CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

CENTRAL COAST REGION

395 Aerovista Place, Suite 101

San Luis Obispo, California 93401

WASTE DISCHARGE REQUIREMENTS

ORDER NO. R3-2021-0076

Waste Discharge Identification No. 3 400721887

FOR

THE CHEVRON GUADALUPE LANDFILL

DECEMBER 10, 2021

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

WASTE DISCHARGE REQUIREMENTS
ORDER NO. R3-2021-0076
FOR
THE CHEVRON GUADALUPE LANDFILL

TABLE OF CONTENTS

WASTE DISCHARGE REQUIREMENTS
ORDER NO. R3-2021-0076
Waste Discharge Identification No. 3 400721887
FOR
THE CHEVRON GUADALUPE LANDFILL

FINDINGS

The California Regional Water Quality Control Board, Central Coast Region (hereafter "Central Coast Water Board"), finds that:

1. In 1998, the Central Coast Water Board issued Cleanup and Abatement Order (CAO) 98-38 to Unocal, for the cleanup of unauthorized discharges of petroleum and its chemical constituents to waters of the state. The CAO included a requirement for various remedial actions such as the excavation of specified sources and sumps at the former Guadalupe Oil Field (former Oil Field).
2. In 2005, Chevron Corporation bought Unocal and the Chevron Environmental Management Company (CEMC) began directing the remaining remediation work as part of the Guadalupe Restoration Project.
3. The Chevron Environmental Management Company (Discharger) plans to construct and operate a Class II landfill referred to as the Chevron Guadalupe Landfill (Landfill) for the disposal of non-hazardous impacted soil from the former Oil Field.
4. Pursuant to California Code of Regulations (CCR), title 27, §20250, the Landfill is classified as a Class II landfill for the disposal of designated waste. Order No. R3-2021-0076 (Order) provides coverage for the discharge of non-hazardous impacted soil from the former Oil Field.
5. The Monitoring and Reporting Program associated with this Order can be found in **Attachment A**.
6. The Central Coast Water Board's additional findings that provide rationale for these requirements are set forth in **Attachment B** of this Order and are incorporated herein.
7. On September 3, 2021, the Central Coast Water Board notified the Discharger and interested agencies and persons of its intent to issue Waste Discharge Requirements for the Landfill and provided an opportunity to review a draft copy of the proposed Order and submit written comments.
8. On December 10, 2021 the Central Coast Water Board held a public hearing and considered all comments and evidence pertaining to this Order. Notice of this hearing was given to all known interested persons in accordance with CCR, title 23, division 3, chapter 15, article 1, and §647.2.

REQUIREMENTS

IT IS HEREBY ORDERED, pursuant to California Water Code (Water Code), §13263 and §13267, the Discharger, its agents, successors, and assignees in maintaining the Chevron Guadalupe Landfill must meet the provisions contained in Water Code, division 7 and regulation adopted hereunder, and must comply with the requirements in this Order.

A. COMPLIANCE WITH OTHER REGULATIONS

1. Discharge of waste, operations, and monitoring must comply with all applicable requirements contained in CCR, title 27, and Code of Federal Regulations, title 40 (40 CFR), chapter I, subchapter I, part 257. If any applicable regulatory requirements overlap or conflict in any manner, the most water quality protective requirement or requirements must govern in all cases, unless specifically stated otherwise in this Order.
2. The Discharger must comply with all required stormwater permits and regulations. Please see the State Water Resources Control Board's Storm Water Program webpage for more information. (https://www.waterboards.ca.gov/water_issues/programs/stormwater/).

B. PROHIBITIONS

1. Discharge of waste to areas outside the approved and permitted waste management units (WMUs) as illustrated in **Figure 1-2**, is prohibited.
2. Discharge of any waste not sourced from the non-hazardous impacted soils from the former Oil Field, is prohibited.
3. Discharge of waste deemed to be hazardous waste, as defined by title 22, division 4.5, is prohibited.
4. Discharge of liquid waste, meaning any waste materials that are determined to contain free liquids through visual inspection, or as defined by United States Environmental Protection Agency Method 9095 (Paint Filter Liquids Test), is prohibited.
5. Discharge of waste or leachate to ponded water, drainage way(s), or waters of the state, including groundwater, is prohibited.
6. Discharge of wastes within five (5) feet of the highest anticipated elevation of underlying groundwater, including the capillary fringe, is prohibited, except as allowed with an engineered alternative under CCR, title 27, §20080(b) and (c).
7. Discharge of waste to new WMUs is prohibited until the following tasks are completed by the Discharger and approved by the Executive Officer:
    a. Installation of WMU leachate, unsaturated zone, groundwater, gas, and stormwater monitoring systems to comply with Monitoring and Reporting Program (MRP) Order No. R3-2021-0076 (**Provision F.3**).

b. Submittal and approval of a WMU liner design report and prior to construction of each phase of the WMU (**Provision F.14**).

c. Submittal and approval of an operations plan (**Provision F.15**).

d. Submittal and approval of a stability analysis (**Provision F.16**).

e. Submittal and approval of a construction quality assurance (CQA) report for WMU construction (**Provision F.18**).

f. Submittal and approval of a sampling and analysis plan (**Provision F.20**).

g. Submittal and approval of a gas monitoring and control program and monitoring network is installed (**Provision F.21**).

h. Submittal and approval of a preliminary closure and post-closure maintenance plan (**Provision F.23**).

i. Establishment of financial assurance funds for corrective action, unit closure, and post-closure maintenance (**Provision F.25**).

C. SPECIFICATIONS

1. Discharge, stockpiling, and treatment of waste must not cause or contribute to a condition of pollution as defined by Water Code, §13050(l).
2. Discharge, stockpiling, and treatment of waste must not create nuisance, as defined by Water Code, §13050(m).
3. The Class II waste management unit must be designed and constructed for the containment of the specific waste which will be discharged, as required by CCR, title 27, §20310. The Landfill must be designed to contain total petroleum impacted soils sourced from the former Oil Field.
4. The discharge of waste must not degrade water quality through the release of pollutants, contaminants, and/or waste constituents, as indicated by the most appropriate statistical (or non-statistical) data analysis method and retest method described in MRP Order No. R3-2021-0076.
5. The Discharger must prevent surface drainage from offsite areas (run-on) and onsite drainage of surface and subsurface origin (runoff) from contacting or percolating through wastes.
6. The Discharger must only discharge waste to the lined WMU disposal areas inside the Executive Officer approved and permitted waste disposal footprint pursuant to CCR, title 27, §20330, §20340, and §20250.
7. The Discharger must construct a liner system consistent with CCR, title 27, §20310 through 20377.
8. The leachate collection and removal system (LCRS) must consist of a permeable subdrain layer that must be designed and operated to the following performance standards:

a. Be designed, constructed, maintained, and operated to collect and remove twice the maximum anticipated daily volume of leachate from the Unit.

b. Be designed and operated to ensure that there is no buildup of hydraulic head on the liner. The depth of fluid in the collection sump must be kept at the minimum needed to ensure efficient pump operation.

c. Covers the bottom of the Unit and extends as far up the sides as possible, (i.e., blanket type).

d. Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment.

e. Function without clogging through the scheduled closure and post-closure maintenance period.

f. Precipitation on the Landfill which is not diverted by covers or drainage control systems must be collected and managed through the LCRS, which must be designed and constructed to accommodate precipitation conditions for a 1,000 year, 24-hour storm event, per CCR, title 27, §20365(b) and §20320, table 4.1.

9. Each new lined area of the WMU must include unsaturated zone monitoring that is designed and constructed to meet the requirement for determining the earliest possible detection of a release(s), as specified in CCR, title 27, §20415(d).

10. The Discharger must protect exposed liners from UV, wind exposure, and physical damage, and insulate the liner system from diurnal thermal effects until operations layer or protective cover soils have been placed as specified in the Executive Officer approved design report or as subsequently approved by the Executive Officer.

11. The Discharger must line drainage ditches crossing over areas of previously disposed waste that have been inactive for one year with at least a one-foot thick layer of soil having an in-place hydraulic conductivity of approximately $1x10^{-6}$ cm/sec or less, or an Executive Officer approved alternative to prevent erosion and percolation through waste.

12. The Discharger must design, construct, operate, and maintain WMUs to prevent inundation or washout due to floods with a 100-year return period pursuant to CCR, title 27, §20250(b) and (c).

13. Diversion and drainage facilities must be designed, constructed, and maintained to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage resulting from a 1,000-year, 24-hour precipitation event, pursuant to CCR, title 27, §20365 and §20320.

14. Any liquid that contacts waste is considered leachate and cannot be discharged. The Discharger must dispose of leachate at a properly permitted facility.

15. If applicable, the Discharger must periodically remove accumulated sediment from stormwater retention facilities and manage facilities to maintain capacity pursuant to CCR, title 27, §20365.

16. The Discharger must design, construct, and maintain WMUs to withstand the maximum credible earthquake (MCE) without damage to the foundation or the structures which control leachate, surface drainage, erosion, or gas, pursuant to CCR, title 27, §20370.
17. The Discharger must prevent formation of a habitat for carriers of pathogenic microorganisms, except for beneficial wildlife habitat within stormwater and water supply basins.
18. The Discharger must apply a daily cover over discharged waste at the WMU at the end of each operating day, less frequently if operations are continuous, or more frequently as necessary to prevent nuisance and excess leachate generation and minimize infiltration. The Discharger may use landfilled petroleum impacted soil as daily cover pursuant to CCR, title 27, §20680 if all runoff is captured and managed as leachate.
19. The Discharger must ensure that appropriate daily cover materials are available and useable during wet weather or high winds. If wet weather restricts access to daily cover source areas, the Discharger must stockpile daily cover material during favorable weather to ensure that adequate daily cover material is accessible during wet weather. The Discharger must stockpile daily cover material in a manner that does not pose a threat to water quality or public health and is designed with adequate best management practices to minimize risk.
20. The Discharger must operate the WMU and configure the final WMU contours, in accordance with the most recent Executive Officer approved operations plan that meets the requirements of CCR, title 27, §21760. If the operations plan is found to conflict with this Order, this Order shall govern in cases where it is more protective of water quality.
21. The Discharger must grade, operate, and maintain all WMU surfaces and working faces to prevent run-on and divert precipitation/surface water runoff around the WMU, minimize precipitation/surface water from infiltrating into waste, prevent ponding of water, and resist erosion. The Discharger must repair erosion rills greater than six inches in depth, or when rills leave insufficient cover to prevent infiltration of precipitation/surface water, as soon as slope conditions allow or implement temporary corrective measures (i.e. tarping) to prevent infiltration of stormwater or stormwater/waste contact.
22. The Discharger must provide an engineered overflow outlet structure and maintain a minimum of two feet of freeboard in all stormwater sediment retention basins, or an Executive Officer approved alternative to prevent berm failure, overtopping, or uncontrolled discharge. Freeboard is defined as the distance between the water surface within the sedimentation basin and the top of the basin.
23. The Discharger must provide all WMU disposal areas that have not reached final fill elevation and will remain inactive for more than 180 days, with intermediate cover consisting of at least 12 inches of compacted soil to contain waste and minimize percolation pursuant to CCR, title 27, §20705. For areas that will

remain inactive more than two years, the Discharger must provide the WMU inactive disposal area with an Executive Officer-approved long-term intermediate cover. The Discharger must base the thickness and permeability of the long-term intermediate cover primarily on landfill-specific conditions including, but not limited to: length of exposure time, volume and type of waste disposed, soil permeability, thickness and composition of existing cover, amount of yearly rainfall, depth to groundwater, beneficial uses of underlying groundwater, landfill-specific geologic and hydrogeologic conditions, and effectiveness of existing monitoring systems.

24. The Discharger must install a perimeter gas monitoring network around the waste disposal footprint in accordance with an Executive Officer approved gas monitoring and control program plan. The gas monitoring network must be designed by a registered Civil Engineer or Certified Engineering Geologist to ensure detection of the presence of landfill gas migrating beyond the disposal site boundary.

D. CLOSURE SPECIFICATIONS

1. The Discharger must implement WMU final closure pursuant to CCR, title 27, §21090, and in accordance with the Executive Officer approved final closure plan and in accordance with other permitting agencies. Any final closure plan amendments or revisions during closure implementation require approval by the Executive Officer.
2. The Discharger must implement partial, incremental, or final closure by implementing closure activities, including but not limited to placement of final cover, final grading, maintenance, revegetation, and installation of environmental monitoring control systems consistent with an Executive Officer approved partial final closure plan or final closure plan. WMUs closed in accordance with a partial or complete final closure plan approved by the Executive Officer, are not subject to future regulatory changes unless monitoring data indicates measurably significant evidence of release.
3. The Discharger must provide WMUs at final elevations with a final cover pursuant to CCR, title 27, §21090, which meets either a. or b. below:
    a. A final cover system consisting of the following components:
        i. Minimum two-foot foundation layer placed over waste, compacted to maximum density obtainable at optimum moisture conditions using methods that are in accordance with accepted civil engineering practice.
        ii. A low hydraulic conductivity layer equal to or less than the hydraulic conductivity of the bottom liner system.
        iii. At least one foot of soil capable of supporting vegetation and resisting erosion, or a mechanically erosion-resistant layer, to protect the underlying low hydraulic conductivity layer. The vegetative layer must be planted with native or other suitable vegetation that has a rooting depth that will not exceed the depth to the top of the low hydraulic conductivity

layer. This layer will be designed and maintained to resist foreseeable erosion effects by wind-scour, raindrop impact, and runoff.

b. An engineered alternative design that satisfies the performance criteria to the prescriptive standard, as provided by CCR, title 27, §20080(b), where the Discharger receives written concurrence from the Executive Officer that the performance of the alternative composite cover's components, in combination, is equal to, or exceeds, the waste containment capability of the regulatory prescriptive standard.

4. The Discharger must provide a closed WMU with at least two permanent monuments, installed by a licensed land surveyor, from which the location and elevation of all wastes, containment structures, and monitoring facilities can be determined throughout the post-closure maintenance period pursuant to CCR, title 27, §20950(d).

5. The Discharger must complete final cover surveys pursuant to CCR, title 27, §21090(e) et seq. upon completing final cover construction activities. The Discharger's initial survey must provide a topographical map with sufficient detail to depict the as-closed topography of the closed or partially closed WMU and allow for early identification of differential settlement. At least every five years following closure of a WMU, the Discharger must produce iso-settlement maps to evaluate differential settlement and must note where repairs or grading of the surface may obscure differential settlement. The Discharger must include all final cover survey maps in the corresponding annual monitoring report.

6. The Discharger must maintain records of cumulative waste subsidence and settlement of areas where a final cover is installed and include the cumulative waste subsidence and settlement data in the annual summary report as required by MRP Order No. R3-2021-0076.

E. WATER QUALITY PROTECTION STANDARDS

1. The Landfill must be designed and constructed for the containment of non-hazardous impacted soils to prevent migration of wastes to adjacent geologic materials, groundwater, or surface water during disposal operations, closure, and the post-closure maintenance period pursuant to CCR, title 27, §20310(a)&(b). The facility must not contaminate an underground drinking water source beyond the Landfill boundary pursuant to 40 CFR, §257.3-4.

2. The Discharger must implement evaluation monitoring pursuant to CCR, title 27, §20385(a)(2)&(3), whenever there is measurably significant or significant physical evidence of release from the WMU to waters of the state, in accordance with MRP Order No. R3-2021-0076.

3. Water quality protection standards apply at the point of compliance and monitoring points for each WMU. The point of compliance pursuant to CCR, title 27, §20405, is a vertical surface located at the hydraulically downgradient limit of a WMU that extends through the uppermost aquifer underlying the WMU.

4. MRP Order No. R3-2021-0076 specifies monitoring points, constituents of concern, and monitoring parameters for groundwater, surface water, leachate, and landfill gas.
5. Discharge of waste must not cause a statistically significant difference in water quality over background concentrations at the point of compliance for proposed concentration limits pursuant to CCR, title 27, §20400. The Discharger must maintain concentration limits for as long as the waste poses a threat to water quality in accordance with MRP Order No. R3-2021-0076.
6. Discharge of waste must not cause concentrations of organic chemicals, inorganic constituents, and radionuclides in groundwater to exceed the State Water Resources Control Board Division of Drinking Water's latest recommended drinking water action levels or maximum contaminant levels of CCR, title 22, division 4, chapter 15, article 4, §64431, and article 5.5, §64444, or exceed median groundwater objectives set forth in Basin Plan Table 3-6, including any updates made to this table.
7. Discharge of waste must not cause, or contribute to, a violation of any applicable water quality standard for receiving waters adopted by the Central Coast Water Board or the State Water Board.
8. Discharge of waste must neither cause, nor contribute to, any surface water degradation including, but not limited to:
    a. Floating, suspended, or macroscopic particulate matter, or foam.
    b. Increases in bottom deposits or aquatic growth.
    c. An adverse change in temperature, turbidity, or apparent color beyond natural background levels.
    d. The creation or contribution of visible, floating, suspended oil, or other products of petroleum origin.
    e. The introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of the beneficial uses of waters of the state.
9. Water quality protection standards apply during the active life of the WMU, the closure period, the post-closure maintenance period, and any other compliance period.
10. The active life of a WMU is the period during which wastes are being discharged to the WMU until final closure of the WMU has been initiated pursuant to CCR, title 27, §20950.
11. The closure period is the period during which a WMU, or portion thereof, that is no longer receiving waste, is undergoing all operations necessary to prepare the WMU (or portion thereof, as appropriate) for post-closure maintenance in accordance with an Executive Officer approved final closure plan, or partial final closure plan.

12. The post-closure maintenance period is the period after closure of a WMU during which the waste of the unit could have an adverse effect on the quality of waters of the state. The post-closure maintenance period is a minimum of 30 years pursuant to CCR, title 27, §21180 and §21900, and must extend as long as the waste poses a threat to water quality pursuant to CCR, title 27, §20950(a)(1).
13. The compliance period is the minimum period during which the Discharger must conduct a water quality monitoring program subsequent to a release from a WMU and is equal to the active life of the WMU plus the closure period, pursuant to CCR, title 27, §20410, and begins anew each time the Discharger initiates an evaluation monitoring program pursuant to CCR, title 27, §20425. If the Discharger is engaged in a corrective action program at the scheduled end of the compliance period, the compliance period will be extended until the Discharger can demonstrate that the WMU has been in continuous compliance with water quality protection standards for a period of three consecutive years pursuant to CCR, title 27, §20410(c).

F. PROVISIONS

1. The Discharger is responsible for waste containment, monitoring, and correcting any problems resulting from the discharge of waste for as long as the waste poses a threat to water quality.
2. The Discharger must maintain records of the volume and type of all waste discharged and manner and location of discharge. These records must be available for review by Central Coast Water Board staff at any time during normal business hours. Such records must be maintained until final closure at which time the Discharger must submit a copy to the Central Coast Water Board.
3. The Discharger must comply with MRP No. R3-2021-0076, and any revisions thereto, as specified by the Executive Officer.
4. **By October 1 of each year**, the Discharger must complete all necessary runoff/run-on diversion and erosion prevention measures including, but not limited to, construction, maintenance, or repairs of precipitation and drainage control facilities to prevent erosion or WMU flooding to prevent surface drainage from contacting or percolating through waste. The Discharger must repair erosion rills greater than six-inches deep, damage to covers or drainages that threatens waste containment or creates ponding, and damage to drainage control facilities that reduces capacity below 1,000-year, 24-hour storm design, as soon as practicable after storm events that caused the erosion or damage, if it is safe to do so.
5. **Throughout the rainy season of each year**, the Discharger must implement stormwater best management practices over all WMU slopes to prevent erosion. Areas that include non-hazardous impacted soils as daily cover and where runoff is managed as leachate must be maintained to prevent erosion and prevent leachate discharge from the facility.

6. **By October 1 of each year** and throughout the rainy season of each year, the Discharger must maintain all long-term intermediate covers in inactive WMUs and a compacted soil cover designed and constructed to minimize percolation of precipitation through waste over active WMUs. The only exception to this specification is the working face, wet weather approved alternative daily covers, and compaction of the soil cover during wet weather. The working face must be confined to the smallest area practicable based on the anticipated quantity of waste discharged and required by waste management facility operations. Based on WMU-specific conditions, the Executive Officer may require a specified thickness of soil cover for any portion of the active WMU prior to the rainy season.
7. Should additional data become available through monitoring or investigation that indicates compliance with this Order is not adequately protective of water quality, the Central Coast Water Board will review and revise this Order as appropriate.
8. If the Discharger or the Executive Officer determines, pursuant to CCR, title 27, §20420, that there is evidence of a release from a WMU, the Discharger must immediately implement the procedures outlined in CCR, title 27, §20380, §20385, §20425, §20430, and MRP Order No. R3-2021-0076. If evidence of a release is confirmed, pursuant to CCR, title 27, §20425, the Discharger must implement corrective actions to remove waste constituents or treat them in place pursuant to CCR, title 27, §20430. Prior to implementing corrective actions, the Discharger must submit and receive Executive Officer approval for a corrective action program that includes a proposed scope of action, schedule, and performance monitoring to demonstrate the effectiveness of corrective actions pursuant to CCR, title 27, §20430.
9. After notice and opportunity for a hearing, to prevent (or curtail) violation of this Order, the Executive Officer may require partial or final closure of any WMU regardless of whether the unit has reached final capacity pursuant to CCR, title 27, §22190.
10. This Order does not authorize commission of any act causing injury to the property of another, does not convey any property rights of any sort, does not remove liability under federal, state, or local laws, and does not guarantee a capacity right.
11. In accordance with Water Code, §13267(c), Central Coast Water Board and its representatives must be allowed to:
    a. Physically access the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the provisions of this Order.
    b. Have access to and copy any records that must be kept under the provisions of this Order.
    c. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated under this Order.

d. Collect photographs and samples as needed to evaluate compliance with this Order, or as otherwise authorized by the Water Code.

12. The Discharger must take all reasonable steps to minimize or correct adverse impacts on the environment and public health resulting from noncompliance with this Order in accordance with **Reporting G.15 and G.17**.

13. After notice and opportunity for a hearing, the Order may be terminated for cause, including, but not limited to:

    a. Violation of any term or condition contained in this Order.

    b. Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts.

    c. A change in any condition or endangerment to human health or environment that requires a temporary or permanent reduction or elimination of the authorized discharge.

    d. A material change in character, location, or volume of the waste being discharged to land.

14. Prior to initiating construction of a liner or final cover, the Discharger must submit a design report for review and receive Executive Officer approval.

15. Prior to discharging waste into any newly constructed lined WMU, the Discharger must submit an operations plan pursuant to CCR, title 27, §21760.

16. Prior to discharging waste into any new constructed WMU, the Discharger must submit a stability analysis as required by CCR, title 27, §21750.

17. During the construction of WMU liner or final cover, a third party (e.g., unrelated to the Discharger, facility operator, project designer, contractor) must implement the Executive Officer approved CQA plan and provide regular construction progress reports to the Executive Officer.

18. Prior to discharging waste into any newly constructed lined WMU or lateral expansion, the Discharger must submit a final CQA report and must receive a final inspection and written approval from the Executive Officer pursuant to CCR, title 27, §20310(e).

19. The Discharger must continually observe with a quality assurance/quality control (QA/QC) officer, from start to finish, placement of operations layer or protective cover soils, on a geosynthetic membrane liner or final cover system to prevent or document potential damage and facilitate repairs. The QA/QC officer must be a registered Civil Engineer or have extensive experience with the QA/QC procedures as provided by CCR, title 27, §20324.

20. Prior to waste placement, the Discharger must submit for Executive Officer approval, a sampling and analysis plan.

21. Prior to waste placement, the Discharger must submit for Executive Officer approval, a gas monitoring and control program that complies with CCR, title 27, article 6 and in accordance with CCR, title 27, §20012. No waste shall be placed

in the Landfill until the gas monitoring and control program is approved and the monitoring network is installed.

22. If landfill gas monitoring indicates concentrations of methane or trace gases in excess of the compliance requirements in CCR, title 27, §20921(a), the operator will submit plans to construct a gas control system that is designed by a registered Civil or Mechanical Engineer. Once the gas control system is approved by the Executive Officer, the system will be constructed and operated to control excessive gas concentrations per CCR, title 27, §20939.
23. Prior to waste placement, the Discharger must submit for Executive Officer approval, a preliminary closure and post-closure maintenance plan that must contain all of the elements specified under CCR, title 27, §21790 through §21840, as applicable.
24. The Discharger can utilize leachate for dust control over lined WMUs if leachate is found to be non-hazardous and if leachate management/disposal procedures are included in the Executive Officer approved leachate management plan.
25. The Discharger must obtain and maintain financial assurance instruments (instruments), which comply with CCR, title 27, §22207 (closure fund), §22212 (post-closure fund), and §22220 et seq. (corrective action fund). Pursuant to CCR, title 27, §22221, the amount of required coverage for the corrective action fund will be the greater of water release corrective action estimate or non-water release corrective action estimate. Pursuant to CCR, title 27, §20380(b) and §22222, the Discharger must obtain and maintain assurances of financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases and name the Central Coast Water Board as beneficiary. As WMU conditions change, and upon the Central Coast Water Board's request, the Discharger must submit a report proposing the amount of financial assurance necessary for corrective action for the Executive Officer's review and approval. The Discharger must demonstrate to the Central Coast Water Board compliance with all financial instruments at a minimum of every five years.

G. REPORTING

1. All reports required by this Order or MRP Order No. R3-2021-0076 must be signed by the Discharger as follows:
   a. For a public agency – by either a principal executive officer or ranking elected official.
   b. For a partnership or proprietorship – by a general partner or the proprietor, respectively.
   c. For a corporation – by a principal executive officer of at least the level of a vice-president.

d. A “duly authorized representative”[1].

e. A California Registered Civil Engineer or Certified Engineering Geologist must sign engineering reports.

2. Any person signing a report as prescribed in **Reporting G.1** of this Order must include the following statement:

> "I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of a fine and imprisonment."

3. Except for data determined to be confidential under Water Code, §13267(b), all technical reports prepared in accordance with this Order are non-exempt public records and must be uploaded by the Discharger to the California State Water Resources Control Board GeoTracker system at the Chevron Guadalupe Landfill GeoTracker page (https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000014025).

4. The Discharger must submit reports in advance of any planned changes of the permitted WMU, or in an activity, which could potentially or actually result in noncompliance.

5. By **October 1** of each year, the Discharger must submit a wet weather preparedness report (WWPR) that describes compliance with **Provisions F.4, F.5, and F.6** above. The report must also detail preparedness actions taken to ensure discharges to surface or groundwater do not occur during the impending rainy season and ensure compliance with all other relevant CCR, title 27, and 40 CFR, part 257, criteria. The report must include photographs of all wet weather preparedness measures implemented.

6. At least **180 days** prior to construction of a WMU liner or final cover, the Discharger must submit a WMU liner (or final cover) design report for Executive Officer approval that includes but is not limited to, the following:

a. Liner or final cover design proposal consistent with prescriptive standard or proposed engineered alternative,

b. Site history, geology, and hydrogeology,

c. Site capacity,

d. Groundwater separation evaluation (liner design),

e. LCRS capacity evaluation (liner design),

---

[1] A “duly authorized representative” means a person who has written authorization from the Discharger to sign required reports on behalf of the Discharger.

f. Site precipitation and drainage evaluation,

g. Stability analysis,

h. Design specifications,

i. Construction drawings, and

j. CQA plan.

7. Within **60 days** of completing construction of a WMU liner or final cover, the Discharger must submit a final CQA report documenting that the as-built liner or final cover is consistent with the Executive Officer approved design report and any approved design changes during construction, if applicable.

8. At least **48 hours** prior to placement of operations layer or protective cover soils on top of a geomembrane liner or cover system, the Discharger must notify Central Coast Water Board staff by electronic mail and provide a schedule for placement activities.

9. Within **7 days** of completing each week's operations layer and/or protective cover soil placement activities the Discharger must submit a report signed by the observing QA/QC officer(s) summarizing the operations layer and/or protective cover soil placement activities performed and in compliance with **Specification C.10 and Provision F.19**, including the following, at a minimum:

   a. A map documenting where operations layer and/or protective cover soil was placed.

   b. Digital photos of the work performed.

   c. The date and time of the work performed.

   d. A list of equipment used to place the operations layer and/or protective cover soil.

   e. A discussion of any problems that were encountered (i.e., tears in the liner system) and how they were addressed.

10. The Discharger must notify the Central Coast Water Board of any proposed change in ownership or responsibility for construction or operation of WMUs in accordance with CCR, title 27, §21710(c)(1). The notice and must be given at least **90 days** prior to the effective date of change in ownership or responsibility and must:

    a. Be accompanied by an amended report of waste discharge (ROWD) and any other technical documents needed to demonstrate continued compliance with this Order.

    b. Contain the requesting entity's full legal name, the state of incorporation if a corporation, the name, address and telephone number of the persons responsible for contact with the Central Coast Water Board.

    c. Contain a statement indicating that the new owner or operator assumes full responsibility for compliance with this Order.

11. In the event of any change in ownership or operation responsibility of WMUs, the Discharger must notify the succeeding owner or operator, in writing, of the existence of this Order and their requirement to be in compliance with the Order. The Discharger must send a copy of that notification to the Executive Officer.
12. The Discharger must furnish, within a reasonable timeframe, any information the Executive Officer may require to determine compliance with this Order or to determine whether cause exists for modifying or terminating coverage under this Order.
13. The Discharger or persons employed by the Discharger must comply with all notice and reporting requirements of the California Department of Water Resources, and other applicable permitting agencies with concurrence of the Executive Officer regarding the permitting, construction, alteration, inactivation, destruction, or abandonment of all monitoring wells used for compliance with this Order or with MRP Order No. R3-2021-0076, as required by Water Code, §13750.5 through §13755, and §13267.
14. Should the Discharger discover that it failed to submit any relevant facts or that it submitted incorrect information, it must promptly submit the missing or corrected information.
15. The Discharger must notify the Executive Officer, within **24 hours** by telephone or email and submit a report of noncompliance within **14 days**, of:
    a. Any noncompliance that potentially or actually endangers human health and/or the environment. Reports of noncompliance must include a description of:
        i. The reason for noncompliance.
        ii. A description of the noncompliance, including photo documentation.
        iii. Schedule of tasks necessary to achieve compliance.
        iv. An estimated date for achieving full compliance.
    b. Any flooding, equipment failure, slope failure, or other change in WMU conditions which could impair the integrity of waste containment facilities or of precipitation and drainage control structures.
    c. Leachate seep(s) occurring on or in proximity to a WMU.
    d. Violation of a discharge prohibition.
    e. Violation of any treatment system's discharge limitation.
16. The Discharger must submit within **14 days** of compliance dates or Executive Officer approved compliance schedules pursuant to **Reporting G.15** a compliance or noncompliance report. Compliance reports must document both the original noncompliance and corrective actions implemented to achieve compliance. Noncompliance reports must summarize progress towards compliance dates or compliance schedules, for Executive Officer approved compliance schedules additional time may be granted by the Executive Officer in

complex situations where data collection and/or detailed evaluation is necessary. If reporting a noncompliance update include the following:

a. The reason for noncompliance.

b. A description of the noncompliance.

c. Schedule of tasks necessary to achieve compliance.

d. An estimated date for achieving full compliance.

17. The Discharger must promptly correct any noncompliance issue(s) that threatens WMU containment integrity. Correction schedules submitted in accordance to **Reporting G.15 and G.16**, are subject to the approval of the Executive Officer, except when delays will threaten human health and/or the environment and/or WMU integrity (i.e., emergency corrective measures). For emergency corrective measures, the Discharger must report details of the corrections in writing within **seven (7) days** of initiating correction.

18. If the facility is still actively placing waste five years after the adoption of this Order or plans to make changes that affect compliance with this Order, the Discharger must submit a report of waste discharge (ROWD) pursuant to CCR, title 27, §21710, to the Executive Officer every five years, or earlier as needed. The ROWD is to be submitted, in accordance with CCR, title 27, §21585 et al. and meet the following criteria:

    a. Updated information on waste characteristics, geologic, and climatologic characteristics of the waste management facility and the surrounding region, installed features, precipitation and drainage controls, and closure and post-closure maintenance plans, in accordance with CCR, title 27, §21740, §21750, §21760, and §21769.

    b. Include a completed State Water Board Joint Technical Document index, in accordance with CCR, title 27, §21585(b).

    c. Include any other technical documents needed to demonstrate continued compliance with this Order and all pertinent state and federal requirements.

    d. Include any updated information regarding regulatory considerations, operating provisions, environmental monitoring, and closure and post-closure.

19. Prior to waste placement, the Discharger must submit for the Executive Officer's review and approval a report demonstrating financial responsibility for initiating and completing reasonably foreseeable corrective action (water and non-water based), along with adjustments to financial assurances (as necessary), pursuant to CCR, title 27, §22220 through §22222. The Discharger must submit an updated report every five years, or earlier as needed.

20. Prior to waste placement, the Discharger must submit for the Executive Officer's review and approval a preliminary closure and post-closure maintenance plan that includes a cost analysis of all actions and associated costs necessary to close the Landfill and carry out post-closure maintenance, pursuant to CCR, title

27, §21815, §21825, and §21840. The Discharger must submit an updated plan including updated financial assurance every five years, or earlier as needed.

21. By **June 1** each year, the Discharger must submit for Executive Officer's review and approval, a report calculating the estimated increase in cost for closure, post-closure maintenance, and corrective action due to the inflation factor for the previous calendar year, pursuant to CCR, title 27, §22236.
22. Final closure and post-closure maintenance plans for solid waste landfills must be submitted two years prior to the anticipated date of closure of each discrete unit, pursuant to CCR, title 27, §21780 and CCR, title 27, §20950 et seq. and must contain all of the elements specified under CCR, title 27, §21769 through 21900, as applicable.
23. The Discharger must submit an amended or updated ROWD (in accordance with **Reporting G.18** of this Order) or secure a waiver from the Executive Officer at least **120 days** before making any changes that affect compliance with this Order. Any changes that may affect compliance with this Order must be approved in writing by the Executive Officer prior to the Discharger implementing such changes.

H. LEGAL REQUIREMENTS

1. The requirement that the Discharger submit a ROWD is made pursuant to Water Code, §13260. Violation of a request made pursuant to this section may subject the Discharger to administrative civil liability of up to $1,000 per day under Water Code, §13261(b).
2. The Discharger must submit all technical and monitoring reports pursuant to this Order in accordance with Water Code, §13267. The reports are reasonably necessary to ensure compliance with this Order and the requirements of CCR, title 27, division 2 and 40 CFR, part 257. Failure to submit reports in accordance with schedules established by this Order, attachments to this Order, or failure to submit a report of sufficient technical quality to be acceptable to the Executive Officer may subject the Discharger to enforcement action pursuant to Water Code, §13268.
3. Any person failing or refusing to furnish technical or monitoring program reports as required by Water Code, §13267(b), or falsifying any information provided therein, is guilty of a misdemeanor.
4. The Discharger and any person who violates this Order and/or who intentionally or negligently discharges waste or causes or permits waste to be discharged into surface waters or groundwater of the state may be liable for civil and/or criminal penalties, as appropriate, pursuant to Water Code, §13350, §13385, and §13387.
5. Provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order must not be affected.

6. The Discharger must comply with all conditions of this Order and any additional conditions prescribed by the Central Coast Water Board in amendments thereto. Any noncompliance with this Order constitutes a violation of the Water Code and is grounds for:
   a. Enforcement action pursuant to the Water Code and in accordance with the State Water Board's Water Quality Enforcement Policy.
   b. Termination of rescission of this Order.
7. No provision or requirement of this Order or MRP Order No. R3-2021-0076 is a limit on the Discharger's responsibility to comply with other federal, state, and local laws, regulations, or ordinances.
8. The Discharger must comply with the following submittal and implementation schedule for all tasks and/or reports required by this Order.

   Table 1: Task Summary Table

Task	Implementation Date
Provision F.3: Compliance with MRP	Date of first waste placement in Landfill
Provision F.4: Runoff diversion and erosion prevention	October 1 of each year
Provision F.5: Implement stormwater BMPs	Throughout the rainy season
Provision F.6: Minimize percolation of precipitation	October 1 of each year
Provision F.8: Evaluation monitoring, corrective actions	Evidence of release
Provision F.12: Correction of noncompliance	Immediately, subject to Executive Officer approval, except during emergencies
Provision F.14: WMU liner or (final cover) construction	Executive Officer approval of WMU liner (or final cover) design report
Provision F.17: Third party CQA	During WMU liner or final cover construction
Provision F.18: New WMU waste discharge	Executive Officer approval of final CQA report

Task	Implementation Date
Provision F.19: QA/QC observation	During operations layer or protective cover soil placement on a geomembrane liner or cover system
Provision F.25: Financial assurance	Continuous

Table 2: Report Summary Table

Report	Due Date
Provision F.15: Operations plan	Prior to waste placement
Provision F.20: Sampling and analysis plan	Prior to waste placement
Provision F.21: Gas monitoring and control program	Prior to waste placement
Reporting G.4: Planned changes and changes that could result in noncompliance	Prior to implementing changes
Reporting G.5: Wet weather preparedness report	October 1 of each year
Reporting G.6: WMU Liner (or final cover) design report	At least 180 days prior to construction
Reporting G.7: Final CQA report	Within 60 days of completing construction of WMU liner or final cover
Reporting G.8: Notification of operations layer or protective cover soil placement	At least 48 hours prior to placement
Reporting G.9: Report summarizing QA/QC observations and exposed liner protection	Within 7 days of completing each week's operations layer and/or protective cover soil placement

Report	Due Date
Reporting G.10: Notice of change in ownership or responsibility	At least 90 days prior to the effective date of change
Reporting G.12: Requests regarding compliance determination	Reasonable timeframe
Reporting G.14: Missing and/or corrected information	Immediately upon discovery
Reporting G.15: Notice of noncompliance	Within 24 hours verbally and within 14 days in writing
Reporting G.16: Noncompliance report	Within 14 days of failing to meet compliance dates or Executive Officer approved compliance schedule
Reporting G.17: Emergency corrective measures reporting	Within 7 days of initiating corrections
Reporting G.18: Amendment to ROWD	Every 5 years after Order adoption, or earlier as needed
Reporting G.19 & G.21: Demonstration of financial assurance for reasonably foreseeable corrective action	Prior to waste placement and every 5 years thereafter, or earlier as needed. An annual report to adjust for inflation by June 1
Reporting G.20 & G.21: Preliminary closure and post-closure maintenance plan	Prior to waste placement and every 5 years thereafter, or earlier as needed. An annual report to adjust for inflation by June 1
Reporting G.22: Final closure and post-closure maintenance plans	2 years prior to closure of each discrete unit
Reporting G.23: Amended ROWD or waiver	At least 120 days prior to request to implement changes

ORDERED BY:

I, Matthew T. Keeling, Executive Officer of the California Regional Water Quality Control Board, Central Coast Region, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Central Coast Region on December 10, 2021.

Matthew T. Keeling

Digitally signed by Matthew T. Keeling
Date: 2021.12.14 12:53:02 -08'00'

Water Boards

Matthew T. Keeling, Executive Officer

Figure 1-1: Landfill location within the former Guadalupe Oil Field

Path: R:\RB3\Shared\LDU\Facilities\PERMITTED\Chevron Guadalupe Landfill\ArcMap Figures\Site Maps\Landfill Location.aprx

Figure 1-2: Landfill liner footprint

Path: R:\RB3\Shared\LDU\Facilities\PERMITTED\Chevron Guadalupe Landfill\ArcMap Figures\Site Maps\Liner Footprint.aprx

ATTACHMENT A

MONITORING AND REPORTING PROGRAM
ORDER NO. R3-2021-0076
Waste Discharge Identification No. 3 400721887
FOR
THE CHEVRON GUADALUPE LANDFILL

INTRODUCTION

Monitoring and Reporting Program Order No. R3-2021-0076 (MRP) is issued by the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) pursuant California Water Code (Water Code), §13267.

Chevron Environmental Management Company (Discharger) owns and operates the Chevron Guadalupe Class II Landfill (Landfill). The MRP is required to determine compliance with the Water Code, applicable state and federal regulations, and the associated Waste Discharge Requirements Order No. R3-2021-0076 (Order). The Central Coast Water Board requirement that the Discharger submit the reports as specified in the MRP are made pursuant to Water Code, §13267. The reports are reasonably necessary to ensure compliance with this Order and the requirements of California Code of Regulations (CCR), title 27 and Code of Federal Regulations, title 40, chapter I, subchapter I (40 CFR), part 257. Pursuant to Water Code, §13268, a violation of Water Code, §13267, may subject the Discharger to civil liability of up to $1,000 per day, for each day in which the violation occurs.

ELECTRONIC SUBMITTAL

The Discharger must transmit correspondence and other information electronically in Portable Data Format (PDF), reducing the amount of paper used, and increasing the speed of which information is distributed. Electronic documents can be submitted to centralcoast@waterboards.ca.gov and will be distributed to the appropriate staff person. Informal written correspondence (i.e., email) can be sent directly to the appropriate staff person.

All technical reports including the monitoring site information, data, and reports required below, must be submitted electronically to the State Water Resources Control Board's internet-accessible database system (GeoTracker), pursuant to the Order and in accordance with the reporting requirements of this MRP. Additional instructions for the Discharger on formatting, uploading data, and other technical information to GeoTracker can be found under the "ESI Overview" and "Getting Started" sections at UST Electronic Submittal of Information (ESI) | California State Water Resources Control Board (https://www.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

The GeoTracker page associated with the Chevron Guadalupe Landfill can be found at: Chevron Guadalupe Landfill GeoTracker Page

(https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000014025)

MONITORING REQUIREMENTS

PART I. MONITORING AND OBSERVATION SCHEDULE

Unless otherwise indicated, the Discharger must report all monitoring data and observations as outlined in **Part IV**.

A. SITE INSPECTIONS

The Discharger must inspect the Landfill facility, in accordance with the following schedule, and record (including photographs, when appropriate), at a minimum, the observations listed below.[2]

1. Inspection Schedule

   At least monthly and during or following each storm event that produces stormwater runoff and/or a storm event that produces a minimum of 1-inch of rain within a 24-hour period.

2. Standard Observations
   a. At the waste management units (WMU) and along the perimeter of the WMUs:
      i. Evidence of ponded water at any point in WMU disposal areas – this includes providing a map and photos of the affected area, documenting whether ponded water contacted waste, and corrective action.
      ii. Evidence of erosion and/or exposed refuse within WMU disposal areas.
      iii. Evidence of waste in the drainage system (e.g., drainage channels, stormwater sediment retention basins).
      iv. Integrity of all drainage and containment systems.
   b. Along the Landfill facility perimeter:
      i. Evidence of liquid offsite discharge or onsite run-on, from/to WMUs and waste processing/diversion/recycling areas of the Landfill, estimated size of affected area and flow rate, and show affected area on a map.
      ii. Evidence of odors – characterization, source, and distance odor detected from the source.

[2] The intent of this requirement is for Landfill staff to use professional judgment to determine how quickly (**during or within 24 hours**) and the level of detail a facility inspection is warranted after a storm event to ensure that the storm event has not resulted in erosion or other stormwater related issues that can potentially impact water quality or the integrity of the various covers and stormwater conveyance systems (i.e. drainage control systems).

iii. Evidence of trespass/illegal access and damage to the cover system, structures, monitoring points, or any other onsite equipment.

c. For receiving waters:

i. Oily sheen of waste origin – presence or absence, source, and size of affected area.

ii. Suspended material of waste origin – presence or absence, source, and size of affected area.

iii. Discoloration and turbidity – description of color, source, and size of affected area.

iv. Evidence of odors – presence or absence, characterization, source, and distance of odor detected from source.

v. Evidence of beneficial use – presence of water associated wildlife.

vi. Estimated flow rate to the receiving water.

vii. Weather conditions – wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation.

B. DRAINAGE SYSTEM INSPECTIONS

1. General conditions (e.g., evidence of excessive sediment or vegetation requiring cleanout, poor drainage, erosion, or ponding due to settlement, structural integrity requiring maintenance/repair).
2. Whether stormwater sediment retention basins (if applicable) and drainage ditches contain liquids and if basins are discharging.
3. Whether best management practices to prevent impacts to stormwater (e.g., erosion control, sediment control, waste containment, stormwater diversion) are implemented and performing as specified in the Landfill's annual wet weather preparedness plan required by the Order, and as required by applicable stormwater permits.
4. Steps taken to correct any problems found during inspections and date(s) when corrective action was taken (include photographic documentation).

C. RAINFALL DATA

The Discharger must record the following information:

1. Total daily precipitation, in inches, each month.
2. Precipitation, in inches, and return period (25-year, 100-year, etc.) of the most intense 24-hour rainfall event occurring each month.
3. Number and date of storms (greater than or equal to one inch in 24 hours) received each month.

D. INTAKE MONITORING

The Discharger must maintain a daily record of the waste stream. The intake daily records are not to be submitted to the Central Coast Water Board, but must be maintained at the Discharger's offices in accordance with **Part II.C** of this Monitoring and Reporting Program (MRP) and are to be made available to Central Coast Water Board staff upon request to review and/or copy. The record must include the following:

1. Volume (in cubic yards) of waste landfilled.
2. Running totals of cubic yards received, estimated cubic yards remaining for waste placement, and remaining site life expectancy calculated annually (in years).

E. POLLUTION CONTROL SYSTEM

The Discharger must inspect the leachate collection and removal systems (LCRS), any leak detection system (LDS) and groundwater subdrains and record the following information:

1. LCRS, LDS, and Groundwater Subdrain
   a. **Weekly** – System integrity and general operational status, volume of leachate collected (gallons with monthly, semiannual, and annual volume sub-totals), and disposal method, if more than one disposal method is used, record volume specific for each method. Documentation of scheduled and unscheduled maintenance.
   b. **Annually** – Analytical results of leachate monitoring from lined area as specified in **Part I.F.2**. The Discharger must take leachate or groundwater samples, as applicable, directly from any LCRS, LDS, groundwater subdrain, or associated holding tank (if fresh) that is representative of liquids from the control system sampled.
   c. **Annually** – LCRS testing and demonstration, per CCR, title 27, §20340(d), or Executive Officer approved engineered alternative pursuant to CCR, title 27, §20380(e). Report results as part of the annual summary report required by this MRP, **Part IV.C.** The Discharger must develop results of annual testing in a manner that makes one year's test comparable to previous and subsequent tests. The Discharger must specifically address the absence or presence of biofouling in the annual summary report. For LCRS and LDS, the Discharger must check and report water level transducer calibrations per manufacturer's specifications.
   d. All lined WMUs will have the location of their respective liners surveyed and markers placed at readily observable locations observable by Landfill operations staff discharging leachate back to lined modules, and by state inspectors.

F. ANALYTICAL MONITORING AND MONITORING LOCATIONS

The Discharger must monitor the Landfill in accordance with the following schedule(s). Monitoring locations are shown on **Figure A-1**.

1. Monitoring Periods
   a. **Quarterly** – The 1st through 4th quarter monitoring periods are January 1 – March 31, April 1 – June 30, July 1 – September 30, and October 1 – December 31, respectively.
   b. **Semiannually** – The 1st and 2nd semiannual monitoring periods are January 1 – June 30, and July 1 – December 31.
   c. **Annually** – The annual monitoring period is from January 1 – December 31.
2. Monitoring Points

   The Discharger must sample the following monitoring points as shown and described in **Table A-1** below.

Table A-1 Monitoring Points

LOCATION ID	MONITORING ZONE	PARAMETERS	FREQUENCY
Monitoring well MW-1	Upgradient	Table A-2 and Table A-3	Quarterly for groundwater depth, Semiannually* testing for parameters/constituents
Monitoring well MW-2	Downgradient	Table A-2 and Table A-3	Quarterly for groundwater depth, Semiannually* testing for parameters/constituents
Monitoring well J13-1	Downgradient	Table A-2	Quarterly for groundwater depth, Semiannually* testing for parameters/constituents
Monitoring well K14-1	Downgradient	Table A-2	Quarterly for groundwater depth, Semiannually* testing for parameters/constituents
LCRS	Control System	Table A-2 and Table A-3	Annually*
LDS	Control System	Table A-2	Monthly check for liquids, Quarterly testing for parameters/constituents

LOCATION ID	MONITORING ZONE	PARAMETERS	FREQUENCY
Perimeter Landfill Gas Probes	Unsaturated zone	Table A-4	Quarterly
Leachate Seep/Spill	As detected	Table A-2	Conditionally

a. Table A-1 Provisions

i. Monitoring frequencies with an asterisk* indicates that the Discharger must conduct initial quarterly parameter/constituent monitoring for four consecutive quarters for the associated monitoring points. After completing the initial quarterly sampling, the frequency is as specified in **Table A-1**, except as provided under **Part III.D**.

ii. The Discharger must measure depth to groundwater as specified in **Part I.F.7** of this MRP.

iii. The Discharger must collect and analyze landfill gas samples as specified in **Part I.F.6** of this MRP.

iv. In the event of a leachate seep or spill, the Discharger must monitor the seep or spill as specified in **Part IV.D.1** of this MRP.

3. Monitoring Parameters

The Discharger must analyze groundwater, stormwater, leachate, and liquid found in the LDS for the monitoring parameters described in **Table A-2** below:

Table A-2 Monitoring Parameters

Monitoring Parameters/ Constituents	Method	Units
Depth to groundwater	Field	Feet (AMSL and depth from top of well casing)
pH	Field	Std Units
Electrical Conductivity (@ 25 °C)	Field	µmhos/cm
Dissolved Oxygen (DO)	Field	mg/L
Temperature	Field	°F/C
Turbidity	Field	NTU

Monitoring Parameters/ Constituents	Method	Units
Oxidation-Reduction Potential (ORP)	Field	mV
Total Dissolved Solids (TDS)	Laboratory	mg/L
Total Organic Carbon (TOC)	Laboratory	mg/L
Total Alkalinity (as $CaCO_3$)	Laboratory	mg/L
Carbonate (as CO_3)	Laboratory	mg/L
Bicarbonate (as HCO_3)	Laboratory	mg/L
Aluminum, as Al	Laboratory	mg/L
Chloride	Laboratory	mg/L
Fluorine, as F	Laboratory	mg/L
Nitrate (as Nitrogen)	Laboratory	mg/L
Ammonia (as Nitrogen)	Laboratory	mg/L
Sulfur, as S	Laboratory	mg/L
Sulfate	Laboratory	mg/L
Sulfide	Laboratory	mg/L
Iron	Laboratory	mg/L
Boron	Laboratory	mg/L
Calcium	Laboratory	mg/L
Magnesium	Laboratory	mg/L
Manganese	Laboratory	mg/L
Sodium	Laboratory	mg/L
Phosphorus	Laboratory	mg/L
Potassium	Laboratory	mg/L

Monitoring Parameters/ Constituents	Method	Units
TDS (Sum of Ions) vs TDS (Measured)	Laboratory	RPD
TDS/Electrical Conductivity	Laboratory	RPD
Cation/Anion Balance	Laboratory	RPD
Total Petroleum Hydrocarbons (TPH) (gasoline, diesel, crude oil)	Laboratory	mg/L
All constituents listed in 40 CFR, part 258, appendix II including metals, VOCs, SVOC, and PAHs	Laboratory	µg/L
n-Butylbenzene	Laboratory	µg/L
sec-Butylbenzene	Laboratory	µg/L
Isopropylbenzene	Laboratory	µg/L
p-Isopropyltoluene	Laboratory	µg/L
1,2,4-Trimethylbenzene	Laboratory	µg/L
1,3,5-Trimethylbenzene	Laboratory	µg/L
Fluorene	Laboratory	µg/L

a. Table A-2 Provisions

i. The Discharger must initially conduct quarterly sampling, pursuant to **Part I.F.2.a.i** for all groundwater monitoring wells and leachate for the first year. 40 CFR, part 258, appendix II is a broad list of chemicals typically required for municipal solid waste landfills. Due to the broad range of chemicals listed in **Table A-2**, some chemicals may not be found in waste or groundwater at this facility. After the initial year of quarterly sampling, the Discharger may request to reduce the list of required monitoring parameters/constituents and request to remove analytes not found or expected to be found in groundwater or landfill leachate. The subsequently revised Executive Officer approved MRP may either remove or require less frequent monitoring for such chemicals.

ii. Laboratory analytical methods include any approved United States Environmental Protection Agency (US EPA) method that provides the lowest practicable detection limit or as specified in an Executive Officer

approved sampling and analysis plan in accordance with **Part II.A** of this MRP.

iii. Laboratory-derived parameters/constituents must be evaluated using statistical, non-statistical, and graphical assessment methods, as required by **Part III**.

iv. For groundwater samples, all metals must be field filtered prior to laboratory analysis unless otherwise specified (e.g., chromium VI), or as approved in accordance to **Part II.A** of this MRP and analyzed for total metals.

v. Units are defined as follows: µmhos/cm – micromhos per centimeter; mg/L – milligrams per liter; °F/C – degrees Fahrenheit/Celsius; NTU – nephelometric turbidity units; µg/L – micrograms per liter; RPD – relative percent difference; AMSL – above mean sea level

vi. Volatile Organic Compounds (VOCs) include VOCs detectable using US EPA Method 8260B. Semi-volatile organic compounds (SVOCs) include SVOCs detectable using US EPA Method 8270C. Polycyclic Aromatic Hydrocarbons (PAH) chemicals include PAHs detectable using 8270 SIM. Lab results must include all unidentified peaks whenever practical, in accordance to **Part II.A.6** of this MRP.

4. Per- and polyfluoroalkyl substances (PFAS) Monitoring Analytes

   The Discharger must analyze leachate and groundwater monitoring wells MW-1 and MW-2 listed in **Table A-1** for the PFAS analytes described in **Table A-3** below:

Table A-3 PFAS Monitoring Constituents

PFAS Monitoring Constituents	Method	Units
Perfluorobutanoic acid (PFBA)	Laboratory	ng/L
Perfluoropentanoic acid (PFPeA)	Laboratory	ng/L
Perfluorohexanoic acid (PFHxA)	Laboratory	ng/L
Perfluoroheptanoic (PFHpA)	Laboratory	ng/L
Perfluorooctanoic acid (PFOA)	Laboratory	ng/L
Perfluorononanoic acid (PFNA)	Laboratory	ng/L
Perfluorodecanoic acid (PFDA)	Laboratory	ng/L
Perfluoroundecanoic acid (PFUnDA)	Laboratory	ng/L

PFAS Monitoring Constituents	Method	Units
Perfluorododecanoic acid (PFDoDA)	Laboratory	ng/L
Perfluorotridecanoic acid (PFTrDA)	Laboratory	ng/L
Perfluorotetradecanoic acid (PFTeDA)	Laboratory	ng/L
Perfluorobutane sulfonic acid (PFBS)	Laboratory	ng/L
Perfluoropentane sulfonic acid (PFPeS)	Laboratory	ng/L
Perfluorohexane sulfonic acid (PFHxS)	Laboratory	ng/L
Perfluoroheptane sulfonic acid (PFHpS)	Laboratory	ng/L
Perfluorooctane sulfonic acid (PFOS)	Laboratory	ng/L
Perfluorodecane sulfonic acid (PFDS)	Laboratory	ng/L
Perfluorooctanesulfonamide (PFOSA)	Laboratory	ng/L
N-Ethyl perfluorooctane sulfonamide ethanol (EtFOSE)	Laboratory	ng/L
N-Methyl perfluorooctane sulfonamide ethanol (MeFOSE)	Laboratory	ng/L
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	Laboratory	ng/L
N-Methyl perfluorooctane sulfonamide (MeFOSA)	Laboratory	ng/L
N- Methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	Laboratory	ng/L
*N- Ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	Laboratory	ng/L
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	Laboratory	ng/L
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	Laboratory	ng/L
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	Laboratory	ng/L

PFAS Monitoring Constituents	Method	Units
Hexafluoropropylene oxide dimer acid (HFPO-DA)	Laboratory	ng/L
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	Laboratory	ng/L
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9-Cl-PF3ONS)	Laboratory	ng/L
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11-Cl-PF3OUdS)	Laboratory	ng/L

a. Table A-3 Provisions

i. The Discharger must initially conduct quarterly sampling, pursuant to **Part I.F.2.a.i** for the first year. After the initial year of quarterly sampling, the Discharger may request to reduce the list of required monitoring constituents and request to remove constituents not found or expected to be found in groundwater or landfill leachate. The subsequently revised Executive Officer approved MRP may either remove or require less frequent Constituent of Concern (COC) monitoring for such chemicals.

ii. Laboratory analytical methods include any approved US EPA method that provides the lowest practicable detection limit or as specified in an Executive Officer approved sampling and analysis plan in accordance with **Part II.A** of this MRP.

iii. Laboratory-derived parameters/constituents must be evaluated using statistical, non-statistical, and graphical assessment methods, as required by **Part III**.

iv. Units are defined as follows: ng/L – nanograms per liter

5. Stormwater Monitoring

a. Conditional stormwater monitoring: If leachate from spills or seeps contacts surface waters or stormwater and leaves the Landfill, the Discharger must sample applicable onsite/offsite stormwater and surface water for the monitoring parameters included in **Table A-2**. This applies to any liquid that contacts waste, if discharged from lined WMUs.

6. Landfill Gas Monitoring

The Discharger must monitor all perimeter landfill gas probes listed in the Executive Officer approved gas monitoring and control program for the monitoring parameters listed in **Table A-4** below at the frequency specified in **Table A-1** above.

Table A-4 Landfill Gas Monitoring Parameters

Monitoring Parameters	Method	Units
Methane	Field	ppm
Carbon Dioxide	Field	ppm
Oxygen	Field	ppm
Volatile Organic Compounds	TO-15	ppb

a. Table A-4 Provisions

i. Laboratory methods include any US EPA method that provides the lowest practicable detection limit or as specified in an Executive Officer approved sampling and analysis plan in accordance to **Part II.A** of this MRP.

ii. The Discharger will specify the type of field meters that will be used for perimeter monitoring in the gas monitoring and control program that is subject to approval by the Executive Officer. The Discharger must document that field meters are calibrated according to manufacturer specifications prior to use.

iii. Landfill gas VOC sample collection is conditional, if gas probes or landfill collection header contain methane concentrations greater than 5%, the Discharger must collect and analyze landfill gas for VOCs. Landfill gas VOC monitoring is required once **annually** per landfill gas monitoring point with methane greater than 5%.

iv. If the compliance requirements listed in CCR, title 27, §20921(a) are exceeded in any probe at any well, the monitoring reports must include the reporting requirements listed in CCR, title 27, §20934 and the Discharger will immediately take the steps listed in CCR, title 27, §20937 for validating the sampling results and for future control of excess gas concentrations through the implementation of an Executive Officer approved gas control system.

7. Groundwater Flow Rate and Direction

a. For each monitored groundwater body, the Discharger must measure the water elevation in each well, at least **quarterly**, including the times of expected highest and lowest elevations of the water level, and determine the presence of vertical gradients, and groundwater flow rate and direction for the respective groundwater body. Groundwater elevations for all wells in a given groundwater body must be measured within a period of time short enough to avoid temporal variations in groundwater flow which could preclude accurate determination of groundwater flow rate and direction.

b. The Discharger must compare observed groundwater characteristics with those from previous determinations, noting the appearance of any trends and of any indications that a change in the hydrogeologic conditions. The discharger must evaluate groundwater separation from WMU using critical groundwater cross sections.

8. Sample Procurement Limitation

   For any given monitored medium, the Discharger must collect samples from monitoring points with a span **not exceeding 30 days** within a given monitoring period and collect samples in a manner that ensures sample independence to the greatest extent feasible per CCR, title 27, §20415(e)(12)(B).

PART II. SAMPLE COLLECTION AND ANALYSIS

The Discharger must collect and analyze samples in a manner that ensures the quality of the monitoring data. Unless otherwise indicated, the Discharger must report all sampling and analysis as outlined in **Part IV**.

A. SAMPLE COLLECTION AND ANALYSIS

The Discharger must perform sample collection, storage, and analysis according to methods approved by the US EPA and in accordance with a sampling and analysis plan approved by the Central Coast Water Board's Executive Officer. The sampling and analysis plan must include a PFAS sampling workplan. A laboratory certified for these analyses by the State of California Environmental Laboratory Program must perform all water analyses and they must identify the specific methods of analysis. The director of the laboratory whose name appears in the certification must supervise all analytical work in his/her laboratory and must sign reports of such work submitted to the Central Coast Water Board. In addition, the Discharger is responsible for confirming that the laboratory analysis of samples from all monitoring points meets the following restrictions:

1. Method Selection

   The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% nonnumerical determinations in historical data for that medium, the analytical method having the lowest method detection limit[3] (MDL) must be selected from

[3] The lowest concentration at which a given laboratory, using a given analytical method to detect a given constituent, can differentiate with 99% reliability, between a sample which contains the constituent and one which does not. The Method Detection Limit must reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory.

among those methods which would provide valid results in light of any matrix effects[4] involved.

2. Trace Results

   The Discharger must report trace results [i.e., results falling between the MDL and the practical quantitation limit[5] (PQL)] and the result must be accompanied by both the (nominal or estimated) MDL and PQL values for that analytical run.

3. Nominal or Estimated MDL and PQL

   The laboratory must derive MDLs and PQLs for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits must reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory, rather than simply being quoted from US EPA analytical method manuals. If the laboratory suspects that, due to a change in matrix or their effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the laboratory must flag the results accordingly and the laboratory must include an estimate of the MDL/PQL actually achieved.

4. Quality Assurance/Quality Control (QA/QC) Data

   The Discharger and laboratory must report QA/QC data along with the sample results to which it applies. The laboratory must report sample results unadjusted for blank results or spike recovery. The QA/QC data submittal must include:

   a. Method, equipment, and analytical detection limits.
   b. Recovery rates, an explanation for any recovery rate that is outside the US EPA specified recovery rate.
   c. Results of field, trip, equipment, and method blanks.
   d. Results of spiked and surrogate samples.
   e. Frequency of quality control analysis.
   f. Chain of custody logs.
   g. Name and qualifications of the person(s) performing the analyses.

5. Common Laboratory Contaminants

   Upon receiving written approval from the Executive Officer, the Discharger can use an alternative statistical or non-statistical procedure for determining the

[4] Any increase in the MDL or PQL for a given constituent as a result of the presence of other constituents, either of natural origin or introduced through a release, that are present in the sample being analyzed.

[5] The lowest acceptable calibration standard (acceptable as defined for a linear response or by actual curve fitting) times the sample extract dilution factor times any additional factors to account for matrix effect. The PQL must reflect the quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. PQLs reported by the laboratory must not simply being restated from US EPA analytical method manuals. Laboratory derived PQLs are expected to closely agree with published US EPA estimated quantitation limits (EQL).

significance of analytical results for a constituent that is a common laboratory contaminant [i.e., methylene chloride, acetone, 2-butanone, diethylhexyl phthalate, di-n-octyl phthalate, disulfide, and bis(2-ethylhexyl)phthalate] during any given Monitoring Period in which QA/QC samples show evidence of laboratory contamination for that constituent. The Discharger must report and flag analytical results involving detection of these analytes for easy reference by Central Coast Water Board staff.

6. Unknowns

   For unidentified chromatographic peaks, the Discharger must request the laboratory report tentatively identified compounds (TICs), along with an estimate of the concentration of the unknown analyte. When unidentified chromatographic peaks are encountered, the laboratory must perform second column or second method confirmation procedures to attempt to identify and more accurately quantify the unknown analyte(s). The Discharger must report the TIC results as estimated (i.e., J flag or qualifier code).

7. Contaminants in QA/QC Samples

   In cases where contaminants are detected in QA/QC samples (i.e., field, trip, equipment, method blanks), the Discharger must appropriately flag the accompanying sample results.

B. CONCENTRATION LIMIT DETERMINATION

The Discharger must propose concentration limits for each monitoring parameter in accordance with CCR, title 27, §20400 and as outlined in **Part IV**.

1. For the purpose of establishing concentration limits for monitoring parameters detected in greater than 10% of a medium's samples the Discharger must:
   a. Statistically analyze existing monitoring data (**Part III**), and propose, to the Executive Officer, statistically derived concentration limits for each monitoring parameter at each monitoring point for which sufficient data exists.
   b. In cases where sufficient data for statistically determining concentration limits do not exist, the Discharger must collect samples and analyze for monitoring parameter(s), which require additional data. Once sufficient data are obtained, the Discharger must submit proposed concentration limit(s) to the Executive Officer for approval. This procedure must take no longer than two calendar years.
   c. Sample and analyze new monitoring points, including any added by this Order, until sufficient data is available to establish a proposed concentration limit for all monitoring parameters. Once sufficient data are obtained the Discharger must submit the proposed concentration limit(s) to the Executive Officer for approval. This procedure must take no longer than two calendar years.

2. In cases where the monitoring parameter's MDL is exceeded in less than 10% of historical samples, the MDL is the concentration limit.
3. Once established, the Discharger must review concentration limits a minimum of **annually** and propose new concentration limits, when appropriate.

C. RECORDS TO BE MAINTAINED

The Discharger or laboratory must maintain records in accordance with CCR, title 27, §21720(f), and retain them for a minimum of five years. The Discharger must extend the period of retention during the course of any unresolved litigation or when requested by the Executive Officer. Such records must show the following for each sample:

1. Identification of sample and monitoring point from which the sample was taken, along with the identity of the individual who obtained the sample.
2. Date and time of sampling.
3. Date and time that analyses were started and completed, and the name of personnel performing each analysis including the field sheets.
4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.
5. Results of analyses, and MDL and PQL for each analysis.
6. A complete chain of custody log.

PART III. DATA ANALYSIS

A. STATISTICAL ANALYSIS

For detection monitoring, the Discharger must use statistical methods to analyze monitoring parameters that exhibit concentrations that equal or exceed their respective MDL in at least ten percent of applicable historical samples. The Discharger may propose and use any statistical method that meets the requirements of CCR, title 27, §20415(e)(7). All statistical methods and programs proposed by the Discharger are subject to Executive Officer approval.

B. NON-STATISTICAL ANALYSIS

For detection monitoring, the Discharger must use the following non-statistical method for analyzing constituents which are detected in less than 10% of applicable historical samples. This method involves a two-step process:

1. For constituents to which this non-statistical method applies, compile a specific list of constituents that exceed their respective MDL. The Discharger must compile the list based on either data from the single sample or in cases of multiple independent samples, from the sample, which contains the largest number of constituents.

2. Evaluate whether the listed constituents meet either of two possible triggering conditions. Either the list from a single sampling location contains two or more constituents or contains one constituent that equals or exceeds its PQL. If either condition is met, the Discharger must conclude that a release is tentatively indicated and must immediately implement the appropriate re-test procedure under **Part III.D**.

C. GRAPHICAL ANALYSIS

For detection monitoring, the Discharger must graphically evaluate the complete history of laboratory analytical data as outlined in **Part IV.B.3**.

1. The Discharger must evaluate long-term trends and variations in the laboratory analytical data.
2. For major cation/anions (calcium, magnesium, sodium, potassium, bicarbonate, chloride, sulfate), the Discharger must evaluate leachate, leak detection systems, and groundwater monitoring wells using Piper and Stiff diagrams.
3. If graphical methods support evidence of a tentative release, the Discharger must carry out the requirements of **Part IV.D.4**.

D. RE-TEST PROCEDURE

1. In the event that the Discharger concludes that a tentative release occurred, the Discharger must carry out the reporting requirements of **Part IV.D.2** and, **within 30 days** of receipt of analytical results, collect two new samples for the indicated monitoring parameter(s) at each indicating monitoring point, collecting at least as many samples per monitoring point as were used for the initial test.
2. Analyze each of the two samples re-test analytical results using the same statistical method (or non-statistical comparison) that provided the tentative indication of a release. If the test results of either (or both) of the re-tested sampling data confirm the original indication, the Discharger must conclude that a release has been discovered and must carry out the requirements of **Part IV.D.4**.
3. The Discharger must carry out re-tests only for the monitoring point(s) for which a release is tentatively indicated, and only for the monitoring parameter(s) which triggered the indication. When an analyte of the VOC composite parameter is re-tested the results of the entire VOC composite must be reported.

PART IV. REPORTING

A. ELECTRONIC SUBMITTAL

The Discharger must submit the following monitoring information to GeoTracker pursuant to the Order and CCR, title 23, division 3, chapter 30 and CCR, title 27, division 3:

1. Boring logs as a GEO_BORE PDF file. Boring logs must be prepared by an appropriate registered professional and include monitoring well screen depth and interval.
2. Groundwater monitoring well horizontal sampling location longitude (X) and latitude (Y), and top-of-casing elevation (Z) as a GEO_XY text file and GEO_Z text file, respectively. Collection of information related to the exact location of groundwater wells, required by CCR, title 23, division 3, chapter 16, article 12, §2729-2729.1, constitutes "land surveying," as the term is defined in Business and Professions Code, §8726 and the collection of data is restricted to those who are licensed to practice land surveying in California.
3. Site map as a GEO_MAP file. The acceptable format for the GEO_MAP file is PDF (preferred), GIF, TIFF (TIF), or JPEG (JPG). The Landfill site map includes Landfill facility information (e.g., property line, waste footprint, waste management units, leachate tanks, buildings, waste processing/diversion/recycling areas, surface waters, ponds, stormwater discharge points) and all current and historical monitoring locations including groundwater monitoring wells, boreholes, transient sampling points (i.e. direct push subsurface or surface sampling points), landfill gas probes, or any other field points utilized for leachate, landfill gas, soil, groundwater, surface water, or stormwater sampling.
4. Groundwater well measurement information for each sampling event as a GEO_WELL file. Measurement must be completed from the top of the well casing to the groundwater surface to the nearest +/-0.01-foot accuracy.
5. Analytical sampling results for each sampling event as an Electronic Deliverable Format (EDF) file.
6. Complete monitoring report for regulatory review as a GEO_REPORT PDF file. Please note, technical reports are also submitted as GEO_REPORT PDF files. The monitoring report should include the signed transmittal sheet, text, graphs, diagrams, tables, maps, figures, and appendices that would have been included in a hard copy paper report.

B. MONITORING REPORT

The Discharger must submit a monitoring report **semiannually** by **January 31** and **July 31** of each year. Submit the monitoring reports in an electronic format, with transmittal letter, text, tables, figures, laboratory analytical data, and appendices in a PDF (one PDF for the entire report). The Discharger is required to upload the full monitoring report into GeoTracker along with corresponding laboratory data in EDF, pursuant to CCR, title 23, chapter 30, division 3 and CCR, title 27, division 3. The monitoring report must address all facts of the Landfill's monitoring program. The monitoring report must include, but should not be limited to the following:

1. Letter of Transmittal

A letter transmitting the essential points must accompany each monitoring report. The letter must include a discussion of violations that occurred since the last such report was submitted. If the Discharger has not discovered new violations since the last submittal, the Discharger must state this in the transmittal letter. The Discharger must sign both the monitoring report and the transmittal letter as prescribed in Order **Reporting G.1** and include the following statement:

> "I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of a fine and imprisonment."

2. Compliance Summary

   The summary must discuss compliance with the Order, concentration limits, release indications, and any corrective actions taken.

3. Graphical Presentation of Data

   For each monitoring point in each medium, submit, in graphical format, the complete history of laboratory analytical data. Graphs must effectively illustrate trends and/or variations in the laboratory analytical data. Each graph must plot a single constituent concentration over time at one (for intra-well comparison) or more (for inter-well comparisons) monitoring points in a single medium. Maximum contaminant levels (MCL) and/or concentration limits must be graphed along with constituent concentrations where applicable. When multiple samples are taken, graphs must plot each datum, rather than plotting mean values.

   For leachate, leak detection systems, groundwater subdrains, and groundwater monitoring wells, evaluate cation/anion balance using Piper and Stiff diagrams.

   Determine horizontal and vertical gradients, groundwater flow rate, and flow direction for each respective groundwater body. This data must be presented on a figure that depicts groundwater contours, flow directions, and gradient. Include one figure for each groundwater level monitoring event in the semi-annual monitoring report. If appropriate, include figures for critical groundwater/WMU cross sections to evaluate groundwater separation from WMUs.

4. Map(s)

   The Landfill base map for the monitoring report must consist of a current aerial photograph or include relative topographical features, along with monitoring points and features of the Landfill facility (e.g., surface waters, drainage facilities, stormwater discharge points, WMU disposal areas, scale house, buildings, waste processing/diversion/recycling areas).

5. Corrective Action Summary

   Discuss significant aspects of any corrective action measures conducted during the monitoring period and the status of any ongoing corrective action efforts,

including constituent trend analysis. Calculate pollutant load removed from the site's impacted media (water, gas, leachate) by mass removal system(s). Based on the mass removal calculations on actual analytical data as required by **Part I.F**, present discussion and indications, relating mass removal data to the violation the corrective action is addressing.

6. Laboratory Result

   A tabular report and summary discussion of laboratory results and statements demonstrating compliance with **Part II** including the current monitoring periods laboratory data sheets. Also provide results of analyses performed at the Landfill that are outside of the requirements of this Monitoring and Reporting Program and are water quality related. For each constituent, the Discharger must note the chemical abstraction service (CAS) number associated with the constituent and, if applicable, the associated water quality objective. If the reporting limit for a certain chemical is higher than the water quality objective and no other US EPA method can analyze using a lower reporting limit, the Discharger will justify the reason for the high reporting limit.

7. Sampling Summary

   For each monitoring point addressed by the report, describe and summarize: 1) the method and time of water level measurement, 2) the method of purging and purge rate and well recovery time, and 3) the field parameter readings.

   For each monitoring point addressed by the report, a description of the type of sampling device used, its placement for sampling, and a description of the sampling procedure (number of samples, field blanks, trip blanks, and duplicate samples taken; the date and time of sampling; the name and qualification of the person actually taking the samples; and description of any anomalies).

8. Pollution Control Systems

   A summary of the total volume of leachate or water collected each month and disposal method(s) since the previous monitoring report for pollution control systems (e.g., LCRS, LDS, surface water runoff collected as leachate). Also include fluid level measurements in LCRS and LDS, along with transducer calibration records, and whether liquid was observed/removed from the LDS.

9. General Discussion

   A summary of site inspections, drainage system inspections, and rainfall data for the Landfill recorded during the monitoring period (**Part I**).

C. ANNUAL SUMMARY REPORT

The Discharger must submit an annual report to the Central Coast Water Board covering the previous monitoring year. The annual monitoring period ends on December 31 each year. Submit this annual summary report no later than **January 31 of each year**. The Discharger may combine the annual summary report with the second semiannual monitoring report of the year. The annual report must include the

information outlined in **Part IV.B** above and the following:

1. Discussion

   Include a comprehensive discussion of the compliance record as it related to Waste Discharge Requirements Order No. R3-2021-0076, a review of the past year's significant monitoring system and operational changes, a summary of corrective action results and milestones, and a review of construction projects, with water quality significance, completed or commenced in the past year or planned for the upcoming year.

2. Concentration Limit Review

   Proposed concentration limits for all monitoring parameters. The Discharger must review concentration limits a minimum of annually and revise them as necessary. The Discharger must discuss data collected during the past year and consider for inclusion in, and determination of, proposed concentration limits for the coming year. For statistical concentration limits that are changed from the previous year, include a comprehensive discussion of the proposed concentration limit for Executive Officer review and consideration.

3. Pollution Control Systems

   Results of the annual pollution control systems testing, as required by **Part I.E**. The Discharger must verify that disposal methods for leachate or impacted groundwater are appropriate based on annual sampling results.

4. Final Cover

   Most recent final cover survey as required by the Order and a summary of final cover repairs. The Discharger must maintain records of cumulative waste subsidence or settlement in final cover areas based on the most recent and historical final cover surveys. The Discharger must document final cover repairs (e.g. adding vegetative soils to restore grading and/or prevent ponding) with sufficient details to facilitate future evaluations of final cover differential settlement.

5. Analytical Data

   Complete historical analytical data record presented in a tabular form in Excel™ format or in another file format acceptable by the Executive Officer.

6. Map(s)

   A map, or set of maps, that indicate the type of cover materials in place (final, long-term intermediate, or intermediate) over inactive and completed areas.

D. CONTINGENCY RESPONSE

1. Leachate Seep/Spill

   The Discharger must, **within 24 hours**, report by telephone concerning the discovery of previously unreported seepage from the WMU, the Discharger must

submit a written report within seven says, containing at least the following information:

a. A map showing the location(s) of seepage along with photographic documentation.

b. An estimate of the flow rate and duration of seep.

c. Location of sample(s) collected for laboratory analyses. Unless otherwise directed by Central Coast Water Board staff, the Discharger must sample all leachate seeps and spills, and applicable downgradient surface water or stormwater monitoring locations for the monitoring parameters in **Table A-2**. In the event multiple seeps occur in a similar localized area (slope or bench), the Discharger may use professional judgment to reduce the number of leachate seep samples provided the Discharger collects a representative sample. The Discharger must photo document sample location(s), all observed seeps/spills, and document the sample location(s) on a map or diagram. The Discharger is also required to sample stormwater in accordance with **Part I.F.5**.

d. A description of the nature of the discharge (e.g., pertinent observations and analysis).

e. A summary of corrective measures both taken and proposed.

2. Initial Release Indication Response

Should the initial statistical or non-statistical comparison (under **Part III.A or Part III.B**) indicate that a new release is tentatively identified, the Discharger must:

a. **Within 24 hours**, notify the Central Coast Water Board verbally or by email of the monitoring point(s) and constituent(s) or parameter(s) involved.

b. Provide written notification of the tentatively identified release by certified mail **within seven days**; and

c. Either of the following:

i. Carry out a discrete re-test in accordance with **Part III.D**. If the re-test confirms the existence of a release or the Discharger fails to perform the re-test, the Discharger must carry out the requirements of **Part IV.D.4**. In any case, the Discharger must inform the Central Coast Water Board of the re-test outcome **within 24 hours** of the results becoming available, following up with the written results submitted by certified mail **within seven days**; or

ii. Make a determination, in accordance with CCR title 27, §20420(k)(7), that a source other than the MWU(s) caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the groundwater, surface water, or the unsaturated zone.

3. Physical Evidence of a Release

   If either the Discharger or the Executive Officer determines that there is physical evidence of a new release pursuant to CCR, title 27, §20385(a)(3), the Discharger must conclude that a release has been discovered and must:

   a. **Within seven days** notify the Executive Officer of this fact by certified mail (or acknowledge the Executive Officer's determination).

   b. Carry out the requirements of **Part IV.D.4** for potentially affected medium/media.

   c. Carry out any additional investigations stipulated in writing by the Executive Officer or the purpose of identifying the cause of the indication.

4. Release Discovery Response

   If the Discharger concludes that a new release has been discovered the following steps must be carried out:

   a. The Discharger must, **within 90 days** of discovering the release, submit to the Executive Officer a revised report of waste discharge proposing an evaluation monitoring and reporting program that meets the requirements of CCR, title 27, §20420 and §20425.

   b. The Discharger must, **within 180 days** of discovering the release, submit to the Executive Officer a preliminary engineering feasibility study meeting the requirements of CCR, title 27, §20420.

   c. The Discharger must immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that the Discharger can meet the requirements of CCR, title 27, §20425 to submit a delineation report **within 90 days** of when the Executive Officer directs the Discharger to begin the evaluation monitoring program.

5. Release Beyond the Facility Boundary

   Any time the Discharge or Executive Officer concludes that a release from the WMU has proceeded beyond the Landfill facility boundary, the Discharger must notify the affected persons[6] who either own or reside upon the land that directly overlies any part of the plume.

   a. Initial notification to affected persons must be accomplished **within 14 days** of making this conclusion and must include a description of the Discharger's current knowledge of the nature and extent of the release.

   b. Subsequent to initial notification, the Discharger must provide updates to affected persons, including any persons newly affected by a change in the

[6] Individuals who either own or reside upon the land which directly overlies any part of that portion of a gas or liquid phase release that may have migrated beyond the facility boundary.

boundary of the release, **within 14 days** of concluding there has been any material change in the nature or extent of the release.

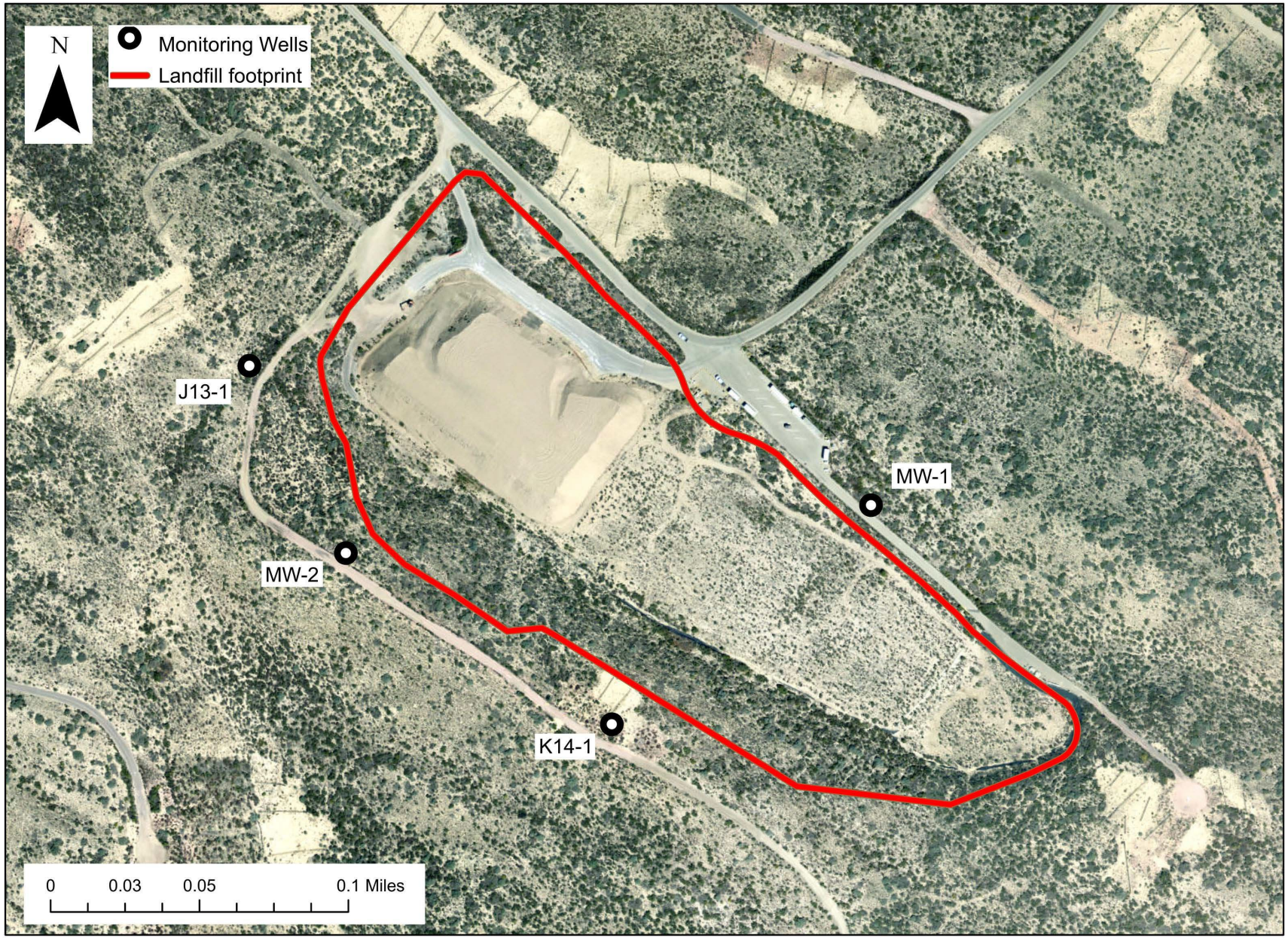
c. Each time the Discharger sends a notification to affected persons (under a. or b. above), the Discharger must, within seven days, of sending such notification, provide the Executive Officer with both a copy of the notification and a current mailing list of affected persons.

This MRP may be revised or modified by the Executive Officer at any time.

ORDERED BY: Matthew T. Keeling Digitally signed by Matthew T. Keeling Date: 2021.12.14 13:24:40 -08'00'

Matthew T. Keeling,
Executive Officer

Figure A-1 Monitoring Point Location Map



Path: R:\RB3\Shared\LDU\Facilities\PERMITTED\Chevron Guadalupe Landfill\ArcMap Figures\Site Maps\Monitoring Location Map.aprx

ATTACHMENT B

WASTE DISCHARGE REQUIREMENTS
ORDER NO. R3-2021-0076
Waste Discharge Identification No. 3 400721887
FOR
THE CHEVRON GUADALUPE LANDFILL

Additional findings of the California Regional Water Quality Control Board, Central Coast Region (Central Coast Water Board) presented below describe the legal requirements and technical rational that serve as the basis for the requirements of Waste Discharge Requirements Order No. R3-2021-0076 (Order) and Monitoring and Reporting Program (MRP) Order No. R3-2021-0076.

ADDITIONAL FINDINGS

A. LANDFILL OWNER AND LOCATION

1. Once constructed, the Chevron Environmental Management Company (Discharger) will own and operate the Chevron Guadalupe Landfill (Landfill).
2. The Landfill is located at 2184 West Thornberry Road at the former Guadalupe Oil Field (former Oil Field). The Landfill is approximately nine miles from the City of Santa Maria and about one mile from the City of Guadalupe. The Landfill is located approximately 0.4 miles north the Santa Maria River and approximately 1.25 miles east of the Pacific Ocean, **Figure B-1**.
3. The Landfill lies within Section 1 of Township 10N, Range 36W with a latitude of 34° 58’ 25” N and a longitude of 120° 37’ 21” W. The Discharger plans to conduct landfilling operations within 16.2-acres in the former tank battery 9 (TB-9) area of the former Oil Field. The Landfill site is located on assessor’s parcel number (APN) 092-041-001 and 092-041-005. The Landfill will be accessed on existing all-weather paved roads that are part of the former Oil Field.
4. The proposed Landfill location is within the former TB-9 area of the former Oil Field, an area that requires remediation of discharged petroleum and related chemical constituents to waters of the state. The location is near the remaining remediation areas, has access via the existing road network, and is close to other supporting infrastructure such as the Advanced Water Treatment System (AWTS).
5. The project will require excavation of impacted soil within the TB-9 area, which will be moved into the lined Landfill. The subgrade excavation will be completed in two phases starting with Phase 1 in the southeastern portion of the proposed Landfill, **Figure B-2**.

B. SITE DESCRIPTION AND HISTORY

1. From 1946 to March 1994, the Guadalupe Oil Field was used for the production of oil and natural gas. From the 1950s to 1990, the Union Oil Company of California (Unocal) used a refined petroleum hydrocarbon referred to as diluent to assist in the production of heavy crude oil. Over the years, diluent was released from the pipelines and storage tanks, which contaminated onsite soils, groundwater, and was released into the Pacific Ocean.
2. In 1998, the Central Coast Water Board issued Cleanup and Abatement Order (CAO) 98-38 to Unocal, mandating remediation actions such as the excavation of specified sources and sumps at the former Oil Field. In 2005, Chevron Corporation bought Unocal. After 2005, the Chevron Environmental Management Company (CEMC) began directing the remaining remediation work as part of the Guadalupe Restoration Project.
3. Since 2006, non-hazardous impacted soils from the former Oil Field have been hauled to the Santa Maria Regional Landfill for disposal.
4. In 2016, CEMC reevaluated impacted soil management alternatives to hauling non-hazardous impacted soil to the Santa Maria Regional Landfill. CEMC has since proposed to build a Class II landfill within the former Oil Field which is the subject of this Order.
5. The areas surrounding the Landfill are predominately zoned as “Recreation” and “Rural Lands”.
6. About 70 percent of the land located within one mile of the Landfill is within the boundary of the former Oil Field. There are approximately 540 acres of agricultural land within one mile of the Landfill that are not owned by Chevron.
7. The Landfill is located in southern San Luis Obispo County approximately half of a mile northwest of the Santa Barbara County line.

C. PURPOSE OF THE LANDFILL AND THE ORDER

1. The Landfill is expected to contain up to approximately 1,185,000 cubic yards of non-hazardous impacted soil sourced from the former Oil Field as part of the ongoing Guadalupe Restoration Project.
2. As an alternative to hauling non-hazardous impacted soils to Santa Maria Regional Landfill, the Chevron Guadalupe Landfill is expected to eliminate truck trips, which will reduce greenhouse gas emissions, reduce impacts on local air quality, and protect public health by reducing potential safety hazards on local roadways.
3. The active life, or the period when waste will be placed in the Landfill, is expected to be approximately three to five years.
4. In accordance with the Porter-Cologne Water Quality Control Act, also known as Water Code, division 7, the Central Coast Water Board has the authority to

regulate waste discharges that could affect the quality of the waters of the state. Under Water Code, §13050(e), "waters of the state" include any surface or groundwater within the boundaries of the State of California.

5. The Discharger will design, construct, and operate the Landfill pursuant California Code of Regulations, title 27 (CCR, title 27), and Code of Federal Regulations, title 40, chapter I, subchapter I, part 257, Solid Waste Facility Disposal Criteria, (40 CFR, part 257).

D. CLASSIFICATION AND WASTE CHARACTERIZATION

1. "Landfill facility" or "waste management facility" pursuant to CCR, title 27, §20164 is:

   "…the entire parcel of property at which solid waste discharge operations are conducted."

   Landfill facilities typically include access roads; maintenance buildings; waste processing, soil borrow, stockpiling, and staging areas; drainage infrastructure, monitoring areas, and waste disposal areas or waste management units (WMUs).

2. CCR, title 27, §20164, defines "waste management unit" or "WMU" as:

   "…an area of land, or a portion of a waste management facility, at which waste is discharged. The term includes containment features and ancillary features for precipitation and drainage control, and for monitoring."

3. CCR, title 27, §20200 through 20230, establish a waste classification system. Wastes covered under CCR, title 27, are classified as either inert, nonhazardous solid, or designated.

4. CCR, title 27, §20210 outlines the classification of designated waste and references Water Code, §13173 which defines designated waste as either:

   a. Hazardous waste that has been granted a variance from hazardous waste management requirements pursuant to Health and Safety Code, §25143, or

   b. Nonhazardous waste that consists of, or contains, pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives or that could reasonably be expected to affect beneficial uses of the waters of the state as contained in the appropriate state water quality control plan.

5. The Landfill will contain only one particular type of waste, non-hazardous impacted soils sourced from the former Oil Field, and is a threat to water quality. Therefore, the waste is classified as designated waste pursuant to CCR, title 27, §20210.

6. CCR, title 27, §20240 through 20260, establish a WMU classification system according to waste containment ability. The Landfill will be designed and constructed as a designated waste Class II WMU.

7. The Landfill will contain non-hazardous impacted soils from roads, pads, sumps, and diluent stain excavations. The impacted soils are known to contain total petroleum hydrocarbons (TPH). Soil samples taken from Landfill waste source locations at the site yielded the following results:
    a. The average concentration of TPH (C_4-C_{40}) in soil is expected to be 8,182 mg/kg and discrete, single point soil testing concentrations ranged as high as 165,000 mg/kg.
    b. Based on source soil data, TPH impacted soil contained a carbon chain fraction (C_x) of approximately 4.9% TPH as gasoline (TPH-g) (C_4-C_{12}) and consists mostly of high molecular weight hydrocarbons at 42% as diesel (TPH-d) (C_{12}-C_{22}) and 53.1% as motor oil (TPH-m) (C_{23}-C_{40}).
    c. TPH-g concentrations collected from the soil sources ranged from 0.22 mg/kg to 2,500 mg/kg and had an average concentration of 404 mg/kg.
    d. Twelve VOC compounds within the TPH-g range were detected in the soil samples and include benzene, n-butylbenzene, sec-butylbenzene, toluene, ethylbenzene, isopropylbenzene, p-isopropyltoluene, naphthalene, n-propylbenzene, 1,2,4- trimethylbenzene, 1,3,5-trimethylbenzene, total xylenes. These chemicals collectively represent less than 2% of the TPH-g soil concentrations.
        i. Benzene concentrations in source soils ranged from 0.0078 mg/kg to 0.39 mg/kg, with an average concentration of 0.9 mg/kg.
        ii. Ethylbenzene concentrations in source soils ranged from 0.0054 mg/kg to 14 mg/kg, with an average concentration of 1.22 mg/kg.
        iii. Toluene concentrations in source soils ranged from 0.030 mg/kg to 43 mg/kg, with an average concentration of 0.96 mg/kg.
        iv. Xylenes concentrations in source soils ranged from 0.011 mg/kg to 25 mg/kg, respectively, with an average concentration of 1.23 mg/kg.
    e. Seven SVOC compounds that are within the TPH-d and TPH-m carbon range were detected in the soil samples and include acenaphthene, acenaphthylene, fluoranthene, fluorene, naphthalene, phenanthrene, pyrene. These chemicals collectively represent less than 1% of the TPH-d and TPH-m soil concentrations.
8. MRP Order No. R3-2021-0076 includes required leachate and groundwater monitoring for the chemicals listed above that were found in soil sourced at the former Oil Field.
9. Per- and polyfluoroalkyl substances (PFAS) are a group of chemicals that are persistent, bioaccumulative, and highly mobile in water. Studies have indicated that exposure to certain PFAS chemicals over certain levels may result in adverse health effects. According to US EPA, oil recovery facilities are a potential

source of PFAS[7]. PFAS sampling at the former Oil Field has yet to be conducted. The Discharger is required to sample leachate and two monitoring wells for 31 PFAS constituents as required by MRP Order No. R3-2021-0076. The requirement to sample for PFAS in at least one upgradient well, one downgradient well, and leachate is consistent with other landfills within the Central Coast Region and is necessary to further classify the water quality threat of the Landfill waste and leachate.

10. Monoammonium phosphate (MAP) was previously used at the former Oil Field to stimulate biodegradation of residual petroleum hydrocarbons within excavation areas. MAP is a 100% water soluble crystalline solid. The dissolution of MAP in water releases cations and anions in the form of ammonium and phosphate and will be monitored for in Landfill leachate and groundwater pursuant to MRP Order No. R3-2021-0076.

    The Discharger plans to pre-mix MAP into the dust control water and apply the liquid over each 12-inch lift of the non-hazardous impacted soil placed in the Landfill. Each lift will then be compacted to achieve the desired relative density. The addition of MAP is expected to result in a decrease in gasoline (C4 – C12) and diesel fuel (C13 – C22) concentrations. Studies at the former Oil Field showed that there was little to no hydrocarbon degradation within the motor oil (C23 – C40) carbon chain range. Overall, the addition of MAP is expected to increase the speed of hydrocarbon degradation and reduce future methane production.

11. Typically, Dischargers at new landfills are required to conduct quarterly sampling for the first year to establish background values prior to waste placement in the Landfill, pursuant to CCR, title 27, §20415(e)(6). However, quarterly monitoring prior to waste placement is not needed at the Chevron Guadalupe Landfill because the goal of the proposed Landfill is to remove the impacted soil as a source of further groundwater impacts as soon as feasible, there is a history of groundwater monitoring at the former Oil Field, and waste has been characterized as part of the cleanup effort. In addition, the leak detection system is designed to indicate the presence of liner leaks that could influence groundwater impacts from the Landfill. Monitoring, as required by MRP Order No. R3-2021-0076, can begin concurrently with the placement of waste within the Landfill.

12. The Discharger will use the landfilled petroleum impacted soil as daily cover. As such, any liquid that contacts the waste will be contained as leachate.

[7] For more information about PFAS, please see the US EPA webpage about Basic Information on PFAS (https://www.epa.gov/pfas/basic-information-pfas) for more information or visit the State Water Board's PFAS webpage (https://www.waterboards.ca.gov/pfas/background.html).

E. GEOLOGY AND HYDROGEOLOGY

1. **Setting**

   The Landfill area lies within the Coast Range geomorphic province which is dominated by northwest-trending, moderately elevated mountains and valleys that parallel the central California coastline. The Santa Maria River Valley is bounded to the northeast by a group of low coastal mountains and to the southwest by the Casmalia Hills. The Landfill site lies within coastal dune deposits within the Santa Maria River Valley. The predominant surficial sediments at the site are composed of Quaternary aeolian dune deposits.

2. **Topography**

   The Landfill property generally slopes from northwest to southeast. Surface elevations range from 65 feet above mean sea level (AMSL) to 105 feet AMSL.

3. **Faulting**

   CCR, title 27, §20370 and §21750, require Class II landfills to be designed to withstand the ground motion associated with the maximum credible earthquake (MCE), which is defined as the maximum earthquake that appears capable of occurring under the presently known geologic framework.

   There are no known faults that cross the Landfill area. The closest known fault is the San Luis Bay Segment of the Shoreline fault zone which is approximately one mile from the site. The Discharger performed earthquake evaluations to determine the MCE event. The Casmalia fault zone was found to have the highest risk to the Landfill. The Casmalia fault zone is a steep southwest dipping reverse fault which forms the boundary between the structural blocks associated with the offshore Hosgri fault zone and the Casmalia structural block.

4. **Hydrogeology**

   The Landfill area is part of the Arroyo Grande-Santa Maria Groundwater Basin. The depth to groundwater varies due to changes in dune topography. However, the depth to groundwater generally decreases from east to west and groundwater generally flows west where it discharges to the Pacific Ocean. The Landfill is underlain by three distinct hydrostratigraphic units. From top to bottom these units include:

   a. The Dune Sand Aquifer (DSA) is a shallow unconfined aquifer composed of recently deposited sand dunes with a relatively high hydraulic conductivity. The DSA has a saturated thickness of about 5 feet under the Landfill.

   b. The Confining Unit (CU) is comprised of interbedded alluvial sediments that are primarily fine-grained silts and clays with some sand and few gravels. The unit is characterized by low vertical hydraulic conductivity and varying horizonal hydraulic conductivity that is dependent on soil texture. The CU beds are estimated to be about 135 feet thick under the Landfill area. The CU is hydraulically connected to the DSA.

c. Principal Aquifer (PA) consists of coarse-grained alluvial materials with high hydraulic conductivities. The PA serves as the primary water supply for agricultural and municipal operations surrounding the Landfill.

F. GROUNDWATER, SURFACE WATER, AND STORMWATER

1. Groundwater

a. Groundwater Separation

The lowest point of the proposed Landfill will be the leak detection sump. Based on historic groundwater monitoring at the former Oil Field, there is approximately 9.8 feet of separation to highest groundwater beneath the sump. The lowest base elevation (under the sump) is approximately 46 feet above mean sea level (AMSL). Groundwater elevations under the Landfill range from 27 to approximately 36.2 feet AMSL. Across the majority of the Landfill footprint there is about 30 feet of separation between groundwater and the bottom of the liner. CCR, title 27 §20240(c) requires a minimum separation of five feet between waste and the highest anticipated groundwater elevation.

b. Groundwater Quality

The Landfill location was selected above groundwater with existing impacts. The groundwater impacts vary within underlying hydrostratigraphic units.

The DSA is the uppermost hydrostratigraphic unit and has been impacted by historic oil field operations. Between 1998 and 2017, eight wells within the vicinity of the Landfill were used to evaluate DSA groundwater quality. Light non-aqueous phase liquid (LNAPL) was found in several wells within the DSA unit with thicknesses ranging from 0.03 feet to 2.55 feet. Six wells had dissolved phase TPH as diluent present in the groundwater samples with concentrations ranging from 0.081 mg/L to 2,000 mg/L. In 2016, three groundwater samples were collected and chemically analyzed for the presence of TPH as diluent (C_{12}-C_{32}), benzene, toluene, ethylbenzene, and total xylenes (BTEX). The analysis found concentrations of TPH as diluent ranging from 0.6 mg/L to 2,000 mg/L, benzene concentrations ranging from 0.0016 mg/L to 0.0018 mg/L, and ethylbenzene concentrations ranging from 0.0073 mg/L to 0.011 mg/L. One groundwater sample indicated a toluene concentration of 0.00050 mg/L and a total xylenes concentration of 0.039 mg/L.

Underlying the DSA is the CU. Although the CU and the DSA are hydraulically connected, groundwater quality tests indicate that contaminant movement to the CU is limited and localized.

Stratigraphically below the CU is the PA. Groundwater samples taken in the PA have produced no confirmed detections of petroleum hydrocarbons characteristic of diluent.

Once the Landfill is constructed, the Discharger will collect additional groundwater samples from the monitoring wells located upgradient and downgradient of the Landfill pursuant to MRP Order No. R3-2021-0076.

c. Nearby Wells

There are seven water supply wells and two irrigation wells within one mile of the proposed Landfill. Two of the water supply wells are within the former Oil Field and includes Unocal-02. The Discharger has indicated that Unocal-02 is no longer active. The other five water supply wells and the two agricultural wells are located on agricultural land in Santa Barbara County, across the Santa Maria River. The principal supply well for the former Oil Field is located just over a mile from the Landfill. There are five former product recovery (remediation) wells within 1,000 feet of the Landfill and a total of 20 active recovery wells across the former Oil Field.

d. Abandoned Wells Within the Landfill Footprint

On July 23, 2020, Central Coast Water Board staff approved a workplan for the abandonment of eight monitoring and passive recovery wells near or within the Landfill footprint. On November 13, 2020, Central Coast Water Board staff received a Technical Memorandum for the abandonment of these wells. The Discharger plans to perform supplemental excavation of these areas to ensure there is at least five feet separating the top of the abandoned well bentonite and grout fill and the bottom of the sump/liner.

2. **Surface Water**

The Santa Maria River is approximately 0.4 miles from the Landfill and is the only significant water body within one mile of the Landfill. Santa Maria River flows directly into Santa Maria Estuary and then to the Pacific Ocean. The Pacific Ocean is approximately 1.25 miles from the Landfill.

3. **Stormwater**

a. Stormwater Design

During waste placement within the Landfill, the Discharger plans to route surface drainage around the Landfill and contain any runoff that contacts waste as leachate. After the final cover is placed, the Discharger plans to route precipitation that falls on the final cover as clean stormwater that will be directed to adjacent natural drainages. Diversion and drainage facilities must be designed, constructed, and maintained to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and damage resulting from a 1,000-year, 24-hour precipitation event, pursuant to CCR, title 27, §20365 and §20320.

b. Stormwater Permitting

The Discharger must comply with all required stormwater permits and regulations. Please see the State Water Resources Control Board's Storm

Water Program web page for more information. (https://www.waterboards.ca.gov/water_issues/programs/stormwater/)

c. Landfill Leachate

Any liquid that contacts waste is considered leachate and cannot be discharged. This includes waste used as daily cover. The discharger plans to route leachate to onsite storage tanks. The Discharger must dispose of leachate at a properly permitted facility, which may include utilizing the onsite Advanced Water Treatment System (AWTS).

d. Floodplain and Flooding

The Federal Emergency Management Agency Flood Insurance Rate Maps show that the Landfill is outside the 100-year floodplain.

CCR, title 27, §20260(c), requires Class II landfills to be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return period.

e. Precipitation

According to the Santa Maria Public Airport station, which is operated by National Oceanic and Atmospheric Administration (NOAA), the area receives an average of 12.76 inches of rain per year primarily between the months of September and April. The month with the highest average rainfall is February with 2.73 inches of average precipitation. The 1,000 year, 24-hour storm event is estimated to be 5.27 inches according to the Guadalupe – Union Oil Station data obtained from NOAA Atlas 14.

G. FINANCIAL ASSURANCE

1. CCR, title 27, §22207, §22212, and §22220 et seq. requires the Discharger to obtain and maintain financial assurance Instruments to address closure, post-closure, and corrective action. Prior to placement of waste, Central Coast Water Board staff will verify that the Discharger has demonstrated availability of financial resources to conduct closure and post-closure maintenance activities and an appropriate financial assurance instrument for corrective action for a reasonably foreseeable water or non-water release at the Landfill. The financial instruments for closure, post-closure maintenance, and corrective action must be adjusted annually for inflation and submitted to the Central Coast Water Board.
2. Typically, Central Coast Water Board staff work mutually with California Department of Resources Recycling and Recovery (CalRecycle) staff to certify financial assurance documents. CalRecycle and Central Coast Water Board staff work together on projects related to municipal solid waste landfills. However, the proposed Chevron Guadalupe Landfill will not be a municipal solid waste landfill. On April 16, 2020, CalRecycle staff issued a letter indicating they do not plan to regulate the facility, since the proposed operation meet the requirements of CCR, title 14, §17362.1 and is excluded from CCR, title 14, 17360 et seq. Central

Coast Water Board staff will review and approve financial assurance information prior to waste placement in the Landfill.

H. CLOSURE

1. This Order includes closure specifications and requires compliance with CCR, title 27, and 40 CFR, part 257 through partial and final closure. The Discharger may propose an engineered alternative to the final cover requirements for Executive Officer review and approval as long as the performance of the alternative final cover system is equal to or exceeds the prescriptive design containment capabilities, pursuant to CCR, title 27, §20080. Once the Landfill stops accepting new waste for disposal and has a final cover over all WMU disposal areas, the Landfill will require coverage under separate WDRs that are specific to post-closure waste discharge requirements.

I. CONTROL SYSTEMS, MONITORING, AND REPORTING

1. Liner Design
   a. Base Liner Design

      The Discharger has proposed an engineered alternative to the prescriptive liner system, as allowed per CCR, title 27, §20080(b). The proposed liner system design is more protective of water quality than the prescriptive liner system requirements of CCR, title 27. The liner will consist of the following components, from top to bottom:

      i. Minimum one-foot thick soil operations layer constructed from soil unimpacted by petroleum.

      ii. 8 ounce per square yard (oz/sy) geotextile.

      iii. 12 inches leachate collection and removal system (LCRS) gravel

      iv. 8 oz/sy geotextile

      v. 60 thousandth of an inch (mil) high density polyethylene (HDPE) geomembrane

      vi. Geosynthetic clay liner (GCL)

      vii. Double sided geocomposite leak detection system (LDS) comprised of HDPE geonet drainage material with needle-punched non-woven 8oz/sy geotextile bonded on the upper and lower surfaces.

      viii. 60 thousandth of an inch (mil) HDPE geomembrane

      ix. At least one-foot thick low permeability layer with a maximum hydraulic conductivity of 1×10^{-7} centimeters per second (cm/s)

      x. Prepared Subgrade

   b. Side Slope Liner System

i. Minimum one-foot operations layer

ii. Double sided geocomposite comprised of HDPE geonet drainage material with needle-punched non-woven 8oz/sy geotextile bonded on the upper and lower surfaces.

iii. 60 mil textured HDPE geomembrane

iv. GCL

v. Double sided geocomposite comprised of HDPE geonet drainage material with needle-punched non-woven 8oz/sy geotextile bonded on the upper and lower surfaces.

vi. 60 mil textured HPDE geomembrane

vii. At least one- foot thick low permeability layer with a maximum hydraulic conductivity of 1 x 10^{-7} cm/s

viii. Prepared subgrade

2. Liner Compatibility with Waste

The proposed liner system includes HDPE, which is a petroleum-based product that can slowly absorb other hydrocarbons, if present at high concentrations. The TPH impacted soils will not be discharged in concentrations that will negatively impact the liner materials. The Discharger plans to manage operations in a manner that isolates higher TPH impacted soil towards the center of the fill. In addition, the proposed liner design includes a 12-inch thick operations layer constructed from unimpacted soil. Consequently, the upper composite liner elements (60-mil HDPE geomembrane over GCL) will never directly contact TPH impacted soil. Given the low solubility of petroleum in water, TPH chemicals would only contact the upper composite liner as dissolved, low concentration constituents in leachate.

3. Groundwater Monitoring

Groundwater monitoring is required to evaluate whether there is a release from the Landfill and to monitor whether groundwater concentrations change over time with the containment of onsite non-hazardous impacted soil and ongoing remediation efforts at the former Oil Field.

MRP Order No. R3-2021-0076 requires groundwater monitoring with one upgradient and three downgradient monitoring wells. The well locations were chosen based on previous groundwater monitoring done at the former Oil Field and the proposed Landfill footprint. The Discharger plans to install an upgradient monitoring well (MW-1) and a downgradient monitoring well (MW-2). The Discharger has proposed to use two existing wells (J13-1 and K14-1) for monitoring groundwater downgradient of the proposed Landfill. All monitoring wells are screened or will be screened within the first encountered groundwater within the Dune Sand Aquifer (DSA) to allow for the earliest detection of a release from the Landfill pursuant to CCR, title 27, §20415.

4. Leachate Monitoring

   The Landfill WMUs will be equipped with leachate collection and removal systems (LCRS). Collected leachate is tested and evaluated to determine the proper disposal method. During active filling operations, the Discharger plans to route all precipitation that falls on the placed waste as landfill leachate. The Discharger can utilize leachate for dust control over lined WMUs if leachate is found to be non-hazardous and if leachate management/disposal procedures are included in the Executive Officer approved leachate management plan.

5. Stormwater Monitoring

   a. The Discharger plans to divert all stormwater Landfill run-on to natural drainages away from the waste footprint. During waste placement, the Discharger plans to divert all runoff that falls onto the Landfill as leachate. Once a final cover is installed, the Discharger plans to direct clean stormwater that falls on the Landfill cover to natural drainages. Stormwater sampling may be conditionally required if any precipitation that contacts waste (leachate) is discharged from the Landfill or is suspected to have discharged from the Landfill, pursuant to MRP Order No. R3-2021-0076.

   b. The Discharger must comply with all required stormwater permits and regulations. Please see the State Water Resources Control Board's Storm Water Program web page for more information. (https://www.waterboards.ca.gov/water_issues/programs/stormwater/)

6. Unsaturated Zone Monitoring

   Unsaturated zone monitoring systems are reviewed and approved during the WMU liner design review process. The Discharger has proposed to install a geocomposite leak detection system (LDS) beneath the primary liner system. The LDS will act to detect any leaks from the primary liner system and therefore will act as unsaturated zone monitoring for determining the earliest possible detection of a release(s), as specified in CCR, title 27, §20415(d).

7. Landfill Gas Monitoring

   Biodegradation of the hydrocarbons in the non-hazardous impacted soil will result in the production of carbon dioxide and methane, but the rate of generation, and the volume produced, are expected to be minimal. The Discharger will measure Landfill gas quantity and quality regularly according to MRP Order No. R3-2021-0076. If gas concentrations are measured in any of the perimeter probes in excess of the standards in CCR, title 27, §20921, the Discharger will install an Executive Officer approved gas control system pursuant to CCR, title 27, §20939. Additionally, the Discharger may be required to install a gas control system prior to violation of the migration standard if it is determined by the Executive Officer that gas migration is occurring and is likely to exceed standards. If the Discharger is required to install a gas control system, the MRP will be revised to reflect the addition of more landfill gas monitoring points.

Typically, CalRecycle implements the sections of title 27 related to landfill gas requirements. However, as indicated in **Additional Finding G.2,** CalRecycle does not plan to permit the facility so the Central Coast Water Board is responsible for implementing title 27 landfill gas requirements in accordance with CCR, title 27, §20012.

8. Concentration Limits

   CCR, title 27, §20400, requires the Central Coast Water Board to specify concentration limits in waste discharge requirements. The Central Coast Water Board complies with the intent of CCR, title 27, §20400, by requiring the Discharger to establish and review concentration limitations on an annual basis in accordance with MRP Order No. R3-2021-0076.

J. BASIN PLAN

1. The Water Quality Control Plan for the Central Coastal Basin (Basin Plan) is the Central Coast Water Board's master water quality control planning document and was first adopted in 1975. The Basin Plan designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwaters. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was duly adopted by the Central Coast Water Board and approved by the State Water Board, the Office of Administrative Law (OAL), and the US EPA, where required. The Basin Plan may be amended in accordance with Water Code, §13240 et seq.
2. The Landfill is located approximately 0.4 miles north of the Santa Maria River which then flows into the Santa Maria Estuary. Pursuant to chapter II of the Basin Plan, the present and anticipated beneficial uses of Santa Maria River and Santa Maria Estuary include:
   a. Municipal and Domestic Supply (MUN)
   b. Agricultural Supply (AGR)
   c. Industrial Service Supply (IND)
   d. Groundwater Recharge (GWR)
   e. Water Contact Recreation (REC-1)
   f. Non-contact Water Recreation (REC-2)
   g. Commercial and Sport Fishing (COMM)
   h. Warm Fresh Water Habitat (WARM)
   i. Cold Fresh Water Habitat (COLD)
   j. Estuarine Habitat (EST)
   k. Wildlife Habitat (WILD)
   l. Preservation of Biological Habitats of Special Significance (BIOL)

m. Rare, Threatened, and/or Endangered Species (RARE)

n. Migration of Aquatic Organisms (MIGR)

o. Spawning, Reproduction, and/or Early Development (SPWN)

p. Shellfish Harvesting (SHELL)

3. Observed groundwater use in the vicinity of the Landfill is agricultural and industrial supply. The Basin Plan identifies the following present and anticipated future beneficial uses of groundwater in the vicinity of the Landfill as:

   a. Municipal and Domestic Supply (MUN)

   b. Agricultural Supply (AGR)

   c. Industrial Service Supply (IND)

4. Pursuant to Water Code, §13263(a), this Order implements the Basin Plan including consideration of the beneficial uses of water, the water quality objectives reasonably required for protection of those beneficial uses, other waste discharges, and the need to prevent nuisance conditions. Water quality objectives are the limits or levels of water quality constituents or characteristics that are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area (Water Code, §13050(h)). Water quality objectives apply to all waters within a surface water or groundwater resource for which beneficial uses have been designated.

5. This Order requires the containment of all wastes within WMUs to prevent degradation of waters of the state pursuant to CCR, title 27 and 40 CFR, part 257, and therefore implements the Basin Plan's water quality objectives and protects beneficial uses.

K. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

1. In 1996, an Environmental Impact Report (EIR) was developed to address the proposed remediation and restoration project at the former Oil Field. In 2005, the San Luis Obispo County Planning Commission certified a supplemental environmental impact report (SEIR) that evaluated the trucking of non-hazardous impacted soil to the Santa Maria Regional Landfill. The EIR and SEIR both included public meetings and public comment periods.

2. In January 2021, on behalf of the San Luis Obispo County Department of Planning and Building, MRS Environmental, Inc. prepared the Guadalupe Restoration Soil Management Area (SMA) Project Draft Initial Study and Mitigated Negative Declaration (MND Report). After a public comment period that resulted in no public comments, the San Luis Obispo County Planning Commission approved and certified the MND on March 25, 2021.

3. This Order contains prohibitions, discharge specifications, water quality protection standards, and provisions intended to protect the environment by mitigating or avoiding impacts of the project on water quality. This Order

addresses proposed landfilling activities approved through the CEQA process and identified in the ROWD.

L. STATE ANTI-DEGRADATION POLICY (RESOLUTION 68-16)

1. State Water Board Resolution No. 68-16, *Statement of Policy with Respect to Maintaining High Quality of Water of California* (hereafter referred to as the Anti-degradation Policy) requires that disposal of waste into waters of the state be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the state. The quality of some waters of the state is higher than that established by adopted policies, and that higher quality water must be maintained to the maximum extent possible consistent with the Anti-degradation Policy. The Anti-degradation Policy requires the following:
   a. Maintenance of existing high-quality waters of the state unless limited degradation is consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in state policies.
   b. Any activity that produces or may produce a waste and discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements that will result in best practicable treatment or control of the discharge necessary to assure pollution or nuisance will not occur, and the highest water quality consistent with maximum benefit to the people of the state will be maintained.
2. This Order places restrictions on the discharge of wastes from the Landfill that are intended to prevent pollution and nuisance conditions from occurring or persisting. This Order prohibits discharges of waste to surface waters and/or groundwater.
3. The Discharger is required to comply with the land disposal regulations contained in CCR, title 27, and 40 CFR, part 257, which are intended to prevent discharges of waste to waters of the state, preventing degradation of waters of the state. The discharge is subject to waste discharge requirements, which will result in best practicable treatment or control.

M. STATE CLEANUP POLICY (RESOLUTION 92-49)

1. State Water Board Resolution No. 92-49, *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304* (Resolution 92- 49), adopted June 18, 1992, and amended on April 21, 1994, and October 2, 1996, sets forth the policies and procedures to be used during an investigation or cleanup of discharged wastes that threaten or create conditions of pollution or nuisance.
2. Resolution 92-49 requires that cleanup levels be consistent with Anti-degradation Policy. Resolution 92-49 requires the waste to be cleaned up to background, or if that is not reasonable, to an alternative level that is the most stringent level that

is economically and technologically feasible in accordance with CCR, title 23, §2550.4. Any alternative cleanup level to background must (1) be consistent with the maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of such water; and (3) not result in water quality less than that prescribed in the Basin Plan and applicable Water Quality Control Plans and policies of the State Water Board.

3. Pursuant to CCR, title 27, §20420, if the Discharger or the Executive Officer determines that there is evidence of a release from any portion of the WMU, this Order requires the Discharger to implement the procedures outlined in CCR, title 27, §20380, §20385, §20425, §20430, and MRP No. R3-2021-0076. If evidence of a release is confirmed, pursuant to CCR, title 27, §20425, the Discharger is required to propose corrective actions to remove waste constituents or treat them in place (corrective action program). Pursuant to CCR, title 27, §20385, the Corrective Action Program must meet the requirements of CCR, title 27, §20430.
4. This Order regulates discharges associated with the Discharger's corrective action program and its implementation by requiring the Discharger to submit and receive Executive Officer approval for a corrective action program that includes a proposed scope of action and monitoring to demonstrate the effectiveness of corrective actions pursuant CCR, title 27, §20430. If the Executive Officer approves the corrective action program, the MRP will be revised to include corrective action monitoring as necessary.

N. ENFORCEMENT

1. Water Code, §13000 et seq. grants the State and Regional Water Boards the authority to implement and enforce water quality laws, regulations, policies, plans, to protect waters of the state. The Central Coast Water Board has broad authority to take a variety of enforcement actions both informal (e.g., oral and written correspondence, notices of violation) and formal (e.g., notices to comply, 13267 investigation orders, cleanup and abatement order, time schedule orders, cease and desist orders, modification or rescission of WDRs, administrative civil liabilities) under the Water Code. Enforcement is implemented in accordance with the State Water Board Water Quality Enforcement Policy (Enforcement Policy) that defines an enforcement process that addresses water quality problems in the most fair, efficient, effective, and consistent manner. The Enforcement Policy became effective on October 5, 2017. If the Enforcement Policy is updated, revised, or amended by the State Water Board, the Central Coast Water Board will implement the most current version of the Enforcement Policy.
2. The Enforcement Policy provides guidance for the application of the Water Code's enforcement provisions in a fair, firm, consistent, progressive, and transparent manner and addresses recently adopted legislation and Water Board policies on environmental justice and the human right to water.

3. The Enforcement Policy governs implementation of enforcement with respect to water quality by the State and Regional Water Boards. The Central Coast Water Board will evaluate compliance with the terms and conditions of the Order based threat of water quality impairment, content of technical reports, results of inspections, and water quality monitoring data. In addition to the determination of noncompliance and water quality impairment, the Central Coast Water Board will enforce the conditions of the Order consistent with the Enforcement Policy, focusing on the highest priority water quality issues and most severely impaired waters.

O. HUMAN RIGHT TO WATER

1. Pursuant to Water Code, §106.3, the state statutorily recognizes that "[…] every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." The human right to water extends to all Californians, including underrepresented individuals and groups and communities in rural and urban areas. This Order protects the human right to water by providing requirements that are protective of groundwater and surface water resources within the Central Coast Region.
2. Surrounding wells near the proposed Landfill were evaluated and there is minimal risk to domestic wells from the project.

P. UNDERREPRESENTED COMMUNITIES

1. On January 26, 2017, the Central Coast Water Board adopted Environmental Justice and the Human Right to Water Resolution No. R3-2017-0004, which adopts the human right to water as a core value and affirms the realization of the human right to water and protecting human health as the Central Coast Water Board's top priorities. To meet the objectives of the Resolution, staff has conducted outreach to Underrepresented Communities and also evaluated the disadvantaged community status for the Discharger. The proposed Landfill location is not within a disadvantaged community block group, however, the proposed Landfill is located near neighboring areas with disadvantaged community block groups including the City of Santa Maria, City of Guadalupe, and the Nipomo area. More information about disadvantaged community block groups can be found using the California Department of Water Resources Disadvantaged Community (DAC) Mapping Tool (https://gis.water.ca.gov/app/dacs/).
2. On July 9, 2021, Central Coast Water Board staff sent a factsheet to interested parties in both English and Spanish to provide information about the proposed Landfill and provided notification that the Central Coast Water Board staff were drafting WDRs for the proposed project. The interested parties list included governmental agencies/leaders, environmental justice groups, environmental groups, and community groups within San Luis Obispo and Santa Barbara

County. The factsheet encouraged the public to submit any questions or comments about the project.

3. On September 3, 2021, Central Coast Water Board staff provided a draft copy of the WDR to the interested parties list which included a formal 30-day public comment period.
4. If impacts to surface water or groundwater pollution results from the discharges regulated by the proposed order, Central Coast Water Board staff will help facilitate outreach and education to inform affected parties and connect them with available resources, especially Underrepresented Communities.

Q. CLIMATE CHANGE

1. The Central Coast faces the threat and the effects of climate change for the foreseeable and distant future. To proactively prepare and respond, the Central Coast Water Board has launched the Central Coast Water Board's Climate Action Initiative, which identifies how the Central Coast Water Board's work relates to climate change and prioritizes actions such as water conservation, reuse and recycling to improve water supply resiliency, sea level rise and flood mitigation and adaptation, and that improve energy efficiency and reduce greenhouse gas production. The Climate Action Initiative is consistent with the Governor's Executive Order B-30-15 and the State Water Board's Climate Change Resolution No. 2017-0012.
2. Extreme weather events, including drought, high intensity precipitation, flooding, and extreme heat have occurred through much of California in the recent years, and are projected to increase in frequency, extent, or intensity due to climate change. Additional climate change impacts include prolonged fire seasons with larger and more intense fires, tree mortality, rising sea level and storm surges.
3. According to the MND Report, non-hazardous impacted soil has been hauled to the Santa Maria Regional Landfill at the historical rate of about 52 truck roundtrips per day. The proposed Landfill would contain approximately 1,185,000 cubic yards of non-hazardous impacted soil from the former Oil Field that was originally planned for disposal at the Santa Maria Regional Landfill. The MND Report indicates that the proposed Landfill would eliminate about 74,100 truck trips, which would reduce greenhouse gas emissions, reduce impacts on local air quality, and reduce potential safety hazards on local roadways.
4. More frequent high intensity precipitation may result in damage to landfill covers and drainage facilities. This Order requires the Discharger to design landfill drainages to handle 1,000-year, 24-hr storms and to inspect the Landfill following wet weather. Due to climate change Central Coast Water Board staff recognize that the 1,000-year, 24-hr storm design values may trend higher due to more frequent high intensity storms. If necessary, existing drainage facilities may need to be upgraded to handle updated 1,000-year, 24-hr storm design values.

5. On May 1, 2020, the California Coastal Commission approved the Sea Level Rise Principles that aim to guide unified, effective action toward sea level rise resilience for California's coastal communities, ecosystems, and economies. The document was co-developed and endorsed by state and regional agencies, including the State Water Board, to follow the Principles for Aligned State Action. The document specifies using a sea level rise target based on the best available science and a minimum of 3.5 feet of sea level rise by 2050. The document also adopts the policy of developing and utilizing more protective baselines for facilities such as water and wastewater systems.
6. In March 2018, the Ocean Protection Council adopted the State of California Sea-Level Rise Guidance (Guidance Document), which provides guidance to state agencies for incorporating sea level rise projections into planning, permitting, investment, and other decisions. The Guidance Document includes sea level rise projections for Port San Luis, which is approximately 16 miles from the proposed Landfill. By the year 2100, there is a 95 percent probability that sea level rise will be less than 4.1 feet. The Landfill leak detection sump is expected to be approximately 47 feet above current mean sea level. The Pacific Ocean is currently approximately 1.25 miles from the proposed Landfill. Therefore, rising sea levels are not expected to affect the Landfill.
7. Biodegradation of the hydrocarbons in the non-hazardous impacted soil will result in the production greenhouse gases such as carbon dioxide (CO_2) and methane (CH_4). However, the rate of generation, and the volume produced, are expected to be minimal given the preponderance of weathered heavier end hydrocarbons and the low concentration of water-soluble hydrocarbons. Migration of landfill gas will be monitored with gas probes within an approved perimeter monitoring network pursuant to MRP Order No. R3-2021-0076 to ensure that landfill gas production is below the standards required by CCR, title 27, §20921. If those standards are exceeded, the Discharger is required to install a gas control system pursuant to CCR, title 27, §20939.

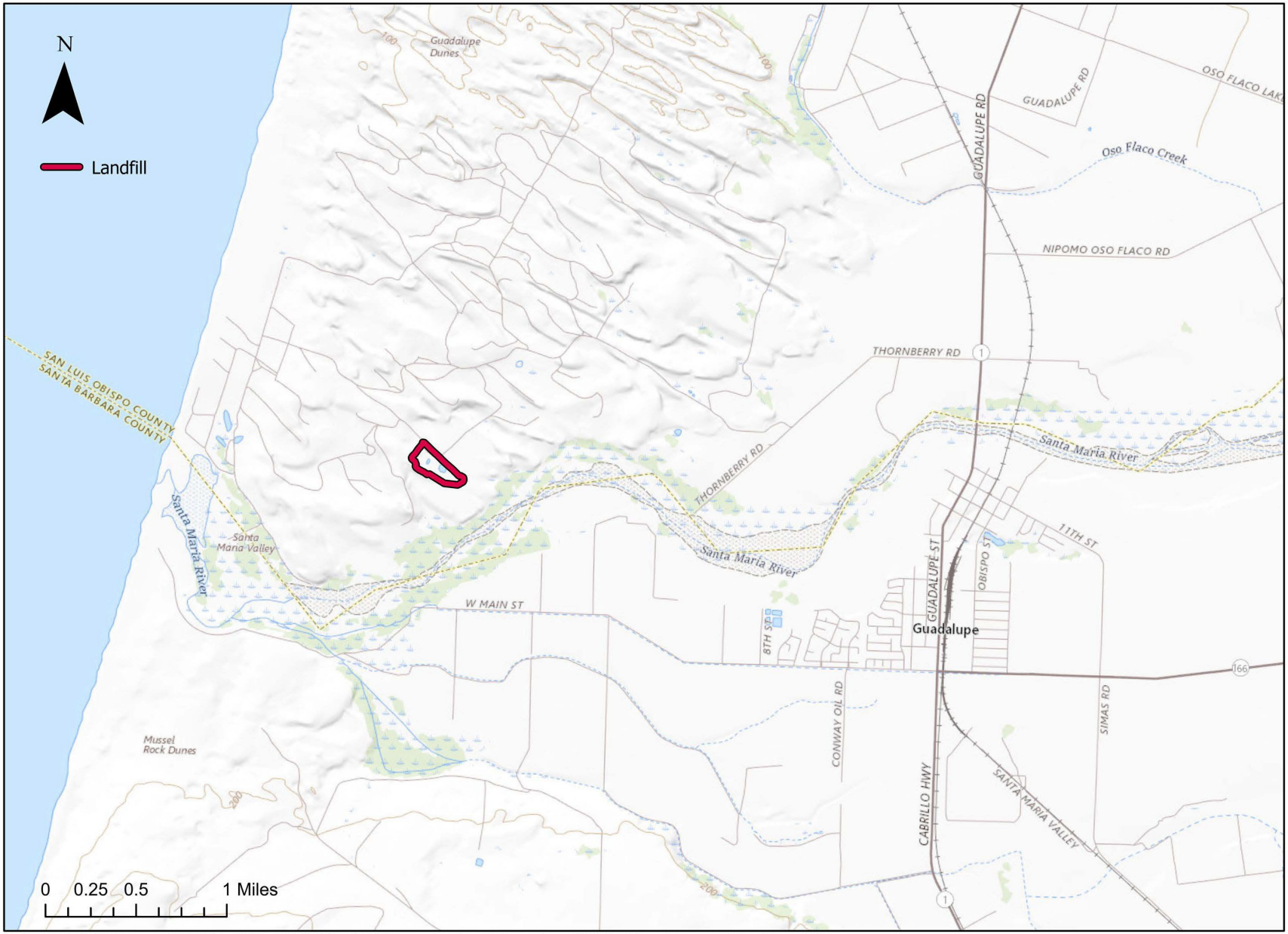
R. GENERAL FINDINGS

1. This Order does not authorize violation of any federal, state, or local law or regulation.
2. In accordance with Water Code, §13263(g), the discharge of waste into waters of the state is a privilege, not a right, and this Order does not create a vested right to continue discharge of a waste. Failure to prevent conditions that create, or threaten to create, pollution or nuisance will be reason to modify, revoke, or enforce this Order. In accordance with Water Code, §13263(g), no discharge into waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, must create a vested right to discharge.
3. All discharges of waste into waters of the state are privileges, not rights. Central Coast Water Board authorization to discharge waste is conditioned upon the Discharger complying with provisions of Water Code, division 7 and with any

more stringent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. The Discharger's compliance with Order No. R3-2021-0076 should assure they meet conditions and mitigate any potential changes in water quality attributed to the Landfill.

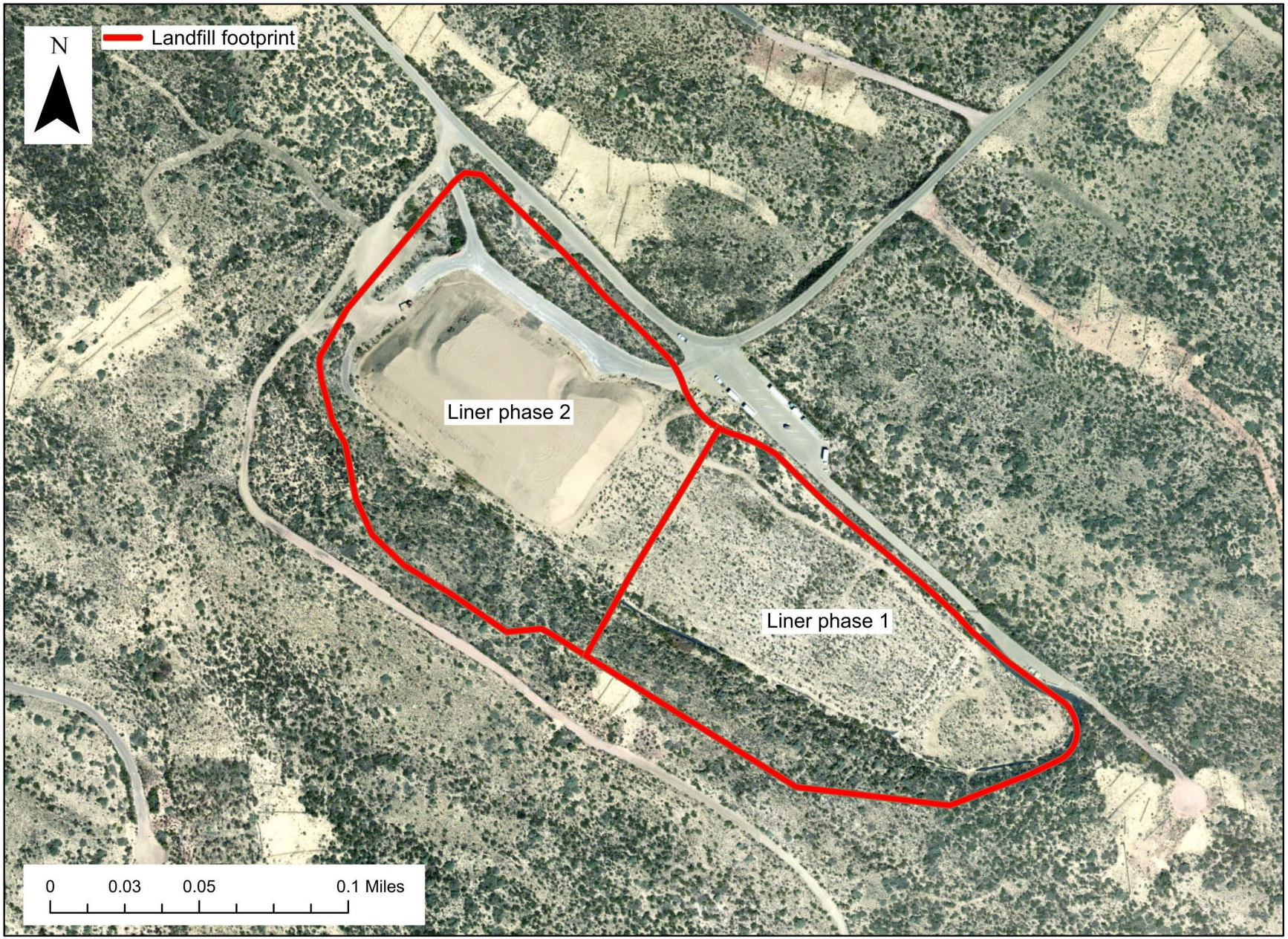
4. Pursuant to Water Code, §13267, the burden, including costs, of the required reports bears a reasonable relationship to the need for those reports and the benefits to be obtained thereby.
5. Additional information referenced in the Findings of this Order can be found within the Report of Water Discharge. (https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo_report/3506649315/T10000014025.PDF)
6. Hyperlinks to codes of regulations may be out of date and were provided for reference only. Hyperlinks may contain broken links to websites that no longer exist or be out of date after the issuance of this Order. Please refer to the following websites for more information on individual codes and for information on when each website was last updated.
    a. The Electronic Code of Federal Regulations, including 40 CFR. (https://www.ecfr.gov/cgi-bin/ECFR?page=browse)
    b. California Codes, including the Health and Safety Code, the Business and Professional Code, and the Water Code. (https://leginfo.legislature.ca.gov/faces/home.xhtml)
    c. California Code of Regulations, including title 14, title 23 and title 27. (https://govt.westlaw.com/calregs/Index?bhcp=1&transitionType=Default&contextData=%28sc.Default%29)

Figure B-1 Landfill Location



Path: R:\RB3\Shared\LDU\Facilities\PERMITTED\Chevron Guadalupe Landfill\ArcMap Figures\Site Maps\Chevron.aprx

Figure B-2 Landfill Liner Phases



Path: R:\RB3\Shared\LDU\Facilities\PERMITTED\Chevron Guadalupe Landfill\ArcMap Figures\Site Maps\Chevron landfill boundary.aprx