use one of the statistical retesting procedure as required in Standard Monitoring Specification I.47 of the SPRRs.

6. Point of Compliance

The point of compliance for the water standard at each waste management unit is a vertical surface located at the hydraulically down gradient limit of the Unit that extends through the uppermost aquifer underlying the unit.

7. Compliance Period

The compliance period for each waste management 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 waste management unit. The compliance period shall begin anew each time the Discharger initiates an evaluation monitoring program. (See Title 27, § 20410.)

8. Monitoring Points

A monitoring point is a well, device, or location specified in the waste discharge requirements, which monitoring is conducted and at which the water quality protection standard applies. The monitoring points for each monitored medium are listed in Section A of this MRP.

D. TRANSMITTAL LETTER FOR ALL REPORTS

A transmittal letter explaining the essential points shall accompany each report. At a minimum, the transmittal letter shall identify any violations found since the last report was submitted, and if the violations were corrected. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. The transmittal letter shall also state that a discussion of any violations found since the last report was submitted, and a description of the actions taken or planned for correcting those violations, including any references to previously submitted time schedules, is contained in the accompanying report.

The transmittal letter shall 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.

The Discharger shall implement the above monitoring program on the effective date of this Program.

I, PATRICK PULUPA, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of a Monitoring and Reporting Program issued by the California Regional Water Quality Control Board, Central Valley Region, on 31 May 2018.



PATRICK PULUPA, Executive Officer

EAMW

TABLE I
GROUNDWATER DETECTION MONITORING PROGRAM

<u>Parameter</u>	<u>GeoTracker Code</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Field Parameters				
Groundwater Elevation	GWELEV	Ft. & 100ths, M.S.L.	Quarterly	Semiannual
Temperature	TEMP	°F	Semiannual	Semiannual
Electrical Conductivity	SC	umhos/cm	Semiannual	Semiannual
pH	PH	pH units	Semiannual	Semiannual
Turbidity	TURB	Turbidity units	Semiannual	Semiannual
Monitoring Parameters				
Total Dissolved Solids (TDS)	TDS	mg/L ¹	Semiannual	Semiannual
Chloride	CL	mg/L	Semiannual	Semiannual
Carbonate	CACO3	mg/L	Semiannual	Semiannual
Bicarbonate	BICACO3	mg/L	Semiannual	Semiannual
Nitrate - Nitrogen	NO3N	mg/L	Semiannual	Semiannual
Sulfate	SO4	mg/L	Semiannual	Semiannual
Calcium	CA	mg/L	Semiannual	Semiannual
Magnesium	MG	mg/L	Semiannual	Semiannual
Potassium	K	mg/L	Semiannual	Semiannual
Sodium	NA	mg/L	Semiannual	Semiannual
Volatile Organic Compounds (USEPA Method 8260B, short list, see Table III)		ug/L ²	Semiannual	Semiannual
5-Year Constituents of Concern (see Table IV)				
Total Organic Carbon	TOC	mg/L	5 years	2023
Inorganics (dissolved)		ug/L	5 years	and every 5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)		ug/L	5 years	thereafter
Semi-Volatile Organic Compounds (USEPA Method 8270D)		ug/L	5 years	" "
Chlorophenoxy Herbicides (USEPA Method 8151A)		ug/L	5 years	" "
Organophosphorus Compounds (USEPA Method 8141B)		ug/L	5 years	" "

¹ Milligrams per liter

² Micrograms per liter

TABLE II
LEACHATE MONITORING ¹, SEEP MONITORING ²

<u>Parameter</u>	<u>GeoTracker Code</u>	<u>Units</u>	<u>Sampling Frequency</u>	<u>Reporting Frequency</u>
Field Parameters				
Total Flow		Gallons	Monthly	Semiannual
Flow Rate	FLOW	Gallons/Day	Monthly	Semiannual
Electrical Conductivity	SC	umhos/cm	Quarterly	Semiannual
pH	PH	pH units	Quarterly	Semiannual
Monitoring Parameters				
Total Dissolved Solids (TDS)	TDS	mg/L	Annually	Annually
Chloride	CL	mg/L	Annually	Annually
Carbonate	CACO3	mg/L	Annually	Annually
Bicarbonate	BICACO3	mg/L	Annually	Annually
Nitrate - Nitrogen	NO3N	mg/L	Annually	Annually
Sulfate	SO4	mg/L	Annually	Annually
Calcium	CA	mg/L	Annually	Annually
Magnesium	MG	mg/L	Annually	Annually
Potassium	K	mg/L	Annually	Annually
Sodium	NA	mg/L	Annually	Annually
Volatile Organic Compounds (USEPA Method 8260B, short list, see Table III)		ug/L	Annually	Annually
5-Year Constituents of Concern (see Table IV)				
Total Organic Carbon	TOC	mg/L	5 years	2023
Inorganics (dissolved)		ug/L	5 years	and every 5 years
Volatile Organic Compounds (USEPA Method 8260B, extended list)		ug/L	5 years	thereafter
Semi-Volatile Organic Compounds (USEPA Method 8270C or D)		ug/L	5 years	" "
Chlorophenoxy Herbicides (USEPA Method 8151A)		ug/L	5 years	" "
Organophosphorus Compounds (USEPA Method 8141B)		ug/L	5 years	" "

¹ If leachate is detected in a previously dry sump, the Discharger shall verbally notify Central Valley Water Board staff within **seven days** and shall immediately sample and test the leachate for Field and Monitoring Parameters listed in Table III. Leachate in the LCRS sump shall then be sampled for all parameters and constituents in accordance with the frequencies listed in Table III whenever liquid is present.

² Leachate seeps shall be sampled and analyzed for the Field and Monitoring Parameters in this table upon detection. The quantity of leachate shall be estimated and reported in gallons/day. Also, refer to Section B.3

TABLE III

MONITORING PARAMETERS FOR DETECTION MONITORING

Surrogates for Metallic Constituents:

<u>COC Description</u>	<u>GeoTracker Code</u>
pH	PH
Total Dissolved Solids	TDS
Electrical Conductivity	SC
Chloride	CL
Sulfate	SO4
Nitrate nitrogen	NO3N

Volatile Organic Compounds, short list (USEPA Method 8260B):

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 (Bromomethane)	BRME
Methyl chloride (Chloromethane)	CLME

TABLE III
MONITORING PARAMETERS FOR DETECTION MONITORING
Continued

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

TABLE IV
5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

<u>Inorganics (dissolved):</u>	<u>USEPA Method</u>	<u>GeoTracker Code</u>
Aluminum	200.8	AL
Antimony	200.8	SB
Barium	200.8	BA
Beryllium	200.8	BE
Cadmium	200.8	CD
Chromium	200.8	CR
Cobalt	200.8	CO
Copper	200.8	CU
Silver	200.8	AG
Tin	200.8	SN
Vanadium	200.8	V
Zinc	200.8	ZN
Iron	200.8	FE
Manganese	200.8	MN
Arsenic	200.8	AS
Lead	200.8	PB
Mercury	245.1	HG
Nickel	200.8	NI
Selenium	200.8	SE
Thallium	200.8	TL
Cyanide	SM ¹ 4500-CM	CN
Sulfide	SM 4500-SF	S

Volatile Organic Compounds, extended list (USEPA Method 8260B):

<u>COC Description</u>	<u>GeoTracker Code</u>
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

TABLE IV
5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

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
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
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

TABLE IV
5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

1,2,3-Trichloropropane	TCPR123
Vinyl acetate	VA
Vinyl chloride (Chloroethene)	VC
Xylene (total)	XYLENES

Semi-Volatile Organic Compounds (USEPA Method 8270C or D - base, neutral, & acid extractables):

Acenaphthene	ACNP
Acenaphthylene	ACNPY
Acetophenone	ACPHN
2-Acetylaminofluorene (2-AAF)	ACAMFL2
Aldrin	ALDRIN
4-Aminobiphenyl	AMINOBP4
Anthracene	ANTH
Benzo[a]anthracene (Benzanthracene)	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
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

TABLE IV
5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

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-Dimethylphenol (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
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

TABLE IV

5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS

Continued

2-Naphthylamine	AMINONAPH2
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-butyl nitrosamine)	NNSBU
N-Nitrosodiethylamine (Diethyl nitrosamine)	NNSE
N-Nitrosodimethylamine (Dimethyl nitrosamine)	NNSM
N-Nitrosodiphenylamine (Diphenyl nitrosamine)	NNSPH
N-Nitrosodipropylamine (N-Nitroso-N-dipropylamine; Di-n-propyl nitrosamine)	NNSPR
N-Nitrosomethylethylamine (Methylethyl nitrosamine)	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-Phenylenediamine	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
2,4,5-Trichlorophenol	TCP245
0,0,0-Triethyl phosphorothioate	TEPTH
sym-Trinitrobenzene	TNB135

TABLE IV
5-YEAR COCs & APPROVED USEPA ANALYTICAL METHODS
Continued

Chlorophenoxy Herbicides (USEPA Method 8151A):

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

Organophosphorus Compounds (USEPA Method 8141B):

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

¹ Standard Methods



Source: Imagery @ 2017 Google, Map Data @ 2017 Google

REFERENCE: SOMA ENVIRONMENTAL ENGINEERING, INC – ANNUAL MONITORING REPORT, SECOND HALF 2017



ATTACHMENT A

SITE LOCATION MAP

ORDER NO R5-2018-0053
WASTE DISCHARGE REQUIREMENTS
SOUTHEAST REGIONAL SOLID WASTE COMMISSION
SOUTHEAST REGIONAL DISPOSAL SITE
CLASS III LANDFILL
POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
FRESNO COUNTY

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

ORDER R5-2018-0053

WASTE DISCHARGE REQUIREMENTS

SOUTHEAST REGIONAL SOLID WASTE COMMISSION
POST-CLOSURE MAINTENANCE AND CORRECTIVE ACTION
SOUTHEAST REGIONAL DISPOSAL SITE
FRESNO COUNTY

INFORMATION SHEET

The Southeast Regional Solid Waste Commission, consisting of the County of Fresno and the Cities of Fowler, Kingsburg, Orange Cove, Parlier, Reedley and Sanger (collectively, Discharger), own the Southeast Regional Disposal Site (Facility) about 1 mile southwest of the City of Parlier, in Section 27, T15S, R22E, MDB&M. The proposed Order revises the existing WDRs to provide for post-closure and corrective action. The Facility is on a 132-acre property at 12716 East Dinuba Avenue, Selma. The existing closed landfill unit is 72 acres and consists of 3 unlined acres and 69 lined acres with a variety of liners consisting of natural clay soils, bentonite/soil admixtures, and flexible membranes.

The Facility is located in the eastern part of the San Joaquin Valley, which is located in the southern portion of the Central Valley of California. The Central Valley is a large, northwest trending structural trough that is bounded by the Sierra Nevada Mountains to the east and the Coast Ranges to the west. The Central Valley is filled with both marine and continental deposits of Jurassic to Holocene age. Valley-fill sediments in the Parlier area exceed 2,400 feet in thickness. The dominant depositional processes since the Pleistocene have been alluvial, fluvial, and lacustrine. The combination of these processes has produced a heterogeneous mixture of clays, silts, and sands.

The first encountered groundwater beneath the Facility ranges from about 25 feet to 50 feet below the native ground surface based on data in the Second Semi Annual and Annual 2017 Groundwater Monitoring Report. Monitoring data indicate background groundwater quality for first encountered groundwater has electrical conductivity (EC) ranging between 320 and 450 micromhos/cm, with total dissolved solids (TDS) ranging between 230 and 330 milligrams per liter (mg/L), based on Second Semi Annual and Annual 2017 Groundwater Monitoring Report. The direction of groundwater flow is generally toward the south-southwest. The direction of groundwater flow varies and has sometimes been found to be toward the northeast. The estimated average groundwater gradient is approximately 0.0014 feet per foot. The estimated average groundwater velocity is 217 feet per year.

The Waste Discharge Requirements are being revised to provide for post-closure maintenance and corrective action, including further delineation of an off-site down gradient plume. Historically, VOCs had been detected in groundwater at concentrations exceeding Primary Maximum Contaminant Levels for drinking water standards. As a result, a corrective action system to remediate a release of VOCs to groundwater was initiated in 1983, following the receipt of a State grant for the implementation of a Board approved corrective action program. The corrective action system would extract groundwater from the down gradient boundary of the Facility. The groundwater was then conveyed to a spray field where the VOCs were volatilized by air stripping. The corrective action also acted hydraulically to control the flow of polluted groundwater to down gradient wells in the area. The Discharger submitted a Corrective Action Program dated January 1999 that evaluated and documented the effectiveness of the pump and spray field remediation method. In 2012, the Discharger proposed an off-site groundwater sampling program that included the sampling of eight

former point of entry wells. In April 2013, the Discharger submitted a Report of Waste Discharge that documented the concentrations of VOCs in groundwater extracted by the on-site groundwater extraction and treatment system and that concentrations in compliance groundwater monitoring wells had dropped to non-detect. The groundwater extraction system had completed its goal of treating the on-site plume, and the Report recommended monitored natural attenuation as a form of continued corrective action for the further down gradient areas not remediated by the on-site pump and treat system. In a 6 March 2014 letter, Staff reviewed the 2013 Report of Waste Discharge and approved temporarily discontinuing the operation of the on-site groundwater extraction system and monitoring for potential rebound in VOC concentrations. The on-site groundwater extraction system was required to be kept in a standby ready status for a minimum of two years to be immediately reactivated if a rebound in waste constituent concentrations was detected that warranted additional active remediation. The letter also required additional investigative work be conducted to further delineate the extent of VOC migration off-site. In a report dated 24 October 2016, the Discharger proposed to eliminate sampling of five of the eight off-site wells with no VOC detections since at least 2012. The proposed reduction was approved per Staff's letter dated 31 January 2018. The Discharger sampled several private domestic and agricultural supply wells with property owner's permission down gradient of the Facility in an effort to further delineate the extent of VOC migration down gradient and off-site. The Discharger also obtained well construction information for the wells, if available.

The results of the down gradient off site investigation generally indicated the decrease in detectable VOC concentrations from previous sampling events. However, the furthest down gradient well located at 12198 E. Huntsman Avenue had detectable concentrations of the following VOCs: 0.79 $\mu\text{g/L}$ tetrachlorethene (PCE), 0.14 $\mu\text{g/L}$ trichloroethene (TCE), 0.62 $\mu\text{g/L}$ chlorofluorocarbon-12 (CFC-12), and 0.14J $\mu\text{g/L}$ trichlorofluoromethane (CFC-11). All of which are constituents identified as part of the original landfill release, but none exceeding California Maximum Contaminant Levels. No further down gradient wells were sampled as access was denied by the property owners. Central Valley Water Board staff required the Discharger to submit a Plume Delineation Work Plan by 30 April 2018. After the Work Plan is implemented, a Plume Delineation Report shall be submitted as part of an evaluation of the effectiveness of the on-going CAP. Staff will determine if any appropriate additional investigations or corrective actions are necessary.

The revision of waste discharge requirements for existing facilities is categorically exempt from the California Environmental Quality Act (CEQA), Public Resource Code section 21000 et seq., pursuant to section 15301 of the CEQA Guidelines (Cal. Code Regs., tit. 14 § 15000 5000 et seq)

State Water Resources Control Board



Alan Lloyd
Secretary for
Environmental
Protection

Division of Water Quality

1001 I Street • Sacramento, California 95814 • (916) 341-5455
Mailing Address: P.O. Box 2231 • Sacramento, California • 95812
Fax (916) 341-5453 • <http://www.swrcb.ca.gov>



Arnold Schwarzenegger
Governor

RECEIVED
JAN 18 2005

FRESNO COUNTY
DEPT. OF
PUBLIC WORKS & PLANNING

January 12, 2005

To Whom It May Concern:

SUBJECT: NEW REGULATIONS - ELECTRONIC SUBMITTAL OF INFORMATION

The State Water Resources Control Board (SWRCB) has recently adopted and gained approval from the Office of Administrative Law (OAL) for regulations that require the electronic submittal of information (ESI) for groundwater cleanup programs including the Land Disposal Program (i.e., active and closed landfills, mines, land treatment units, surface impoundments, and waste piles). The text of the regulations can be found at:

http://www.waterboards.ca.gov/lust/cleanup/electronic_reporting/docs/final_electronic_regs_dec04.pdf

For several years, parties responsible for cleanup of leaks from underground storage tanks (LUST) have been required to submit groundwater analytical data, the surveyed locations of monitoring wells, and certain other data to the SWRCB's GeoTracker database over the internet. Beginning January 1, 2005, electronic submittal of these items and a portable data format (PDF) copy of the full report is being extended to included all SWRCB groundwater cleanup programs including the Land Disposal Program. The GeoTracker system is already capable of accepting this electronic information and currently has information submitted by responsible parties for over 10,000 LUST sites statewide. This information is available to the public at <http://www.geotracker.swrcb.ca.gov/>.

Beginning July 1, 2005, a paper copy of these reports will no longer be required for the Land Disposal Program upon submittal of the electronic copy unless the Regional Water Board specifically requires the paper copy to be submitted. The electronic copy is intended replace the need for a paper copy and is expected to be relied upon for all public information requests, regulatory review, and compliance/enforcement activities.

Training and Outreach

A series of training and outreach sessions will be held for regulators and the public. In January 2005, a user outreach meeting will be held in Southern California to introduce the ESI program to new users and to discuss more detailed questions with experienced users:

Exhibit H

Addressee

- 2 -

January 12, 2005

Date: Monday, January 24, 2005
Time: 10am - 4pm
Location: Irvine Civic Center
1 Civic Center Plaza
Irvine, CA 92606

locations if you plan to attend by e-mailing Maria Rodas at: mr001ad@waterboards.ca.gov.

Additional user outreach meetings will be held in Northern and Southern California in the future based upon demand. The GeoTracker system will be announcing future sessions to all regulators, consultants and responsible parties who hold a GeoTracker password. You will also need a GeoTracker password for submitting data and reports. You can obtain instructions for receiving a GeoTracker password at our Electronic Submittal of Information (ESI) website:

http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting/index.html

Our ESI website also contains information that will aid your transition to electronic data and reporting submittal. If you have any questions or need additional information, please contact me either by e-mail (jmello@waterboards.ca.gov) or telephone (916-341-5622).

Sincerely,

/s/

Joseph Mello
Land Disposal Program Manager

Exhibit I



California Regional Water Quality Control Board Central Valley Region

Steven T. Butler, Chair

Winston H. Hickox
Secretary for
Environmental
Protection

Fresno Branch Office
Internet Address: <http://www.swrcb.ca.gov/~rwqcb5>
2414 East Ashlan Avenue Fresno, California 93726



Gray Davis
Governor

8 November 2000

Harris Hays
Fresno County Public Works and Development Services
2220 Tulare St, Sixth Floor
Fresno, CA 93721

DIGITAL DATABASE FORMAT FOR MONITORING DATA

Some of your monitoring and reporting programs contain wording to the effect that you must submit data "in a digital database format acceptable to the Executive." This requirement is now typically included in all Title 27 permits adopted. This letter defines what constitutes a "digital database format acceptable to the Executive Officer." In general, this format is one that can be readily imported by Board staff into a standard database program. Specific requirements are as follows:

File-Format Requirements – Board staff currently use Microsoft Access 2000, so any file format from which Access can import data is acceptable. Acceptable formats include but are not necessarily limited to Access, dBase, Excel, Lotus 1-2-3, Paradox, or tab- or comma-delimited text files.

Table-Structure Requirements – The preferred table structure for monitoring data includes at a minimum the following fields or columns:

Column	Data	Format
1	Sampling Location	Text
2.	Date Sampled	Date
3	Constituent Name	Text
4	Analytical Result	Number
5	Quantitation Limit	Number
6	Detection Limit	Number
7	Detection Flag ¹	Text

¹ The detection flag would indicate whether a constituent was undetected, present in trace amounts or exceeded a censoring limit.

Variations from this preferred structure will be considered on a case-by-case basis. In any case, all analyzed constituents should be included, whether detected or not, and sufficient data should be included to enable the original laboratory data sheet to be located for each sampled constituent. Note that a table structure that simply reproduces the tables in the monitoring report will generally not be acceptable.

If you have any questions, please contact Stanley Gilbert by phone at (559) 445-5652 or by e-mail at gilbers@rb5f.swrcb.ca.gov.

LONNIE M. WASS
Supervising Engineer

California Environmental Protection Agency