COMMUNITY MONITOR COMMITTEE
Altamont Landfill Settlement Agreement

*** The Public is Welcome to Attend***

www.altamontcmc.org

VOTING MEMBERS

Ben Barrientos
City of Livermore

Jeff Nibert
City of Pleasanton

Donna Cabanne
Sierra Club

Alexandra Hoffmann-Bradley
Northern California Recycling Association

NON-VOTING MEMBERS

Marcus Nettz
Waste Management Altamont Landfill and Resource Recovery Facility

Arthur Surdilla / Ryan Hammon
Alameda County

Robert Cooper
Altamont Landowners Against Rural Mismanagement (ALARM)

STAFF

Judy Erlandson
City of Livermore
Public Works Manager

AGENDA

DATE: **Wednesday, April 12, 2023**
TIME: **4:00 p.m.**
PLACE: City of Livermore
Maintenance Services Center
3500 Robertson Park Road

1. Call to Order
2. Introductions
3. Roll Call
4. Approval of Minutes (From January 11, 2023)
5. Open Forum — This is an opportunity for members of the audience to comment on a subject not listed on the agenda. No action may be taken on these items.
6. Matters for Consideration
   - **6.1 Responses to Committee Member Questions**
   - **6.2 Water Board Requests**
   - **6.3 Review of Documents on GeoTracker web site**
   - **6.4 Review of Reports From ALRRF**
   - **6.5 PFAS Updates**
   - **6.6 Reports from Community Monitor**
   - **6.7 Confirmation of Election of Chair for 2023**
   - **6.8 2022 Draft Annual Report**
   - **6.9 Announcement (Committee Members)**
7. Agenda Building

   This is an opportunity for the Community Monitor Committee Members to place items on future agendas.
8. Adjournment

   The next regular Community Monitor Committee meeting is tentatively scheduled to take place at 4:00 p.m. on **July 12, 2023,** at 3500 Robertson Park Road, Livermore.

Informational Materials:

- Community Monitor Roles and Responsibilities
- List of Acronyms
- Draft Minutes of January 11, 2023

City of Livermore

HOW TO PARTICIPATE IN A COMMUNITY MONITOR COMMITTEE MEETING:

You can participate in the meeting in a number of ways:

The **Community Monitor Committee Agenda and Agenda Reports** are prepared by the Community Monitor and City staff and are available for public review on Wednesday evening, seven days prior to the Community Monitor Committee meeting at the Maintenance Service Center, 3500 Robertson Park Road, Livermore. The agenda is also available at http://altamontcmc.org/.

Under Government Code §54957.5, any **supplemental material** distributed to the members of the Community Monitor Committee after the posting of this agenda will be available for public review at the Maintenance Service Center, 3500 Robertson Park Road, Livermore, and included in the agenda packet available at http://altamontcmc.org/.

PURSUANT TO TITLE II OF THE AMERICANS WITH DISABILITIES ACT (CODIFIED AT 42 UNITED STATES CODE SECTION 12101 AND 28 CODE OF FEDERAL REGULATIONS PART 35), AND SECTION 504 OF THE REHABILITATION ACT OF 1973, THE CITY OF LIVERMORE DOES NOT DISCRIMINATE ON THE BASIS OF RACE, COLOR, RELIGION, NATIONAL ORIGIN, ANCESTRY, SEX, DISABILITY, AGE OR SEXUAL ORIENTATION IN THE PROVISION OF ANY SERVICES, PROGRAMS, OR ACTIVITIES. TO ARRANGE AN ACCOMMODATION IN ORDER TO PARTICIPATE IN THIS PUBLIC MEETING, PLEASE CONTACT THE ADA COORDINATOR AT ADACOORDINATOR@CITYOFLIVERMORE.NET OR CALL (925) 960-4170 (VOICE) OR (925) 960-4104 (TDD) AT LEAST THREE (3) BUSINESS DAYS IN ADVANCE OF THE MEETING.

Submission of Comments Prior to the Meeting:

Email Comments may be submitted by the public to the City of Livermore Public Works Department via email at SolidWaste_Recycling@livermoreca.gov. Items received by 12:00 pm on the day of the meeting will be provided to the Committee and will be available on the meeting agenda prior to the meeting. These items will not be read into the record.

Submission of Comments During the Meeting:

During the meeting, the Open Forum agenda item is an opportunity for the public to speak regarding items not listed on the agenda. Speakers may also provide comments on any item listed on the agenda. Speakers are limited to a maximum of 500 words per person, per item. The Committee is prohibited by State law from taking action on any items that are not listed on the agenda. However, if your item requires action, the Committee may place it on a future agenda or direct staff to work with you and/or report to the Committee on the issue.

For questions regarding the Community Monitor Committee, please contact Public Works at (925) 960-8015.

COMMUNITY MONITOR COMMITTEE
Altamont Landfill Settlement Agreement
Minutes of January 11, 2023

DRAFT

1. Call to Order
The meeting came to order at 4:00 PM.

2. Roll Call

Members Present:	Jeff Nibert, City of Pleasanton; Donna Cabanne, Sierra Club; Alexandra Hoffmann-Bradley, Northern California Recycling Association (NCRA); Arthur Surdilla and David Madieros, Alameda County Department of Environmental Health (LEA); Marcus Nettz II, Altamont Landfill and Resource Recovery Facility (ALRRF).
Absent:	Ben Barrientos, City of Livermore; Robert Cooper, Altamont Landowners Against Rural Mismanagement (ALARM)
Staff:	Marisa Gan, Judy Erlandson and Desiree Humphers, City of Livermore; Mukta Patil and Maria Lorca, Langan/Community Monitor
Others:	

3. Introductions
All those present introduced themselves.

4. Approval of Minutes of July 13, 2022 meeting
Ms. Cabanne moved approval, Ms. Hoffmann-Bradley seconded, and the minutes were approved 3–0; Mr. Barrientos was absent.

5. Open Forum
There was no open forum discussion.

6. Matters for Consideration

6.1 Election of the Chair

Ms. Erlandson recommended election of a Chairperson. Ms. Cabanne suggested the representative of the City of Livermore be Chair as it had been in the past, and nominated Mr. Barrientos. Mr. Barrientos was absent and the CMC members present agreed he could excuse himself from being the Chairperson in the next meeting. Mr. Nibert moved the motion to elect Mr. Barrientos as Chairperson, Ms. Hoffmann-Bradley seconded, and the motion was approved 3-0.

6.2 Response to Committee Member Questions

Ms. Patil presented the responses to the committee member questions.

Ms. Cabanne requested follow up on the Cost Estimates for Evaluation of Reasonably Foreseeable Releases. Ms. Cabanne asked if the CVRWQCB can provide details on drinking water supply for neighboring residents if a release impacted the groundwater. It is her understanding a cost estimate was prepared for Vasco Road landfill.

Regarding the mitigation pond, Ms. Cabanne noted the recent storms would likely supply water to maintain mitigation pond wet during this summer.

Ms. Cabanne requested clarification on the use of biosolids being used as alternative daily cover (ADC) after a provision of Senate Bill (SB) 1383 came into effect. Mr. Nettz explained that the biosolids could still be used as alternative daily cover for landfill operations, and it was his understanding that it could not be counted as a diversion of organic waste for the generator, which could be the challenge for municipalities. Mr. Nettz explained that if the biosolids meet the chemical profile, they could be used as ADC. Mr. Surdilla further clarified that biosolids received as sludge are solidified in the yellow flag pit when they are used for ADC, and in the blue flag pit when they are disposed.

6.3 Water Board Requests

Ms. Lorca presented new developments on request by the CVRWQCB on the CDO and inspection report. These request which were summarized in the packet table.

Ms. Cabanne asked for updates on the compost contact water pond. Mr. Nettz reminded to the CMC members that the composting facility operates under a different permit and it is not under the oversight of the CMC, and continued to explain the second pond had been built.

Ms. Cabanne requested clarification on item 12 of the facility inspection report. Mr. Nettz explained that the RWQCB staff listed areas of concern (AOCs) which are suggestions for improvement, this one referred to a recommendation to grow vegetation on the side slopes of Fill Area 1 (FA1) and FA2. Mr. Nettz explained that due to the nature of the slopes vegetation is hard to grow and that WM staff monitors the areas for erosion.

Mr. Nettz updated the CMC members that the litter violation issues had been resolved and that the CVRWQCB issued a letter notifying of the solution.

As a separate item during this discussion, Mr. Nibert asked if there are endangered species at or near the facility and what is done to maintain their habitat. Ms. Cabanne explained there is a conservation plan to protect endangered species.

6.4 Review of Documents on GeoTracker

Ms. Lorca provided a summary of the items from the GeoTracker tables provided in the meeting packet. No questions were asked as follow up for this item.

6.5 Review of Reports from ALRRF

Ms. Lorca presented an overview of the groundwater monitoring reports. Ms. Cabanne requested the CM continued to review and inform on updates on groundwater chemistry, in particular for MW-40 that had reported detectable concentrations of two VOCs.

Ms. Patil provided an overview of the air emission report. No questions were asked as follow up for this item.

6.6 PFAS Updates

Ms. Patil summarized the PFAS updates presented in the meeting packet.

Ms. Cabanne commented that the new limits set by the Environmental Protection Agency (EPA) were extremely low at 1 part per quadrillion, and asked how that would affect ALRRF. Ms. Patil explained that the regulatory agencies continue to collect data and no action has been taken yet. Ms. Patil noted that in California the approach has been to monitor concentrations, and that one sampling event was conducted at ALRRF in 2019. Mr. Nibert asked about PFAS detections at the facility. Ms. Patil offered to summarize the 2019 results for the April meeting packet.

6.7 Reports from Community Monitor

Ms. Lorca explained that the CM conducted a Class 2 soil profile review at the WMAC facilities. All of the data for the profiles reviewed seemed to be within compliance.

Ms. Lorca continued to summarize the CM site visits, tonnage reports, as well as figures with tonnages plots.

With respect to the ET Cover vegetation coverage, Ms. Cabanne asked what is the limit on the surface cracks for the cover to continue being effective and requested the CM continues to observe the area and document with photographs. Ms. Lorca offered to follow up on the question and report on the next meeting.

Mr. Nibert asked if there were safety concerns for the trucks that had overturned. Ms Patil explained that in the past the overturns had been due to drivers unsafe practices and that fortunately only minor casualties had been reported. Mr. Nettz further explained that some customers drivers rush and do not take the time for safety, for example some dump loads that get stuck due to failed fast attempts to disconnect from the trailers. Mr. Nettz

expressed WM's commitment to safety and that unfortunately these events are usually due to external customers.

Ms. Cabanne asked the CM to keep monitoring the free board available at the liquids storage facilities following the storm events in December and January.

6.8 2023 Committee Meeting Schedule

Ms. Cabanne moved approval, Ms. Hoffmann-Bradley seconded, and the minutes were approved 3–0; Mr. Barrientos was absent.

6.9 2022 Draft Annual Report

Ms. Erlandson recommended to postpone the discussion and approval of the 2022 Annual report to April, with the option to provide preliminary comments via e-mail. She explained there is no strict deadline for the Annual Report in the Settlement Agreement, and in the past it has been approved during a July meeting. She further explained the Settlement Agreement does require the CMC to produce an Annual Report. The CMC members agreed to discuss the item in the following meeting.

6.10 Announcements

No announcements were made.

7. Agenda Building

No items were added to future agenda.

8. Adjournment

The meeting was adjourned at 6:20 p.m. The next meeting will be held on Wednesday April 12, 2022 at 4:00 p.m. at the Livermore Maintenance Services Center at 3500 Robertson Park Road.

LANGAN

1814 Franklin Street, Suite 505 Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

Memorandum

To: ALRRF Community Monitor Committee

From: Langan – Community Monitor

Date: March 28, 2023

Re: **CMC Meeting of 4/12/2023 - Agenda Item 6.1 - Responses to Committee Members' Questions**

Cost Estimates for Evaluation of Reasonably Foreseeable Releases

At the January 11, 2023 meeting, Ms. Cabanne requested follow up on the Cost Estimates for Evaluation of Reasonably Foreseeable Releases. Ms. Cabanne asked if details can be provided on drinking water supply for neighboring residents if a release impacted the groundwater.

In their letter dated February 25, 2022, WMAC has indicated that this provides assurance that domestic water supplies would not be affected by a potential release and that the neighboring wells would not be affected as the release would be remediated prior to reaching the water users, and estimated that the cost of replacement would be zero.

On April 12, 2022, the Central Valley Regional Water Quality Control Board (CVRWQCB) responded to WMAC statements regarding Cost Estimates for Foreseeable releases. In this letter, CVRWQCB indicates the evaluation is sufficient. At this at this time there is no requirement for any additional financial assurance or cost estimate for the drinking water supply. If a release impacts the groundwater supply, WMAC will need to supply replacement water or correction action to address a released.

Endangered Species

At the January 11, 2023 meeting, Mr. Nibert asked if there are endangered species at or near the facility and what is done to maintain their habitat.

The San Joaquin kit fox, San Joaquin pocket mouse, Pacific Western big-eared bat, Ferruginous hawk, Western burrowing owl, California tiger salamander and the California red-legged frog are species that are confirmed to occur within the landfill facility.

The Biological Opinion from the United States Fish and Wildlife Service (USFWS) describes the need for wildlife connectivity and wildlife corridors in eastern Alameda County to provide for wildlife movement and thereby enhance species health by preventing inbreeding. The Biological Opinion states that this need exists for three of the four protected species in the area: San Joaquin Kit Fox, California Red-Legged Frog, and California Tiger Salamander. The fourth species is the federally threatened valley elderberry longhorn beetle. No conservation measures are enforced for the beetle since the project is unlikely to affect it. It may have been historically documented in the area of the landfill, but at the time the landfill poses no threat.

The ALRRF's Conservation Management Plan contains the following requirements in the Minimization and Mitigation sections of the document:

> MIN-31 – The project proponent will contribute funding to conduct a research study of wildlife passage at local over- and under- crossings to determine if these conduits provide conductivity [sic] for wildlife through the Interstate 580 corridor. The study will entail the periodic placement of motion-activated camera station, track plates, and other approved sampling method. The project proponent will provide the Service and/or CDFW with as much as $50,000 to perform the study. With the approval of the Service and CDFW, the project proponent may contract the study to an approved third party.
>
> MIT-7 – The mitigation pond/wetland will be constructed in an upland area […] immediately upstream from the Eastern Alkali Wetland. […] This area provides suitable upland refugial habitat for tiger salamanders and suitable dispersal habitat for red-legged frogs to the Eastern Alkali Wetland and the Southern Alkali Wetland.

These requirements are also stated in the USFWS Biological Opinion, which in turn is referenced by the California Department of Fish and Wildlife (CDFW) Consistency Determination.

ALRRF prepares reports to inform the natural-resource agencies about progress on their permit requirements for Fill Area 2 expansion, including the Conservation Plan Area, construction the wetland mitigation project, protecting existing wetlands and surface waters, etc. The CM has received the 2021 Annual Status Report for Mitigation Wetland Report prepared by Kleinfelder where ESA noted that conditions in the wetland had improved with respect to previous years following the reconstruction of the wetland in 2018. ESA noted that, due to below average rainfall and the implementation of the Wetland Mitigation Plan or Conservation Management Plan, translocating egg-masses and/or larvae from viable ponds on/off of ALRRF is not recommended at the time. However, if limited hydrology persists over summer 2023, remedial activities should be considered.

The Conservation Management Plan remedial action requires the notification to the USFWS and CDFW regarding the California red-legged frog and the California tiger salamanders egg-mass count if five or more California red-legged frogs are not present during breeding season within a three year period. The re-construction of the mitigation pond was completed in December 2018, but it assumed to begin first year of monitoring December 2019. ESA noted, "It is not recommended at this time however it should be considered in the future if performance standards are not met."

Biosolids and the Implementation of SB1383

At the July 13, 2022 meeting, Ms. Cabanne requested clarification on the use of biosolids being used as alternative daily cover (ADC) after a provision of Senate Bill (SB) 1383 came into effect. Mr. Nettz explained that the biosolids could still be used as alternative daily cover for landfill operations, and it was his understanding that it could not be counted as a diversion of organic waste for the generator, which could be the challenge for municipalities. Mr. Nettz explained that if the biosolids meet the chemical profile, they could be used as ADC. Mr. Surdilla further clarified

that biosolids received as sludges are solidified in the yellow flag pit when they are used for ADC, and in the blue flag pit when they are disposed.

SB 1383 is a statewide effort to reduce emissions of short-lived climate pollutants (SLCP), diverting organic waste from landfills into recycling activities and food recovery organizations. As part of SB 1383, counties should take the lead collaborating with the jurisdictions located within the county in planning organic waste recycling and food recovery capacity needed, to 1) Reduce organic waste disposal 75% by 2025, and 2) Rescue for people to eat at least 20% of currently disposed surplus food by 2025[1]. Requirement for new or exploding landfill include implementing and organic waste recovery activity[2], and its impacts must be documented in a report submitted to CalRecycle no later than January 1, 2023.

Evapotranspirative (ET) Cover Surface Cracks

Ms. Cabanne asked what is the limit on the surface cracks for the cover to continue being effective.

Desiccation and compaction stresses can lead to surface cracks on the soil surfaces. The ET Cover work plan (Geosyntec, 2017) and subsequent documents did not identify a limit on surface cracks for the cover. The plan notes that the ET Cover has to be cheeked periodically (at least yearly) for stress cracks and corrective actions are to be taken as necessary. Based on a review of the 2020 Annual Progress Report (Geosyntec, 2021), most of the cracks observed during the monthly inspections conducted were considered surficial with depths less than 0.5 to 1 inch. One large crack, approximately 3 inches wide, 10 feet long and had a maximum depth of approximately 21 inches, was identified in the November 2020 monthly inspection and repaired in December of 2020. During monthly inspections, areas observed to have significant cracking or to have larger cracks are recorded for future monitoring.

[1] https://calrecycle.ca.gov/organics/slcp/
[2] https://calrecycle.ca.gov/organics/slcp/tpf/

LANGAN

1814 Franklin Street, Suite 505 Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

Memorandum

To: Community Monitor Committee

From: Langan – Community Monitor

Date: March 23, 2023

Re: **CMC Meeting of 4/12/23 – Agenda Item 6.2 – Central Valley Regional Water Quality Control Board (CVRWQCB) Requests Progress Update**

The Central Valley Regional Water Quality Control Board (CVRWQCB) issued Cease and Desist Order[1] (CDO) R5-2021-001 for the ALRRF on April 22, 2021. In the CDO, the CVRWQCB alleged the ALRRF was being operated outside of applicable federal and state regulations, and the Waste Discharge Requirements (WDRs). The CDO provided a list of various items the Discharger (ALRRF) had performed out of compliance and also provided a time schedule with specific requirements to compel the Discharger to resolve past compliance issues, achieve compliance with Title 27 and the WDRs, and conform to its Notice of Applicability (NOA) in a time frame acceptable to the CVRWQCB.

Table 6.2.2 provides an update of the CVRWQCB requests, including the requirements outlined in the CDO, the expected completion timeline and progress that has been made on each item. The Areas of Concern (AOCs) and Violations that were included in the previous packet have been resolve and are not included in the updated table.

The Community Monitor will continue to review items on GeoTracker and discuss with WMAC during site visits to provide updates on the work and deliverables requested by the CVRWQCB.

[1] According to California Water Code Section 8701.2 - Cease and desist order, if the Water Board or executive officer determines that any person or public agency has failed to adequately respond to a notice of violation, the board or executive officer may issue an order directing that the person or public agency to whom the notice of violation was issued to cease and desist. A cease and desist order is an order by an administrative agency that requires certain practices specified to stop.

Table 6.2-2
Tracking Table for Water Board Requests
Altamont Landfill Resource and Recovery
Livermore, CA

Task	Due Date	Completed	Comments
Cease and Desist Order (CDO) R5-2021-001			
1.Update the Sampling and Analysis Plan for the interim POC detection monitoring program	~~7/21/2021~~ 4/4/2022	Yes, revised plan submitted on 4/4/22	
2. Revise the background water quality values and update the concentration limits (CLs)	4/21/2022	Yes, submitted on 5/13/22	
3. Install groundwater monitoring wells (interim and final) for FA2			
(a) Work plan to install the groundwater monitoring wells (interim and final) for FA2	7/21/2021	Yes, submitted on 7/20/21	
(b) Install Interim POC Wells	2021-2024	Ongoing	Phase 6 wells proposed for 2023. Phase 8 wells proposed for 2024.
(c) Report installation within 60 days of installing any new groundwater monitoring well or soil gas monitoring well.	Ongoing	Ongoing	
(d) Install Final Permanent FA2 limit wells	2021 and 2022	Yes, installation report submitted on 12/2/2021	
(e) Report installation within 60 days of installing any new groundwater monitoring well or soil gas monitoring well.	Ongoing	Ongoing	Monitoring well installations have been reported within schedule.
(f) Implementation of a Water Quality Monitoring and Response Program for FA2 Unit 1	TBD	Yes, completed with the SAP revisions and new monitoring well network.	
4. Install soil gas monitoring wells (interim and final) for FA1 and FA2			
(a) Work plan to install the soil gas monitoring wells (interim and final) for FA1 and FA2	7/21/2021	Yes, submitted on 8/3/2021	
(b) Install Interim Monitoring Wells FA1	Week of May 31, 2021	Yes, submitted on 7/20/21	
(c) Install Interim Monitoring Wells FA2	9/21-10/21; 2021-2023	Ongoing	Same schedule as item 3(b).
(d) Report installation within 60 days of installing any new groundwater monitoring well or soil gas monitoring well.	Ongoing	Ongoing	Monitoring well installations have been reported within schedule.
(e) Install Final Monitoring Wells	TBD	Yes, installation report submitted on 12/2/2021	
5. Surface Water Monitoring Plan to conduct surface water monitoring for surface water flowing out of FA2	7/21/2021	Yes, submitted on 7/16/21	
(a) Surface Water Monitoring	Ongoing	Yes, Second Semiannual 2021 results submitted on 2/1/22	
6. Document the results of the MW-4A evaluation monitoring program (including groundwater and soil gas sampling) in separate corrective action status reports to be submitted semi-annually	8/1/2021	Yes, second report submitted on 2/1/22 Ongoing	
7. Groundwater and soil gas monitoring network along the northern and eastern limits of FA1			
(a) Work plan to install the groundwater and soil gas monitoring network along the northern and eastern limits of FA1	6/21/2021	Yes, submitted 5/10/2021; approved 5/19/2021	
(b) Install groundwater and soil gas monitoring network along northern and eastern limits of FA1	Week of May 31, 2021	Yes, submitted on 8/3/2021	
8. Update corrective action financial assurance cost estimates for FA1 and FA2	~~7/21/2021~~ 3/1/2022	Yes, submitted 2/25/2022	Revised cost estimates were approved by the CVRWQCB on 4/21/2022.

Table 6.2-2
Tracking Table for Water Board Requests
Altamont Landfill Resource and Recovery
Livermore, CA

Task	Due Date	Completed	Comments
9. Report outlining the LFG extraction wells operations as part of the Corrective Action Program to address the LFG impacts outside the limits of FA1	5/22/2021	Yes, submitted 5/21/2021	
10. Submit a Report of Waste Discharge to install off-waste liquid solidification basins	10/19/2021	Yes, submitted 10/19/2021	
11. Report Installation and operation of new off-waste footprint solidification basins	TBD (After June 2023)		Report no later than 12 months from approval of the Report of Waste Discharge (submitted June 2022).
12. Notify the CVRWQCB 30 days prior to removal of interim monitoring devices	Ongoing during Fill Area 2 expansion	Ongoing	Fill Area 2 wells MW-24, MW-25, and MW-26 (interim Phase 3 detection monitoring wells) were destroyed on 24, 25, 26 May 2021. The CVRWQCB was notified prior to well destruction.

Notes:

POC - Point of Compliance
FA - Fill Area
LFG - Landfill Gas
CVRWQCB - Central Valley Regional Water Quality Control Board
WMAC - Waste Management of Alameda County
TBD - To Be Determined. These deadlines depend on activities which have not yet been completed.
Gray shaded cells denote items that have been completed and no longer tracked. Items remain in the table for reference.

LANGAN

1814 Franklin Street, Suite 505 Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

Memorandum

To: ALRRF Community Monitor Committee

From: Langan – Community Monitor

Date: March 23, 2023

Re: **CMC Meeting of 4/12/2023 – Agenda Item 6.3 – Review of Documents on Geotracker Web Site**

This is the abridged version of this memorandum. It is limited to new items reported in Geotracker since the previous Community Monitor Committee packet for the January 2023 meeting was completed, plus any prior items that provide useful background information for the new items. The complete, current version of this Review of Documents is located on the Community Monitor Committee web site and can be accessed using this link[1].

In this memo, each topic is given its own table where relevant documents are summarized in chronological order. For ease of reference, the topics are grouped under major headings, and in the electronic version of this memo, links enable the reader to skip to a topic of interest and return to the top of the list when finished.

In the list, those topics that include a recent important development or Violation are marked with a special bullet:

- This topic links to a list of documents that contains a recent violation or important development.

Summaries of the documents added since the previous Community Monitor Committee meeting are indicated with a heavy black border. They largely consist of Waste Management of Alameda County (WMAC) responses to Central Valley Regional Water Quality Control Board (CVRWQCB) requests and notices, as well as design reports and reports describing specific incidents.

Violations and important areas of concern are highlighted in pink and yellow, respectively. Other noteworthy new items are highlighted in green. The topic list begins on the following page. When a single document addresses multiple topics, its summary is placed under the most general category available, which is often the first topic, Refuse Disposal Operations.

For reference the Geotracker webpage for the ALRRF is accessible here: https://geotracker.waterboards.ca.gov/profile_report?global_id=L10005834311.

1 https://altamontcmc.org/agendas-etc-2020-2023

MEMO

Topic List

Landfill Operations

- Revised Configuration and Phasing Schedule for Fill Area 2
- Windblown Litter

Liquids Management

Monitoring Program

- New or Pending Monitoring Wells
- Exceedances in Monitoring Wells

Other Topics

- CVRWQCB Inspections
- Winterization Plan
- CASP (For Information Only)

MEMO

LANDFILL OPERATIONS

Revised Configuration and Phasing Schedule for Fill Area 2 Topics

From	Format | Date	Key Point(s)
CVRWQCB	Report | February 22, 2022	The Design Report – Fill Area 2, Phase 5 Construction & Stormwater Improvements provides plans and specifications. Phase 5 is expected to be constructed during the spring, summer and fall of 2022. This report includes the geologic, hydrogeological and geotechnical conditions, site seismicity, a description of the design details for the containment system, slope stability analysis, and stormwater conveyance.
Geosyntec	Construction Quality Assurance Report | March 16, 2022	The Report of Construction Quality Assurance (CQA) documents the CQA activities associated with the construction of the Phase 4 containment cell and related stormwater improvements in FA2. Geosyntec Consultants were on-site continuously during the mass excavation, subgrade preparation and liner installation. The report was prepared by Geosyntec, who concluded that the construction was completed in compliance with the approved design report, construction documents, CQA Plan, and recommendations during construction.
Geosyntec	Correspondence | May 16, 2022	Response to comments provided by the CVRWQCB regarding the "Design Report - Fill Area 2, Phase 5 Construction & Stormwater Improvements.
CVRWQCB	Letter – Notice | July 21, 2022	The CVRWQCB staff reviewed the Design Report, as well as the May 16, 2022 Response to Comments regarding Design Report and July 1, 2022 clarification to the Design Report. According to the CVRWQCB staff, they support the improvements and recommendations described in the Design Report. This letter approves WMAC to proceed with construction, provided they adhere to the recommendations made in the Design Report, related revisions and the WDRs, CDO, and Title 27. The notice does not authorize discharge of wastes to Phase 5 until the final documentation report has been reviewed and approved by the CVRWQCB staff.
Geosyntec	Design Report| February 14, 2023	Geosyntec prepared this Design Report on behalf of WMAC. Additionally, Geosyntec designed the cell containment system and other project elements in accordance with the WDR. This report contains the design basis, plans, specifications, CQA plan and supporting documentation for FA2, Phase 6 construction as well as the Sediment Basin H extension project.

Windblown Litter Topics

From	Format | Date	Key Point(s)
ALRRF / KSC	December 27, 2022	The response from WMAC and KSC (WMAC legal counsel) to the CVRWQCBs 13267 Investigative Order (Order) states WMAC's objection to the request of information. WMAC denies any alleged liability arising from windblown litter or the allegations in the Order

MEMO

From	Format | Date	Key Point(s)
		and asserts privileges, protection, and objects to Order and its technical report requirements. The letter addresses that, subject to and without waiving its objections, WMAC had collected and removed approximately 2,221 bags of litter from the Bethany Reservoir and 21,908 bags of windblown litter from a location outside the boundary of FA2, between July 15, 2021 and December 26, 2022.
CVRWQCB	Correspondence | January 5, 2023	The CVRWQCB issued a letter providing notice that Investigative Order R5-2021-0817 is resolved in its entirety and that all of WMAC reporting obligations under this Order are complete.

MONITORING WELLS

New or Pending Monitoring Wells Topics

From	Format | Date	Key Point(s)
Geosyntec	Report/ Document| December 9, 2022	This report was prepared on behalf of WMAC to document the installation and development of five new monitoring wells (MW-54, MW-55, MW-56, MW-57 and MW-20R) and two new gas multi-depth gas probes (UGP-17 and UGP-18) and one single-depth gas probe (VP-5) for FA2. This new network was installed in accordance with FA2 Work Plan approved by CVRWQCB on July 26, 2021.

Exceedances in Monitoring Wells Topics

From	Format | Date	Key Point(s)
WMAC	Correspondence| February 13, 2023	Indicated by WMAC on November 21, 2022, during the second semi-annual 2022 period in FA2, monitoring well MW-55 detected measurably significant results for two SVOCs. Resampling events that took place on December 28, 2022 and January 19, 2023 results did not verify the exceedance of the SVOCs in MW-55. No further action was recommended at this time.

OTHER TOPICS

CVRWQCB Inspections Topics

From	Format | Date	Key Point(s)
CVRWQCB	Facility Inspection Report| July 19, 2022	On June 28, 2022, CVRWQCB conducted an inspection of ALRRF noting 13 AOCs at the landfill. Pertaining to these AOCs, WMAC is to complete a series of tasks. WMAC must notify the CVRWQCB as soon as each of the tasks regarding each AOC has been completed. Additionally, each task for AOC 1-3 should be completed before the 2022/2023 wet season. WMAC must submit associated report no later than September 30, 2022, documenting completed work to address AOCs 4-11. Regarding AOC 12, all winterization work must be completed by October 31, 2022 and submitted by November 15, 2022. To address AOC 13, WMAC

MEMO

From	Format | Date	Key Point(s)
		must take proactive measures to continue to contain windblown waste.
WMAC	Correspondence| November 21, 2022	WMAC response to the CVRWQCB Inspection Report dated July 19. This letter provides an update to the required work addressing AOCs 1-3, 5, 6 and 10. AOC 12 was addressed in ALRRFs Winterization Plan 2022-2023 report, submitted November 15, 2022.

Winterization Plan **Topics**

From	Format | Date	Key Point(s)
WMAC	Report/ Document| November 21, 2022	WMAC is responding to the CVRWQCB letter dated July 19, 2022 with a second submittal letter concerning the landfill inspection that took place on June 28, 2022 at ALRRF. This letter provides an update to the required work addressing AOCs 1-3, 5, 6 and 10. AOC 12 was addressed in ALRRFs Winterization Plan 2022-2023 report, submitted November 15, 2022.

CASP (For Information Only) **Topics**

From	Format | Date	Key Point(s)
CVRWQCB	Correspondence| November 11, 2022	CVRWQCB reviewed WMAC's 2021 Annual Monitoring and Maintenance Report (Annual Report). CVRWQCB outlines required work to maintain compliance with the compost general order and NOA for all future monitoring reports. The information is summarized in the report. The next monitoring report, the 2022 Annual Monitoring Report and Maintenance Report is due April 1, 2023.

LANGAN

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Memorandum

TO: Community Monitor Committee

FROM: Langan – Community Monitor

DATE: March 23, 2023

SUBJECT: **CMC Meeting of 4/12/23 – Agenda Item 6.4.1.1 – Review of Reports from ALRRF: Groundwater Analysis Progress Report #30**
Langan Project No. 750657603

Langan Engineering and Environmental Services (Langan) has reviewed hydrogeologic data for the Altamont Landfill and Resource Recovery Facility (ALRRF) located near Livermore, California. The work and resulting data were conducted by SCS Engineers, and presented in the following reports:

- SCS Engineers, Second Semiannual-Annual 2022 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility (WDR Order No. R5-2016-0042-01), Long Beach, California, dated February 2023.

- SCS Engineers Second Semiannual 2022 Corrective Action Status Report, Altamont Landfill and Resource Recovery Facility (Order No. R5-2021-0022), Long Beach, California, dated January 2023.

The reports address the monitoring and reporting requirements of the Central Valley Regional Water Quality Control Board (CVRWQCB) Waste Discharge Requirements (WDR) Order No. R5-2016-0042 and the related Monitoring and Reporting Program (MRP), adopted on October 27, 2016 for the ALRRF, which is owned and operated by Waste Management of Alameda County, Inc. (WMAC) and Cease and Desist Order (CDO) No. R5-2021-0020, adopted on April 22, 2021. In a letter dated January 5, 2023, the CVRWQCB notified Waste Management of Alameda County, Inc. (WMAC), the Investigative Order R5-2021-0817 was resolved in its entirety and that all WMAC reporting obligations under this Order are complete. Also during this period, a notice of violations for alleging discharge of windblown waste outside the active face of a solid waste management unit at ALRRF was given. WMAC submitted responses to the September 1, 2022 document on November 15 and 21, 2022.This memorandum describes the results of the above efforts and provides Langan's opinions and recommendations for the Community Monitor Committee (CMC). The report was reviewed for issues described in previous CMC meeting minutes, to address provisions stated in the CDO adopted in 2021, and for potential trends in groundwater analytical data over recent years.

In a letter dated July 14, 2022, the CVRWQCB provided comments and requests related to the Second Semiannual Annual 2021 Groundwater Monitoring Report. SCS Engineers made changes and additions in the Second Semiannual-Annual 2022 Groundwater Monitoring Report to reflect the comments received from the Second Semiannual Annual 2021 Groundwater Monitoring Report.

The Second Semiannual 2022 groundwater sampling activities for Fill Area 1 (FA1) and 2 (FA2) were conducted from July through December 2022. This period included semiannual sampling

of newly installed interim point of compliance (POC) wells MW-54, MW-55, MW-56, and MW-57 for Phase 5, quarterly sampling of wells under additional evaluation and final landfill perimeter monitoring wells. The Phase 5 POC wells were sampled for the first time for Contaminants of Concern (COC) parameters to comply with Order No. R5-2016-0042-1. Well MW-20 was abandoned in April 2022 due to damage and replaced with well MW-20R, which was installed October 2022. Semiannual sampling of MW-9 was initiated during the Second Semiannual 2022 sampling. Wells and monitoring points were generally found to be in compliance during the Second Semiannual sampling event.

LABORATORY QA/QC

During the Second Semiannual 2022 monitoring event, there were a similar number of QA/QC issues compared to the First Semiannual 2022 monitoring event.

All but one ice chest containing groundwater samples collected during the Second Semiannual 2022 period arrived at the laboratory (TestAmerica in Colorado) with temperatures between 0.1 and 5.9 degrees Celsius, which is at or below the recommended 6.0 degrees Celsius. The laboratory reported that the ice chest with the September 7, 2022 sample containers for MW-44A, MW-44B, and MW-45A arrived with a temperature of 9.9 degrees Celsius. Due to delays in sample delivery, quality control compliance, instrument malfunction/error, and/or laboratory analyst error, 16 samples for nitrate and four samples for VOCs were analyzed outside of recommended method hold times.

Tetrahydrofuran and toluene were detected in trip, field, and/or equipment blanks associated with one or more sample lots. No other VOCs were detected in the trip, field, and equipment blanks. Tetrahydrofuran was also detected in one of the ALRRF groundwater samples.

During the Second Semiannual 2022 monitoring event, the laboratory reported that dissolved sodium, calcium, iron, potassium, magnesium, manganese, and zinc (Method 6010B); dissolved beryllium, lead, nickel, thallium, and cadmium (Method 6020); bicarbonate and carbonate alkalinity (Method 2320B); chemical oxygen demand (Method 410.4); and sulfate (Method 300.0) were detected in one or more of the method blanks associated with groundwater samples.

Values reported between the method detection limit (MDL) and the reporting limit (RL) should not be considered a reliable quantitative result given the method uncertainty at this low range. The RL was established to protect against false positives within the MDL - RL range. This is typically why no action is usually taken on the basis of these detections.

For the duplicate samples collected during the Second Semiannual 2022 period, the primary and duplicate sample concentrations were within the acceptable relative percent difference limits.

SECOND SEMIANNUAL 2022 GROUNDWATER SAMPLING RESULTS

Detection and Corrective Action Wells[1] Inorganic and Volatile Organic Compound Concentrations

The 2016 MRP identifies two sets of corrective action groundwater monitoring wells: 1) well E-20B along the east side of FA1 and downgradient (detection) wells MW-27 (this well replaced well MW-12) and MW-20 (now replacement well MW-20R[2]), and 2) wells E-05 (now replacement well E-05R) and E-07 in the main canyon south of FA1 and their downgradient (detection) wells E-03A and E-23. Additional detection wells have been added to the MRP, due to indications of possible groundwater impacts at other locations on site. Table 6.4.1-1 (below) summarizes the monitoring well network, which is also presented in Figure 6.4.1–6. In addition, landfill gas extraction is ongoing in the vicinity of monitoring wells MW-4A and MW-38.

Table 6.4.1-1

FA1	
Detection Monitoring Groundwater Monitoring Wells	MW-3B
Corrective Action Program Groundwater Monitoring Wells	E-03A, E-05R, E-07, E-20B, E-23, MW-20R, MW-27
Evaluation Groundwater Monitoring Wells	MW-1A, MW-2A, MW-3B, MW-4A, MW-5A, MW-6, MW-7, MW-31
Class II Surface Impoundment "FA1 South LSI" Evaluation Monitoring Groundwater Well	MW-11
Point of Compliance (POC) (or Final Edge of Waste) Monitoring Wells	MW-37, MW-38, MW-39, MW-40
Evaluation Groundwater Monitoring Well for MW-38	MW-53
FA2	
Detection Monitoring Groundwater Monitoring Wells	MW-9, MW-10, MW-19, PC-6B, PC-6B[R], WM-2, PC-2A, PC-2C
Class II Surface Impoundment (LSI-3) Detection Groundwater Monitoring Wells (listed in MRP as SI-1)	MW-8A, MW-8B, MW-15A, MW-15B, MW-16, MW-17, MW-17R, MW-18
Interim Phase 5 Groundwater Monitoring Wells	MW-54, MW-55, MW-56, MW-57
Point of Compliance (POC) (or Final Edge of Waste) Monitoring Wells	MW-34A, MW-34B, MW-35A, MW-35B, MW-41A, MW-41B, MW-42A, MW-42B, MW-43, MW-44A, MW-44B, MW-45A, MW-45B, MW-45C, MW-46A, MW-46B, MW-47A, MW-47B, MW-48A, MW-48B, MW-49A, MW-49B, MW-50, MW-51, MW-52

[1] Monitoring wells included in the Corrective Action Program (CAP) and Detection Monitoring Program (DMP) of the MRP, used for compliance monitoring.

[2] Wells that have an "R" after their number are replacement wells, installed because the original well became dry or damaged.

Well MW-20, downgradient of E-20B, was abandoned in April 2022 because it was damaged by heavy equipment. Its replacement designated MW-20R was installed during the Second Semiannual 2022 period in October 2022 and sampled for the first time in November 2022. Sampling at MW-9 began on a semiannual basis, for Fill Area 2 detection monitoring purposes, during the Second Semiannual 2022 period. This period also included quarterly sampling of wells under additional evaluation (MW-8A, MW-8B, PC-2A, and PC-2C). Because analytical results have remained consistent and there have been no confirmed VOCs detected, the sampling of these wells will revert to semiannual during the next monitoring period (First Semiannual 2023) per the MRP. Interim detection monitoring wells MW-54, MW-55, MW-56, and MW-57 for the Fill Area 2 Phase 5 were installed in October 2022, as described in the report by Geosyntec (December 9, 2022). Initial samples were collected from these wells in November 2022. Interim detection monitoring wells are sampled semiannually. All Fill Area 1 and 2 POC wells and MW-53 are being sampled on a quarterly basis until a minimum of eight samples are collected. Following the second semiannual 2022 period, ten of these wells have been sampled 8 or more times and will be sampled on a semiannual basis starting on the First Semiannual 2023 period.

There were no new concentration limit exceedances identified for the inorganic monitoring parameter sample data for Fill Area 1 wells for the Second Semiannual 2022 sampling event.

The CVRWQCB was notified on July 21, 2022 of statistical exceedances at MW-2A and MW-6 during the First 2022 Semiannual sampling event. These wells were resampled and the results and submitted. Resample data did not verify the initial statistical exceedance of chemical oxygen demand (COD) in MW-6. However, the statistical exceedance for COD in MW-2A was confirmed. The September 20, 2022 letter said that the COD concentration decreased in each subsequent resample from the original (30 mg/l) to second resample (14 mg/l; note, there was also a method blank detection of 9.72 mg/l in the second resample). Since there were no other changes in water chemistry besides COD, it was recommended that the water quality for well MW-2A continue to be assessed in accordance with the requirements contained in the WDR. There were no statistical exceedances for MW-2A during the current period.

A previously observed recurring exceedance of bicarbonate alkalinity for FA 1 well MW-4A was not noted during either 2022 semiannual period (after being observed during both semiannual periods of 2021). No statistical exceedances were observed in MW-4A during this period. No VOCs were detected in the Second Semiannual 2022 samples from MW-4A, MW-4B, or MW-31.

An initial concentration limit exceedance was identified for the following wells and inorganic parameters for the Second Semiannual 2022 sampling event: MW-9 (Chemical oxygen demand) and MW-55 (Chloride). The CVRWQCB was notified of these initial statistical exceedances by phone and by email on January 30, 2023. Both wells are planned to be resampled and submitted.

Recurring statistical exceedances for MW-8A (chloride and chemical oxygen demand), MW-8B (chemical oxygen demand, dissolved calcium, chloride, and TDS), PC-2A (chemical oxygen demand, dissolved calcium, chloride, sulfate, and TDS), MW-18 (chloride), and WM-2 (dissolved calcium, chloride, sulfate, and TDS) were observed.

In response to the First Semiannual 2022 initial statistical exceedance of chloride at MW-10, resampling was conducted on July 28, 2022 and August 17, 2022. The concentrations of both resamples were below the statistical limit therefore this exceedance was not verified. The exceedance did nor reoccur during the Second Semiannual 2022 period. The results were submitted in a WMAC letter to the CVRWQCB dated September 20, 2022. Well MW-18 chloride exceeded the statistical limit during both semiannual 2022 periods. SCS Engineers recommended that the water quality in MW-18 continue to be assessed in accordance with the requirements contained in Order No. R5-2016-0042-01.

In an email dated June 15, 2021, the CVRWQCB requested that the water quality changes in WM-2 continue to be monitored. WMAC has continued to report water quality data from this well in accordance with the 2016 WDR/MRP.

No VOCs were detected above their primary Maximum Contaminant Levels (MCLs) in any Fill Area 1 or Fill Area 2 groundwater monitoring well samples during the Second Semiannual 2022 period.

Fill Area 1

For Fill Area 1, no VOCs were detected in Second Semiannual 2022 samples from Fill Area 1 detection and evaluation monitoring wells E-03A, E-21, E-22, E-23, MW-1A, MW-2A, MW-3B, MW-4A, MW-4B, MW-5A, MW-6, MW-7, MW-11, MW-31, MW-37, MW-39, and MW-53 during the Second Semiannual 2022 event.

For MW-40, recurring below RL concentrations of MTBE (both quarterly samples) and tert-butyl alcohol (third quarter sample only) were detected during the Second Semiannual 2022 period.

<u>MW-38</u>

POC monitoring well MW-38 and down gradient well MW-53 was most recently sampled in November, 2022. The VOCs detected in the groundwater samples are summarized in Table 6.4.1-2. During the initial sampling event conducted late April 2022, no VOCs were detected in groundwater downgradient from MW-38 at new monitoring well MW-53. A Proposed Evaluation Monitoring Plan (EMP)[3], Engineering Feasibility Study (EFS)[4], and initial and revised Amended Report of Waste Discharge (AROWD[5]) were submitted to the CVRWQCB (Geosyntec, February 2, 2022; May 9, 2022, and May 13, 2022). It was concluded that the VOC concentrations in groundwater at MW-38 were due to LFG effects. On February 15, 2022, the CVRWQCB indicated that the monitoring of water quality in the MW-38 area (including newly installed downgradient well MW-53) should be included in the CDO status report for the corrective action areas. In a CVRWQCB letter dated December 13, 2022, the CVRWQCB provided comments to the May

[3] *Geosyntec Consultants, February 2, 2022. Amended Report of Waste Discharge and Proposed Evaluation Monitoring Plan for MW-38, Altamont Landfill and Resource Recovery Facility, Alameda County, California*

[4] *Geosyntec Consultants, May 2, 2022; Revised May 9, 2022. Engineering and Feasibility Study for MW-38 Area, Altamont Landfill and Resource Recovery Facility, Alameda County, California*

[5] Geosyntec Consultants, May 13, 2022. Amended Report of Waste Discharge for MW-38 Area, Altamont Landfill and Resource Recovery Facility, Alameda County, California

2022 AROWD and requested an amended AROWD be submitted by March 31, 2023. Additional details and current results for MW-38 and MW-53 are included in the Corrective Action Status Report for the Second Semiannual 2022 period (SCS, January 31, 2023). WMAC is currently in the processing of preparing a response to the CVRWQCB review comments of the May 2022 AROWD regarding previous VOC detections at MW-38 (CVRWQCB, December 13, 2022).

E-20B and downgradient wells

In monitoring well E-20B, 1,1-DCA was detected at concentrations above RL. This VOC has been detected in E-20B since 1999. Below RL concentrations of diethyl ether and MTBE were also detected in E-20B during the Second Semiannual 2022 monitoring event. These results were also consistent with past results at E-20B. Concentrations of cis-1,2-dichloroethene (cis-1,2-DCE) and tert-butyl-alcohol, substances that have been previously observed in E-20B samples, were not detected in the Second Semiannual 2022 sample.

Three VOCs were detected in MW-20R at concentrations below reporting limits during this period: 1,1-DCA, diethyl ether, and MTBE. None of the VOCs that have historically or currently been detected in E-20B were detected in down gradient monitoring wells PC-1B, PC-1C, or MW-27 during this, or any previous, reporting period.

The groundwater data collected during this reporting period indicates that LFG extraction continues to be effective in addressing gas effects at well E-20B as VOC concentrations at E-20B have decreased significantly over time.

MW-4A

No statistical exceedances were observed in MW-4A during this period. No VOCs were detected in the Second Semiannual 2022 samples from MW-4A, MW-4B, or MW-31.

The groundwater data collected during this reporting period indicated that the LFG extraction continues to be effective in addressing gas effects at well MW-4A. No LFG-related VOCs have been detected at MW-4A since the Third Quarter of 2019. The concentrations of bicarbonate alkalinity have fluctuated from slightly below to slightly above the statistical concentration limit. Dissolved calcium was detected in MW-4A at concentrations below the statistical limit.

Fill Area 2

Wells associated with FA2 were evaluated with the same statistical protocols used for FA1 wells as mentioned above. A summary of VOCs detected in FA2 is presented in Table 6.4.1-3, attached at the end of the memo.

No VOCs were detected in samples from Fill Area 2 detection monitoring wells MW-8A, MW-8B, MW-9, MW-10, MW15B, MW-16, MW-17, MW-17R, MW-18, MW-19, MW-27, MW-34A, MW-35A, MW-35B, MW-41A, MW-41B, MW-42A, MW-43, MW-44A, MW-45A, MW-45C, MW-46A, MW-46B, MW-47A, MW-47B, MW-48A, MW-48B, MW-49A, MW-50, MW-52, PC-6B(R), WM-2, PC-2A, and PC-2C. No VOCs were detected in Fill Area 2 interim Phase 5 monitoring wells MW-54, MW-55, MW-56, and MW-57.

The following wells had single below RL concentrations of VOCs or two below RL concentrations of VOCs but with associated trip, field, equipment or method blank detections that eliminated some detections from consideration. Since a single below RL VOC concentration per well does not trigger resampling, no further action is required for the following:

- MW-34B (both September and December 2022 samples). Naphthalene below the RL.
- MW-44B (September 2022 sample). Naphthalene below the RL.
- MW-45B (September 2022 sample). Naphthalene below the RL.

No VOCs were detected in the November 2022 samples from wells MW-44B and MW-45B. The Third Quarter sample from September 2022 from MW-49B had a recurring concentration of carbon disulfide above the RL (7.6 µg/l). In the Fourth Quarter (December) 2022 sample, the concentration of carbon disulfide decreased to below the RL (1.7 µg/l).

During the Second Semiannual 2022 period, four newly installed interim groundwater wells, MW-54, MW-55, MW-56, and MW-57, were sampled for the first time for 5-Year COC parameters. For these wells, no VOCs, organochlorine pesticides, chlorophenoxy herbicides, organophosphorous pesticides, or polychlorinated biphenyls (PCBs) were detected. No Method 8270C SVOCs were detected in the samples from MW-54 and MW-57. The only SVOC detected in the sample from MW-56 was a below RL concentration of acetophenone. Additionally, below RL concentrations of benzo[g,h,i]perylene and bis(2-ethylhexyl) phthalate were detected in the sample from MW-55. For MW-56, the single below RL SVOC species is not considered an initial indication of the presence of the SVOC and no further actions are required. For MW-55, the CVRWQCB was notified of the detection of two below RL SVOC species by email on December 22, 2022. The email also included plans to complete two resampling events to confirm these detections. Resamples were collected on December 28, 2022 and January 19, 2023. No additional action is recommended based on these 5-Year COC results from MW-54, MW-55, MW-56, and MW-57.

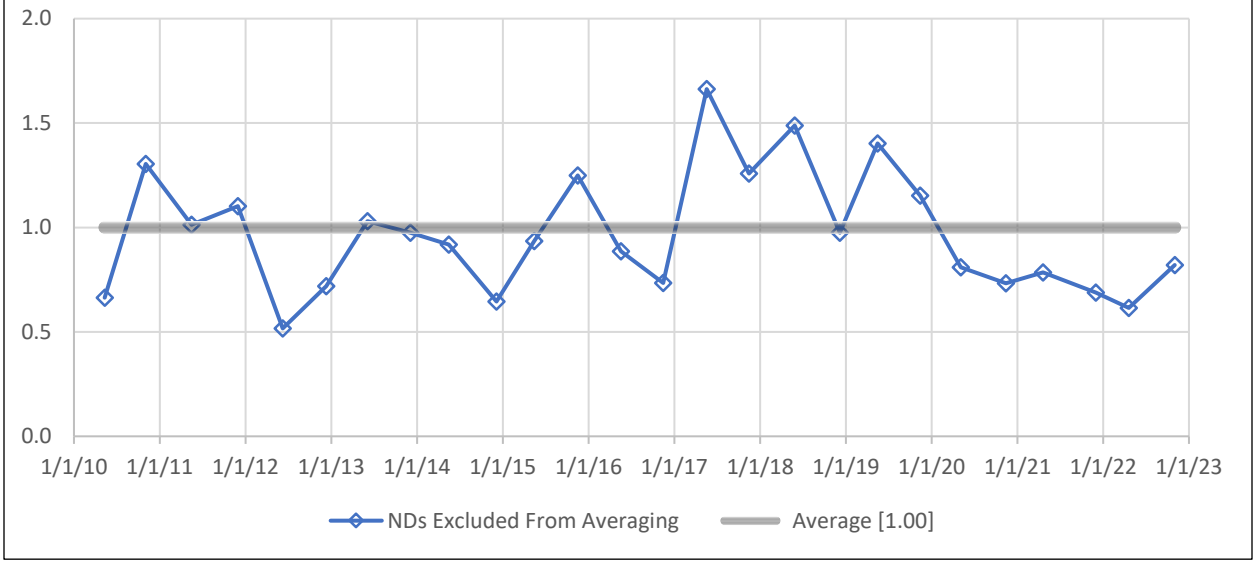
All of the VOCs detected in corrective action wells during the Second Semiannual 2022 period have been detected in past samples from these wells at similar or reduced concentrations. For this period, there were no detections of acetophenone or dinoseb in samples from E-05R, E-07, and E-23. Except for 1,1-dichloroethane slightly above its RL in E-07, all VOCs detected in E-05R and E-07 were below their respective RLs. No VOCs were detected in the downgradient well E-03A during the Second Semiannual 2022 event. No VOCs were detected in other downgradient wells E-21, E-22, or E-23 during this period. For corrective action well E-20B, the Second Semiannual 2022 sample had concentrations above the RLs of 1,1-dichloroethane (1.4 µg/l) and below RL concentrations of methyl tert-butyl ether and diethyl ether/ethyl ether. MW-20R had VOC detections similar to past MW-20 samples that include below RL concentrations of 1,1-dichloroethene, diethyl ether, and MTBE. No VOCs were detected in the sample from MW-27 during the Second Semiannual 2022 period.

Trends in VOC Data

The Community Monitor continued to review the trends in data from monitoring wells where VOCs have been detected and continued graphing the data over time for each contaminant in

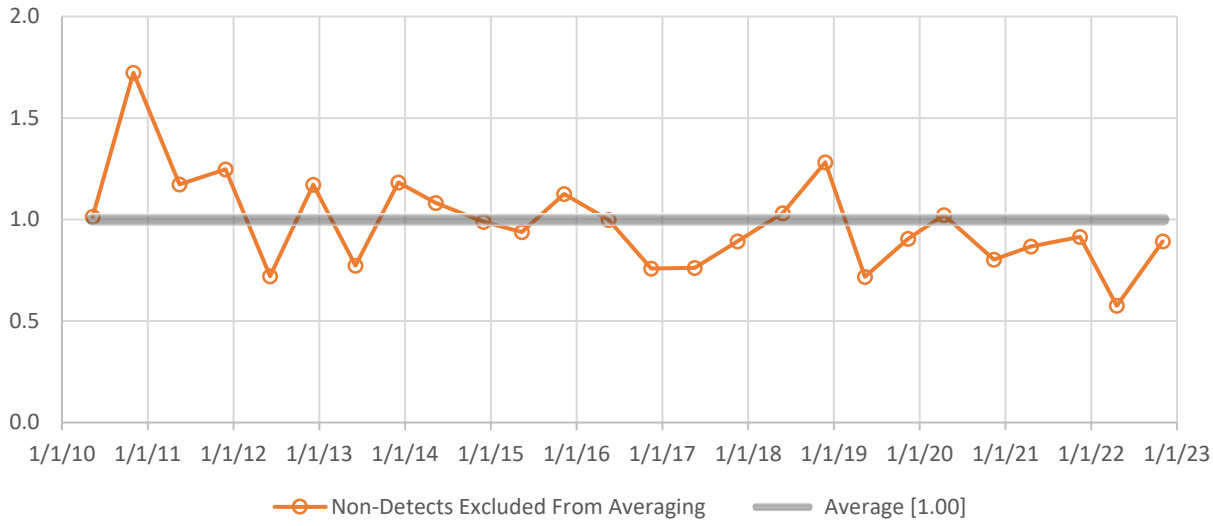
each well. We have normalized the concentration data (dividing each data point by the average for that substance at that well, with non-detects excluded) in order to pool all of the VOC data at a well and look for trends. We offer the following updated observations well-by-well, and the general observation that for most of these wells normalized concentration trends were close to, at, or below the average (i.e. 1.0), with the exception of MW-4A for which VOCs were not detected.

Figure 6.4.1-1
E-05 & E-05R: Averages of Normalized Concentrations



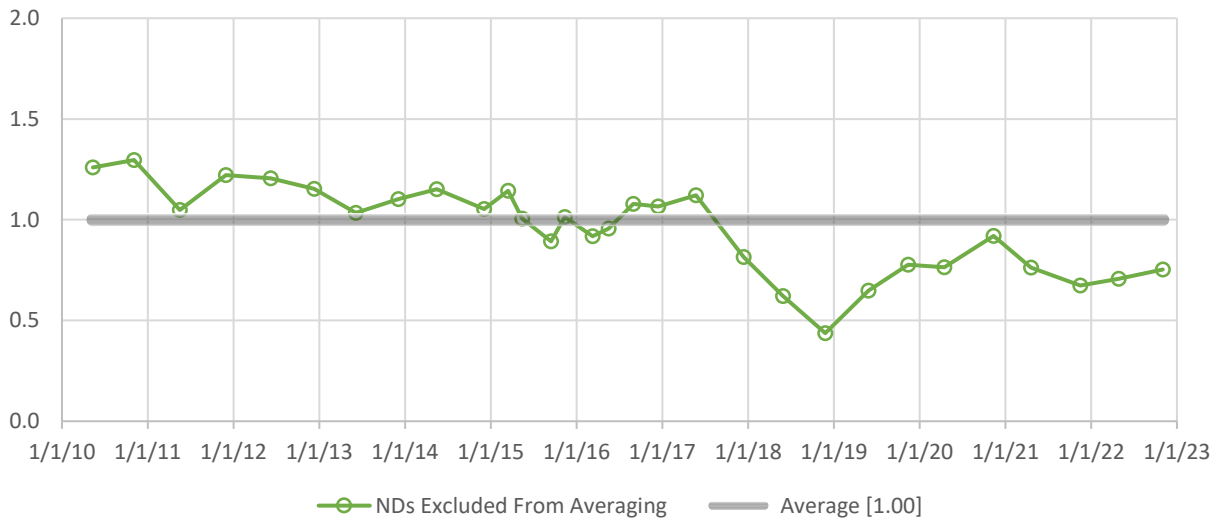
At Well E-05, at the toe of FA1, the data has shown below average concentrations since May 2020. The November 2022 sample showed an increase in normalized concentration, with respect to the previous sampling event. Concentrations at E-05 will continue to be tracked.

Figure 6.4.1-2
E-07: Averages of Normalized Concentrations



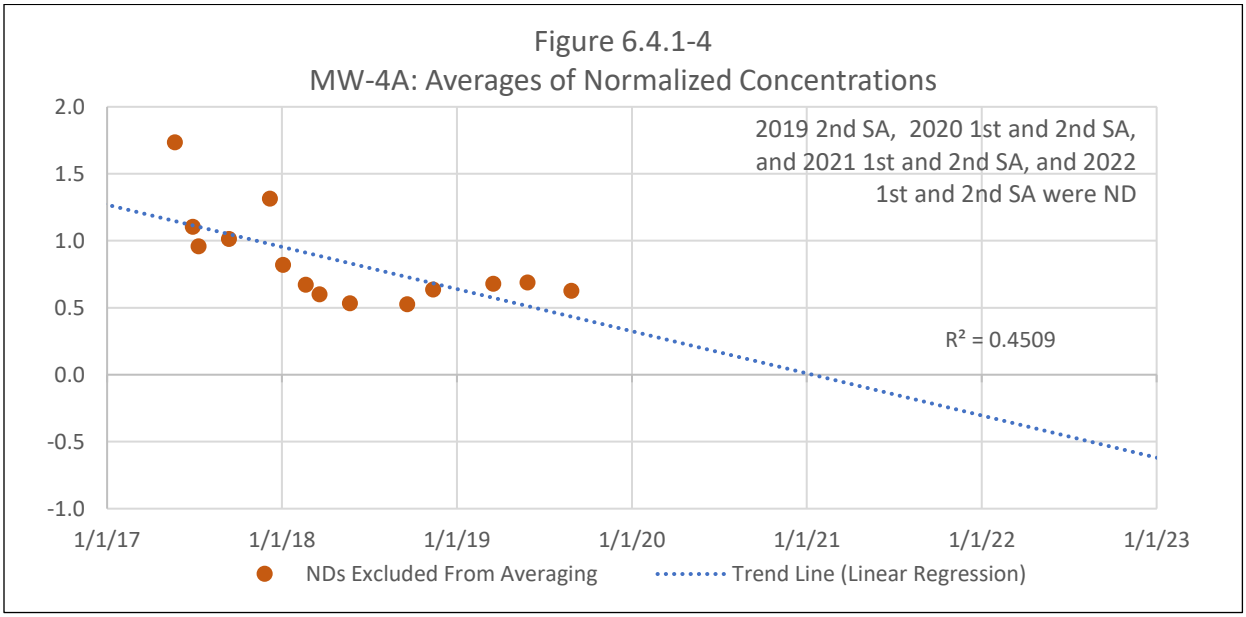
At well E-07, in the same location as E-05 though screened deeper, the November 2022 normalized concentration increased to reach slightly below average. No clear trend is observed for this well, and we will continue to monitor the normalized concentrations over time.

Figure 6.4.1-3
E-20B: Averages of Normalized Concentrations

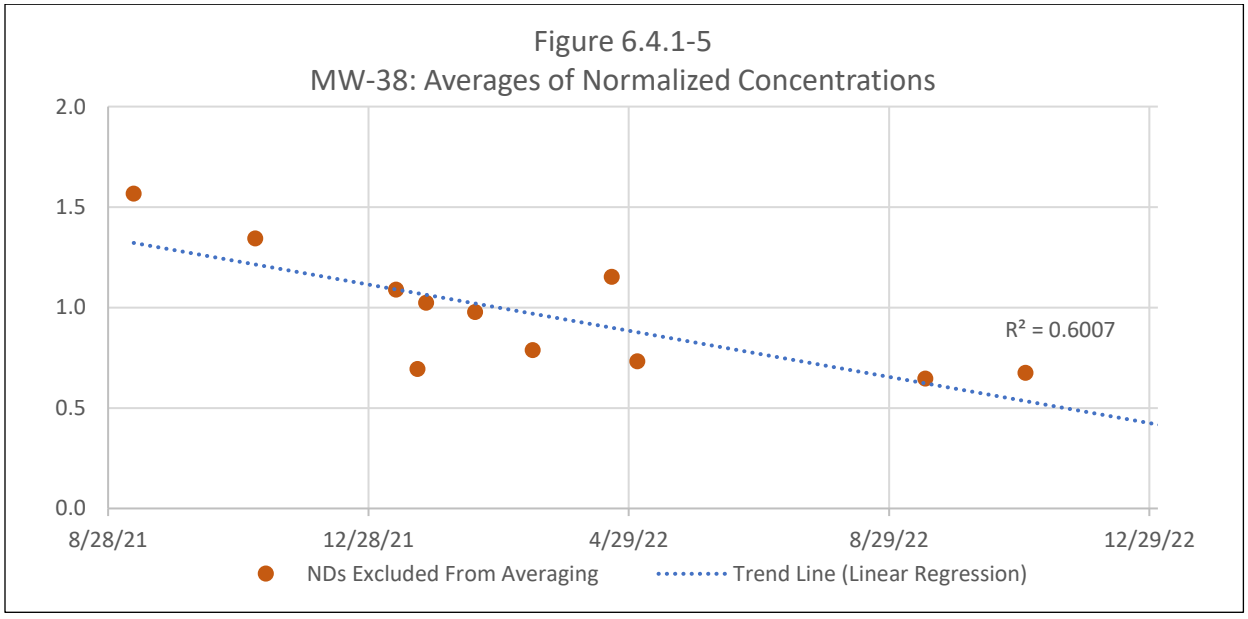


At well E-20B, on the east side of FA1, the average across all VOC's was showing a clear decline in 2017 – 2018, but the samples had shown an increase from 2019-2021, which brought normalized concentrations back to the historical average. Since 2021, the normalized

concentrations have decreased. The November 2022 sample was below average. Concentrations in this will continue to be tracked.



At well MW-4A, at the northeast corner of FA1, samples collected during the past three years had no detections of VOCs and therefore it appears that the downward trend continues.



At well MW-38, at the northeast corner of FA1 and downgradient of POC well MW-4A, samples collected over the past year have had several detections of VOCs. In the most recent sampling effort on November 2022, only three VOCs were detected: 1,1-DCA, DCFM, MTBE. Overall VOC detections seem to be in decline at MW-38.

SUMMARY OF GROUNDWATER RESULTS

There were a similar number of occurrences of laboratory QA/QC issues compared to the previous reporting period.

This period included semiannual sampling of newly installed interim point of compliance (POC) wells MW-54, MW-55, MW-56, and MW-57 for Phase 5, quarterly sampling of wells under additional evaluation and final landfill perimeter monitoring wells. The Phase 5 POC wells were sampled for the first time for Contaminants of Concern (COC) parameters to comply with Order No. R5-2016-0042-1. Well MW-20 was abandoned in April 2022 due to damage and replaced with well MW-20R, which was installed October 2022. Semiannual sampling of MW-9 was initiated during the Second Semiannual 2022 sampling. Wells and monitoring points were generally found to be in compliance during the Second Semiannual sampling event. The first time sampling of new Fill Area 2 interim groundwater wells MW-54, MW-55, MW-56, and MW-57 included 5-Year COCs. For MW-55, the CVRWQCB was notified of the detection of two below RL concentrations of SVOCs by email on December 22, 2022. Resamples were collected on December 28, 2022 and January 19, 2022 and results will be submitted under separate cover.

VOCs detected in corrective action monitoring wells E-05, E-07, and E-20B were generally consistent and within the ranges of previous detections observed at these wells. No VOCs were detected in E-03A, E-21, E-22, or E-23 located downgradient of E-05 and E-07. None of the VOCs that have historically or currently been detected in E-20B were detected in downgradient monitoring wells MW-27 during this, or any previous, reporting period. VOCs historically and currently detected in E-20B were detected in downgradient monitoring well MW-20R during this reporting period.

LFG-related VOCs were detected in POC monitoring well MW-38. On February 15, 2022, the CVRWQCB indicated that the monitoring of water quality in the MW-38 area (including newly installed downgradient well MW-53) should be included in the CDO status report for corrective action areas. No LFG-related VOCs have been detected at MW-4A since the Third Quarter 2019. The concentrations of bicarbonate alkalinity at MW-4A have fluctuated from slightly below to slightly above the statistical concentration limit.

There were no initial statistical concentration limit exceedances for Fill Area 1 wells. Initial concentration limit exceedances were identified for the following wells and inorganic parameters for Fill Area 2 wells for the Second Semiannual 2022 sampling event:

- MW-9A. Chemical oxygen demand (sample concentration of 13 mg/l versus the 10 mg/l limit).

- MW-55. Chloride (sample concentration of 460 mg/l versus the 423 mg/l limit).

The CVRWQCB was notified of these initial statistical exceedances by phone and by email on January 30, 2023. These wells will be resampled and the results will be submitted.

With the exception of a single below RL concentration, VOCs attributed to field and/or laboratory cross contamination, and/or VOCs already evaluated and either not confirmed or attributed to non-landfill operations, no VOCs were detected in detection monitoring, evaluation monitoring, POC, or interim wells for Fill Area 1 or Fill Area 2.

A corrective action Status Report for the Second Semiannual 2022 period was submitted for the CDO referenced corrective action areas MW-4A, E-20B, GP-9, and recently added corrective action area MW-38. For consistency, MRP corrective action area E-05R/E- 07 was also included in the Status Report.

VOCs were detected in LD-5 and LS-3 and will be tracked because they have not been seen in the past. In both cases, the data is being reviewed by the project laboratory and ALRRF is evaluating site conditions related to these two systems. The liquid in these leak detection systems is contained. WMAC is evaluating the laboratory data and site conditions and will provide a summary of findings.

RECOMMENDATION

We recommend continuing review of groundwater, unsaturated zone, leachate, and stormwater data as it becomes available, and evaluating for trends in data, especially for groundwater monitoring wells where VOCs have previously been detected. Also, we recommend to continue review of laboratory QA/QC issues.

Attachments: Figure 6.4.1-6 - Groundwater Monitoring Network
Table 6.4.1-2 - Fill Area 1 Analytical Results Summary
Table 6.4.1-3 - Fill Area 2 Analytical Results Summary

6.4.1.1_Review of Reports From ALRRF_Groundwater_SA2_2022

Table 6.4.1-2
Fill Area 1 Analytical Results Summary
Altamont Landfill Resource and Recovery
Livermore, CA

Area	Sample ID	Acetone	Benzyl Alcohol	2, Butanone	Carbon Disulfide	Chloro-benzene	1,4-Dichloro-benzene	cis-1,2-dichloroethene	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloropropane	1,2-Dichloroethane	Dichlorodi-fluoromethane	Dichloro-flouromethane	Diethyl ether	Methylene Chloride	Methyl tert-butyl ether	Napthalene	Styrene	Tert-Butyl-Alcohol	Tetrachloroethene	Tetrahydrofuran	Toluene	Trichloroethene	Vinyl chloride	Xylenes	Comment
West of FA1	MW-2A																										Monitoring Well
	MW-40																X[2]			X[2]							POC Monitoring Well
	MW-6																										Monitoring Well
	MW-1A																										Monitoring Well
Canyon South of Fill Area 1	E-05R														X[2]		X[2]			X[2]		X[2,4]					Corrective Action Well Matches Historical Data
	E-07							X[2]	X				X[2]		X[2]		X[2]				X[2]			X[2]			Corrective Action Well Matches Historical Data
	E-21																										Evaluation Well
	E-22																										Evaluation Well
	E-23																										Corrective Action Well
	E-03A																										Corrective Action Well
NE of FA1	MW-4A																										Monitoring Well
	MW-4B																										Evaluation Well
	MW-37																										POC Monitoring Well
	MW-31																										Monitoring Well
South of FA1	MW-5A																										Monitoring Well
	MW-7																										Monitoring Well
	MW-11																										Monitoring Well
East of Fill Area 1	E-20B								X						X[2]		X[2]										Corrective Action Well Matches Historical data
	MW-38								X					X[2]			X[2]										POC Monitoring Well
	MW-39																										POC Monitoring Well
	MW-27																										Corrective Action Well
	MW-3B																										Monitoring Well
	MW-53																										Monitoring Well for MW-38
Downgradient of E-20B	MW-27																										Downgradient Evaluation Well
	MW-20R[5]								X[1,2]						X[1,2]	X[2]											Downgradient Evaluation Well

Notes
VOC - Volatile Organic Compound
POC - Point of Compliance
[1] First detection.
[2] Concentration reported is estimated because it is below the reporting limit and above its method detection limit.
[3] Analyte was detected in method, trip, and/or field blanks associated with a different lot during the same event, but not detected in the quality control blanks associated wih this particular sample.
[4]Denotes constituent also found in trip blank
[5]MW-20R was constructed to replace MW-20 in October 2022 because MW-20 was abandoned in April 2022.

LANGAN

Table 6.4.1-3
Fill Area 2 Analytical Results Summary
Altamont Landfill Resource and Recovery
Livermore, CA

Area	Sample ID	Sample Date	Acetone	Benzene	Benzyl Alcohol	Bromomethane	2, Butanone	Carbon Disulfide	Chloro-benzene	Chloroform	1,4-Dichloro-benzene	cis-1,2-dichloroethene	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloropropane	1,2-Dichloroethane	Dichlorodi-fluoromethane	Dichloro-flouromethane	Diethyl either	Methylene Chloride	Methyl tert-butyl ether	Naphthalene	Styrene	Tert-Butyl-Alcohol	Tetrachloroethene	Tetrahydrofuran	Toluene	Trichloroethene	Xylenes	Comment
Fill Area 2	MW-34B	9/12/2022																				X[2]								Final FA2 POC Monitoring Wells
		12/19/2022																				X[2]								
	MW-44B	9/7/2022																				X[2]								Final FA2 POC Monitoring Wells
		11/30/2022																												
	MW-45B	9/7/2022																				X[2]								Final FA2 POC Monitoring Wells
		11/30/2022																												
	MW-49B	9/8/2022						X																						Final FA2 POC Monitoring Wells
		12/19/2022						X[2]																						

Notes
VOC - Volatile Organic Compound
POC - Point of compliance
[1] First detection
[2] Concentration reported is estimated because it is below the reporting limit and above its method detection limit.
[3] Analyte detected in associated trip blank.
[4] Analyte detected in associated equiptment blank at a reportable limit.
[5] Analyte was detected in method, trip, and/or field blanks associated with a different lot during the same event, but not detected in the quality control blanks associated wih this particular sample.
[6] Analyte was reported in an associated method blank at a reportable limit.
[7]MW-8A, MW-8B, MW-9, MW-15B, MW-10, MW-16, MW-17, MW-17(R), MW-18, MW-19, MW-27, MW-34A, MW-35A, MW-35B, MW-41A, MW-41B, MW-42A, MW- 43, MW-44A, MW-45A, MW-45C, MW-46A, MW-46B, MW-47A, MW-47B, MW-48A, MW-48B, MW-49A, MW-50, MW-51, MW-52, MW-54, MW-55, MW-56, MW-57, PC-2A, PC-2C, PC-6B(R), WM-2 were also sampled during this event and no detection of VOCs were reported.
[8]PC-1A, PC-1B and PC-1C were abandoned February 2022. MW-30, MW-32, MW-33, and MW-36 were abandoned April 2022.
[9] A sample was collected at MW-19 without purge per RWQCB and SAP. The well went dry during or at the end of grab sampling and no recharge occurred after 24 hours. No samples were collected at MW-42B because the well was

Figure 6.4.1.6

LOOKOUT HILL
F4
STORMWATER RETENTION BASIN G/"SB-G" (FORMER SB-2) REMOVED FALL 2022
CASP
CASP
RWQCB ORDER WQ, 2020-0012-DWQ
EAST PERIMETER
STORMWATER RETENTION BASIN E/"SB-E" (FORMER SB-1)
WEST FAULT
HUEY FAULT
STORMWATER RETENTION BASIN F/"SB-F"
MW-52
MW-19
PC-6B (R)
PC-6B
MW-43
MW-41A
MW-42B
MW-42A
PHASE 3
MW-41B
APPROXIMATE LIMITS OF FILL AREA 2 (FA2)
FILL AREA 2
PHASE 1
PHASE 1 UD-1 & LD-1 EXTENDED
UD-3 & LD-3 EXTENDED
UD-4, LD-4, LP-4 Extended
HSA-6
MW-14
BASIN ISB-A/SB-A (REMOVED)
MW-14R
MW-22
PHASE 4
MW-47B
MW-53
MW-21
MW-24
PHASE 5
MW-47A
LSI-3 CLASS II SURFACE IMPOUNDMENT VZM-B, LS-3
PHASE 2
MW-28
MW-55
MW-51
MW-10
MW-13A
MW-32
UD-5, LD-5, LP-5
MW-48B
MW-48A
MW-18
MW-17
MW-28A
MW-13B
MW-45 B
MW-45 A
MW-45 C
MW-46 B
MW-46 A
MW-25
MW-30
MW-23B
MW-56
MW-16
MW-17R
PHASE 2 UD-2 &LD-2 EXTENDED
MW-33
MW-57
MW-44 B
MW-44 A
MW-15A
MW-26
PC-1A/B/C
MW-36
MW-15B
MW-35 A
MW-35 B
MW-54
SPRING 1&2
MW-34 A
MW-8A
PC-2A
MW-8B
PC-2C
MW-50
MW-34 B
MW-49A
MW-49B
STORMWATER RETENTION BASIN H/"SB-H"
MW-9
MW-1A
MW-1B
DIBBLEE
MW-37
MW-31
MW-4B
MW-4A
SOLIDIFCATION BASINS
EARTHCARE MATERIAL STORAGE
DAVIS STREET TRANSFER STATION DROP & HOOK
TIRE SHREDDING FACILITY
LANDFILL GAS TO LIQUID NITROGEN GAS FACILITY
FLARE STATION & LANDFILL GAS TO ENERGY PLANT #2
TRUCK WASH
MW-40
MW-38
WM-1
MW-39
FILL AREA 1 UNIT 2
ASBESTOS AREA
MW-6
UNIT 2 MONITORING LOCATIONS FOR LEACHATE, VADOSE ZONE, & SUBDRAIN (LS2, VZMA, VD2)
APPROXIMATE LIMITS OF FILL AREA 1
UNIT 1 CLOSED AREA
FILL AREA 1 UNIT 1
E-20B
MW-3C
MW-12
SEDIMENTATION BASIN "D"
MW-20
MW-3B
MW-20R
LSI-2 NORTH CLASS II SURFACE IMPOUNDMENT (NO LEACHATE: LSI-2LD, LSI-2VZM)
LSI-1 SOUTH CLASS II SURFACE IMPOUNDMENT (LSI-1 LD, LSI-1, VZM)
MW-27
APPROXIMATE FACILITY BOUNDARY
MW-11
WASTE WATER PLANT TANKS
FLARE STATION & LANDFILL GAS TO ENERGY PLANT #1
MW-2C
MW-2B
MW-2A
FUELING FACILITY
MAINTENANCE BUILDING
MW-7
E-07
E-05R
GWIB
FILL AREA 1 CONDENSATE SAMPLE LOCATION
UNIT 1 MONITORING LOCATIONS FOR LEACHATE & VALLEY DRAIN MANHOLE LOCATION (LS, VD)
MW-5A
MW-5B
E-18
E-23
E-17
E-21
ADMINISTRATION OFFICES (INCLUDING THE ENGINEERING OFFICE TRAILER)
GUARD HOUSE
E-22
E-03A
STORMWATER RETENTION BASIN "C"
STORMWATER RETENTION BASIN "A"
LOOKOUT HILL

LEGEND

- E-17 — CORRECTIVE ACTION PROGRAM WELL LOCATION
- MW-5A — DETECTION OR EVALUATION MONITORING PROGRAM WELL LOCATION (FILLS AREAS 1 AND 2)
- E-18 — MONITORING WELL LOCATION ONLY
- WM-1 — ABANDONED MONITORING WELL

MAPS SHOWING UNSATURATED GAS LOCATIONS (GAS PROBES [GP], VAPOR PROBES [VP], UGP-1 THROUGH UGP-18, AND AL-6) ARE LOCATED IN APPENDIX F.

MW-53 LOCATION IS APPROXIMATE PENDING SURVEY.

N

GRAPHIC SCALE
0 800 1600
SCALE IN FEET

SOURCE: JANUARY 10, 2022 TOPO PROVIDED BY WASTE MANAGEMENT

NO.	REVISION	DATE

SHEET TITLE: GROUNDWATER MONITORING NETWORK

PROJECT TITLE: ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY ALAMEDA COUNTY, CALIFORNIA

CLIENT: Waste Management of Alameda County, Inc.

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
3900 KILROY AIRPORT WAY, STE 100
LONG BEACH, CA 90806
PH. (562) 426-9544 FAX. (562) 427-0805

PROJ. NO.	DSN. BY:	CHK. BY:	DWN. BY:	ACAD FILE:	APP. BY:
01202209.10	A. HUTCHENS	T. SCHMIESING	T. BIRREN		K. LISTER

DATE: FEBRUARY 2023

SCALE: 1" = 800'

FIGURE NO. 2

LANGAN

1814 Franklin Street, Suite 505 Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

Memorandum

To: Community Monitor Committee

From: Langan – Community Monitor

Date: March 23, 2023

Re: **CMC Meeting of 4/12/23 – Agenda Item 6.4.2 – Review of Reports Provided by ALRRF: Air Emission Report**

Air Emissions Report

The most recent Semi-Annual Report to the Bay Area Air Quality Management District (BAAQMD) covers the period from June 1, 2022 through November 30, 2022. The key points from this document are:

- New gas wells brought on line – During the reporting period, 19 new landfill gas extraction wells were brought on line.

- High temperature wells – During the reporting period, no wells showed high temperatures (131 Fahrenheit [F] or higher).

- Recent gas well decommissions – During the reporting period, a total of 5 existing wells were decommissioned, i.e., shut down and disconnected from the gas extraction system because they had become unproductive.

- Surface emissions monitoring – For the second quarter of 2022, surface emissions monitoring took place on June 7, 2022; for the third quarter of 2022, monitoring took place on 29, 30 and 31 of August 2022, as well as September 1, 2022. In June, for the second quarter of 2022, there were 8 exceedances of the 500 parts per million by volume (ppmv) methane threshold. In August and September 2022, for the third quarter, the number of exceedances decreased to 4. All of the corrective actions to block these emissions were successful and passed their 10-day and 30-day follow-up tests.

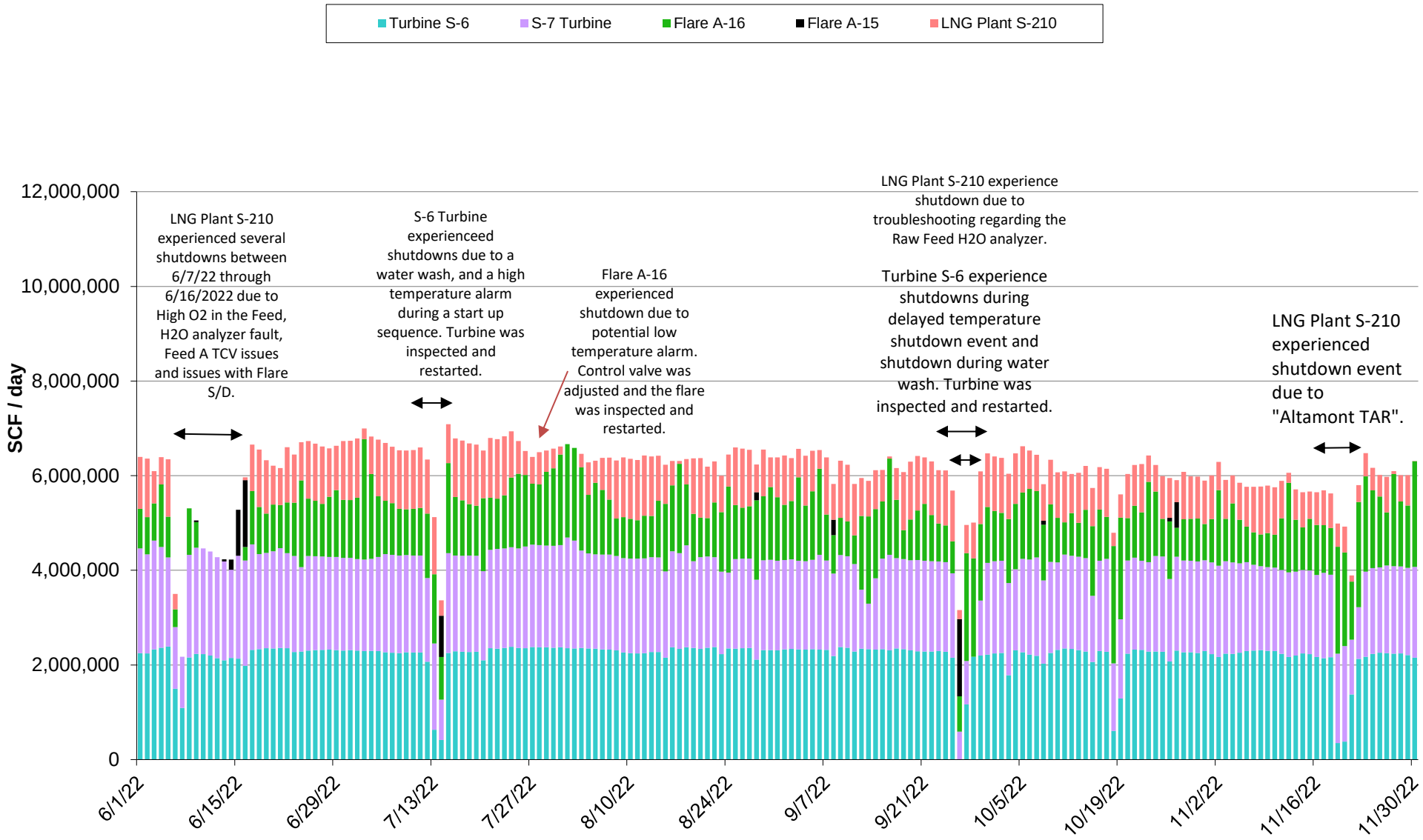
- Emission Control Device Source Tests – Currently the operating emission control devices for landfill gas at the ALRRF consist of two turbines (S-6 and S-7) and two flares (A-15 and A-16). The two turbines were tested for compliance with emission limits in December 2021, while the main flare, A-16, and the back-up flare, A-15, and were tested in February 2022, 60 days late of the test date. All four devices passed by the BAAQMD Permit 8-34-412 and Condition Number 18773.

- Gas Migration at Perimeter Probes – In this reporting period, methane exceeding regulatory threshold of 5% was not found in any of the 50 perimeter probes installed around Fill Areas 1 and 2. Probe GP-20C and probe GP-8C, both have historically had higher methane values that have been proven to be naturally occurring and not related to landfill operations. No exceedances were detected during this monitoring event.

- Gas Migration Near Groundwater Monitoring Wells – Throughout this monitoring period, the landfill gas wells nearest to groundwater monitoring wells E-05/E-07, E-20B, and MW-4A continued to be operated with as much vacuum as they would tolerate without pulling in air from above the ground surface. This was an effort to prevent landfill gas from reaching those groundwater wells, where low concentrations of VOCs have been detected.

Figure 6.4.7 shows the amounts of landfill gas consumed by each of the gas-consuming devices at the ALRRF. As shown in the figure, the gas system ran for most of the six-month reporting period. As shown in the figure, there were few major down times for the LNG Plant S-210 including high oxygen in the feed, a fault with the H_2O analyzer, o, issue with the Flare, troubleshooting due to issues with the Raw Feed H_2O analyzer, and other shut down events. Flare A-16 was shut down due to a potential low temperature alarm. Turbine S-6 experienced shutdown due to a potential low temperature alarm, a delayed temperature shutdown event and during a water wash. Turbine S-7 ran smoothly through the six-month reporting period. S-7 Turbine was shut down for testing and maintenance. The LNG Plant S-210, Flare A-16 and Turbine S-6 were restarted and brought back online after each incident was resolved.

Figure 6.4.7 - ALRRF Daily LFG Flow
(values derived from Title V Report)



LANGAN

1814 Franklin Street, Suite 505 Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

Memorandum

To: ALRRF Community Monitor Committee

From: Langan – Community Monitor

Date: March 23, 2023

Re: **CMC Meeting of 4/12/23 - Agenda Item 6.5 - Updates on PFAS regulations and monitoring requirements**

PFAS MONITORING

The Committee Members have expressed continued interest in new developments related to per- and polyfluoroalkyl substances (PFAS), in particular to better understand about future requirements that may affect the landfill. Products known to contain PFAS are regularly disposed of in landfills.

California and Federal agencies are in the process of evaluating health risks and developing guidance for PFAS, no relevant updates have occurred on PFAS monitoring requirements for landfills.

At the ALRRF, PFAS were sampled in November 2019 in response to the State Water Resources Control Board's (SWRCB) investigative order (WQ 2019-0006-DWQ). The PFAS samples were analyzed by Eurofins TestAmerica in West Sacramento. Total PFAS sample results are presented in Figure 6.5.1, attached to this memo.

Leachate samples for Fill Area 1 reported total concentrations from approximately 21,000 to 26,000 parts per trillion (ppt). Fill Area 2 leachate sample (LS-4) reported concentrations considerably lower, with a total concentration of approximately 2,700 ppt. Trace concentrations (<2.0 ppt) of three PFAS compounds were detected in background monitoring well PC-6B(R), located up gradient of Fill Area 2. Trace concentrations of two PFAS compounds were reported in detection monitoring well PC-1B, located downgradient of Fill Area 2. Monitoring wells MW-4A and MW-13B reported small concentrations of PFAS, with total concentrations of 57 and 98 ppt. PFAS compounds were reported at higher concentrations in groundwater monitoring wells in the previously affected assessment and corrective action areas. In particular, wells E-05 and E-07 reported concentrations of approximately 2,000 and 1,200 ppt, respectively. Concentrations for wells E-20B and MW-20 were 650 and 670 ppt, respectively.

The concentrations reported at the ALRRF were below the maximum concentrations for groundwater and leachate at other landfills covered by the PFAS Order, and within the middle of the range. Neither the SWRCB nor the Central Valley Regional Quality Control Board (CVRWQCB) have requested additional monitoring at this moment.

On May 18, 2022, the U.S. Environmental Protection Agency (EPA) added five PFAS to a list of risk-based values for site cleanups[1]. These levels are used by the EPA and other agencies in the investigations of contaminated sites. No updates to the risk-based values have occurred for PFAS since May 2022.

On June 15, 2022 the EPA announced new drinking water health advisories for PFAS[2]. The EPA issued interim, updated drinking water health advisories for two substances and final health advisories for two additional substances. These health advisories inform the maximum contaminant levels allowed in drinking water, and would not have an effect at this moment on landfills.

On August 17, 2022 the Division of Drinking Water presented at the State Water Resource Control Board meeting on the Notification and Response Levels for Perfluorohexane Sulfonic Acid[3]. There is continued progress through the discussion of this topic from regulatory agencies but at this time no direct regulatory updates have occurred.

On August 26, 2022 the EPA announced under the Administrator Regan's PFAS Strategic Roadmap, significant action to protect communities health from the risks posed by certain PFAS's[4]. The EPA is proposing that PFAS become designated as a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or "Superfund." This would increase transparency around the releases of PFAS and help hold polluters accountable for the cleanup. This proposal applies toward PFOA and PFOS.

On March 14, 2023, the EPA announced proposed national primary drinking water maximum contaminant levels (MCLs) for six PFAS (PFOA and PFOS as individual contaminants, and four contaminants as a PFAS mixture). The proposed regulation would require public water systems to monitor, notify the public of the contaminant levels, and treat drinking water to reduce the levels of these PFAS if they exceed the proposed MCLs[5]. California-specific MCLs for PFAS have not yet been established as of March 2023[3].

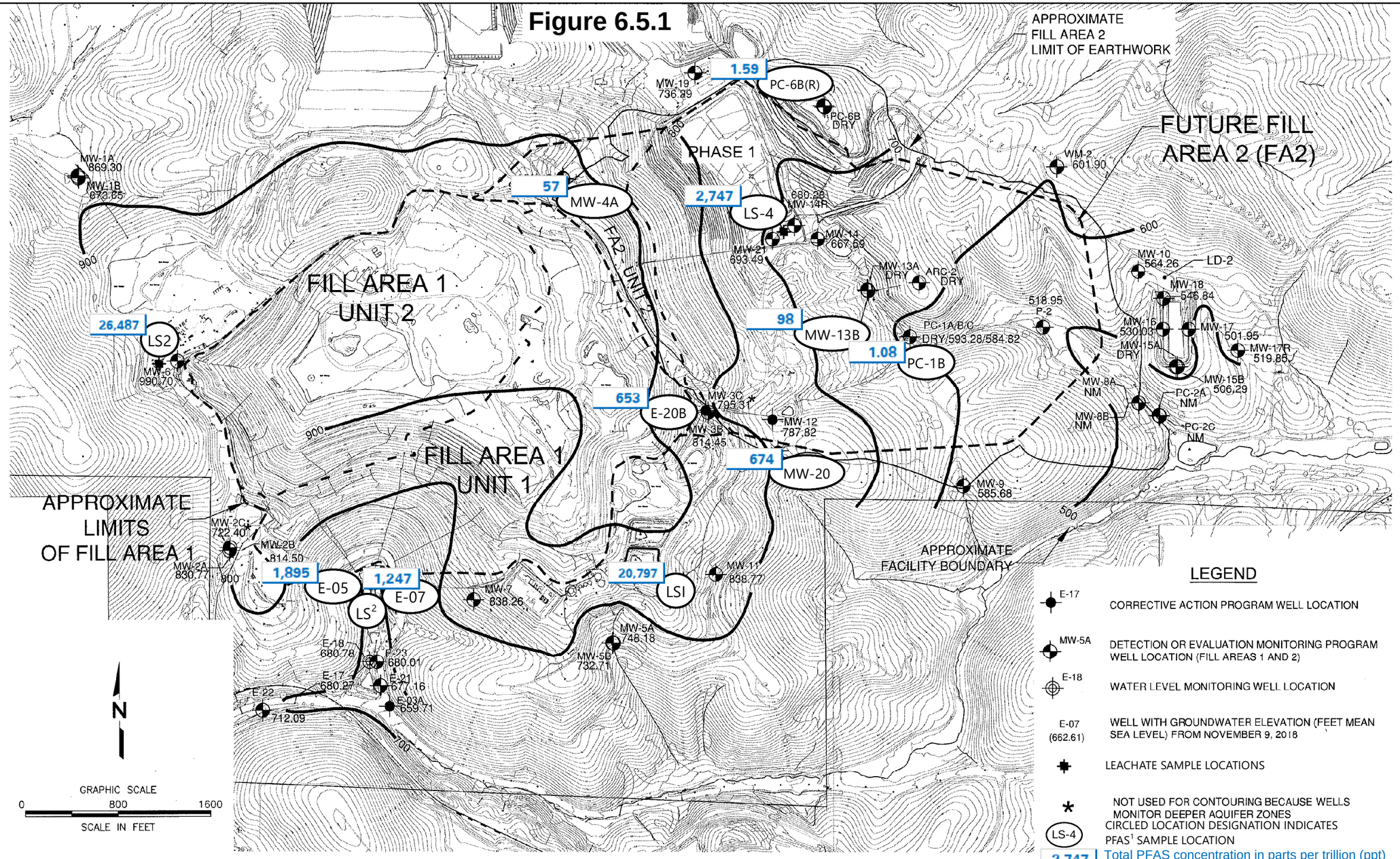
Regarding corrective actions, known technologies for treating PFAS in water include granular activated carbon, ion exchange, and reverse osmosis[6]. Granular activated carbon and ion exchange resins remove chemicals by sorption (the chemical is attached to the media), which reduces concentrations of chemicals in the effluent water of the system. Reverse osmosis removes contaminants by pushing water through a semipermeable membrane, effluent water has less chemicals, and a portion of the water (rejected water or concentrate) is collected for

[1] https://www.epa.gov/risk/regional-screening-levels-rsls-whats-new
[2] https://www.epa.gov/newsreleases/epa-announces-new-drinking-water-health-advisories-pfas-chemicals-1-billion-bipartisan
[3] https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/pfas.html
[4] https://www.epa.gov/newsreleases/epa-proposes-designating-certain-pfas-chemicals-hazardous-substances-under-superfund
[5] https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas
[6] Interstate Technology and Regulatory Council (ITRC), 2022. Treatment Technologies – PFAS — Per- and Polyfluoroalkyl Substances. https://pfas-1.itrcweb.org/12-treatment-technologies/#12_1. Accessed on March 10, 2022.

disposal. PFAS do not degrade in the environment, and one of the few technologies that can potentially destroy PFAS is incineration.

Current and proposed regulations have focused on drinking water. Future developments may include additional monitoring for landfill and other disposal facilities.

Figure 6.5.1



Map modified from drawing 4 of Second Semiannual-Annual 2018 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility. SCS Engineers, February 28, 2019

Modified by Langan on 3/11/2020 to include PFAS results

Notes:
1) PFAS = per- and polyfluoroalkyl substances.
2) LS was a proposed leachate sample location but was dry on day of sampling.

PFAS Sample Locations, Groundwater Elevation and Contour Map
Fourth Quarter 2018
Altamont Landfill and Resource Recovery Facility
Livermore, Alameda County, California

By: EMC	Date: 1/23/2020	Project No.: FR19161340
wood.		Figure 1

Date: 1/23/2020 Printed by: elizabeth.chapman
Path: N:_FR_projects\FR19s\FR19161340 WM\gis\Altamont_fig01_PFAS_GW_contours.mxd

LANGAN

1814 Franklin Street, Suite 505 Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

Memorandum

To: ALRRF Community Monitor Committee

From: Langan, Community Monitor

Date: March 31, 2023

Re: **CMC Meeting of 4/12/23 – Agenda Item 6.6 – Reports From Community Monitor**

ALTAMONT MONTHLY OPERATIONS AND RECORDS REVIEW

During the fourth Quarter of 2022 and the first Quarter of 2023, four site visits were performed by the Community Monitor. In addition to site visits, summaries of LEA inspections available on CalRecycle's website are reviewed and important issues are highlighted in the monthly reports. The reports in this item include:

- Community Monitor Site Visit for December, which took place on December 1, 2022.
- Community Monitor Site Visit for January, which took place on January 31, 2023.
- Community Monitor Site Visit for February, which took place on February 27, 2023.
- Community Monitor Site Visit for March, which will took place on March 24, 2023.

Details about operations-related matters are provided in the attached reports. Issues that cause special concern are marked with yellow rectangles in the monthly reports. For the fourth and first quarters, construction of additional landfill space in Fill Area 2, Phase 5 was ongoing. Construction of Phase 4 was completed in April of 2022, obtained regulatory approval and has been in use. The storms that occurred during the winter of great importance, and WMAC dedicated resources to make improvements.

Also attached are graphs showing monthly tonnages by type of material for the most recent 12-month period. Figure 6.6-1 shows the breakdown of materials that make up Revenue-Generating Cover. Figure 6.6-2 shows these same quantities, plus the Municipal Solid Waste (MSW) and Special Waste tonnage for each month.

ALRRF Community Monitor Monthly Report — December 2022

Monthly Tonnage Report for December 2022, received January 13, 2022

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	81,133.77	
1.2	Other Out of County Disposal Tons	2,102.05	
	subtotal Disposed	83,235.82	
	Disposed, By Source Type		
2.1	C&D	240.37	
2.2	MSW	79,383.88	
2.3	Special Wastes	3,611.57	
	subtotal Disposed	83,235.82	
		0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	685.71	
2.5	Revenue Generating Cover	25,360.19	
	Total, 2.1 - 2.5	109,281.72	
	Materials of Interest		
2.1.1	Fire Debris	240.37	
2.3.1	Friable Asbestos	612.01	
2.3.2	Treated Wood	157.23	
2.5.1	Class 2 Cover Soils	12,514.01	
2.5.2	Auto Shredder Fluff	2,164.46	
2.5.3	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00	
2.5.4	MRF Fines for ADC	656.07	

ALRRF Reports from Community Monitor **December 2022**

Site Visit December 1, 2022, 9:00 AM - 1:00 PM

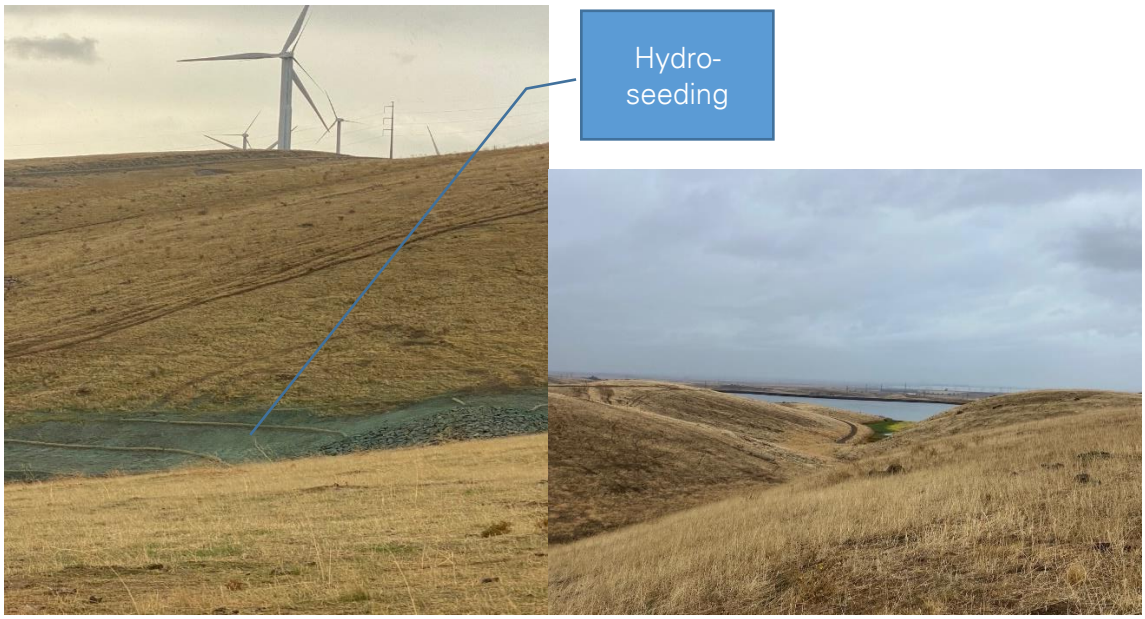
- Attended by Megan Rollo (Langan, Community Monitor), Ryan Hammon (LEA, Alameda County); David Madieros, (LEA, Alameda County)
- Escort: Luis Rocha (Waste Management). Unannounced.
- Weather: Rain, 47 degrees, wind.

General Observations

- Traffic to the site was flowing freely through the road and the entrance of the landfill.
- The scale houses appeared to be in good condition.
- ALRRF staff removing leaves from drainage system in parking lot area.

Back-40 to Bethany Reservoir

- The Back-40 is the portion of the property to the northeast of FA2. Windblown litter was not observed in this area. WMAC reported litter in the Back 40 is picked up twice each day, and the neighboring properties are inspected once a week.
- Hydro-seeding was observed at the entrance to the Back-40 (WMAC side) to mitigate erosion during wet season.
- No litter was observed near Bethany Reservoir.



Fill Area 2 Operations

- Windblown litter was observed on the litter catching fences that border FA2.
- Birds were observed in the vicinity of FA2 at time of visit. Bird scare cannons were used several times during observation of FA2.
- Landfill operations were occurring on FA2 Phase 4.
- Multiple stockpiles of cover soil and Alternative Daily Cover (ADC) were observed near the Active Face, Phase 4.
- Phase 5 construction was ongoing, and compaction of the liner layers was observed.

- Piles of asphalt were observed distributed along Phases 3 and 4. This is the second step in Winterization of roads at the Landfill. Asphalt pad implementation had begun within a week or two of the site visit.

Fill Area 1

- Fill Area 1 (FA1) was observed at the solidification basins and LSI ponds.
- The two solidification basins were observed to be in good condition. One stockpile of auto-shredder was observed. ALRRF reported the stockpile would be distributed by Saturday per landfill standard operations.

- The LSI ponds were in good condition. LSI-2, which holds underdrain and rainwater, was observed with 18 feet of freeboard and LSI-1, which holds leachate, had 12 feet of freeboard.
- The implemented "back-splash" behind LSI-1 in response to a CVRWQCB Facility Inspection Report is present and well maintained. The system was built to prevent leachate foam from migrating outside of the pond.

Auto-shredder stockpile

LSI-1 Pond Backsplash

Other Environmental Observations / Issues

- WMAC is has begun a process to mitigate potential muddy roadways on site during the upcoming winter season. Asphalt layer to be implemented this week. Winterization Report was reportedly submitted to CVRWQCB.

Special Occurrences

Updates on special occurrences will be provided when received.

ALRRF Community Monitor Monthly Report **January 2023**

Monthly Tonnage Report for January 2023, received February 13, 2023

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	89,340.48	
1.2	Other Out of County Disposal Tons	4,256.19	
	subtotal Disposed	93,596.67	
	Disposed, By Source Type		
2.1	C&D	256.72	
2.2	MSW	87,504.70	
2.3	Special Wastes	5,835.25	
	subtotal Disposed	93,596.67	
		0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	378.13	
2.5	Revenue Generating Cover	28,366.90	
	Total, 2.1 - 2.5	122,341.70	
	Materials of Interest		
2.1.1	Fire Debris	256.72	
2.3.1	Friable Asbestos	605.27	
2.3.2	Treated Wood	105.8	
2.5.1	Class 2 Cover Soils	13,262.44	
2.5.2	Auto Shredder Fluff	3,396.65	
2.5.3	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00	
2.5.4	MRF Fines for ADC	834.57	

ALRRF Reports from Community Monitor

January 2023

Site Visit January 31, 2023, 10:00 AM – 12:00 PM

- Attended by Megan Rollo (Langan, Community Monitor)
- Escort: Luis Rocha (Waste Management). Announced.
- Weather: Sunny, light wind. 54 degrees.

General Observations

- Traffic to the site was flowing freely through the road and the entrance of the landfill.
- The scale houses appeared to be in good condition.
- Light erosion of dirt within parking lot area.

Fill Area 1

- Fill Area 1 (FA1) was observed at the solidification basins and LSI ponds.
- The two solidification basins were observed from the Bird Perch and appeared to be in good condition. Treated auto-shredder off-haul was observed, and a truck of "yellow-flag" waste that will be utilized for Alternative Daily Cover (ADC) once solidified was dumping during the observation.
- The LSI ponds were in good condition. LSI-2, which holds underdrain and rainwater was observed with 14 feet of freeboard, which is a higher quantity of liquid due to excessive storms the area has seen in the past month.
- LSI-1, which holds leachate, had 4 feet of freeboard, which is a lower quantity than in previous months.

ET Cover

- The roadway to access ET cover was muddy and showed minor erosion due to the storms that impacted the area, but generally it was in useable conditions.
- WM staff pointed out two locations where slope erosion occurred in the ET. WM told the CM that due to the Landfill receiving over 1.5 inches of rain during the storm event, WM will provide the CVRWQCB with a 7-Day report detailing the impacts of the storm event to the landfill. These erosion locations will be addressed in this report.

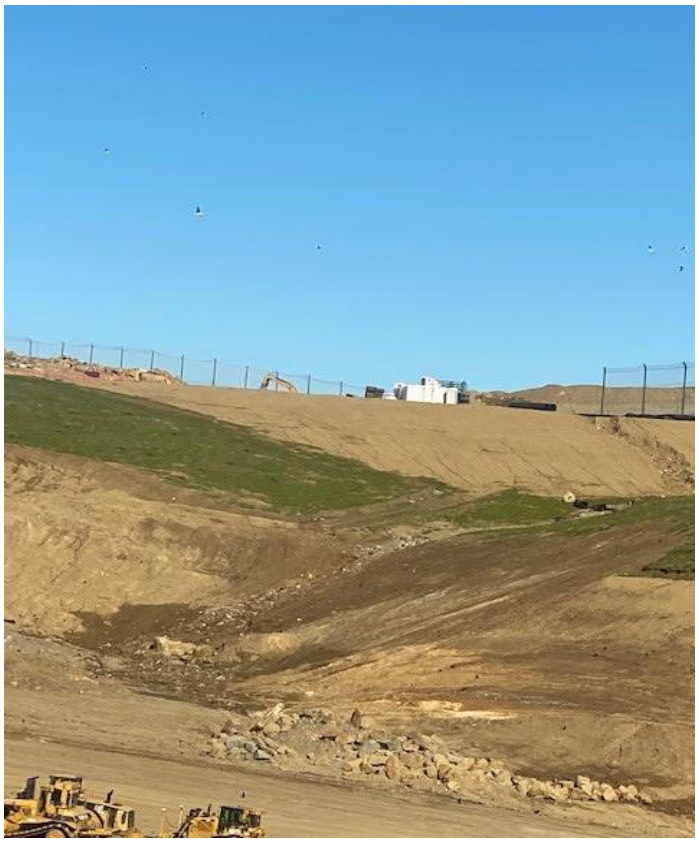
Erosion at ET from storm event, likely December 16, 2022.

Fill Area 2

- Some windblown litter was observed on the litter catching fences that border FA2.
- Several birds were observed in the vicinity of the FA2 at time of visit.
- Landfill operations were occurring on FA2 Phase 4. Two tippers were observed on the winter deck (winterization pad) in Phase 4. Some crack were observed on floor of the active phase of the landfill, but otherwise appears to be in fine condition.
- Collapsed/eroded wall of native material outside of FA2.
- Erosion was observed on the Phase 4 slope of the landfill.

Erosion at FA2, Phase 6 damaged from large storm event. WM actively restoring area.

Collapsed/eroded wall located right outside of FA2.



Erosion on the easterly wall, at active phase of FA2.

Back-40

- The Back-40 is the portion of the property to the northeast of FA2. Windblown litter was not observed in this area during time of visit.

Other Environmental Observations / Issues

- As stated above, per the Waste Discharge Requirements (WDR), WM will submit a 7-Day report following the rain event that accumulated over 1.5 inches of rainfall at the landfill. This report will detail the effects of the storm event to the landfill property.

Special Occurrences

Updates on special occurrences will be provided when received.

ALRRF Community Monitor Monthly Report **February 2023**

Monthly Tonnage Report for February 2023, received March 15, 2023

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	78,922.11	
1.2	Other Out of County Disposal Tons	4,778.24	
	subtotal Disposed	83,700.35	
	Disposed, By Source Type		
2.1	C&D	1,024.07	
2.2	MSW	76,098.56	
2.3	Special Wastes	6,577.72	
	subtotal Disposed	83,700.35	
		0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	66.79	
2.5	Revenue Generating Cover	37,282.05	
	Total, 2.1 - 2.5	121,049.19	
	Materials of Interest		
2.1.1	Fire Debris	1,024.07	
2.3.1	Friable Asbestos	558.80	
2.3.2	Treated Wood	125.15	
2.5.1	Class 2 Cover Soils	21,355.85	
2.5.2	Auto Shredder Fluff	3,500.08	
2.5.3	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00	
2.5.4	MRF Fines for ADC	1,597.85	

ALRRF Reports from Community Monitor

February 2023

Site Visit February 27, 2023, 9:30 AM – 12:45 PM

- Attended by Megan Rollo (Langan, Community Monitor); Ryan Hammon (Alameda County, LEA); David Madieros, (LEA, Alameda County)
- Escort: Luis Rocha (Waste Management). Unannounced.
- Weather: Cloudy, rain and snow, strong wind. 30-45 degrees.

General Observations

- Traffic to the site was flowing freely through the road and the entrance of the landfill.
- The scale houses appeared to be in good condition.
- Precipitation caused saturated and muddy roadways, particularly impacting back-roads without gravel.

Fill Area 1

- Fill Area 1 (FA1) was observed at the LSI ponds. Due to weather conditions, the road to the solidification basin was not accessible.
- The LSI ponds were in good condition. LSI-2, which holds underdrain and rainwater was observed with 12 feet of freeboard, which is a slightly higher quantity of liquid than previous months, due to storms the area has seen in the past 3 days.
- LSI-1, which holds leachate, had 4 feet of freeboard, which is a lower quantity than previous months. At minimum, 2 feet of freeboard must be maintained.

Fill Area 2

- Several birds were observed in the vicinity of the FA2 at time of visit. Two bird screamers were fired during visit.
- Liter fences were positioned between Phase 4 and Phase 5 to prevent windblown litter from escaping the waste management unit.
- SUKUT was grading Phase 5.

- Landfill operations were occurring on FA2 Phase 4. Two tippers were observed in Phase 4. One tipper was active.
- Several small piles of Alternative Daily Cover (ADC) were observed in Phase 4.
- A collapsed/eroded wall of native material outside of FA2 remained. WMAC had begun but not completed, filling in the collapsed area observed in the January visit.

FA2, Phase 4. One active tipper utilizing

Grading on FA2, Phase 5 by SUKUT

Some activity at FA2, Phase 3 & 4. Winterization Road pictured.

Back-40

- The Back-40 is the portion of the property to the northeast of FA2. Windblown litter was not observed in this area during time of visit.
- Langan observed four members of the liter pick-up crew operating at the Back-40 entrance.

Back-40 during rain. No windblown liter present.

Other Environmental Observations / Issues

- ALRRF experiences snowfall during this visit. This is not usual weather for this area.
- Precipitation that occurred before snow caused muddy and over saturated roadways for roadways that do not contain gravel. These roadways are not accessible to general public.

Snow falling on the CASP.

Special Occurrences

Updates on special occurrences will be provided when received.

ALRRF Reports from Community Monitor

March 2023

Site Visit March 24, 2023, 9:50 AM – 11:50 AM

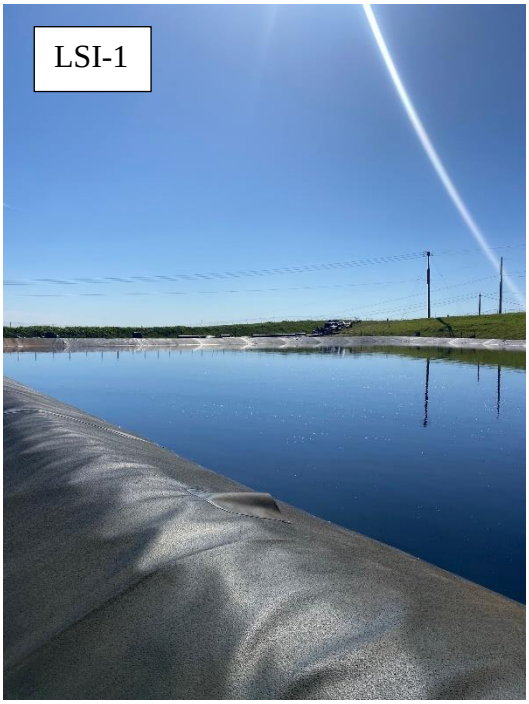
- Attended by Megan Rollo (Langan, Community Monitor)
- Escort: Luis Rocha (Waste Management). Announced.
- Weather: Sunny, light wind. 48-50 degrees F.

General Observations

- Traffic to the site was flowing freely through the road and the entrance of the landfill.
- The scale houses appeared to be in good condition.
- Roadways have dried out, but recent precipitation event continued the presence of saturated and muddy roadways, particularly impacting back-roads without gravel.

Fill Area 1

- Fill Area 1 (FA1) was observed at the LSI ponds.
- The LSI ponds were in good condition. LSI-2, which holds underdrain and rainwater was observed with 10 feet of freeboard.
- LSI-1, which holds leachate, had 4 feet of freeboard, which is a lower quantity than previous months. At minimum, 2 feet of freeboard must be maintained. No overflow has occurred during the winter.



Fill Area 2

- Several birds were observed in the vicinity of the FA2 at time of visit. One bird cannon was fired during visit.
- No active work at Phase 5, which is under construction, was visible during visit.
- Landfill operations were occurring on FA2 Phase 4. Two tippers were active in Phase 4.
- Five to six small piles of Alternative Daily Cover (ADC) were observed in Phase 4.
- Black tarps were laid over erosion caused by recent storm activity. This process prevents further erosion.

Back-40

- The Back-40 is the portion of the property to the northeast of FA2. Windblown litter was not observed in this area during time of visit.
- The cleanup crew was not observed during site visit.

Other Environmental Observations / Issues

- Storm impacts to roadways were noticeable during visit. Likely dry weather will resolve this problem in weeks to come.

Special Occurrences

- Updates on special occurrences will be provided when received.

Figure 6.6-1 Monthly Volumes of Revenue-Generating Cover

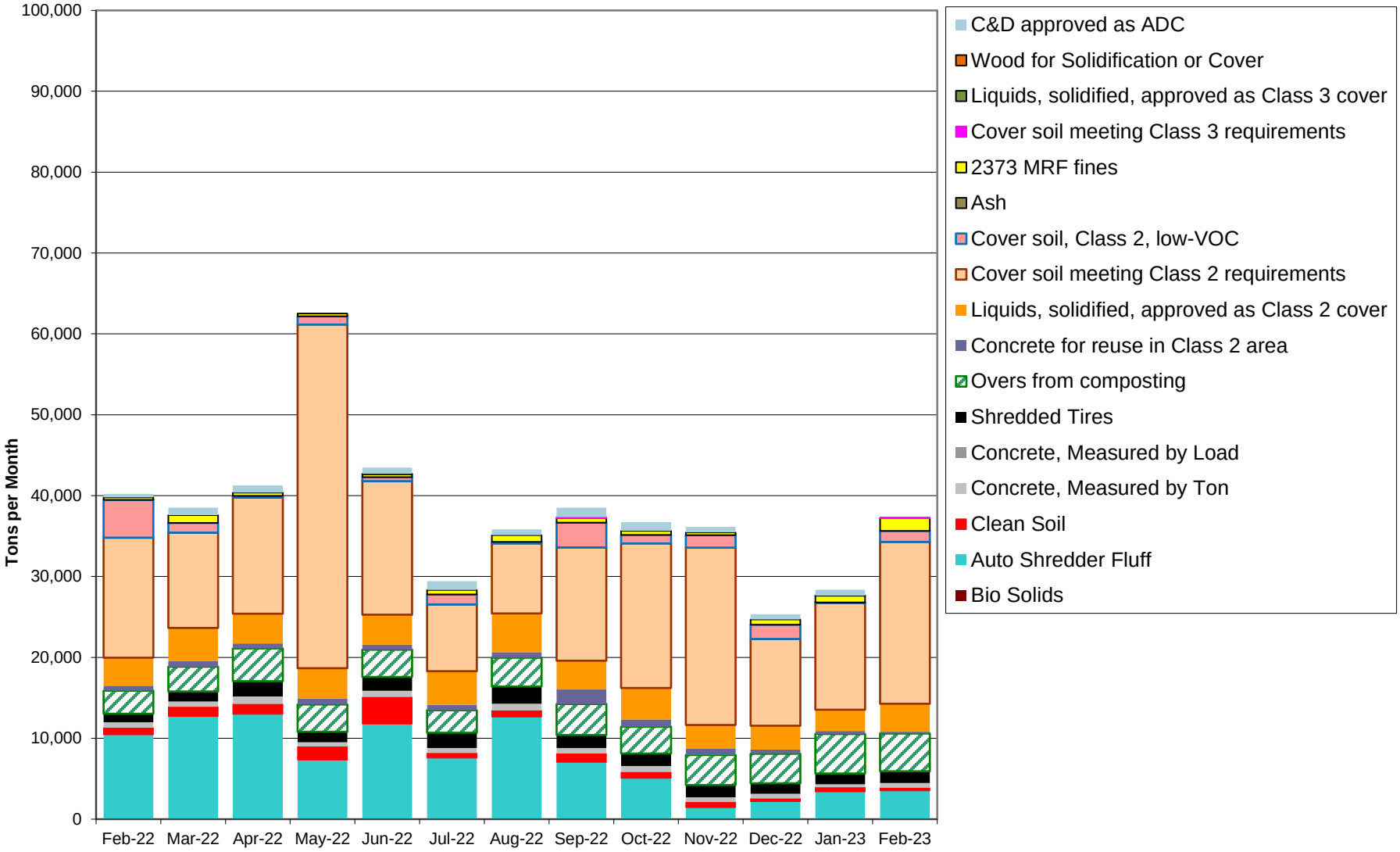
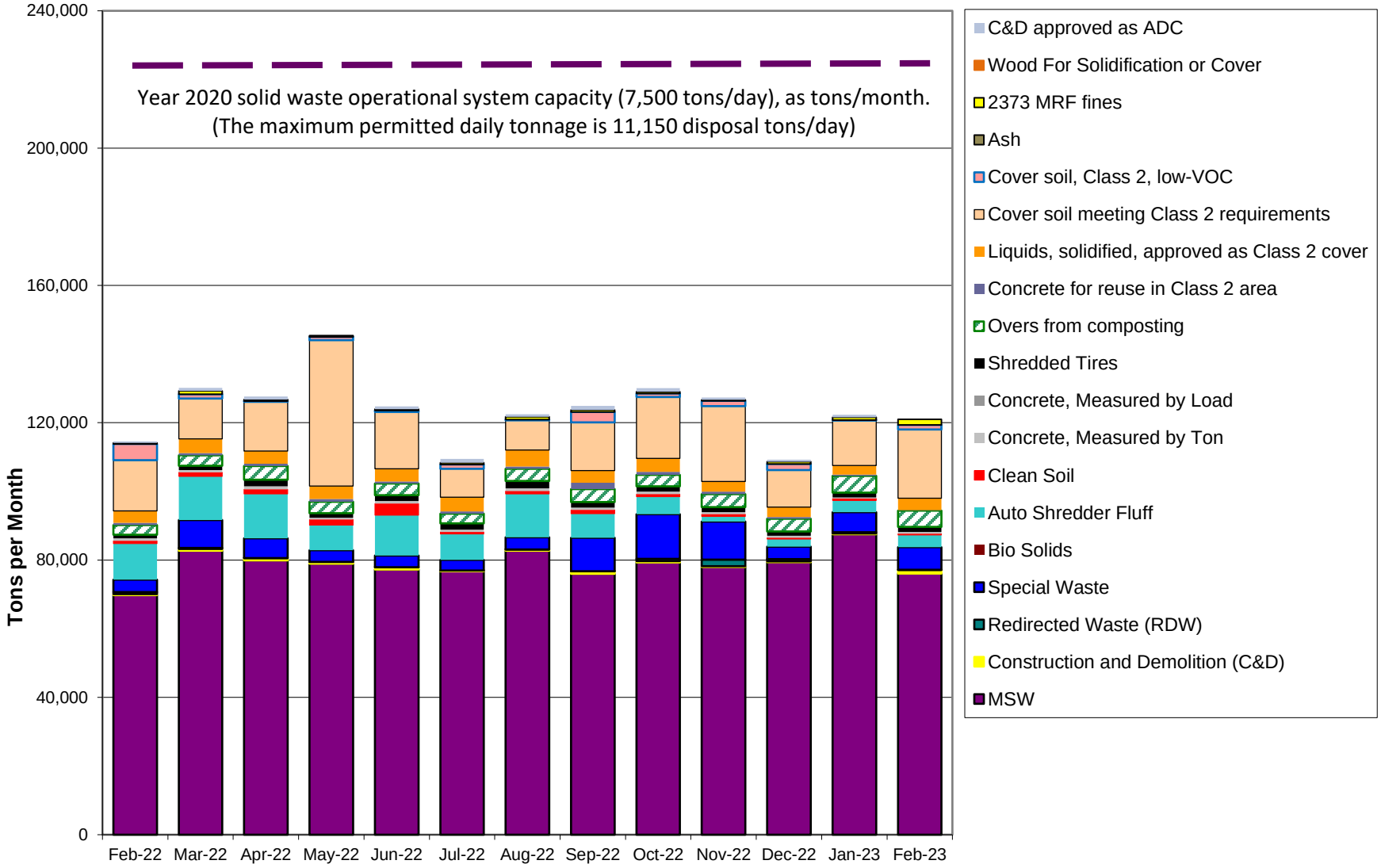


Figure 6.6-2 Monthly Volumes of Landfilled Materials



COMMUNITY MONITOR COMMITTEE
STAFF REPORT

TO: Community Monitor Committee Members

FROM: Judy Erlandson, Public Works Manager

SUBJECT: Community Monitor Committee Election of Chair

RECOMMENDED ACTION

Staff recommends the Community Monitor Committee elect a Committee Chairperson.

DISCUSSION

The Settlement Agreement, dated November 30, 1999, between the County of Alameda, the City of Livermore, the City of Pleasanton, Sierra Club, Northern California Recycling Association, Altamont Landowners Against Rural Mismanagement, and Waste Management of Alameda County, Inc. (Settlement Agreement), describes the duties and obligations of the Community Monitor Committee, but does not require the selection of a Committee Chairperson.

Although not required by the Settlement Agreement, staff recommends the Community Monitor Committee select a Chairperson to preside at all regular meetings and decide upon all points of order and procedure during the meeting.

At the January 11, 2023 Community Monitor Committee meeting, Committee Members voted to elect Committee Member Barrientos as Chairperson; the vote was 3-0 with Committee Member Barrientos absent. The Committee requested that this item be reconsidered at the April 2023 meeting in the case that Committee Member Barrientos declined the appointment of Chair.

At this time, the Committee may confirm Committee Member Barrientos as Chair, the Committee may choose to appoint an alternate Chairperson, or the Committee may choose not to select a Chairperson. In any case, the option selected shall be by majority vote of the voting members of the Committee. If a quorum of three of the four voting Committee members is present, all three committee members would have to vote, and vote unanimously, in order to take this action.

Approved by:

Judy Erlandson
Public Works Manager

LANGAN

Memorandum

1814 Franklin Street, Suite 505 Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

To: ALRRF Community Monitor Committee

From: Langan – Community Monitor

Date: March 23, 2023

Re: **CMC Meeting of 4/12/23 - Agenda Item 6.8 - Topics for 2022 Annual Report**

The draft of the Annual Report for 2022 is attached. The list below summarizes the topics-of-interest for 2022 that were identified by Committee Members. Each of these is addressed or updated in the appropriate section(s) within the reports, and those sections are identified below.

Topic	Section(s)
Fill Area 2 operations and expansion	
Construction activity during 2022	2.2 – 1st bullet
Monitoring well replacement	2.2 – 2nd bullet
Cease and Desist Order (CDO)	2.3.2.2
Fill Area 2 Detection Monitoring Program	
MW-4A Evaluation Monitoring Program	
Fill Area 1 Corrective Action Program	
Solidification basins	
Windblown litter incidents and controls	1.2, 1.4, 2.2, 2.3
PFAS regulatory updates	2.7
ET cover	2.2 – 7th bullet

Information has been updated through the report to reflect changes that have occurred in this year.

COMMUNITY MONITOR ANNUAL REPORT 2022
ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
Livermore, CA

Prepared For:

ALRRF Community Monitor Committee

Prepared By:

Langan Engineering and Environmental Services, Inc.
1814 Franklin Street, Suite 505
Oakland, CA 94612

DRAFT
Megan Rollo
Staff Scientist

DRAFT
Maria E. Lorca, PG
Senior Staff Geologist

DRAFT
Mukta Patil, PE
Senior Project Engineer

April 12, 2023
750657603

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1.0 INTRODUCTION

1.1 Background: Settlement Agreement

In December 1999, a Settlement Agreement was reached among parties involved in a lawsuit regarding the proposed expansion of the Altamont Landfill and Resource Recovery Facility (ALRRF). The settlement limited the expansion to a second permitted operational area, known as Fill Area 2 (FA2), adjacent to the existing Fill Area 1 (FA1). The Settlement Agreement established the Community Monitor Committee (CMC) and a funding mechanism for its technical consultant, the Community Monitor (CM).

The Settlement Agreement defines the purview of the CMC and the CM. The CM's scope of work is further defined in a contract between the CM and the CMC. The City of Livermore provides staff and administrative support to the CMC, as well as management of the CM contract and space for CMC meetings. The City also acts as financial agent for the CMC, pursuant to a letter agreement dated July 6, 2004.

In broad terms, the CM is to review certain reports and information, as defined; monitor incoming traffic by conducting truck counts, as described in the Settlement Agreement; and inspect the ALRRF site no more than twelve times each year. The Settlement Agreement describes the CM's Scope of Work to include "issuing a written report each year summarizing the ALRRF's compliance record for the period since the last such report with respect to all applicable environmental laws and regulations." This Annual Report provides that summary for 2022.

The Settlement Agreement also requires that the ALRRF operator, Waste Management of Alameda County (WMAC), pay invoices submitted by the CM to the CMC, if the work represented in those invoices is consistent with the CM's scope of work and role as defined in the Settlement Agreement.

1.2 Prior Community Monitor Work

Records indicate that the CMC retained a technical consultant as the CM from 2005 through part of 2007.

In mid-2007, the CMC selected the current CM team of Environmental Science Associates (ESA) and Langan (formerly Treadwell & Rollo). This team began work in February 2008. From 2008 through 2019, the team carried out report reviews, Class 2 soil analysis file review, and site inspections as defined in the Settlement Agreement. From 2020, after a public procurement process to select a continuing CM, the CM team of Langan and ESA switched roles, with Langan

as the primary CM and ESA as a sub-contractor to Langan. The CM team continues to carry out report reviews, Class 2 soil analysis file review, and site inspections (when allowed), as defined in the Settlement Agreement.

- In 2008, the primary concern was the rate at which groundwater monitoring wells were purged during sampling. This was resolved satisfactorily.
- In 2009, the CM team took a close look at the methodology used by ALRRF and its consultants to track variations in groundwater quality. No Areas of Concern (AOCs) were identified.
- In 2010, landfill gas perimeter probes were installed to comply with new regulations, and one of those probes detected landfill gas at levels that exceeded regulatory limits. This was abated by installing several gas extraction wells close to those probes.
- In 2011, the ALRRF sought to use fine material[1] from the Davis Street Material Recovery Facility (MRF) as Alternative Daily Cover. The use of this material was approved by the LEA through a special study in 2013.
- In 2012, two ongoing problems, windblown litter and seagull activity, became more severe; and while the gull problem has varied seasonally, the litter problem has continued.

Since mid-2013, the CM's observations and document reviews have included the construction of FA2 and related mitigation measures. The excavation and preparation of the Phase 1 portion of FA2, together with related improvements, were monitored in 2014 and 2015.

In 2015, the Five-Year Permit Review process began when the Alameda County Department of Environmental Health, the Local Enforcement Agency (LEA), requested the ALRRF to submit an application and a revised draft of its Joint Technical Document[2] (JTD), which contains a detailed description of FA2 development plans, design details, and operating procedures. On July 31, 2015, the revised JTD was submitted to the LEA and the Central Valley Regional Water Quality Control Board (CVRWQCB). Waste Discharge Requirements (WDRs) were issued by the CVRWQCB in mid-2016.

Throughout this process, the LEA held its permit review in abeyance while CVRWQCB staff prepared, and the CVRWQCB adopted, the WDRs. Subsequently, the LEA's review required

1 MRF fines: Fine material produced by sorting systems that recover materials at the Davis Street Transfer Station.

2 Under California regulations, a Joint Technical Document (JTD) is a detailed description of all of the means and methods by which a disposal site will satisfy State requirements to protect water resources and safely dispose of permitted wastes.

more than four years to complete. It was difficult for the ALRRF to refine its JTD to conform to the requirements of the WDRs and subsequent directives from CVRWQCB staff, and the sheer size and complexity of the JTD itself also impeded progress. The JTD, after several revisions, was finalized on April 30, 2020. The Five-Year Solid Waste Facility Permit (SWFP) was finalized and issued on September 2, 2020.

In 2021, as a result of COVID-19 health emergency and the statewide Shelter-in-Place Order issued in early March 2020, the CM site visits were suspended from January through March 2021.

1.3 Regional Context and Landfill Capacity Needs

Events in the landfill disposal industry and demographic shifts within the greater Bay Area have affected, and may continue to affect, operations and future developments at the ALRRF. Prior Annual Reports have discussed impending landfill capacity changes and changes in landfill usage that could directly affect the life expectancy of regional landfills including the ALRRF.

Those issues have largely abated, but legislative and regulatory developments have resulted in new implications for landfill life in the region and statewide. The bellwether for this trend was AB 1594, which was passed in 2014. As of January 1, 2020, the use of green material as alternate daily cover (ADC) does not constitute diversion through recycling and is considered disposal for purposes of measuring a jurisdiction's 50 percent per capita disposal rate.

The 2015-2016 legislative session in California gave rise to several new laws that are intended to dramatically reduce the disposal to landfill of organic wastes (plant debris, food scraps and similar materials that readily decompose and produce methane, a potent greenhouse gas). In Alameda County, this material is approximately 30% of the waste stream[3,4].

The two pieces of 2016 legislation with the most direct effect are SB 1383 and AB 901. SB 1383 established targets to achieve a 50 percent reduction in the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025. AB 901 changed how disposal and recycling is reported to California Department of Resources Recycling and Recovery (CalRecycle). The intended effect is to provide a more accurate assessment of progress toward

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[3] CalRecycle 2014 Waste Characterization Study: https://www2.calrecycle.ca.gov/WasteCharacterization/ , accessed December 2017.

[4] Alameda County 2017-2018 Waste Characterization Study: http://www.stopwaste.org/sites/default/files/2017-18%20Alameda%20County%20Waste%20Characterization%20Study.pdf , accessed December 2018.

State goals. Regulations that implement these measures are now in place, and CalRecycle is providing resource documents and workshops to support implementation[5].

One result of this activity has been a tangible commitment by waste industries in California to provide additional organics diversion facilities. In Alameda County, two examples are the 500 tons per day Covered Aerated Static Pile (CASP) facility at the ALRRF, and the implementation of 100 tons per day of anaerobic digestion and subsequent composting capacity at the Davis Street Transfer Station. Taken together, these could reduce disposal at the ALRRF by up to 600 tons per day, which would be a 25% reduction in the current rate of disposal there. This reduction may be offset somewhat by the need for disposal of contaminants and oversize materials from compost operations.

Related State legislation passed in the 2017-2018 session provided further support for waste reduction through product stewardship, packaging, and enhanced organics-diversion requirements. The legislation passed in the first year of the 2019-2020 session has continued to focus on product stewardship while also removing some requirements to provide buy-back recycling centers.

Against this backdrop, the ALRRF began operation in FA2 on March 25, 2019. This triggered several constraints on the types, quantities and sources of materials received; these are described in the next section of this report. On April 27, 2022 the CVRWQCB conducted a final inspection and onsite meeting for FA2 Phase 4. This has been the active face of the landfill since.

1.4 Site-Specific Constraints and Opportunities

The 1999 Settlement Agreement added constraints on operations, by adding new conditions to the Conditional Use Permit for the ALRRF. Solid wastes from out-of-county sources were strictly limited to those covered by existing disposal agreements. During peak traffic hours, the number of refuse trucks entering the landfill is limited. Numerous conditions intended to protect natural resources on the ALRRF property were imposed. These were extensively refined during the development of permit conditions from the State and Federal natural resource agencies with permit authority: The US Army Corps of Engineers, the US Fish and Wildlife Service, the California Department of Fish and Wildlife, and the (CVRWQCB). This process required several years and concluded in 2012.

[5] https://calrecycle.ca.gov/organics/slcp/education

Some of these conditions did not take effect until FA2 began to receive refuse, on March 25, 2019. These conditions include limitations on the amounts of sludge, inert waste and special waste accepted from certain Bay Area counties, as well as self-hauled wastes from Contra Costa County. The specific restrictions are:

- Wastes collected for disposal under a municipal franchise may only be received from Alameda County, San Francisco, and the City of San Ramon in Contra Costa County. San Francisco and San Ramon wastes can only be received if those jurisdictions meet specified waste diversion goals.

- Non-franchise waste may only be received for disposal from Alameda County and San Francisco, plus up to 25,000 tons per year of sludge, inert waste and special waste from the other seven Bay Area counties. In addition, up to 25,000 tons per year of self-hauled wastes from Contra Costa County may be disposed.

Also, under the Settlement Agreement the size of the future expansion area was limited to 40 million tons of capacity, with a footprint of approximately 250 acres. In addition to Conditional Use Permit conditions, the Settlement Agreement established the CMC and the CM role, as described above; and it established mitigation funding related to the landfill expansion.

The physical setting of the ALRRF site presents certain constraints and opportunities. Canyons provide convenient high-volume fill sites, but hilly terrain and local high winds in the Altamont area require constant attention to windblown litter, especially film plastic. As FA1 neared its final elevation, windblown litter continued to be a problem due to the exposure of the landfill's active face to wind. That problem increased through 2019, despite the move to FA2 at a lower elevation. Although the ALRRF's litter collection crew has been able to repeatedly remove litter from large expanses of the ALRRF property, high-wind events in 2019 and 2020 quickly replenished windblown litter in those areas, requiring repeated cleanups. In 2021, the landfill experienced record wind speeds, exacerbating the existing windblown littler issue further around FA2. As a result, a section of the fencing was knocked down and windblown litter covered large expanses of the ALRRF property as well as neighboring properties, including Bethany Reservoir. The landfill has added additional staff dedicated to litter cleanup, has repaired and increased the perimeter fencing downwind of FA2, and is communicating frequently with CalRecycle and the LEA to provide updates on removal of the windblown litter. In 2022, CVRWQCB conducted a targeted inspection of the landfill. In summary, the CVRWQCB outlined 13 Areas of Concern required to maintain compliance with the EDRs and Title 27. On September 1, the CVRWQCB issued a violation for windblown litter outside of the waste management units, within the property. The CVRWQCB noted litter was reported in the July 28, 2022 LEA inspection and observed by

CVRWQCB staff in their 4 August inspection. The CVRWQCB requested WMAC takes appropriate measures to maintain compliance with the WDRs and Title 27, and to notify the CVRWQCB staff when all the windblown material has been returned to the appropriate waste management unit and is under approved cover material. A confirmation inspection was scheduled following completion of the windblown material removal. The CM provides an updated table of the CVRWQCB requests in the quarterly packets, including the requirements outlined in the Cease and Desist Order (CDO) R5-2021-0020, AOCs and Violations, the expected completion timeline and progress that has been made on each item. WMAC has continuously sent letters from their external counsel in response to the investigative order issued by the CVRWQCB in October 2021, objecting the technical reporting requested regarding windblown litter, and informing on the number of litter bags that have been picked-up outside of the property boundary since July 2021.

1.5 Overview of Operations, Regulations and Permits

1.5.1 Operational Functions and Requirements

Like most large landfills throughout California, the ALRRF performs a variety of functions that support the region's management of solid wastes. These functions continue to evolve as increasing emphasis is placed on reducing and recovering wastes, but the primary function of the site continues to be the safe disposal of solid wastes by placing, compacting and covering these materials. Federal, State and local regulations require that at the ALRRF:

- Wastes are covered to control litter, prevent fire, and prevent the spread of disease.
- Wastes are placed and compacted to be physically stable.
- Plant debris is not to be disposed; if received, it must be separated and reclaimed by composting or other methods. The CASP compost system adjacent to the landfill provides a convenient location for plant debris that is inadvertently delivered to the landfill.
- A liner and liquid recovery system is in place to prevent groundwater contamination by leachate.
- Landfill gas (LFG) is controlled by an extraction system. Currently the gas is used to produce fuel (liquefied and compressed natural gas, LNG/CNG) and electrical energy.
- Emissions from combustion and processing (diesel engines and landfill gas systems) are controlled to meet Bay Area Air Quality Management District (BAAQMD) standards.
- Other air pollutants and nuisances (dust, odor, litter, etc.) are prevented.

- Stormwater erosion is controlled and stormwater runoff is tested for pollutants.

Compliance with these requirements protects the environment and public health, and it also presents opportunities to develop and support innovative methods for improved waste management. Currently, such activities at the ALRRF include:

- Using LFG to produce electricity and fuel (LNG/CNG);
- Stockpiling and processing materials for beneficial use on site, such as using demolished concrete for wet-weather roads and access pads;
- Blending liquids with dry materials in a solidification process to make a product that can be landfilled or used as cover;
- Using contaminated soils and other wastes (biosolids, shredded tires, MRF fines, treated auto shredder fluff, etc.) for cover material, as permitted;
- Stockpiling construction and demolition (C&D) materials and scrap metal for processing elsewhere;
- Providing an area for the separation of plant debris from other wastes, to avoid landfilling plant debris; and
- Hosting site visits, by prior arrangement, for public education.

The ALRRF property covers more than three square miles. Within that area, the portion that is delineated as landfill is divided into FA1 and FA2. FA1 covers approximately 235 acres, including an Asbestos-Containing Waste landfill operation which occupies several acres within the FA1 footprint. The FA2 footprint is approximately 250 acres. Although refuse and cover material are currently being delivered to FA2, FA1 has not closed, and it will likely receive additional refuse to reach its permitted final elevation. It is currently the site of the active asbestos landfill and two solidification basins. The solidification basins are proposed to be relocated to FA2 in 2023.

Lands surrounding FA1 and FA2 are mainly grazing land and some construction-support activities related to the continuing construction of FA2, which will take place in phases over several years. These surrounding lands include a Conservation Plan Area, protected with a permanent easement that provides suitable habitat for several special status species.

Much of the work done by the CM involves the review of data and reports required of the ALRRF by regulatory and permitting agencies, as described below.

1.5.1.1 Water

In California, the State Water Resources Control Board (SWRCB) and its Regional Water Quality Control Boards (RWQCBs) protect groundwater and surface water resources through laws, regulations and permit requirements. Because most of the ALRRF property drains into the Central Valley, the CVRWQCB issues and administers the WDRs for the site. These WDRs set various operating requirements, and they also define the programs that monitor water quality by periodically testing groundwater wells as well as storm water basin contents and discharges. The CVRWQCB also requires the ALRRF to address incidents that increase risk to groundwater, such as the inadvertent receipt of wastes that contain unpermitted levels of hazardous materials. The CM reviews semiannual groundwater monitoring reports, the stormwater pollution prevention plan, annual stormwater monitoring reports, and the annual Winterization Plan update, as well as correspondence and required reports that the CVRWQCB posts on its GeoTracker web site[6].

1.5.1.2 Air

The BAAQMD administers its own regulations, including Regulation 8 Rule 34 regarding landfill gas control, as well as relevant State and Federal regulations. At the Federal level these are referred to as Title V requirements. The operation of (and especially the air emissions from) the landfill gas control systems, various diesel engines, and other processes that produce air emissions are regulated through permit requirements. Every six months the ALRRF submits a comprehensive "Title V report" to the BAAQMD. This report summarizes emission test results and landfill gas control system performance as required. The CM reviews these reports as they are issued. The landfill also produces an annual estimate of greenhouse gas (GHG) emissions, as required by Federal regulations. The most recent data available, for 2021, indicate that the ALRRF is the third highest GHG-emitting landfill in California, with 34,865 metric tons of total carbon dioxide ("greenhouse gas as carbon dioxide equivalent") emitted, behind the Kiefer Landfill in Sacramento County (114,051) metric tons of carbon dioxide emitted) and the Puente Hills landfill in Los Angeles County (110,292) metric tons of total carbon dioxide emitted).[7]

1.5.1.3 Disposed Wastes

Two agencies regulate solid waste disposal in Alameda County. At the county level, the LEA, and at the State level, CalRecycle which supports and oversees the LEA. The LEA is the main

[6] ALRRF's profile can be accessed through: https://geotracker.waterboards.ca.gov/profile_report?global_id=L10005834311

[7] Air Resources Board file https://ww2.arb.ca.gov/mrr-data, accessed December 14, 2022.

enforcement agency for the Solid Waste Facility Permit (SWFP) that governs many aspects of operations at the ALRRF, such as operating hours, landfill cover materials and cover frequency, types of materials that are allowed to be disposed, etc. The SWFP is reviewed and updated every five years, and the CMC and CM closely follow that process, as required by the Settlement Agreement. The CM also reviews ALRRF inspection reports made by the LEA, as those reports become publicly available; and each year at least four of the monthly CM site inspections are done in conjunction with the LEA, as required in the CM's Scope of Work. The CM conducted 12 site visits in 2022 as required by the scope of work. Section 2.1 provides more details. Five of the 12 CM site visits in 2022 were performed with the LEA.

1.5.1.4 Land Use

Concurrently with the Settlement Agreement, Land Use Permit C-5512 for the ALRRF site was updated to incorporate mitigations specified by the Settlement Agreement. These modifications include restrictions on waste quantities, limits on truck traffic, and other operational constraints, as well as certain biological resource protection measures discussed in Section 1.5.2 below. The CM tracks compliance through site visits, review of data from ALRRF operations, and review of periodic reports submitted to regulatory agencies by the ALRRF, including the annual Mitigation Monitoring Report submitted to County Planning. Annual monitoring surveys of the on-site Conservation Plan Area are also reviewed by the CM.

An additional Land Use Permit (PLN 2010-00041) was approved by Alameda County in March of 2013 for the future development and use of composting and material recovery operations at the ALRRF. In April 2018, the ALRRF began operation of its CASP compost facility northeast of FA1. Currently, Waste Management's position is that the CASP facility is not within the purview of the CMC. However, the CMC has taken the position that the additional permit *is* within its purview.

1.5.1.5 Waste Diversion Requirements

At the local level, the Alameda County Waste Management Authority and the Alameda County Source Reduction and Recycling Board formed StopWaste as a joint powers agency to pursue local and state waste reduction and diversion goals. StopWaste has implemented mandatory separation of recyclables and compostables at businesses and multifamily properties throughout the county, and it provides public education, training and other assistance. In addition, StopWaste has developed, and all of its member agencies have adopted, a single-use bag ban ordinance; and StopWaste has adopted a countywide ban on the disposal of plant debris in local landfills.

Section 1.3 of this Annual Report describes recent State legislation that requires increased solid waste diversion (or reduction) and more comprehensive reporting of disposed and diverted quantities.

1.5.2 Requirements for FA2 Development and Use

1.5.2.1 Background

In 2011, the last major permits for the development of FA2 were obtained after agreement was reached between regulatory agencies and WMAC regarding mitigation for the loss of a wetland channel and the loss of habitat for special status species. Mitigations were established through Alameda County Conditional Use Permit C-5512 and permits from several State and Federal agencies:

- US Army Corps of Engineers, which had jurisdiction over wetlands.
- US Fish and Wildlife Service (USFWS), which consulted on wildlife protective measures.
- CVRWQCB, which certified that the mitigations would protect water quality.
- California Department of Fish and Wildlife (CDFW), which concurred with the USFWS' Biological Opinion and placed specific conditions on work in the wetland channel.

The fundamental requirements of these permits are:

- The dedication of 750 acres of ALRRF land as a Conservation Easement, in perpetuity.
- The creation of additional wetlands, in the form of a new pond between FA2 and the Eastern Alkali Wetland.
- The enhancement of a riparian channel approximately the same size as the channel to be displaced by FA2.

To guide these efforts and many related requirements, the ALRRF and its consultants prepared the following documents:

- Conservation Management Plan
- Pest Management Plan
- Grazing Plan
- Waters and Wetlands Mitigation Plan

The ALRRF dedicated the 991.6-acre Conservation Easement in 2012 and built the mitigation wetland pond in 2013. In late 2017, the ALRRF executed an agreement with the Cosumnes Floodplain Mitigation Bank to fund river channel restoration and preservation in southern Sacramento County. The current status of these efforts is described in Section 1.5.2.3 below.

1.5.2.2 Corridors and Connectivity

The Biological Opinion from the USFWS describes the need for wildlife connectivity and wildlife corridors in eastern Alameda County to provide for wildlife movement and thereby enhance species health by preventing inbreeding. The Biological Opinion states that this need exists for three of the four protected species in the area: San Joaquin Kit Fox, California Red-Legged Frog, and California Tiger Salamander. The ALRRF's Conservation Management Plan contains the following requirements in the Minimization and Mitigation sections of the document:

> MIN-31 – The project proponent will contribute funding to conduct a research study of wildlife passage at local over- and under- crossings to determine if these conduits provide conductivity [sic] for wildlife through the Interstate 580 corridor. The study will entail the periodic placement of motion-activated camera station, track plates, and other approved sampling method. The project proponent will provide the Service and/or CDFW with as much as $50,000 to perform the study. With the approval of the Service and CDFW, the project proponent may contract the study to an approved third party.
>
> MIT-7 – The mitigation pond/wetland will be constructed in an upland area […] immediately upstream from the Eastern Alkali Wetland. […] This area provides suitable upland refugial habitat for tiger salamanders and suitable dispersal habitat for red-legged frogs to the Eastern Alkali Wetland and the Southern Alkali Wetland.

These requirements are also stated in the USFWS Biological Opinion, which in turn is referenced by the CDFW Consistency Determination.

1.5.2.3 Current Status

Unfortunately, the wetland mitigation pond built in 2013 was badly damaged by sediment inflow due to unusually heavy rainfall in early 2014. Also, the channel enhancement was put on hold due to the drought that occurred between 2011 and 2016. To remedy this situation, the ALRRF has purchased off-site wetland channel mitigation credits from the Cosumnes Floodplain Mitigation Bank in southern Sacramento County and had the pond rebuilt and replanted in 2018. Also, to protect the pond from sediment inflow, in late 2018 the very extensive sedimentation basin SB-H was constructed between the pond and Fill Area 2. This basin SB-H performed well

throughout the 2018-2019 wet season. In the pond itself, it appears that there has been some mortality among the plants that were installed in late 2018. ALRRF management has stated that this is being addressed. In 2021 and 2022, the wetland mitigation pond was irrigated, shallow water was observed in the pond and vegetation grew.

In 2017, the CM reviewed a summary report describing wetland and wildlife mitigation activities and issues. Wetland and wildlife mitigation activities continued in 2018, 2019 and 2020 and 2021 with monitoring of construction areas and wildlife protection measures (e.g., relocating sensitive species such as California Tiger Salamander, when encountered). In 2021, the CM received the 2019 and 2020 Annual Status Reports that describe conservation activities. In 2022, the CM received the 2021 Annual Report by Kleinfelder.

The CM also reviews the ALRRF annual mitigation monitoring progress report, which briefly summarizes the status of compliance with each of the 106 conditions in Conditional Use Permit C-5512.

2.0 COMMUNITY MONITOR ACTIVITIES AND ISSUES

2.1 Introduction

Under the Settlement Agreement, the CM has three ongoing duties:

- Review reports, data and information that are required to be submitted by WMAC to regulatory agencies, or that provide information regarding the ALRRF's compliance with applicable environmental laws and regulations (Settlement Agreement Sections 5.7.1.-5.7.3)
- Conduct inspections of the ALRRF facility up to 12 times per year (Sections 5.7.7, 5.8)
- Review the records of testing and acceptance of "Class 2 soils", i.e. soils known to come from a contaminated site (Section 5.7.9)

Throughout 2022 the COVID-19 restrictions that had been imposed in 2020 and 2021 were lifted and the CM was active in each of these areas, as described below.

2.2 Monitoring of Improvements and Changes

Through report reviews and site visits, several new developments in ALRRF facilities and operations were monitored in 2022:

- On April 27, 2022 the CVRWQCB conducted a final inspection and onsite meeting for FA2

Phase 4. On July 1, 2022 the CVRWQCB authorized construction of FA2 Phase 5 cell and stormwater improvements. Construction is expected to be completed spring 2023.

- Beginning February 14, 2022, WMAC began destroying wells PC-1A, PC-1B and PC-1C at the landfill. The PC-1 well cluster is located in the middle of the FA2 Phase 5 footprint and needed to be destroyed in order to accommodate grading for the continued construction of the landfill. In October 2021, the Phase 4 interim point of compliance wells MW-30, MW-32, MW-33 and MW-36 were installed and will continue to provide monitoring at the downgradient extent of Phase 4 through the 1st semi-annual monitoring event of 2022. The interim point of compliance wells for FA2 Phase 5 will be installed prior to the 2nd semi-annual monitoring event in 2022. These wells will replace the monitoring historically provided by the PC-1 well cluster. In the Amended Report of Waste Discharge for MW-38 prepared December 13, 2022, the CVRWQCB approved of the installation of two new multi-level soil gas probes (UGP-15 and UGP-16) and the installation of one new downgradient well (MW-58).

- In May of 2021, FA2 Phase 4 groundwater monitoring wells MW-13A, MW-13B, MW-24, MW-25, MW-26 and gas probe VP-3, located in the excavation footprint of Phase 4 of FA2 were destroyed to allow construction of the landfill to proceed. The wells were replaced by FA2 Phase 4 monitoring wells MW-30, MW-32, MW-33 and MW-36 and gas prove VP-4. In addition, four new groundwater monitoring wells (MW-37, MW-38, MW-39, and MW-4) and seven new multi-depth soil gas probes (UGP-2, UGP-3, UGP-4, UGP-5, UGP-6, UGP 7, and UGP-8) were installed in FA1 as required under the CDO adopted on April 22, 2021. E-05 was installed in 1985, had a 33 year old dedicated QED bladder pump installed in 1987, and had an obstruction 6 feet below the top of casing that potentially could be associated with root intrusion, a kink or break in the well casing, or other defect. E-05 was replaced to allow for further evaluation of the groundwater quality in the area.

- In the 12 months from June 2021 through May 2022, 13 poorly-performing landfill gas wells were decommissioned and 33 new landfill gas extraction wells were brought on line. Wells with higher than normal gas temperatures were monitored for possible subsurface combustion. Well 799 showed high temperatures and was decommissioned on March 21, 2022. Additionally, three wells (well 835, 836 and 837) showed high temperatures. A total of 13 existing wells were decommissioned, i.e., shut down and disconnected from the gas extraction system because they had become unproductive. During surface emission monitoring, there were 98 exceedances of the 500 parts per million by volume (ppmv) methane threshold total. All of the corrective actions to block these emissions were successful and passed their 10-day and 30-day follow-up tests. Methane exceeding regulatory threshold of 5% was not found in any of the 50 perimeter probes installed around Fill Areas 1 and 2. Probe GP-20C and probe GP-8C, both have historically had higher methane values that have been proven to be naturally occurring and not related to landfill operations. No exceedances were detected during this monitoring event. The landfill gas wells nearest to groundwater monitoring wells E-05/E-

07, E-20B, and MW-4A continued to be operated. This was an effort to prevent landfill gas from reaching those groundwater wells, where low concentrations of VOCs have been detected. Currently the operating emission control devices for landfill gas at the ALRRF consist of two turbines (S-6 and S-7) and two flares (A-15 and A-16). The two turbines were tested for compliance with emission limits in January and December 2021, while the main flare, A-16, and the back-up flare, A-15, and were tested in March and April 2021. All four devices passed by the BAAQMD under Permits (8-34-412 and 8-34-301.1) and Condition Numbers (18773 and 19235).

- In 2022, efforts continued to be made to reduce stormwater pollution. Drop inlets that were fitted in 2019 with "Ertec" filter cloth barriers to screen out silt had been damaged and accumulated sediment around the down drain. The sediment was removed and damaged guards were replaced as part of the 2021 winterization plan. In 2019, specialized Filtrexx™ wattles, designed to trap metals and hydrocarbons, were placed in ditches and along the bases of slopes, to trap hydrocarbons and other pollutants. The year old Filtrexx™ wattles were displaced with debris accumulation in certain locations. The debris was removed and the wattles replaced where necessary. Wattles were also installed upslope of certain concrete open channels. Inlets that were obstructed by vegetation, debris were removed and Filtrexx™ wattles were installed in preparation for rainy weather. Turf reinforcement mats (TRMs) and rip rap were installed within channels in the Phase 3 excavated area. The Winterization Plan for 2022-2023 was not available for review at the time of this annual report.

- During the 2021-2022 wet season, stormwater was sampled upstream of the FA1 stormwater basins, in an effort to identify the sources of volatile organic compounds (VOCs) that have previously been detected in the basins. It was not possible to identify specific sources, however; only low to non-detect concentrations and a single below reporting limit (RL) concentration of acetone were reported in samples. Acetone has historically been detected in equipment and field blanks associated with sampling. In addition, a single below RL concentration of acetone in a sample does not trigger either of the non-statistical indicators. Ketones also continue to be detected in interior stormwater samples upstream of the basins. Overall, the detections of VOCs were less frequent, presumably due to additional Best Management Practices (BMPs) put in place along the storm water conveyances. SCS Engineers and WMAC proposed that the 2014 Industrial Activities Storm Water General Permit (IGP) Order No. 2014-0057-DWQ for storm water samples no longer be analyzed for VOCs and that SW (interior locations of the site) storm water samples no longer be collected. For the time being, storm water samples will continue to be analyzed for VOCs.

- The 10-acre Evapotranspirative (ET) Cover Test area was observed during the May site visit. In general, most of the cover area had vegetation, with the exception of segments of the upper swale banks in the southern portion of the site, the southwestern and northwestern corners of upper flat area, and the northern end of the lower bench of the

ET cover area, which had no vegetation. Native species were observed throughout the ET cover. The visit occurred later in the year than normal, which resulted in fewer observation of flowering plants. There were only a few cracks observed on the surface, which were less than a 1/8-inch wide and appeared to be shallow. Approximately three erosional rills were observed on the slope between Ditch 1 and Ditch 2 along the ET Cover's northwestern boundary. This area did not support high vegetation establishment. It is recommended the erosional features in this area be addressed before hydroseed is reapplied. A negligible amount of windblown litter was observed at the ET cover. The plans for the ET Cover Test Area include annual monitoring, followed by a report to the CVRWQCB at the conclusion of the four-year study period. Since the ET Cover was completed on November 14, 2018, submittal of the Performance Monitoring report is scheduled for April 1, 2024.

- The Mitigation Pond had water present during the site visit conducted in May of 2022. A moderate amount of submerged vegetation is present in the pond, enough to support a breeding habitat for amphibians. ESA could not confirm whether or not the pond is on track to meet the goal of retaining 20 inches of water in the deepest end by the end of August. During the August visit there was no water observed at the Mitigation Pond. The CDFW Consistency Determination recommends monitoring reports be submitted to CDFW and USFWS to inform the agencies of the mitigation pond habitat conditions specifically for California red-legged frog and California tiger salamander that are being monitored.

- The windblown litter issue was reduced during 2022. The LEA issued a violation on June 29, 2022 as litter was observed outside of the property boundary in quantities larger than observed in other 2022 inspections. WMAC cleaned up the litter and the violation was reduced to an AOC on July 29, 2022. The LEA continued to inspect the landfill twice per month. On September 29, 2022 the LEA inspected the landfill and removed the AOC. Perimeter fencing has been installed to control the issues and continuous staffing of litter pickers to prevent litter from leaving the property boundary. The windblown litter issues appear to be improving.

- In the period from January through November 2022, the ratio of **Class 2 cover soil** to municipal solid waste increased to 23%. In 2021 that ratio had increased to 21% from 20% in 2020.

2.3 Compliance and Significant Incidents

As noted above, the Settlement Agreement defines the CM's Scope of Work to include "issuing a written report each year summarizing the ALRRF's compliance record for the period since the last such report with respect to all applicable environmental laws and regulations." This Annual Report provides that summary. The regulatory agencies that administer these laws and regulations, and the environmental permits held by the ALRRF, include the following:

- Alameda County Planning Department
- Alameda County Department of Environmental Health
- Bay Area Air Quality Management District
- US Environmental Protection Agency
- California Department of Resources Recycling and Recovery
- Central Valley Regional Water Quality Control Board
- California Department of Fish and Wildlife
- US Army Corps of Engineers
- US Fish and Wildlife Service

To determine if there are trends in the compliance record, a list of compliance issues has been compiled; issues from 2016-2022 are shown in Table 2-1, below. Persistent issues appear in the upper part of the table, followed by infrequent or one-time issues. Past issues from 2011–2015 are shown in the 2017 Annual Report.

To compile this table, the CM reviewed publicly available data from the regulatory agencies listed above, ALRRF correspondence with those agencies, and the CM's monthly site inspection reports. The severity of the issues was rated subjectively by the CM using the 1 to 5 scale shown below Table 2-1. Issues that were judged to be beyond the control of the ALRRF are not included in the annual total of severity scores but are listed below the total line.

For the purposes of this report and table, incidents involving the delivery of hazardous materials with incorrect profiles (showing them as non-hazardous) are considered to be beyond ALRRF's control; but the CVRWQCB's position appears to be that ALRRF is responsible nevertheless. Fortunately, no such issues occurred in 2022.

The total severity score for 2022 is slightly lower compared to 2021.

Two types of incidents that are of particular concern occurred in 2022:

- **End-dump Truck Overturns**. Within the ALRRF operating area, six dump-trucks overturned in 2022. No injuries were reported. The average number of overturns per year from 2012 through 2019 was six. This is a tiny fraction of the roughly 16,000 truckloads of Class 2 soil and treated auto shredder fluff brought to the facility each year, but the risk

of injury and damage in such incidents continues to be a concern for CMC members and ALRRF management. In 2019, the ALRRF increased its oversight of end-dump truck unloading and provides spotters for drivers to dump safely, which moderated the problem but did not eliminate it. Most of the dump truck accidents have been attributed to inexperienced or negligent drivers.

- **Windblown Litter**. This may be the single most persistent problem at the ALRRF. With the move of refuse fill operations from the FA1 hilltop into the FA2 canyon, additional fencing lining the perimeter of FA2 and the site, a reduction in windblown litter was expected. Windblown litter dispersed across site improved throughout 2022. During site visits, no windblown litter was observed in the Back-40, or at Bethany Reservoir when visited with LEA. However, ALRRF received an AOC and then a notice of violation (NOV) due to the amount of windblown litter deposited outside of the property. The litter cleanup crew has been enlarged (13) and is now a permanent part of the ALRRF work force. When necessary, the crew removes litter from neighboring properties to the east of the ALRRF. This is described further in section 2.2 above and section 2.3.1 and 2.3.2.1 below.

2.3.1 Compliance Issues Documented by the LEA

In 2022, one AOC notice and NOV were issued by the LEA. LEA inspection reports indicate concerns about the following:

- **Windblown Litter:** On June 28, 2022, CVRWQCB conducted an inspection of ALRRF and observed windblown waste outside of FA2 and as far east as the Frog Pond, near the eastern boundary of the Facility and as far south as the mitigated wetland. On July 28, 2022, LEA staff conducted an inspection of the ALRRF and observed significant amounts of windblown waste east of the active face in FA2 with litter observed as far east as the Back-40, near the eastern limit of ALRRF. The Alameda County staff also observed litter beyond the limits of site. Onsite accumulations of litter and offsite migration of litter, as observed during inspections, is a violation of the California Code of Regulations.

Table 2-1
Compliance Issues Ranked by Severity

Issue	2016	2017	2018	2019	2020	2021	2022
Contamination at E-05, E-07, E-20B	2	2	2	2	2	2	2
Stormwater contamination	3	3	3	3	2	2	1
Windblown Litter	4	2	3	4	3	5	4
Birds	2	2	2	2	2	2	2
Erosion	2	1	-	3	2	2	1
Cover thin / absent	-	-	-	1	1	1	2
Worker injury	2	1	-	1	1	-	-
Condensate/Leachate Leakage	-	3	3	3	2	2	2
Ponding in low-lying area of landfill	-	-	1	2	2	2	1
Sediment in Wetland Mitigation Area	3	2	-	-	-	-	-
Odor, on site	1	-	-	1	-	-	-
Leachate Seeps	1	2	-	4	2	2	1
Erosion control (sitewide)	4	-	-	3	2	1	1
Waste outside active area (trash, pallets)	4	-	-	-	-	-	-
Leachate Leak Disposal	-	4	-	-	-	-	3
Contaminants at monitoring well MW-4A	-	4	-	-	-	3	2
Contaminants at monitoring well MW-38	-	-	-	-	-	-	2
Windblown litter beyond last litter fence	-	-	4	2	2	5	3
Disposal of liquid into pond without prior approval	-	-	4	5	2	-	-
Lack of means to record liquid level in ponds [cleared]	-	-	4	-	-	-	1
Failure to monitor landfill gas well	-	-	4	-	-	-	-
Incomplete groundwater monitoring report	-	-	4	-	-	-	-
Liquid separation not implemented, Fill Area 1				4	-	-	-
Medical waste (sharps) manifest issue	-	-	-	-	2	-	-
Totals	**36**	**28**	**44**	**40**	**27**	**29**	**28**
Issues Beyond Control of / Refuted by ALRRF							
Truck overturn	3	3	3	2	2	2	2
Methane Gas at Perimeter Probe(s) [cleared]	4	-	-	4	4	-	-
Fire in refuse &/or stored material	3	1	-	3	3	3	
Fire on ALRRF property, outside active areas	-	2	2	3	2	-	1
Positive COVID case	-	-	-	-	-	1	1

Indicates that a violation was issued by a regulatory agency.

Severity Criteria

1: Minor or ongoing issue having little potential to harm environmental or public health; below regulatory thresholds.
2: Issue having some potential to harm environmental or public health; below regulatory thresholds; being addressed.
3: Issue having potential to harm environmental or public health; below regulatory thresholds; not improving, or new.
4: Issue having significant potential to harm environmental or public health, or resulting in a violation being issued.
5: Issue having significant potential to harm environmental or public health; violation issued; willful non-compliance.
- : Not applicable/not evaluated

2.3.2 CVRWQCB Violations and Concerns

2.3.2.1 2022 Violations

Litter Control: In September, the CVRWQCB issued a NOV in response to the excessive litter that was reported to be escaping from ALRRF property. The NOV requested weekly reporting. To address the violations, the CVRWQCB requested that ALRRF take appropriate measures to maintain compliance with the WDRs and Title 27 including immediately ceasing the discharge of windblown waste beyond the extent of the active Fill Area; notify the CVRWQCB staff when all the windblown material has been returned to the appropriate unit and is under approved cover material, so a confirmation inspection can be scheduled.

2.3.2.2 2022 Areas of Concern

On June 28, 2022, CVRWQCB conducted a targeted inspection of the Altamont Landfill. The report provides a summary of inspection and outlines Areas of Concern, required to maintain compliance with the WDRs and Title 27. The Areas of Concern included in the report are listed below:

1. The leachate line from FA1/U1 to LSI-1 had become clogged and the line needs to be replaced. In the interim, trucks were being used to batch extract and move leachate from the FA1/U1 leachate sump to LSI-1. WMAC was reportedly actively working to replace the line.
2. The FA2 Leachate Collection and Remove System (LCRS) discharge line was connected to a small holding tank and not LSI-3. Trucks were being used to batch extract and move leachate from the small holding tank. WMAC stated that the FA2 LCRS line to LSI-3 would be completed before this wet season, similarly to the lines that had been constructed in the past wet seasons.
3. The culvert that directs storm water run-off from the eastern side of FA1, including from Basin D and the area around E-20B, was partially obstructed and had no designed outfall containment structures or Best Management Practices (BMPs). As construction continues in FA2, storm water run-off from this location will be rerouted around FA2, and WMAC was reportedly working to complete this before the 2022/2023 wet season.
4. CVRWQCB staff observed waste worked into soil east of the Maintenance Shop. Site maps indicated the area is located within the limits of FA1/U1, where 12-inches of intermediate cover, void of waste, should be present. The observed waste quantity at the time of the inspection may expose FA1, and its unlined unit. CVRWQCB requested to address the lack of cover.
5. There was no collection tank for the FA2 under drainpipe. Liquid was detected in the FA2 underdrain in 2017, 2019 and 2020; therefore some type of holding tank is needed for the storage and sampling of this liquid, should it begin to flow again prior to final disposal.
6. Significant erosion was observed in the downstream containment berm of storm water retention basin SB-F.
7. Cattails were observed in LSI-3. Vegetation should be removed before the roots reach the liner.

8. The labels on the FA1/U1 LCRS, underdrain, and vadose zone access points have become faded and/or fallen off. Labels on all three site's surfaces impoundment access points: LCRS, leak detection and vadose zone locations were not clearly labeled.
9. The freeboard measurement markings on the LSI-1 and LSI-2 have faded and are illegible.
10. Improvements need to be made to the northeastern corner of the LSI-1, to prevent windblown leachate foam to be over topped. Additionally, leachate-stained sandbags and hay bales were present along the northeastern corner of LSI-1.
11. No exposed surface seeps were observed at any of the three primary FA1 seep locations. However, two large patches of green vegetative growth were observed on the closed portion of FA1/U1. The area should be investigated to determine whether seeps are occurring at this location.
12. Large areas of exposed soil remain atop and on the side slopes of FA1 and large areas of exposed soil remain within and around FA2.
13. CVRWQCB staff observed windblown litter east of FA2, as far east as the Frog Pond, and as far south as the mitigation wetland. WMAC is reportedly actively mitigating windblown waste.

2.3.2.2 CDO

The CVRWQCB issued CDO R5-2021-001 for the ALRRF on April 22, 2021. In the CDO, the CVRWQCB alleges the ALRRF is being operated outside of applicable federal and state regulations, and the WDRs. The CDO provides a list of various items the Discharger (ALRRF) has performed out of compliance and also provides a time schedule with specific requirements to compel the Discharger to resolve past compliance issues, achieve compliance with Title 27 and the WDRs, and conform to its Notice of Applicability (NOA) in a time frame acceptable to the CVRWQCB. The items identified are not new and had been discussed during the past years with the CM, but the CDO raises the severity of the issues.

Requirements Outlined in the CDO include the following:

<u>Implementation of FA2 Unit 1 Detection Monitoring Program</u>

The CDO requires the Discharger to implement a CVRWQCB approved detection monitoring network. The Discharger has proposed and installed monitoring devices for FA2, nevertheless the CDO notes that it does not meet all the requirements outlined in the WDRs.

The following requirements will resolve this item:

- Installation of interim point of compliance (POC) wells in FA2 Unit 1.
- Installation of final permanent FA2 limit wells.
- Implementation of a Water Quality Monitoring and Response Program for FA2 Unit 1.

MW-4A Evaluation Monitoring Program

In May 2017, MW-4A, located in the northeastern limit of FA1, reported exceedances of bicarbonate, calcium and five VOCs. Additional sampling confirmed a release in this area, which has been attributed to landfill gas. The Discharger has implemented focused extraction of landfill gas in this area and conducted additional investigation to define the extent of the release. A similar release had been documented in the vicinity of E-20B, which had implemented similar corrective actions. The CDO requires the Discharger to complete the MW-4A evaluation monitoring program addressing the following items:

- Monitoring of the nature and extent of the documented releases at MW-4A and E-20B
- Monitoring the effectiveness of corrective action near MW-4A and E-20B
- Establishment of a detection monitoring program along the northern and eastern (upgradient) limits of FA1

Continued implementation of the FA1 Corrective Action Program

The Discharger has chosen landfill gas extraction as the corrective action measure to address landfill gas effects (as described above). The CDO requires continued implementation of the Corrective Action Program, and to submit the following:

Report outlining the Corrective Action Program (landfill gas extraction)

Continued operation of solidification basins

Title 27 and the WDRs require that the solidification process does not result in the introduction of liquids into a solid waste management unit (WMU) in excess of the moisture holding capacity of the unit. The solidification basins at ALRRF are operated atop of FA1 Unit 2. These solidification basins do not comply with the WDR requirements. To bring this item back into compliance, the CVRWQCB included the following requirements in the CDO:

- The operation of the two solidification basins atop of FA1 Unit 2 can continue until new solidification basins are constructed
- The new solidification basins shall be moved outside of the existing WMUs, shall be completed as double lined containment systems, with a leachate recovery system (LCRS) installed between the liners, and a monitoring system

On October 19, 2021, in accordance with the CDO, Golder Associates Inc. (Golder) prepared the

Report of Waste Discharge (ROWD) for the proposed concrete-lined, Solidification Basins that will be re-located near Fill Area 2 (FA2) at the ALRRF. The basins will be constructed as Class 2 liquid waste management units and will be underlain by a geomembrane liner to provide a double containment system with a leachate collection and recirculation system (LCRS). A pan lysimeter will be constructed underneath the sump. On November 8, 2022, a monitoring plan for the solidification basins was prepared by Geosyntec. Once these plans are approved by the CVRWQCB, the construction of the new solidification basins can be completed.

Water Board Tracking Timeline

The timeline for the requirements and deliverables requested in the CDO are summarized below:

- Update the Sampling and Analysis Plan for the interim POC detection monitoring program no later than 90 days after adoption of the CDO (March 4, 2022).
- Revise the background water quality values and update the concentration limits (CLs) no later than one year after adoption of the CDO (April 21, 2022).
- Work plan to install the soil gas monitoring wells (interim and final) for FA1 and FA2 no later than 90 days after adoption of the CDO.
- Report installation within 60 days of installing any new groundwater monitoring well or soil gas monitoring well.
- Work plan to conduct surface water monitoring for surface water flowing out of FA2 no later than 90 days after adoption of the CDO.
- Notify the CVRWQCB 30 days prior to removal of interim monitoring devices.
- Document the results of the MW-4A evaluation monitoring program (including groundwater and soil gas sampling) in separate Corrective Action Progress reports to be submitted semi-annually by 1 August and 1 February each year.
- Update corrective action financial assurance cost estimates for FA1 and FA2 no later than 90 days after adoption of the CDO (Submitted February 25, 2022).
- Report the installation and operation of new off-waste footprint solidification basins no later than 12 months from approval of the Report of Waste Discharge (depending on approval, estimated June, 2023).

The CDO also provides items associated with the Composting General Order, which have been included below for information.

- The leachate storage capacity at the composting facility has to comply with the

requirement for storage for the 100-year wet year. The Discharger is required to submit an updated Permit Design Package for Contact Water Pond 2 or an alternative treatment or storage approach within 90 days from adoption of the CDO (Revised March 28, 2022).

- The composting general order regulates the characteristics of detention ponds at composting facilities. The CASP detention pond was designed to meet the 25-year, 24-peak storm event. The CDO requires additional compost leachate storage capacity.

The majority of the tasks listed in the CDO have been completed on or before the due date included in the CDO. However, some items have not been completed; this issue will continue to be tracked. The CM presents a table that lists updates of the requirements outlined in the CDO, the expected completion timeline and progress that has been made on each item on each quarterly packet.

Following an inspection dated July 1, 2022, the CVRWQCB has 13 requests pertaining to AOCs at the landfill. The timeline for the requirements and deliverables requested are summarized below:

- Repair clogged leachate line from FA1/U1 (Before onset wet season 2022/2023).
- Connect FA2 LCRS line to LSI-3 (Before onset wet season 2022/2023).
- Reroute obstructed culvert that directs storm water from FA1, Basin D and E-20B (Before onset wet season 2022/2023).
- Address lack of cover at FA1/U1. 12 inches of immediate cover should be present (Completed, submitted report September 30, 2022).
- No collection tank was observed for the FA2 under drainpipe. CVRWQCB requires some kind of holding tank for the storage and sampling of this liquid, should it begin to flow again (Reportedly completed October 15, 2022, pending report on Geotracker).
- Significant erosion was observed in the downstream containment berm of storm water retention basin SB-F (Reportedly completed, pending report on Geotracker).
- Cattails were observed in the LSI-3. Vegetation should be removed before the roots reach the liner (Completed September 30, 2022).
- The freeboard measurement markings on the LSI-1 and LSI-2 have faded and are illegible (Completed September 30, 2022).
- Improvements to be made to northeastern corner of the LSI-1, to prevent windblown leachate foam from over topped. Leachate-stained sandbags and hay bales were present (End of October, 2022)

- Two large patches of vegetative growth observed on closed portion of FA1/U1. Area should be investigated to determine if seeps are occurring at this location (Completed September 30, 2022).

- Large areas of exposed soil remain atop and on the side slopes of FA1 and large areas of exposed soil remain within and around FA2 (October 31, 2022; Resubmitted by November 15, 2022, reportedly completed, pending report on Geotracker).

- Windblown litter observed east of FA2 as far east as Frog Pond and as far south as the mitigation wetland (Reportedly completed).

Additionally, following the July 1, 2022, inspection the CVRWQCB issued a Notice of Violation (NOV):

- Notify the CVRWQCB staff when all the windblown material has been returned to the appropriate unit and is under approved cover material to schedule an inspection.

2.3.2.4 Other Concerns

There are several open issues that have arisen between the ALRRF and the CVRWQCB since the current WDRs were finalized in July 2016. They are briefly described below. Most of these issues were included in the CDO issued by the CVRWQCB in 2021, and described in section 2.3.2.3.

Identifying Sources of VOCs in Storm Water – During 2021-2022, acetone was the only VOC detected above the RL concentrations in samples. Additionally, acetone was detected in samples in Basin C and in SB-F at below RL concentrations and in SB-H at an above RL concentration. These detections are likely due to field or laboratory cross contamination. Below RL concentrations of tert-butyl alcohol and carbon disulphide were detected in Basin C. It appears the detections of VOCs have decreased since 2020-2021 sampling events.

Deviations from baseline concentration limits – A two year update to concentration limits (CLs) for monitoring parameters for FA1 and FA2 groundwater detection monitoring wells (per the 2016 WDR's) was provided on October 27, 2022 and a FA2 CLs update report was presented ion May 13, 2022 per the requirements of CDO. It is anticipated the 2024 update combines CLs for the complete well network. For FA 2, the CLs were established for three groundwater zones for monitoring wells: alluvial, weather bedrock and unweathered bedrock. The updated CLs are based on historical baseline monitoring data through 2021 for the CDO wells and through June 2022 for the WDR wells). CLs are established for each constituent and were statistically

calculated using the intrawell data evaluation procedure[8]. The 2022 updated CLs were similar to the previous CLs, which had been presented in 2016, 2018 and 2020.

2.3.3 Other Incidents

The following information is based on reports filed in the site's Special Occurrences Log and on Community Monitor site inspections.

2.3.3.1 Vehicular Incidents

Within the ALRRF operating area, six dump-trucks overturned in 2022. No injuries were reported.

2.3.3.2 Fire

Within the ALRRF operating area, one fire occurred at the ALRRF site in 2022. On June 11, 2022, a fire started on the active face of FA2. After three hours the fire was completely extinguished. ALRRF staff contained the fire, and notified the LEA and BAQQMD. The fire was said to have been started by a hot load.

2.4 Review of Reports

2.4.1 Groundwater

Two groundwater monitoring reports were reviewed in 2022. The first covered the period from July through December of 2021; the second covered January through June of 2022.

The data in these reports indicate that most monitoring wells with VOC contamination are still fluctuating and a clear trend cannot be determined. However, all wells have VOC concentrations below the historical average for both the Second Semiannual 2021 and First Semiannual 2022 sampling events and it appears that VOCs are decreasing over time. These trends will continue to be tracked.

A new development in 2020 that has continued into 2022 has been an increase in concentrations of inorganic constituents (dissolved calcium, chloride, sulfate, total dissolved solids, and bicarbonate alkalinity). The concentrations of bicarbonate alkalinity at MW-4A have fluctuated from slightly below to slightly above the statistical concentration limit. In the First Semiannual 2022 sampling event, MW-2A and MW-6 in FA 1 contained elevated chemical oxygen demand while MW-10 in FA-2 had elevated chloride. During the First Semiannual 2022 sampling event, LFG-related VOCs were detected in POC monitoring well MW-38. On February 15, 2022, the

[8] 2020 2-Year Groundwater Concentration Limits Update for Fill Areas 1 & 2 Report by GeoChem Applications, dated October 2020

CVRWQCB indicated that the monitoring of water quality in the MW-38 area (including newly installed downgradient well MW-53) should be included in the CDO status report for corrective action areas. An Amended Report of Waste Discharge for MW-38 was submitted by WMAC on May 13, 2022 which recommended LFG extraction and additional perimeter monitoring in the area. On December 13, 2022 the CVRWQCB requested a more holistic corrective action program in the entire northeastern side of FA 1 to remediate groundwater impacts.

In the First Semiannual 2021 sampling event the following wells has one or more VOCs above the RL or two or more VOCs below the RL: MW-38, MW-40, MW-41A, MW-41B, MW-49B, and MW-34B. CVRWQCB was notified that the following wells were resampled and VOCs were confirmed: MW-38, MW-40, MW-41A, MW-49B. In each case either an AROWD or ODR was submitted.

The Second Semiannual 2021 sampling event had a similarly concerning number of QA/QC issues as the previous reporting period. The QA/QC issues include field sampling and laboratory practices: contaminated trip and equipment blanks, hold time exceedances, and an increasing number of VOCs attributed to laboratory contamination. The first Semiannual 2022 sampling event had a reduced number of QA/QC issues.

2.4.2 Storm Water

A new set of annual requirements for industrial storm water monitoring and reporting took effect throughout California on July 1, 2015. Stormwater samples are to be taken when a "qualifying storm event"[9] (QSE) occurs. Up to four such QSE's are to be sampled at each discharge point during a stormwater year (July through June). For each type of industrial facility, certain key pollutants must be monitored; and if concentrations of those pollutants exceed specified Numeric Action Levels (NALs), the facility must make a plan that describes Exceedance Response Actions (ERAs) to be implemented. In the first year of exceedance, "Level 1" ERAs are selected, which emphasize minimum BMPs. These are low-cost measures such as improving housekeeping, cleaning drain pipes, etc. If the exceedance continues into its second consecutive year, Level 2 ERAs must be developed, and these typically involve advanced BMPs such as specialized equipment, paving projects, etc.

Stormwater monitoring and reporting is especially complex at a landfill site, and even more so at a site that is expanding, like the ALRRF. The Monitoring and Reporting Program (MRP) developed for ALRRF required storm water sampling inside sedimentation basins on a semiannual basis. In

9 a precipitation event that: (1) produces a discharge for at least one drainage area; and, (2) is preceded by 48 hours with no discharge from any drainage area.

the 2019 – 2020 wet season, ALRRF implemented new and improved BMPs. The landfill has implemented all applicable minimum BMPs and several types of advanced BMPs, including additional straw wattles, Filtrexx™ SiltSoxx wattles, flocculent logs, and rock dams. The ALRRF has also been tracking the presence of VOCs in stormwater, under a separate requirement in the WDRs. Data from previous year's wet season sampling indicated improvement in the stormwater quality. During the 2018-2019, 2019-2020, and 2020-2021 wet periods, only low to non-detect VOCs were reported in Basin samples. However, ketones continued to be detected in interior stormwater samples. During 2021-2022, acetone was detected above the RL concentrations in samples from in Basin A and in Basin C. Additionally, acetone was detected in samples in Basin C and in SB-F at below RL concentrations and in SB-H at an above RL concentration. These detections are likely due to field or laboratory cross contamination. Below RL concentrations of tert-butyl alcohol and carbon disulphide were detected in Basin C.

2.4.3 Air Quality

Title V is one of several programs authorized by the U.S. Congress in the 1990 Amendments to the federal Clean Air Act. The Bay Area Air Quality Management District (BAAQMD) administers Title V requirements for the ALRRF. Title V operating permits incorporate the requirements of all applicable air quality regulations. Hence, the semi-annual Title V reports provide a comprehensive review of compliance with BAAQMD permits and regulations.

In 2022, the CM received the Title V reports for the periods June – November 2021, and December 2021 – May 2022. These reports describe landfill gas control operations and source testing, and they also document new or unique developments at the site that can have an effect on air emissions. Results from the current reporting year are similar to those from the previous year:

- The required surface emissions monitoring (checking for methane leaks through the landfill cap) continued to occur, and although exceedances of methane were found, they were typically remedied on the first try, without the need for repeated repairs.

- From June 2021 – November 2021, 8 landfill gas wells were decommissioned, and 21 new wells were installed and began operation.

- From December 2021 – May 2022, 5 landfill gas wells were decommissioned, and 11 new wells were installed and began operation.

- The LNG plant continued to operate at a fairly steady production rate. There were a few brief unscheduled down-time events due to maintenance and planned utility shutdowns from June 2021 to November 2021, but after each of those problems was resolved, the

gas plant returned to steady production. From December 2021 to May 2022, there were shut downs due to maintenance, testing, shutdowns due to high oxygen in the feed, a power outage and control failures, a flare blow out, as well as to repair a faulty regulator. The frequency of major shut downs was approximately the same compared to previous reporting periods. After each of the problems was resolved, the gas plant returned to steady production.

- All control devices passed their latest emissions tests without incident.

2.4.4 Mitigation Monitoring

The Mitigation Monitoring and Reporting Program Annual Progress Report, covering calendar year 2021, was reviewed by the CM during the third quarter of 2022. It is a table that lists each of the conditions described in the current Conditional Use Permit (CUP-5512), followed by a description of the implementation status of that condition or mitigation. The status descriptions together with the verification notes generally reflected the current status of each mitigation measure. Updates to this table from the previous year are listed below, with reference to the applicable CUP Condition number.

- Condition 4.4: This condition limits the amount of sludges, inert waste, and special waste accepted for disposal at ALRRF from outside Alameda County and San Francisco to not exceed 25,000 tons per calendar year. This condition is monitored through the life of ALRRF, and was not exceeded during year 2021. 159 additional loads (135 tons) were accepted inadvertently from outside the Nine Bay Area Counties in 2021. ALRRF has noted that additional training and procedural review have been implemented for scale house personnel and sales department to address such issues in the future.

- Condition 47: Seeps were encountered during Phase 4 construction on the western sideslopes, which were anticipated and mitigated by the Phase 4 design that incorporates geocomposite underdrains to intercept and convey groundwater to the underdrain system. No seeps were encountered on the floor, so finger drain trenches were not needed to supplement the underdrain gravel layer that extends across the entire Phase 4 floor.

In addition to the Annual Progress Report described above, in prior years the ALRRF has prepared reports to inform the natural-resource agencies about progress on their permit requirements for Fill Area 2 expansion: establishing the Conservation Plan Area, constructing the wetland mitigation project, protecting existing wetlands and surface waters, etc. The CM received the 2021 Annual Status Report for Mitigation Wetland Report prepared by Kleinfelder. ESA noted

that conditions in the wetland had improved with respect to previous years following the reconstruction of the wetland in 2018. Additional comments from the 2021 Annual Status Report for Mitigation Wetland include:

- "Given the comprised hydrology over the last two years due to below average rainfall, implementation of the Wetland Mitigation Plan (WMP) Remedial Action 1a (modification of pond to optimize hydrology) or Conservation Management Plan (CMP) Remedial Action 1a (translocate surplus egg-masses and/or larvae from viable ponds on or off the ALRRF site during next winter) are not recommended at this time. However, if limited hydrology persists over summer 2023, remedial action should be considered."

- "CMP Remediation Action 1a required notification to the United States Fish and Wildlife Services (USFWS) and CDFW if California red-legged frog (CRLF) and California tiger salamander egg-masses, and five or more CRLF during the non-breeding season, are not present within a three-year period. The WMP includes similar performance criteria and notification obligation to the Corps… Given the re-construction of the mitigation pond was completed in December 2018, it is assumed the first monitoring year of a full CLRF breeding season begins November 2019… It is not recommended at this time however it should be considered in the future if performance standards are not met."

2020 Annual Progress Report for the Evapotranspirative Cover report prepared by Geosyntec documents biological surveys conducted in the Conservation Plan Area. The CM review yielded the following comments on the report, which were provided to WMAC:

- ESA recommends the timing of the percent cover or percent bare cover estimate based on field observations and aerial imagery to occur in February to April, or May at the latest. In the 2020 Annual Report (report) Section 2.2.2 documents percent bare cover was estimated from an aerial photo of the ET Cover site in June 2020 and ground photos of the vegetation taken by Geosyntec in June, July and September. The Work Plan allows "percent cover (of the converse, percent bare area) will be assess by visual field sampling via aerial photography." Completing the assessment in the spring would provide a more accurate estimate of the plant cover that is present.

- ESA recommends the monitor take photos along the edge of the lower perimeter at regular interval to document plant growth.

2.5 Review of Records

Several types of site records were reviewed by the CM in 2022. The CM's scope of work requires the periodic review of files that contain lab analyses and other descriptions of **Class 2 soils** (considered non-hazardous) that are brought to the site for use as cover soil.

The **Special Occurrences Log** for the ALRRF was examined four times during the year and summarized for the Committee. The **LEA's monthly inspection reports** are publicly available on the CalRecycle web site and were checked by the CM every month, to note any new issues that may have been identified by the LEA.

2.5.1 Class 2 Soils

An ongoing CM task is the periodic review of files containing profiles (sample analyses) for Class 2 soils that are imported for use as cover soil in the Class 2 portion of the ALRRF. For efficiency, this is generally conducted two to three times per year, and it requires at least one full day for a qualified specialist to review each file to be sure that it is complete and within the regulatory limits for Class 2 materials. This review was conducted twice in 2022, on June 23 and July 14, for Class 2 soils accepted in through May 2022, and on December 7, for Class 2 soils accepted through November 2022. The files are made accessible electronically from WMAC's Livermore office.

A total of 90 profiles were reviewed on June 23, 2022 and July 14, 2022 that corresponded to Class 2 soil accepted at the landfill between December 21, 2022 and May 31, 2022 that were not reviewed previously. A total of 94 soil profiles were reviewed on December 7, 2022 that corresponded to Class 2 soil accepted at the landfill between June 1, 2022 and November 30, 2022. During each review, no out-of-compliance profiles were found.

2.5.2 Special Occurrences Log

Each permitted solid waste disposal site in California must keep a Log of Special Occurrences to document unusual and potentially disruptive incidents, including fires, injury and property damage, accidents, explosions, receipt or rejection of prohibited wastes, lack of sufficient number of personnel, flooding, earthquake damage and other unusual occurrences. The ALRRF log was either checked by the CM in person during site visits or requested via email. Six dump trucks overturned in 2022. Two trucks were involved in an accident in FA2, no injuries were reported. One fire was reported on the working face of the landfill (FA2). It was reported to be started from a hot load and was fully extinguished within three hours.

2.5.3 LEA Inspection Reports

In 2022, there was one type of AOC noted in these reports. It pertained to high winds and increased windblown litter within the property boundaries as well as on surrounding properties. The LEA has requested for ALRRF to provide daily updates of litter collection and control activities in reports including photos, wind speed/direction, map of the collection area, amounts of waste collected, number of litter collection employees, and the number of hours worked.

2.6 Monthly Site Visits

Twelve site visits were held during 2022. The visit day and time were as shown in Table 2-2 below.

In general, satisfactory conditions were observed, although windblown litter and bird (seagull) presence were persistent issues. Minor problems generally were rectified prior to the next inspection. Details are available in the monthly site visit reports provided in CMC meeting packets. Distinct operations, such as the stockpiling and processing of specific materials, took place in well-defined areas. No instances of unpermitted activities were noted. There were no new problems seen regarding refuse placement, public safety or traffic management, whether on hours or off hours. Throughout these visits, staff and management were forthcoming regarding operating practices and current conditions.

Table 2-2
2022 Site Visit Summary

Date	Day of Week	Visit Time	Announced in Advance?	With LEA staff?
January 25	Tues	10:30 AM	no	yes
February 08	Tues	10:30 AM	yes	no
March 29	Tues	1:30 PM	yes	no
April 29	Fri	2:45 PM	yes	no
May 19	Thurs	11:30 PM	yes	no
June 29	Wed	10:00 AM	no	yes
July 28	Thurs	12:00 PM	yes	yes
August 23	Tues	10:00 AM	yes	no
September 20	Tues	9:00 AM	no	yes
October 19	Wed	10:00 AM	yes	no
November 17	Thurs	11:30 AM	yes	no
December 01	Thurs	9:00 AM	no	yes

In 2022, observations by the CM focused on:

- The operations in Fill Area 2.
- Additional perimeter and active phase fencing to mitigate litter effluent
- Completion and maintenance of the mitigation pond.
- Plant growth and soil conditions in the evapotranspirative cover test area.
- Storm drainage and erosion control.
- Observation of issues of ongoing concern, including the presence of large numbers of seagulls and management of windblown litter east of FA 2.
- Construction of FA 2 phases 5 and 6.
- Changes at the site that could harm the environment or public health.

No truck traffic counts were conducted in 2022, because ALRRF data on tonnage and traffic made it clear that the traffic volume requirements of the Conditional Use Permit were being met.

2.7 Per- and Polyfluoroalkyl Substances (PFAS) Updates

The PFAS Order was given by the SWRCB as part of a statewide effort to obtain a preliminary understanding of PFAS compounds concentrations in groundwater and leachate at various landfills. The Order indicates this sampling is necessary to determine if PFAS compounds are present in and near waters that could be used for drinking water purposes. The SWRCB and RWQCBs will evaluate the data collected, and use it to support of any regulatory action to be implemented.

To be representative, samples were collected in November 2019 from a background well, a downgradient well, and a composite leachate sampling location, where possible. PFAS compounds were reported at higher concentrations in groundwater monitoring wells in the previously affected assessment and corrective action areas (E-05, E-07, E-20B, and MW-20) than the background or the detection monitoring program (DMP) wells. The highest PFAS concentrations in groundwater were reported in corrective action wells E-05 and E-07, located immediately downgradient of the old permitted unlined portion of FA 1. Relative to corrective action wells E-05 and E-07, lower concentrations of PFAS compounds were reported in the E-20B corrective action area, situated adjacent to the old unlined FA 1.

No additional PFAS sampling is proposed or required at this time. The SWRCB is analyzing the compiled data in airports, landfills and drinking water supply systems to aid in the development of Public Health Goals in drinking water. The concentrations reported at the ALRRF were below the maximum concentrations for groundwater and leachate at other landfills covered by the PFAS Order, and within the middle of the concentration ranges.

In 2021-2022 the United States Environmental Protection Agency (EPA) made several announcements regarding its goals for investigating, regulating, and remediating PFAS in consumer products and across environmental media, including the following:

- Emergency Planning and Community Right-to-Know Act and Toxic Substances Control Act Regulation. In 2022, EPA intends to propose rulemakings to (1) categorize PFAS on the Toxic Release Inventory list as "Chemicals of Special Concern" and remove the de-minimis eligibility from supplier notification requirements for all "Chemicals of Special Concern" and (2) add additional PFAS constituents to the Toxic Release Inventory. It also intends to finalize, by the end of 2022, an already proposed rule to collect data on PFAS that has been manufactured since 2011.

- Safe Drinking Water Act Regulation. The EPA plans to propose a rule setting national primary drinking water standards for two PFAS constituents, Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonic acid (PFOS), by fall 2022, with the intention of finalizing these standards by fall 2023.

- Clean Water Act Regulation. The EPA plans to propose a rule in summer 2023 that will restrict PFAS discharges from the organic chemicals, plastics and synthetic fibers, metal finishing, and electroplating industries. EPA also plans to continue to collect data and, where supported, initiate rulemakings that will restrict PFAS discharges from additional industrial categories, including electrical and electronic components, textile mills, landfills, leather tanning and finishing, plastics molding and forming, paint formulating, pulp, paper, paperboard, and airports.

- On October 26, 2021, the EPA built upon its PFAS Strategic Roadmap by announcing plans to initiate two proposed rulemakings; (1) to add PFOA, PFOS, Perfluorobutane sulfonic acid (PFBS) and GenX[10] to the list of Resource Conservation and Recovery Act (RCRA) Hazardous Constituents, which would result in these chemicals being regulated as hazardous waste under RCRA and (2) clarify that constituents classified as RCRA

[10] GenX is the trademark name for a short-chain PFAS that is being marketed as a replacement for PFOA.

hazardous wastes, such as these four chemicals, can be cleaned up through the RCRA corrective action process.[11] On July 30, 2021, related state information was released providing further support for PFAS regulation and remediation. The California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) announced the availability of a draft technical support document for proposed Public Health Goals (PHGs) for PFOA and PFOS in drinking water. The public comment period for the draft ended on October 28, 2021. The intended effect once PFAS regulation and guidance is finalized at the Federal and State level is to comprehensively regulate and remediate PFAS.

- On May 18, 2022, the U.S. Environmental Protection Agency (EPA) added five PFAS to a list of risk-based values for site cleanups. These levels are used by the EPA and other agencies in the investigations of contaminated sites. No updates to the risk-based values have occurred for PFAS since May 2022.

- On June 15, 2022 the EPA announced new drinking water health advisories for PFAS[12]. The EPA issued interim, updated drinking water health advisories for two substances and final health advisories for two additional substances. These health advisories inform the maximum contaminant levels allowed in drinking water, and would not have an effect at this moment on landfills.

- On August 17, 2022 the Division of Drinking Water presented at the State Water Resource Control Board meeting on the Notification and Response Levels for Perfluorohexane Sulfonic Acid[13]. There is continued progress through the discussion of this topic. On August 26, 2022 the EPA announced under the Administrator Regan's PFAS Strategic Roadmap, significant action to protect communities health from the risks posed by certain PFAS's. The EPA is proposing that PFAS become designated as a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or "Superfund." This would increase transparency around the releases of PFAS and help hold polluters accountable for the cleanup. This proposal applies toward PFOA and PFOS.

[11] The National Law Review: EPA Makes PFAS Announcements, Issues PFAS Strategic Roadmap and Planned RCRA Hazardous Waste Designations https://www.natlawreview.com/article/epa-makes-pfas-announcements-issues-pfas-strategic-roadmap-and-planned-rcra, accessed November 2021.
[12] https://www.epa.gov/newsreleases/epa-announces-new-drinking-water-health-advisories-pfas-chemicals-1-billion-bipartisan
[13] https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/pfas.html

- On August 26, 2022 the EPA announced under the Administrator Regan's PFAS Strategic Roadmap, significant action to protect communities health from the risks posed by certain PFAS's[14]. The EPA is proposing that PFAS become designated as a hazardous substance under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or "Superfund." This would increase transparency around the releases of PFAS and help hold polluters accountable for the cleanup. This proposal applies toward PFOA and PFOS.

- On March 14, 2023, the EPA announced proposed national primary drinking water maximum contaminant levels (MCLs) for six PFAS (PFOA and PFOS as individual contaminants, and four contaminants as a PFAS mixture). The proposed regulation would require public water systems to monitor, notify the public of the contaminant levels, and treat drinking water to reduce the levels of these PFAS if they exceed the proposed MCLs. California-specific MCLs[15] for PFAS have not yet been established as of March 2023[16].

Current and proposed regulations have focused on drinking water. Future developments may include additional monitoring for landfill and other disposal facilities.

3.0 LOOKING AHEAD: ANTICIPATED EFFORTS AND ISSUES

3.1 Introduction

The 2020 contract year was the beginning of a new Community Monitor contract, with Langan providing CM services, assisted by ESA. The CM team will continue to perform report reviews, site inspections and Class 2 soils file reviews. In 2020, COVID-19 health emergency and the resulting Shelter-in-Place orders brought changes in the way the CM conducts monitoring of the landfill activities. Two Emergency Waivers, one for the COVID-19 emergency and the other for wildfires, were requested and received by the ALRRF.

The four-year test of evapotranspirative (ET) cover methods is ongoing; the liquids separation system continued to operate; and ALRRF proposed that storm water samples no longer be analyzed for VOCs and that SW storm water samples no longer be collected. Exceedances at several monitoring wells and windblown litter issues will continue to be tracked.

[14] https://www.epa.gov/newsreleases/epa-proposes-designating-certain-pfas-chemicals-hazardous-substances-under-superfund
[15] https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas
[16] https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas

3.2 Issues to be Tracked in 2023

3.2.1 Ongoing Review

The following issues will continue to be monitored in the coming year:

- Concurrence of natural-resource agencies with off-site wetland mitigations.
- Groundwater monitoring methods and data quality.
- Groundwater quality, including the vadose zone below the landfill liners.
- Stormwater quality and management practices.
- Performance of the landfill gas system; decommissioning and installation of gas wells.
- Effects of composting or material recovery development or operations on the landfill.
- Refuse truck traffic counts, if needed.
- Performance of the 10-acre ET cover test site.
- Compliance with the CDO.
- Reduction of windblown litter on and off ALRRF property.
- Track new developments related to PFAS.

3.2.2 Site Assessments

All operations will continue to be observed, with close attention to the following areas.

3.2.2.1 Landfill Gas Control System

This system protects both air and groundwater quality, and it operates within a complex regulatory framework involving Federal permits, local permits, State regulations, and ALRRF CUP conditions. Physical changes to this system are likely to include the further addition of landfill gas extraction wells, decommissioning of wells that are no longer productive, and ongoing operation of the LNG plant, turbines, flares, etc. In 2023, four topics will be of special interest:

- The effect of the gas system on the concentrations of contaminants in wells E-20B and MW-4A.
- Implementation of the corrective action program in the MW-38 area.
- Gas temperatures, particularly in the high-temperature cluster of wells in FA 1 Unit 2.

- Implementation of gas collection in FA 2.

3.2.2.2 Stormwater Controls and Monitoring

Throughout the year, and especially during wet weather months, the CM will monitor conditions at all stormwater basins. The new additions to the stormwater pollution controls – skimmers, flocculant addition, Filtrexx™ check dams, and additional discharge points appear to have reduced contamination, although sporadic VOCs are still detected.

3.2.2.3 Windblown Litter

This will likely continue to be an issue for FA 2 and downwind areas. ALRRF has installed additional fences and maintained a 13-man crew to perform litter clean up as prevention to litter disposal offsite during 2022 through 2023.

3.2.2.4 New Systems

The CM will directly observe, and review available performance data, for:

- The ET cover test area
- The wetland mitigation pond
- Tipper and truck wash equipment in FA 2
- The liquids separation system
- Relocation of the solidification operations

In addition, monitoring reports on the Mitigation Wetland and the Conservation Plan Area, will be reviewed as they are provided.

3.2.2.5 Groundwater Contaminants and Groundwater Data

The CM team will continue to check concentrations of VOCs which show an increase. The team will also monitor data from wells E-20B, MW-4, MW-12, MW-20, MW-38 and other wells that have shown evidence of contamination. The quality of the groundwater sampling and analyses, especially the occurrence of contaminants in quality-control samples and field samples, will also continue to be monitored.

3.2.3 Class 2 Soils File Review

As required by the Scope of Work, the CM will conduct this review at least twice during 2023.

3.2.4 Permit Requirements

In the Settlement Agreement, Section 4.3 defines the Expansion Date as "the date of the first deposition of solid waste in [Fill Area 2]." That occurred on March 25, 2019, triggering specific requirements in Conditional Use Permit C-5512, and in the resource-protection permit conditions that were imposed through the mitigations in the landfill-expansion EIR and the associated natural-resource-agency permits (Army Corps wetland permit, USFWS Biological Opinion, etc.; see Section 1.5.2, above).

3.2.4.1 Tonnage Limitations

Section 4 of the Settlement Agreement contains numerous restrictions on the types and source jurisdictions of wastes that can be brought to the ALRRF during specified time frames prior to and after the Expansion Date. Specifically:

- After the Expansion Date, the amounts of Sludges, Inert Waste and Special Waste from outside San Francisco and Alameda Counties is limited to 25,000 tons per year, and these materials may only originate within the nine Bay Area counties.
- Self-Hauled wastes (of all types) from Contra Costa County are limited to 25,000 tons per year.
- Materials brought for disposal may only originate from Alameda County, San Francisco, and San Ramon.

3.2.4.2 Natural Resource Protections and Reporting

The natural resource permits issued in connection with the ALRRF expansion contain over 80 explicit permit conditions, too many to enumerate here. In the near term, the following monitoring and reporting conditions are especially significant for the CMC:

- Every four years after the start of construction of FA 2 (which began in 2015), the CDFW is to receive a status report on the required periodic surveys of the Conservation Plan Area. The wildlife surveys focus on Western Burrowing Owl, San Joaquin Kit Fox, California Red-legged Frog, and California Tiger Salamander.
- Annual wetland monitoring reports are required by the Lake and Streambed Alteration Agreement, which was issued by the CDFW, for the first five years of operation of the wetland mitigations, i.e. the constructed pond.
- Reconnaissance survey reports for the Conservation Plan Area are also required by the CDFW. These include baseline and periodic surveys for sensitive wildlife species (see list above), and annual rangeland and general reconnaissance surveys. These are due on

January 15 of the calendar year following the survey.

In 2022, we received and reviewed the 2021 Annual Progress Report. We will continue to request progress reports in the future.