COMMUNITY MONITOR COMMITTEE
Altamont Landfill Settlement Agreement

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

AGENDA

DATE: **Wednesday, April 10, 2024**
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 October 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 Election of the Chair (City of Livermore staff)**
   - **6.2 Responses to Committee Member Questions**
   - **6.3 Water Board Requests**
   - **6.4 Review of Documents on GeoTracker web site**
   - **6.5 Review of Reports from ALRRF**
   - **6.6 PFAS Updates**
   - **6.7 Reports from Community Monitor**
   - **6.8 2023 Draft Annual Report**
   - **6.9 Altamont Community Monitor Budget**
   - **6.10 Announcements (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 10, 2024,** at 3500 Robertson Park Road, Livermore.

Informational Materials:

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

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 Department

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@LIVERMORECA.GOV 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.

List of Acronyms

Below is a list of acronyms that may be used in discussion of waste disposal facilities. These have been posted on the CMC web site, together with a link to the CalRecycle acronyms page: https://www.calrecycle.ca.gov/lea/acronyms.

Updates will be provided as needed. This list was last revised on March 22, 2024.

Agencies
ACWMA – Alameda County Waste Management Authority
ANSI – American National Standards Institute
ARB or CARB – California Air Resources Board
ASTM – American Society for Testing and Materials
BAAQMD – Bay Area Air Quality Management District
CDFW – California Department of Fish and Wildlife (formerly California Department of Fish and Game or CDFG/DFG)
CDRRR – California Department of Resources Recycling and Recovery, or CalRecycle
CIWMB – California Integrated Waste Management Board (predecessor to CDRRR – see above)
CVRWQCB – Central Valley Regional Water Quality Control Board
CMC – Community Monitor Committee
DTSC - Department of Toxic Substances Control
DWR – Department of Water Resources
EMP – Evaluation Monitoring Plan
EPA – United States Environmental Agency
LEA – Local Enforcement Agency (i.e., County Environmental Health)
RWQCB – Regional Water Quality Control Board
SWRCB – State Water Resources Control Board

Waste Categories
C&D – construction and demolition
CDI – Construction, demolition and inert debris
FIT – Fine materials delivered to the ALRRF, measured by the ton.
GSET – Green waste and other fine materials originating at the Davis Street Transfer Station, for solidification, externally processed.
GWRGCT – Green waste that is ground on site and used for solidification or cover (discontinued January 2010)
GWSA – Green waste slope amendment (used on outside slopes of the facility)
MSW – Municipal solid waste
RDW – Redirected wastes (received at ALRRF, then sent to another facility)
RGC – Revenue generating cover
TASW – Treated Auto Shredder Waste

Water Quality Terminology
BMP – Best Management Practice – A general term to identify effective means of pollution control, especially in the contexts of stormwater and air quality.
IDL – Instrument Detection Limit – The smallest concentration of a specific chemical, in reagent grade water, that can be detected, with 99% confidence, with the detection instrument (e.g., the mass spectrometer).
MCL – Maximum Contaminant Level – The legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act.
MDL – Method Detection Limit – The smallest concentration of a specific chemical, in a sample that contains other non-interfering chemicals, that can be detected by the prescribed method, including preparatory steps such as dilution, filtration, digestion, etc.
NAL – Numeric Action Level – A concentration of a stormwater pollutant above which, the discharger must plan to reduce this concentration.
RL – reporting limit: in groundwater analysis, for a given substance and laboratory, the concentration above which there is a less than 1% likelihood of a false-negative measurement.
SWPPP – Storm Water Pollution Prevention Plan

Substances or Pollutants
ACM – asbestos-containing material
ACW – asbestos-containing waste
ADC – Alternative Daily Cover. For more information:
https://www.calrecycle.ca.gov/lgcentral/basics/adcbasic
BTEX – benzene, toluene, ethylbenzene, and xylene (used in reference to testing for contamination)
CH_4 – methane
CO_2 – carbon dioxide
COD – Chemical Oxygen Demand – A measure of the degree to which a wastewater discharge can deplete the oxygen in a body of water.
DO – dissolved oxygen
HHW – household hazardous waste
LFG – landfill gas
LNG – liquefied natural gas
MEK – methyl ethyl ketone
MIBK – methyl isobutyl ketone
MTBE – methyl tertiary butyl ether, a gasoline additive
NMOC – Non-methane organic compounds
NTU – nephelometric turbidity units, a measure of the cloudiness of water
PFAS – Per- and polyfluoroalkyl substances
TCE - Trichloroethylene
TDS – total dissolved solids
TKN – total Kjeldahl nitrogen
TSS – Total Suspended Solids
VOC – volatile organic compounds

Documents
CCR – California Code of Regulations (includes Title 14 and Title 27)
CDO – Cease and Desist Order
CoIWMP – County Integrated Waste Management Plan
CUP – Conditional Use Permit
JTD – Joint Technical Document (contains detailed descriptions of permitted landfill operations)
MMRP – Mitigation Monitoring and Reporting Program
RDSI – Report of Disposal Site Information
RWD – Report of Waste Discharge
SRRE – Source Reduction and Recycling Element (part of CoIWMP)
SWPPP – Stormwater Pollution Prevention Plan
WDR – Waste Discharge Requirements (Water Board permit)

General Terms
ALRRF – Altamont Landfill and Resource Recovery Facility
ASP – Aerated Static Pile composting, which involves forming a pile of compostable materials and causing air to move through the pile so that the materials decompose aerobically.
AQI – Air Quality Index
BGS – below ground surface
BMP – Best Management Practice
CASP – Covered Aerated Static Pile (ASP) composting
CEQA – California Environmental Quality Act
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
CL – Concentration Limit (statistical limit of background concentrations for specific constituents in groundwater monitoring wells)
CQA – Construction Quality Assurance (relates to initial construction, and closure, of landfill Units)
CY – cubic yards
GCL – geosynthetic clay liner

General Terms (continued)
GPS – Global Positioning System
IC engine – Internal combustion engine
LCRS – leachate collection and removal system
LEL – lower explosive limit
LMR – Landfill Methane Regulation
mg/L – milligrams per liter, or (approximately) parts per million
NAAQS – National Ambient Air Quality Standards
µg/L – micrograms per liter, or parts per billion
PPE – personal protective equipment
ppm, ppb, ppt – parts per million, parts per billion, parts per trillion
RAC – Reclaimable Anaerobic Composter – a method developed by Waste Management, Inc., to place organic materials in an impervious containment, allow them to decompose anaerobically, and extract methane during this decomposition.
RCRA – Resource Conservation and Recovery Act
SCF – Standard cubic foot, a quantity of gas that would occupy one cubic foot if at a temperature of 60°F and a pressure of one atmosphere
SCFM – standard cubic feet per minute, the rate at which gas flows past a designated point or surface
STLC – Soluble Threshold Limit Concentration, a regulatory limit for the concentrations of certain pollutants in groundwater
TTLC – Total Threshold Limit Concentration, similar to STLC but determined using a different method of analysis.
TPD, TPM, TPY – Tons per day, month, year
WMAC – Waste Management of Alameda County

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

DRAFT

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

2. Roll Call

Members Present:	Donna Cabanne, Sierra Club; Ben Barrientos, City of Livermore; Jeff Nibert, City of Pleasanton; Ryan Hammon, Alameda County Department of Environmental Health (LEA); Marcus Nettz II, Sonam Kaur, Altamont Landfill and Resource Recovery Facility (ALRRF)
Absent:	Alexandra Hoffmann-Bradley, Northern California Recycling Association (NCRA); Robert Cooper, Altamont Landowners Against Rural Mismanagement (ALARM)
Staff:	Judy Erlandson, City of Livermore; Mukta Patil, Megan Rollo, Langan/Community Monitor
Others:	Matthew Southworth (StopWaste)

3. Introductions
All those present introduced themselves.

4. Approval of Minutes of July 12, 2023 meeting
Ms. Cabanne moved approval, Mr. Nibert seconded, and the minutes were approved 3-0; Alexandra Hoffmann-Bradley was absent.

5. Open Forum
There was no open forum discussion.

6. Matters for Consideration

6.1 Responses to Committee Members Questions

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

Ms. Rollo began with the status of the mitigation pond at FA2. She presented that the mitigation pond is in compliance, per review of several Kleinfelder reports issued in 2022. These reports that evaluate the condition of the mitigation pond as it relates to endangered species that inhabit it. Ms. Rollo also presented the observations of the mitigation pond during the August site visit, where 3-4 feet of water observed, and frogs were present.

Following the response for the mitigation pond, Ms. Rollo presented the status of reseeding at the Evapotranspirative Cover (ET cover). The lack of vegetation in this area was observed by ESA in the Spring of 2023 and prompted discussion of reseeding the sparsely vegetated area. The community monitors reviewed the 2021 Annual Evapotranspirative Cover Report prepared by Geosyntec, an annual progress report part of the four-year monitoring period. This report states that the last time the ET cover was reseeded was in 2020. Geosyntec concluded that the sparsely vegetated areas will continue to be monitored to verify if vegetation continues to develop, and if it does not, reseeing should occur. Ms. Cabanne asked if the community monitors could provide an update on the reseeding of the ET cover in the July CMC meeting.

6.2 Water Board Requests

Ms. Rollo presented new developments on request by the Central Valley Regional Water Quality Control Board (CVRWQCB) on the Cease and Desist Order (CDO) and inspection report. These requests were summarized in the packet table. Ms. Rollo will provide the committee with an update on pending AOCs issued by the CVRWQCB in April 2024.

6.3 Review of Documents on GeoTracker web site

Ms. Rollo provided a summary of the items from the GeoTracker tables provided in the meeting packet.

6.4 Review of Reports from ALRRF

Ms. Patil summarized the Groundwater Analysis Progress Report #31 to the committee. Ms. Patil presented reported concentrations of vinyl chloride in exceedance of the primary Maximum Contaminant Limit (MCL) at E-05R. Ms. Patil explained that vinyl chloride is an unusual detection, however, is not following unusual trends, as there have been similar high concentrations reported between 2000 to 2003. Ms. Cabanne asked about tiers of reporting limits and Ms. Patil described that the MCLs are the maximum level allowed of a chemical in drinking water. Ms. Patil explained that the newest FA1 POC wells, at the end of the First Semiannual 2023 sampling period, except for MW-42B, MW-47B, MW-50, MW-51, MW-52 and MW-60 have been samples eight or more times and will continue to be monitored on a semiannual basis. Ms. Cabanne asked how samples reach the eight samples required and Ms. Patil explained the monitoring wells are sampled four times a year for two years. Ms. Cabanne requested the CMC continue to track E-05R. Ms. Patil continued to summarize the report and described that several monitoring wells had been abandoned. Ms. Cabanne asked for clarification as to why so many wells have been abandoned. Ms. Patil explained it is due to construction at FA2 and these wells were temporary monitoring points. Ms. Cabanne requested the community monitor if they could present information on MW-60 data at the next meeting if it is available. The

committee members expressed that Table 6.4.1-2 had been formatted in a way that presented the information too small and requested that the text be enlarged next time this report is presented.

Ms. Rollo presented the Air Emissions Report. She summarized the information in the report such as the new gas wells brought online, high temperature wells, recent gas well decommissions, surfacer emissions monitoring, emissions control device source tests, gas migration at perimeter probes and the gas migration near groundwater monitoring wells. Ms. Rollo presented Figure 6.4.2 and described the major turn down times for the six-month reporting period, including, refrigeration cycle issues. Mr. Nibert asked Ms. Rollo what it meant that LFG Plant S-210 has a shutdown due to its refrigeration cycle. Ms. Rollo said that she was unsure and that she would try and follow up. Mr. Nettz explained that this process at the landfill is run by a third party that is shutting down, which may modify operations at the landfill in the future. Ms. Rollo said she would try and provide clarity regardless.

6.5 PFAS Update

Ms. Rollo summarized the PFAS updates presented in the meeting packet. On May 4, 2023, the EPA generated updated tables that present changes in the toxicity and chemical specific parameters per regional screening levels. Ms. Rollo explained that the table update is part of the Integrated Risk Information Systems (IRIS) in which hazard identification and dose-response assessments are applied to toxicity values.

It was requested the community monitors continue to track the ongoing circumstances of PFAS, as it is likely significant updates will be provided to the public at the end of 2023.

6.6 Reports from Community Monitor

Ms. Rollo summarized Altamont Monthly Operations and Records Review. This includes Class 2 soil file reviews, tonnage reports and site visits from July, August, and September. Ms. Rollo walked the committee through each report. She described the intent of WM to reduce the quantity of leachate in LSI-1 pond before the wet season. She described her site visit in July with the LEA which began at 5 AM, before operations at the landfill were open to the public. Ms. Rollo also described visiting the Mitigation Pond in August and observing an increase in the water quantity per previous visits. She described her observations of sediment deposition into the mitigation pond and WM efforts to reconstruct this area by October. Ms. Cabanne asked the CMC to continue to monitor the water level in the Mitigation Pond throughout the wet season.

6.7 Community Monitor Budget

Ms. Patil presented the proposed Altamont Community Monitor Budget increase for the year of 2024. She explained that due to landfill expansion, larger groundwater monitoring network, the CDO, litter issues and general updates on contaminants of emerging concern including PFAS, Langan is requesting additional budget. Ms. Cabanne supported to grant the additional budget for services in 2023 to Langan, and supported the efforts

to evaluate information, track PFAS, EPA Particulate standards and other concerns at the Landfill. Mrs. Erlandson agreed to prepare an amendment to reflect the requested budget increase and present it for signatures of the committee members prior to the January 2024 meeting. Mr. Nettz noted WMAC may not agree with the budget increase, and requested additional information on where this money will go and how it will be used. Committee members present at the meeting agreed to revisit the budget discussion for future years at the following meeting.

Ms. Cabanne moved approval, Mr. Nibert seconded, and the budget increase for 2023 was approved 3-0; Alexandra Hoffmann-Bradley was absent.

6.8 2023 Draft Annual Reports Topic

Ms. Rollo presents the 2023 Annual Reports topics. It was requested that the Community Monitor also includes PFAS, EPA findings, and other regulatory advancements in the Bay Area and California.

6.9 2024 Committee Meeting Schedule

Ms. Rollo presented the proposed 2024 Committee Meeting Schedule. The committee discussed that there may be some absent members in April and possibly July, and the committee agrees to reserve the possibility to cancel one of these meeting dates.

Ms. Cabanne moved approval, Mr. Nibert seconded, and the 2024 Committee Meeting Schedule was approved 3-0; Alexandra Hoffmann-Bradley was absent.

6.10 Announcements

There were no announcements from the committee.

7. Agenda Building

No items were added to future agenda.

8. Adjournment

The meeting was adjourned at 5:25 p.m. The next meeting will be held on Wednesday January 10, 2024, at 4:00 p.m. at the Livermore Maintenance Services Center at 3500 Robertson Park Road.

COMMUNITY MONITOR COMMITTEE
STAFF REPORT

TO: Community Monitor Committee Members

FROM: Judy Erlandson, Interim Public Works Director

SUBJECT: Community Monitor Committee Election of Chair

RECOMMENDED ACTION

Staff recommends the Community Monitor Committee elect a Committee Chairperson.

DISCUSSION

The Settlement Agreement, dated December 5, 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.

If the Committee chooses to appoint a Chairperson, election 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
Interim Public Works Director

MEETING DATE:	AGENDA ITEM:
4-10-2024	6.1

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: April 10, 2024

Re: **CMC Meeting of 4/10/2024 - Agenda Item 6.2 - Responses to Committee Members' Questions**

Refrigeration Cycle at LNG Plant

At the October 11, 2023 meeting, Mr. Nibert asked for clarification on what a refrigeration cycle is in relation to the landfill gas (LFG) plant. Mr. Nettz explained the third-party organization that is knowledgeable of this information is shutting down. The liquified natural gas (LNG) process utilizes principles of refrigeration systems in their design and operation.[1] This consists of a chiller, compressor, condenser, and a surge tank. A chiller cools the hot steam and evaporates the refrigerant in the process and liquid from the accumulator enters the chiller. The control loop is focused around the cooled steam by maintaining and controlling pressure in the chiller component of the cycle. This is achieved by altering the compressor speed. Temperature or chiller pressure is variable within this loop and the rest of the process responds. This process at an LFG plant essentially occurs with LGN to maintain the gas in liquid form and allow handling and transport.

MW-60 Data

At the October 11, 2023 meeting, Ms. Cabanne asked the community monitors to present the data from MW-60 at the January 10, 2024 meeting. Unfortunately, at the time of writing this report, data for MW-60 had not been published. The available information consists of the Well Installation and Hydrological Conditions Report. In the report, the Analytical Results for MW-19, MW-52 and MW-60 Volatile Organic Compounds presents the sampling data for MW-60, sampled on July 6, 2023, as a part of the installation process. MW-60 was analyzed for acetone, carbon disulfide, toluene, naphthalene, styrene, and other VOCs. Toluene was detected at a concentration below its reporting limit. The community monitors will continue to track the information presented on MW-60, and it is anticipated additional data will be provided in the Second Semiannual 2023, which will be reviewed in the April 2024 meeting packet.

[1] https://www.sciencedirect.com/topics/engineering/liquefied-natural-gas-process#:~:text=A%20single%2Dmixed%20refrigerant%20process,for%20precooling%20the%20natural%20gas.

LANGAN

Memorandum

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

To: Community Monitor Committee

From: Langan – Community Monitor

Date: April 10, 2024

Re: **CMC Meeting of 4/10/24 – Agenda Item 6.3 – 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 6.3.2 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 6.3-2
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 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	

Table 6.3-2
Tracking Table for Water Board Requests
Altamont Landfill Resource and Recovery
Livermore, CA

Task	Due Date	Completed	Comments
(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.
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)	Ongoing	Report no later than 12 months from approval of the Report of Waste Discharge (submitted June 2022). Groundwater monitoring program is under review.
12. Notify the CVRWQCB 30 days prior to removal of interim monitoring devices	Ongoing during Fill Area 2 expansion	Ongoing	WMAC provided notification of the destruction of Fill Area 2 wells MW-34A, MW-34B, MW-35A, MW-35B, MW49A, MW49B, MW-54, MW-55, MW-56, MW-57, UGP-11, and VP-5 on February 27, 2023.
Violations or Areas of Concern (AOCs)			
1. Notify the CVRWQCB of progress made on the 14 AOCs outlined in letter regarding April 19, 2023 inspection report.	7/7/2023	9/30/2023	

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: April 10, 2024

Re: **CMC Meeting of 4/10/2024 – Agenda Item 6.4 – 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 October 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 FA2
- ET Cover Planning, Design, Installation

Monitoring Program

- New or Pending Monitoring Wells
- Concentration Limits for Monitoring Wells

Liquids Management

- Liquids and Leachate Management

Other Topics

- CVRWQCB Inspections
- Winterization Plan

MEMO

LANDFILL OPERATIONS

Revised Configuration and Phasing Schedule for FA2 Topics

From	Format | Date	Key Point(s)
WM	Correspondence| November 8, 2023	This letter was prepared by WM to inform the CVRWQCB on the planned reconfiguration of FA2, Phase 7 cell and the revised schedule for the stability berm construction activities. WM is also requesting a temporary adjustment of monitoring wells and gas probes in this area.
CVRWQCB	Correspondence| February 8, 2024	This report discusses the CVRWQCB review of the *Fill Area 2 Revised Configurations for Phases 7 and 9, Revised Stability Berm Construction Schedule and Request for Temporary Modification of Well and Gas Probe Network*. This includes proposed revisions to the layout of select fill phases in FA2, installation timing, installation of a final downgradient stability berm and the delay of installation from last monitoring wells. Additionally, the report includes request to temporarily modify the existing downgradient stability berm and Phase 8.
Geosyntec	Other Report/ Document| February 9, 2024	This report documents construction quality assurance activities associated with Phase 6, and related stormwater improvements at FA2. All construction was completed with the approved design report, construction documents and CQA plan.

ET Cover Planning, Design, Installation Topics

From	Format | Date	Key Point(s)
WM	Progress Report| January 15, 2024	The *2022 Annual Progress Report* for the Evapotranspirative Cover is part of the on-going 4-year monitoring period following the construction of the ET Cover in 2018. The report discusses data collection, maintenance, observations, and results of vegetation, erosion, and infiltration monitoring at the area through the end of 2022.

MONITORING PROGRAM

New or Pending Monitoring Wells Topics

From	Format | Date	Key Point(s)
Geosyntec	Well Destruction Report| July 14, 2023	Geosyntec prepared this Report on behalf of WM, to document the destruction of ten monitoring wells and two gas probes. Groundwater monitoring wells, MW-34A, MW-34B, MW-35A, MW-35B, MW-49A, MW-49B, MW-54A, MW-55, MW-56, MW-57 and gas probes UGP-11 and VP-5 were located within the excavation footprint of FA2, Phase 6, and needed to be destroyed to proceed with construction at the phase. The groundwater monitoring wells and gas probes were destroyed in accordance with the "FA2 Soil Gas Probe and Monitoring Well Installation and Destruction Work Plan" dated July 20, 2021.

MEMO

From	Format | Date	Key Point(s)
Geosyntec	Well Installation Report| July 31, 2023	This report was prepared by Geosyntec on behalf of WM for the new proposed solidification basin. This report was submitted at the request of the CVRWQCB and documents the installation of MW-60 and the hydrogeologic conditions in the vicinity of the solidification basins.
Geosyntec	Well Installation Report| December 15, 2023	*The Fill Area 2 Gas Probe and Monitoring Well Installation Report* was prepared to document the installation and development of six new monitoring wells (MW-49AR, MW-49BR, MW-58, MW-61, MW-62, and MW-63), a multi depth gas probe (UGP-11R), a single depth gas probe (VP-6). The installation of the monitoring wells and gas probes were installed with accordance with *the Fill Area 2 Soil Gas Probe and Monitoring Well Installation Work Plan* approved by the CVRWQCB on July 26, 2021.

Concentration Limits for Monitoring Wells Topics

From	Format | Date	Key Point(s)
CVRWQCB	Other Report/Document| October 2, 2023	A technical memorandum was prepared by Geosyntec with assistance of GeoChem Applications on behalf of WM in response to the CVRWQCB letter from June 20, 2023 requesting eight items and to begin a dialogue regarding the monitoring program and an establishment of groundwater concentration limits at ALRRF.

LIQUIDS MANAGEMENT

Leachate and Liquids Management Topics

From	Format | Date	Key Point(s)
CVRWQCB	Correspondence| February 21, 2024	The CVRWQCB reviewed the *Updated Monitoring Program Technical Memorandum* prepared October 2, 2023. This memorandum discusses the landfill's groundwater monitoring well networks: FA1, FA2, LSI-1, LSI-2, and LS-3, along with their designated monitoring program. These monitoring programs include detection monitoring, corrective actions monitoring, and 5-year detection monitoring. Additionally, the memorandum discusses WM proposed method for calculating inorganic intrawell concentration limits, concentration limits for anthropogenic constituents and when FA2 intrawell sample quantities.

OTHER TOPICS

CVRWQCB Inspections Topics

From	Format | Date	Key Point(s)
CVRWQCB	Site Visit/ Inspection/ Sampling| May 2, 2023	The CVRWQCB inspected ALRRF on April 19, 2023. The inspection concluded with 14 Areas of Concern (AOCs) that WM must comply with by July 7, 2023. A detailed list of the AOCs is in the Water Board Tracking table agenda item.

MEMO

From	Format | Date	Key Point(s)
WM	Staff Letter| July 7, 2023	WM has submitted this letter to the CVRWQCB in response to a letter dated May 13, 2023 regarding the CVRWQCB inspection that took place on April 19, 2023 which documented 14 AOCs. This letter provides updates on AOCs 3-7 and 14. Projects concerning AOCs 1,2,11 and 12 are projected to be completed by August 31, 2023; and projects concerning AOCs 8,9,10 and projected to be completed by September 30, 2023. • AOC 3: An upgraded leachate collection trench and drainage pipe system have been installed in the first and second benches of Seep C. • AOC 4: • Leachate was removed and impacted soil was excavated and disposed of in the Class II Lined Landfill. The surface was replaced and graded using clean native soil. • AOC 5: • To ensure adequate freeboard, operations have increased water spreading activity for dust control on top of FA1 Unit 2. • AOC 6: • A surface scan was conducted in the area and no methane was detected. The gas system is working effectively. • AOC 7: • The facility removed the exposed waste observed along the Southeastern limit of FA2.
CVRWQCB	Site Visit/Inspection| October 6, 2023	The CVRWQCB performed an inspection for the FA2 Phase 6 cell construction site, observed the proposed Solidification Facility area, portions of the CASP, and the existing solidification basins on FA1.
CVRWQCB	Site Visit/Inspection| October 31, 2023	WM has submitted a response to the CVRWQCB concerning its landfill inspection that occurred on April 19, 2023, documenting the completion of the 14 AOCs. This letter provides response and updates to remaining AOCs (1-2 and 8-12). AOCs (3-7 and 13-14) were addressed in a response from WM on July 7, 2023.

Winterization Report **Topics**

From	Format | Date	Key Point(s)
WM	Other Report/Document| November 15, 2023	WM prepared the Winterization Plan for 2023-2024 to prepare ALRRF for the wet weather season. The landfill conducts site specific winter preparations as needed to ensure compliance with the WDR and minimize erosion during the wet season. An inspector of the landfill occurred prior to September 2023 to determine focus areas on site. Prior to October 31, 2023, the landfill: inspected groundwater monitoring wells, stormwater pond drainage features, down drains, and v-ditches/channels, removed debris from drain inlets, v-ditches/channels, energy dissipaters, restored litter fences around selective drain inlets, restored rock check dams in permanent drainage ditches, restored v-ditch

MEMO

From	Format | Date	Key Point(s)
		alignments and cross section, constructed soil berms, silt traps, and installed inlets and down drains in new fill areas.

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: April 10, 2024

SUBJECT: **CMC Meeting of 4/10/24 – Agenda Item 6.5.1 – Review of Reports from ALRRF: Groundwater Analysis Progress Report #32**
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 2023 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility (WDR Order No. R5-2016-0042-01), Long Beach, California, dated February 2024.

- SCS Engineers Second Semiannual 2023 Corrective Action Status Report, Altamont Landfill and Resource Recovery Facility (Order No. R5-2021-0022), Long Beach, California, dated February 2024.

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. 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.

The Second Semiannual groundwater sampling activities for Fill Area 1 (FA1) and 2 (FA2) were conducted from July to December 2023. Perimeter monitoring wells (MW-42B, MW-47B, MW-50, MW-51 and MW-52) were sampled quarterly if sufficient liquid was present. Perimeter monitoring wells that have been sampled for eight quarterly events have had their sampling frequency changed to semiannual per WDR requirements. Quarterly sampling of wells under additional evaluation (MW-8A, MW-8B, PC-2A and PC-2C) has ended as analytical results have remained consistent with no confirmation of volatile organic compounds (VOCs) detected. New interim monitoring wells for Phase 6 (MW-58, MW-61, MW-62 and MW-63) and replacement perimeter monitoring wells (MW-4AR and WM-49BR) for the Fill Area 2 were installed in October 2023 and sampled in November and December 2023 for the Second Semiannual 2023 period.

LABORATORY QA/QC

During the Second Semiannual 2023 monitoring event, there were less QA/QC issues compared to the First Semiannual 2023 monitoring event.

All ice chests containing groundwater samples collected during the Second Semiannual 2023 period arrived at the laboratory (TestAmerica in Colorado).

The QA/QC samples included surrogate recovery, matrix spikes/ matrix spike duplicates (MS/MSD), laboratory controls (LCSs) and instrument calibration. Matrix spikes and surrogate recovery are evaluated to determine whether the sample matrix is interfering with the laboratory analysis, and to provide a measure of the accuracy of analytical data. Laboratory control samples are samples with known concentrations for analytes of interest that are prepared and analyzed with groundwater samples. Some QA/QC LCS/LCSD and MS/MSD data associated with the Second Semiannual 2023 groundwater samples were outside of acceptable laboratory control limits, however, overall evaluation of the QA/QC protocols and results determine the data to be valid and useable and considered acceptable.

Bromoform, chloroform, ethanol, tetrahydrofuran was 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. One or more of these VOCs was also detected in ALRRF groundwater samples.

During the Second Semiannual 2023 monitoring event, the laboratory reported that dissolved aluminum, calcium, cobalt, iron, magnesium, manganese, sodium, and zinc (Method 6010B); bicarbonate and carbonate alkalinity (Method 2320B); chemical oxygen demand (Method 410.4); acetone and acetonitrile (Method 8260B) and 4-4' DDT (Method 8081A) were detected in one or more of the method blanks associated with groundwater samples.

MONITORING WELL NETWORK

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) well MW-27 (this well replaced well MW-12), and 2) wells E-05 (now replacement well E-05R[1]) 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 6.5-1 (below) summarizes the monitoring well network, which is also presented in Figure 6.5-5. In addition, landfill gas extraction is the corrective action is ongoing in the vicinity of monitoring wells MW-4A and MW-38.

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

Table 6.5-1

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 6 Groundwater Monitoring Wells	MW-58, MW-61, MW-62, MW-63
Point of Compliance (POC) (or Final Edge of Waste) Monitoring Wells	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-49AR, MW-49BR, MW-50, MW-51, MW-52

SECOND SEMIANNUAL 2023 GROUNDWATER SAMPLING RESULTS

Prior to the start of the First Semiannual 2023 sampling period, except for wells MW-42B, MW-47B, MW-50, MW-51, MW-52 and MW-60, all other groundwater monitoring wells have been sampled eight or more times and will continue to the monitored on a semiannual basis per WDR requirements. These wells were sampled at least once in each of the Third and Fourth Quarters of 2023, and sampling on a quarterly or more frequent basis will continue until these wells have been sampled at least eight times.

In the Second Semiannual 2023 period, corrective action well E-05R reported no concentrations in exceedance of the primary Maximum Contaminant Level (MCL). Two other VOCs were detected above reporting limits in E-05R during this monitoring period: tert-butyl alcohol and tetrahydrofuran, and two VOCs, diethyl ether and methyl tert-butyl ether (MTBE) were detected at concentrations below the reporting limit.

In E-07, 1,1-dichloroethane and dichlorofluoromethane were detected at concentrations exceeding their respective reporting limits. Cis-1,2-dichloroethene, dichlorodifluoromethane,

diethyl ether, MTBE, tetrachloroethene and trichloroethene were detected at concentrations below the reporting limit.

MW-38

The VOCs detected in the groundwater samples are summarized in Table 6.5.1-2. During the initial sampling event conducted late April 2022, one VOC was detected in groundwater at MW-38. A Proposed Evaluation Monitoring Plan (EMP)[2], Engineering Feasibility Study (EFS)[3], and initial and revised Amended Report of Waste Discharge (AROWD[4]) 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 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 2023 period (SCS, February 1, 2024). WMAC has incorporated MW-39, vadose point UGP-4 (near MW-39), and LFG well 703 data into the Corrective Action Status Report, 2024, based on additions to the May 2023 AROWD and requests made by the RWQCB in their June 6, 2023, letter.

E-20B and downgradient wells

In monitoring well E-20B, 1,1-dichloroethane and dichlorofluoromethane was detected at concentrations above RL. These VOCs have been detected in E-20B since 1999. Below RL concentrations of cis-1,2-dichlorethene and MTBE were also detected in E-20B during the Second Semiannual 2023 monitoring event. Less VOCs were detected in the Second Semiannual 2023 sampling event compared to the First Semiannual 2023 Sampling event.

1,1-DCA was detected in the sample from the downgradient monitoring well MW-20R.

No VOCs were detected in MW-27.

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.

[2] *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*

[3] *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*

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

MW-4A

No VOCs were detected in MW-4A or associated monitoring wells during the Second Semiannual 2023 sampling event.

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 6.5.1-3, 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, MW15B, MW-16, MW-17, MW-17R, MW-18, MW-19, MW-27, MW-41A, MW-42A, 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-50, MW-51, 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-58 and MW-63.

MW-49B and its well pair MW-49A, were abandoned in April 2023 to accommodate grading for the continued construction in Fill Area 2. Replacement wells MW-49AR and MW-49BR were installed in October 2023 and samples on December 13, 2023. MW-49BR reported an occurring above reporting limit concentration of carbon disulfide (it had been detected in original well MW-49B). Previous detections of carbon disulfide in original well MW-49B were evaluated and presented to the CVRWCB on March 3, 2022, and concluded the detection is due to natural conditions, not the influence of leachate or LFG.

On July 6, 2023, MW-60, future solidification basin monitoring well was sampled and a below reporting limit concentration of toluene was detected. MW-60 has been sampled four additional times and reported no detections of toluene nor any other VOCs.

Interim monitoring well MW-61 detected below reporting limit concentration of benzene and interim monitoring well MW-62 detected below reporting limit concentration of naphthalene.

Statistical exceedance of chemical oxygen demand (COD) was observed in MW-9 during the Second Semiannual 2022 period and confirmed by resampling. It was recommended that MW-9 continue to be sampled semiannually to monitor COD concentrations and other WDR parameters. In the First Semiannual 2023 sampling event, there were no detections of COD. In the Second Semiannual 2023 sampling event, COD was detected above the reporting limit. Previous changes in COD concentrations have been attributed to natural variations or cross contamination in the laboratory.

For WM-2, the report Assessment of Inorganic Water Quality Changes in WM-2 (SCS, June 11, 2021) concluded that the water quality changes do not appear to be associated with Fill Area 2

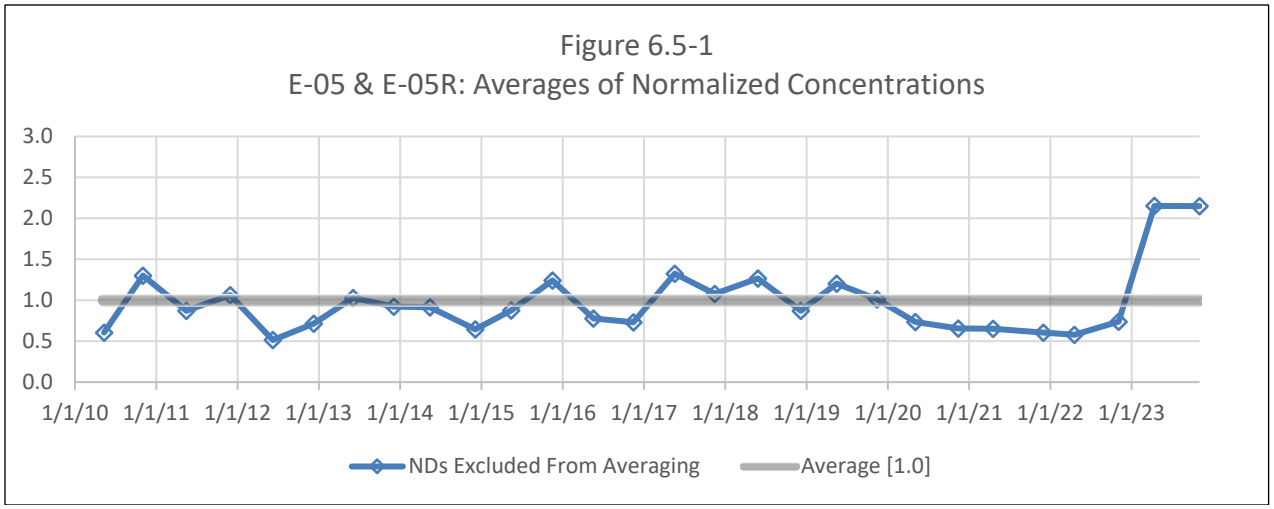
landfilling activities. Since 2019, a significant amount of earthwork has been conducted in the area north of WM-2, including clay mining, processing, and stockpiling, construction of a water supply pond, and development of borrow soil and boulder stockpiles. As a result, the topography has been altered significantly and a depression has been created north of WM-2 where storm water accumulates. These changes appear to have altered the natural recharge processes and resulted in changes in inorganic water quality. 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.

Other recurring statistical exceedances observed in the Second Semiannual 2023 period include MW-8A (chloride), MW-8B (COD, dissolved calcium, and TDS) and PC-2A (COD and sulfate). In the March 22, 2021, and WMAC March 20, 2022, letters to the CVRWQCB indicate that MW-8A, MW-8B and PC-2A are apart of a group of wells that have experienced changed in inorganic groundwater chemistry starting as early as 2018. An evaluation of potential sources of the water quality changes was conducted for these wells, which determined the changes were due to storm water effects and not a release from the landfill (Geosyntec, 2020). WMAC has continued to report water quality data for all three wells in accordance with the 2016 WDR/MRP.

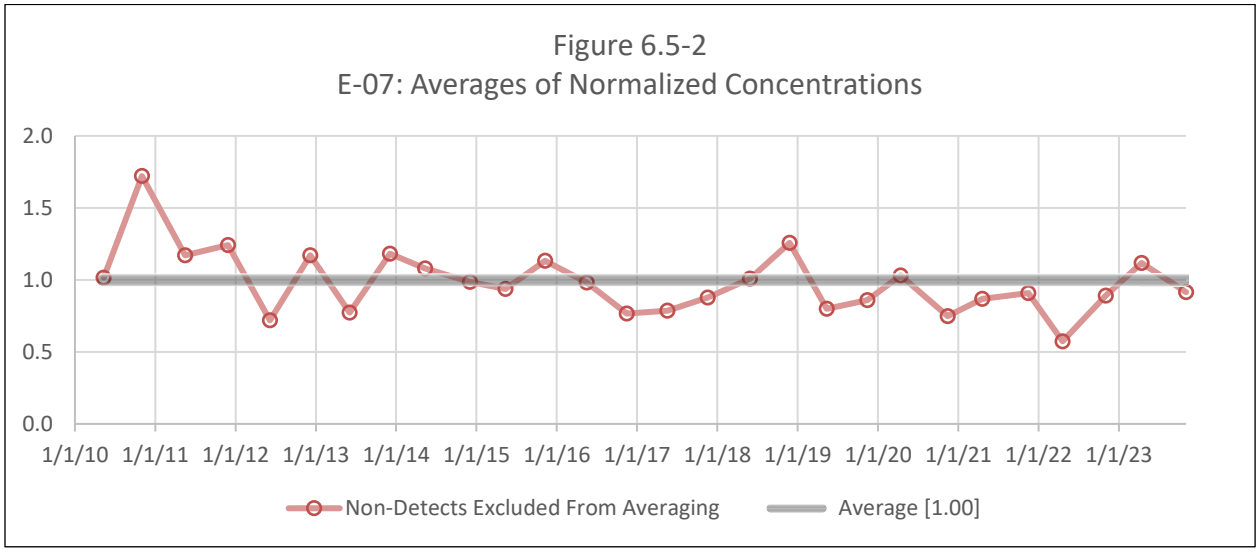
During the Second Semiannual 2023 period, replacement monitoring wells (MW-49AR and MW-49BR) and interim Phase 6 wells (MW-58, MW-61, MW-62 and MW-63) and MW-60 associated with future solidification basin, were sampled for the first time for the for 5-Year contaminants of concern (COC) parameters. No SVOCs, organochlorine pesticides, chlorophenoxy herbicides, organophosphorus pesticides or polychlorinated biphenyls (PCBs) were detected in samples from the wells listed above. 4-4'-DDT was detected below reporting limits in MW-60. The detection is attributed to laboratory cross contamination as a similar detection of 4-4'-DDT was detected in an associated method blank. Dimethyl phthalate was detected below reporting limits in MW-62.

Trends in VOC Data

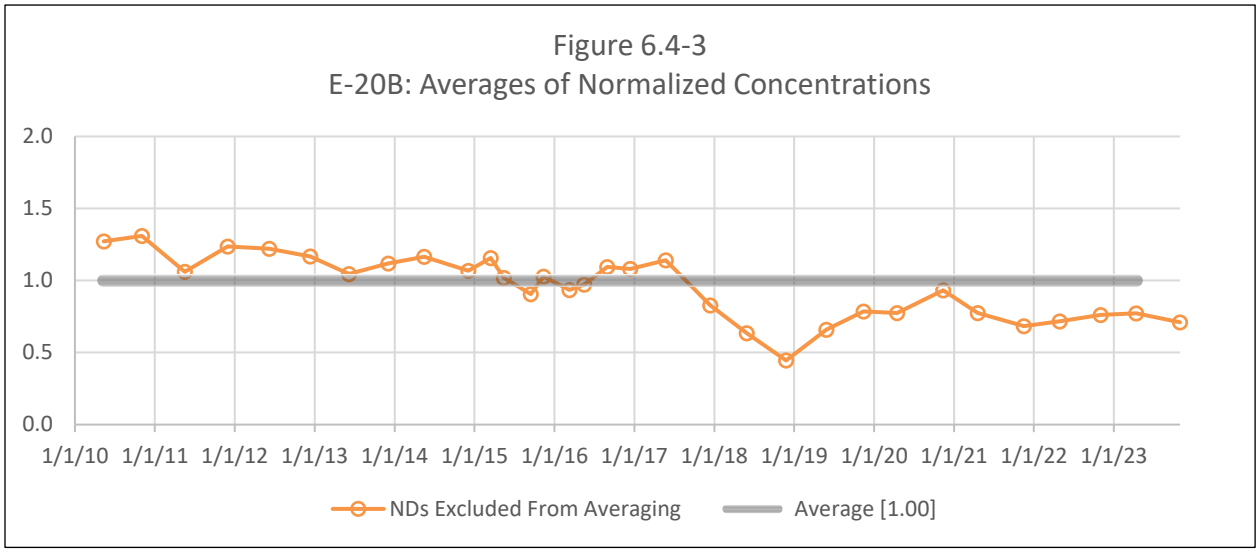
The Community Monitor continued to review the trends in data from monitoring wells where VOCs have been detected and continued graphing the data over time for each contaminant in each well. We have normalized the concentration data (dividing each data point by the average for that substance at that well, 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.



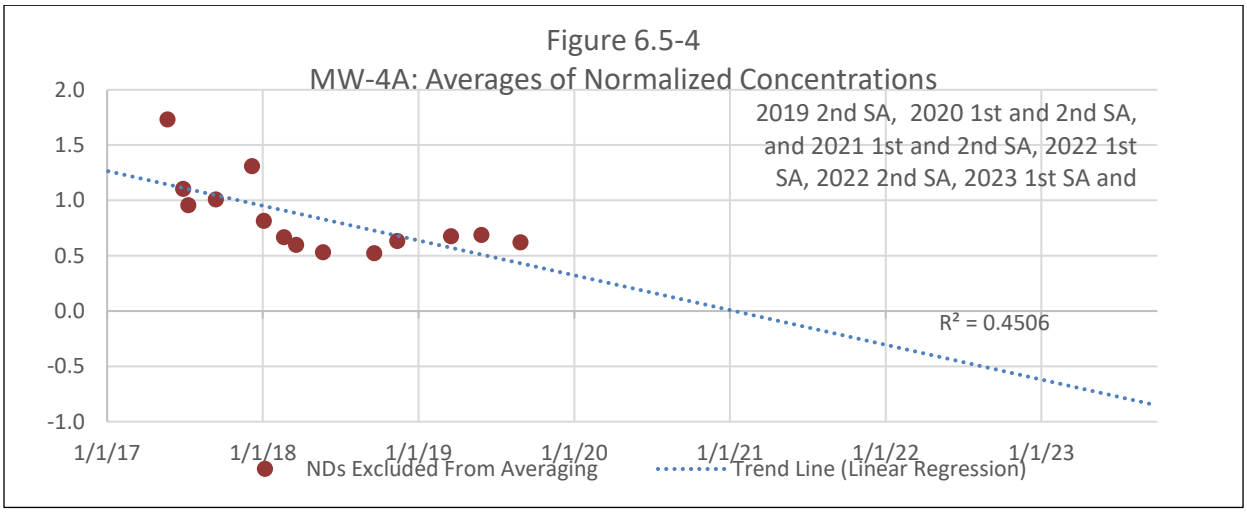
At Well E-05R, at the toe of FA1, the data has shown below average concentrations since May 2020. The April 2023 sample showed a sharp increase in total VOC concentration. The November 2023 sample shows the concentrations level out. This is primarily due to an increase in tert-butyl alcohol concentration, with respect to the previous sampling events. Tert-butyl alcohol is a degradation product of MTBE, which is a component of gasoline. Concentrations at E-05 will continue to be tracked.



At well E-07, in the same location as E-05 though screened deeper, the November 2023 sample moved above average and showed a decrease with respect to the previous sampling event. No clear trend is observed for this well, and we will continue to monitor the normalized concentrations over time.



At well E-20B, on the east side of FA1, the average across all VOCs was showing a clear decline in 2017 – 2018, but the more recent samples had shown an increase from 2019-2021, which brought concentrations back to the historical average. The October 2023 sample was below average. Concentrations in this well will continue to be tracked.



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

SUMMARY OF GROUNDWATER RESULTS

There were the similar occurrences of laboratory QA/QC issues compared to the previous reporting period; there were several concentrations that were observed in method blanks as well as in trip, field, and/or equipment blanks during the Second Semiannual 2023 sampling event.

This period included semiannual sampling of interim point of compliance wells for Phase 6 (MW-58, MW-61, MW-62, MW-63). This period also included quarterly sampling of wells under additional evaluation (MW-8A, MW-8B, PC-2A, and PC-2C). Final landfill perimeter monitoring wells (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-49AR, MW-49BR, MW-50, MW-51, and MW-52) were sampled quarterly if there was sufficient liquid. As apart of the future solidification facility to be constructed in the north of Fill Area 2, MW-60 was installed and late June and first sampled July 6, 2023. This well has sampled four more times during this monitoring period. POC wells (not including MW-42B, MW-47B, MW-50, MW-52 and MW-60) have been sampled eight or more times and will be monitored on a semiannual basis per the WDR requirements. MW-42B, MW-47B, MW-50, MW-52 and MW-60 will be sampled quarterly or more frequently until they have been sampled at least eight times.

VOCs detected in corrective action monitoring wells E-05, and E-07, were generally consistent and within the ranges of previous detections observed at these wells. E20-B had decreased detection concentrations than previous detections observed in the well. No VOCs were detected in E-03A, E-21, 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 well MW-27 during this, or any previous, reporting period. One LFG-related VOC was 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. The amended AROWD that combined the corrective action areas on the eastern side of FA1 into one Corrective Action Program was submitted on March 20, 2023. No detections of LFG related VOCs were detected at MW-4A. The concentrations of bicarbonate alkalinity at MW-4A have fluctuated from slightly above to slightly below the statistical concentration limit.

There were no initial concentration limit exceedances identified for the wells and inorganic parameters for Fill Area 1 wells for the Second Semiannual 2023 sampling event.

For Fill Area 2, the following initial statistical exceedance was observed for detection monitoring and interim POC wells during the Second Semiannual 2023 period:

- MW-16B. TDS (sample concentration of 8,600 mg/L is above the 5,160 mg/L limit)
- MW-18. Dissolved calcium (sample concentration of 43 mg/l over the 42.4 mg/l limit).
- PC-62. Bicarbonate alkalinity (sample concentration of 800 mg/l over the 780 mg/l limit), COD (sample concentration of 34 mg/l over the 30 mg/l), Chloride (sample concentration of 490 mg/l over the 423 mg/l limit) and TDS (sample concentration of 2,000 mg/l over the 1,800 mg/l limit).
- MW-63. Chloride (sample concentration 490 mg/l over the 423 mg/l limit).

The CVRWQCB was notified of these initial statistical exceedances by phone and by email on January 30, 2024. These wells will be resampled and the results will be submitted under separate cover. 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 Second Semiannual 2023 period was submitted under separate cover on July 29, 2023, 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.

The SCS report states that the GCCS system and LFG extraction wells are performing as expected and VOCs are continuing to decrease over time based on the VOC data, VOC time series plots, and LFG control system data.

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 6.5-5 - Groundwater Monitoring Network
Table 6.5-2 - Fill Area 1 Analytical Results Summary
Table 6.5-3 - Fill Area 2 Analytical Results Summary

6.5.1.1_Review of Reports From ALRRF_Groundwater

Figure 6.5-5

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)
MW-60
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 SB-A/SB-A (REMOVED)
PHASE 4
PHASE 5
MW-47B
MW-47A
MW-51
MW-10
LSI-3 CLASS II SURFACE IMPOUNDMENT VZM-B, LS-3
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-6
MW-14R
MW-21
MW-22
MW-53
MW-24
MW-58
MW-55
MW-28
MW-13A
MW-32
MW-23A
MW-38
WM-1
MW-39
MW-23B
MW-16B
MW-25
MW-60
ARC-2
MW-63
MW-56
MW-61
MW-57
MW-62
MW-54
MW-45 A
MW-45 B
MW-45 C
MW-46 B
MW-46 A
MW-48B
MW-48A
MW-44 B
MW-44 A
MW-16
MW-18
MW-17
MW-17R
MW-15A
MW-15B
PC-2A
PC-2C
MW-8A
MW-8B
PHASE 2 UD-2 &LD-2 EXTENDED
MW-3B
PC-1A/B/C
MW-26
MW-36
ASBESTOS AREA
SPRING 1&2
MW-3C
MW-34A
MW-34B
MW-35A
MW-35B
MW-50
E-20B
MW-1C
SEDIMENTATION BASIN "D"
MW-20
MW-3B
MW-20R
MW-49A
MW-49B
MW-49BR
MW-49AR
MW-9
STORMWATER RETENTION BASIN H/"SB-H"
UD-5, LD-5, LP-5 EXTENDED
UD-6, LD-6, LP-6
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)
PHASE 6
MW-27
APPROXIMATE FACILITY BOUNDARY
MW-11
WASTE WATER PLANT TANKS
FILL AREA 1 CONDENSATE SAMPLE LOCATION
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
FLARE STATION & LANDFILL GAS TO ENERGY PLANT #1
MW-2C
MW-2B
MW-2A
FUELING FACILITY
MAINTENANCE BUILDING
E-07
E-05R
GWB
MW-7
STORMWATER RETENTION BASIN "C"
E-18
E-23
E-17
E-21
E-22
E-03A
UNIT 1 MONITORING LOCATIONS FOR LEACHATE & VALLEY DRAIN MANHOLE LOCATION (LS, VD)
MW-5A
MW-5B
ADMINISTRATION OFFICES (INCLUDING THE ENGINEERING OFFICE TRAILER)
GUARD HOUSE
STORMWATER RETENTION BASIN "A"
LOOKOUT HILL
N
GRAPHIC SCALE
0 800 1600
SCALE IN FEET

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.

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

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

DATE: FEBRUARY 2024

SCALE: 1" = 800'

FIGURE NO. 2

\\lbc--fs01\Data\ES\SW\JOBS\2002\01202209 - Altamont\Design\ALRRF WDR Main Drawing.dwg Feb 01, 2024 - 2:2pm By: 5156thb

Table 6.5.1-2
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]										POC Monitoring Well
	MW-6																										Monitoring Well
	MW-1A																										Monitoring Well
Canyon South of Fill Area 1	E-05R														X[2]		X[2]			X		X					Corrective Action Well Matches Historical Data
	E-07							X[2]					X	X[2]	X[2]		X[2]							X[2]			Corrective Action Well Matches Historical Data
	E-23																										Corrective Action Well
	E-03A																										Corrective Action Well
NE of FA1	MW-4A																										Monitoring 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[2]	X					X	X		X[2]			X[2]		X[2]					Corrective Action Well Matches Historical data
	MW-38													X[2]			X[2]										POC Monitoring Well
	MW-39																										POC Monitoring 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				X		X	X		X										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.

Table 6.5.1-3
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
	MW-41B	11/27/2023																									X[2]			POC Monitoring Well
	MW-49BR	12/13/2023						X																						POC Monitoring 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 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-41A, MW-42A, 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-49AR, MW-50, MW-51, MW-52, PC-2A, PC-2C, PC-6B(R), WM-2 were also sampled during this event and no detection of VOCs were reported.

LANGAN

Memorandum

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

To: Community Monitor Committee

From: Langan – Community Monitor

Date: April 10, 2024

Re: **CMC Meeting of 4/10/24 – Agenda Item 6.5.2 – 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, 2023 through November 30, 2023. The key points from this document are:

- New gas wells brought online – During the reporting period, 5 new landfill gas extraction wells were brought online.

- 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 2 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 2023, surface emissions monitoring took place on April 17, 18 and 19 and May 12 of 2023; for the third quarter of 2023, monitoring took place on January 31 and February 1, 2 and 7 of 2023. During the second quarter of 2023, there were 13 exceedances of the 500 parts per million by volume (ppmv) methane threshold. All the corrective actions to block these emissions were successful and passed their 10-day and 30-day follow-up tests. During the third quarter of 2023, there were 24 exceedances of the 500 parts per million by volume (ppmv) methane threshold. 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 flares (A-15). The two turbines were tested for compliance with emission limits in December 2023, while flare A-16, was tested in March 2023, within the 60 days of the test date. All three devices passed by the BAAQMD Permit 8-34-412 and Condition Number 18773.

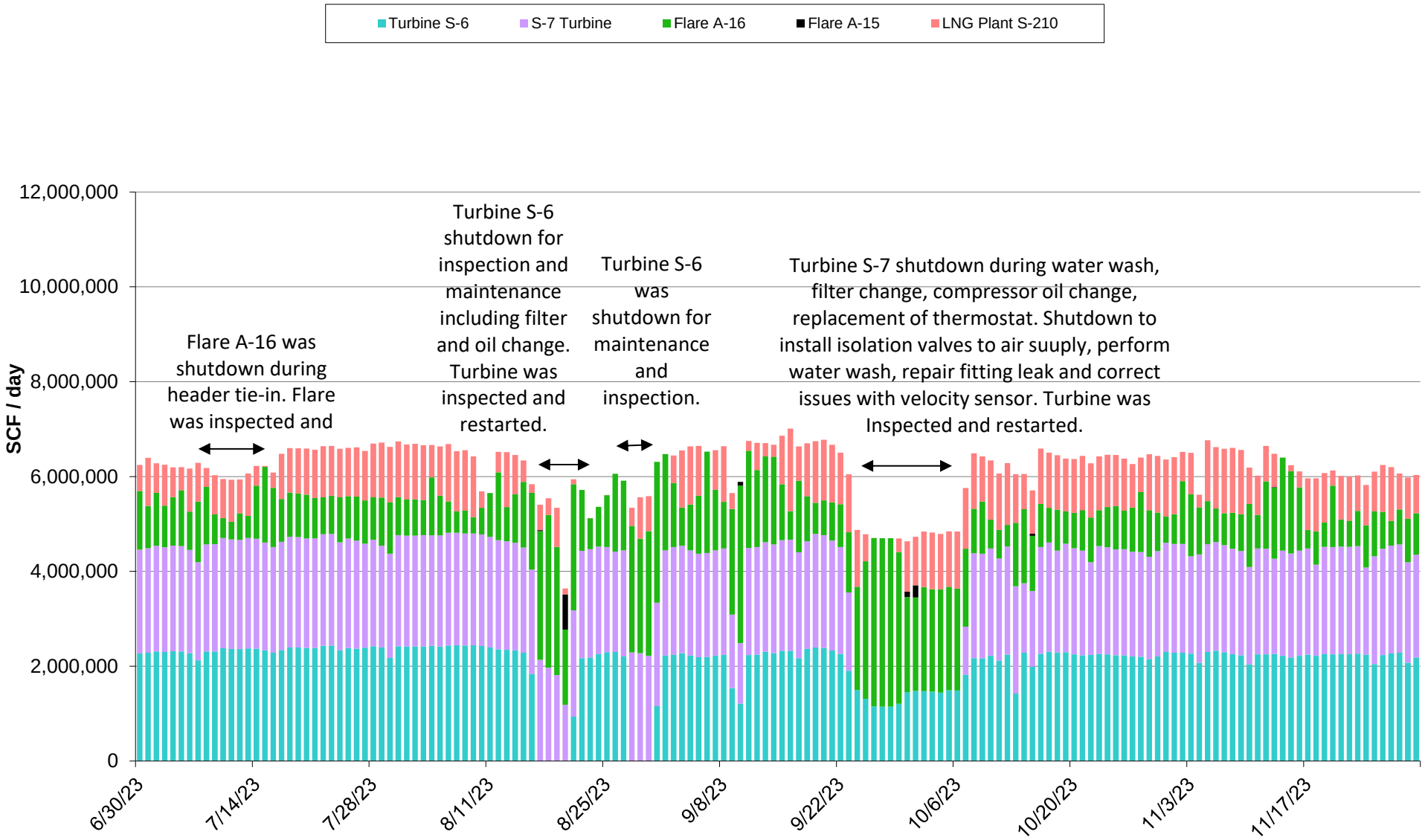
- Gas Migration at Perimeter Probes – In this reporting period, methane exceeding regulatory threshold of 5% was found in two of the 50 perimeter probes installed around Fill Areas 1 and 2. Probe GP-8C, on the west side of Fill Area 1, had 15.4% methane in October of 2023. Probe GP-15A, located to the north of Fill Area 1, had 10% methane in

October of 2023. 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.

- 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 6.5.2 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. S-6 Turbine was shutdown due to change oil and filters. Turbine S-7 was shut down during water wash, for a filter change, compressor oil change and replacement of a thermostat. Additionally, Turbine S-7 was shutdown to install isolation valves to the air supply and correct issues with the velocity sensor. Flare A-16 was shut down during a header tie in. S-6 Turbine, Turbine S-7 and Flare A-16 were restarted and brought back online after each incident was resolved. Flare A-15 and LNG Plant S-210 ran smoothly for the six-month period.

Figure 6.5.2 - ALRRF Daily LFG Flow
(values derived from Title V Report)



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: April 10, 2024

Re: **CMC Meeting of 4/10/24 - Agenda Item 6.6 - 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. During the second quarter of 2023, there have been no updates to PFAS regulation, and the following summary presents the same information that was discussed during the April 12, 2023, CMC meeting.

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 6.4.1, 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], and the proposed regulations do not require any actions until finalized, likely by the end of 2023[6].

On May 4, 2023, the EPA generated tables that reflect changes in the toxicity and chemical specific parameters per regional screening levels hierarchies[7]. The table compares the previous toxicity database to this new and current table. This update is in response to the Integrated Risk Information System (IRIS) which is a part of the risk assessment process in which hazard identification and dose-response assessment are applied to derive toxicity values.

[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] https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas
[7] https://www.epa.gov/risk/regional-screening-levels-rsls-whats-new

On February 1, 2024, the Biden-Harris Administration announced new steps to protect communities from PFAS and other emerging chemicals of concern.[7] The EPA is proposing to modify the definition of hazardous waste as it applies to the cleanups permitted at hazardous waste facilities to ensure the EPA's regulations are clearly reflected and authorizes states authorities to require the cleanup of the full range of substances under the Resource Conservation and Recovery Act (RCRA). The EPA states that the proposed rules would "strengthen protections for communities and drinking water supplies located near the 1,740 permitted hazardous waste facilities across the nation." This would include corrective action under RCRA, requiring facilities that treat, store, or dispose of hazardous waste to investigate and mitigate hazardous releases into soil, groundwater, surface water and air. The EPA will publish the proposals in the Federal Register.

Regarding corrective actions, known technologies for treating PFAS in water include granular activated carbon, ion exchange, and reverse osmosis[8]. 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 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.

[7] https://www.epa.gov/newsreleases/biden-harris-administration-announces-new-steps-protect-communities-pfas-and-other

[8] 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.

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: April 10, 2024

Re: **CMC Meeting of 4/10/24 – Agenda Item 6.7 – Reports From Community Monitor**

CLASS 2 SOIL FILE REVIEWS

In accordance with the Settlement Agreement, we reviewed Class 2 Soil Profiles at ALRRF on May 25, 2023, and November 2, 2023. The records reviewed correspond to soil accepted at the landfill between December 2022 and October 2023. A total of 182 soil profiles were provided for our review. We reviewed 91 soil profiles on May 25, 2023, and 91 soil profiles on November 2, 2023. No out of compliance profiles were found.

ALTAMONT MONTHLY OPERATIONS AND RECORDS REVIEW

During the Fourth Quarter of 2023, three 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 October, which took place on October 17, 2023.
- Community Monitor Site Visit for November, which took place on November 6, 2023.
- Community Monitor Site Visit for December, which took place on December 15, 2023.

During the First Quarter of 2024, three 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 January, which took place on January 25, 2024.
- Community Monitor Site Visit for February, which took place on February 28, 2024.
- Community Monitor Site Visit for March, which took place on March 20, 2024.

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 quarter, construction of additional landfill space in Fill Area 2, Phase 6 was ongoing. Construction was not occurring during the first quarter of 2024.

Also attached are graphs showing monthly tonnages by type of material for the most recent 12-month period. Figure 6.7-1 shows the breakdown of materials that make up Revenue-Generating Cover. Figure 6.7-2 shows these same quantities, plus the Municipal Solid Waste (MSW) and Special Waste tonnage for each month.

There were no special occurrences during the Fourth Quarter of 2023.

There was one special occurrence during the First Quarter of 2024. On February 26, 2024, there was a fire in the MSW route truck area in FA2, Phase 1. The fire was exhausted.

Figure 6.7-1 Monthly Volumes of Revenue-Generating Cover

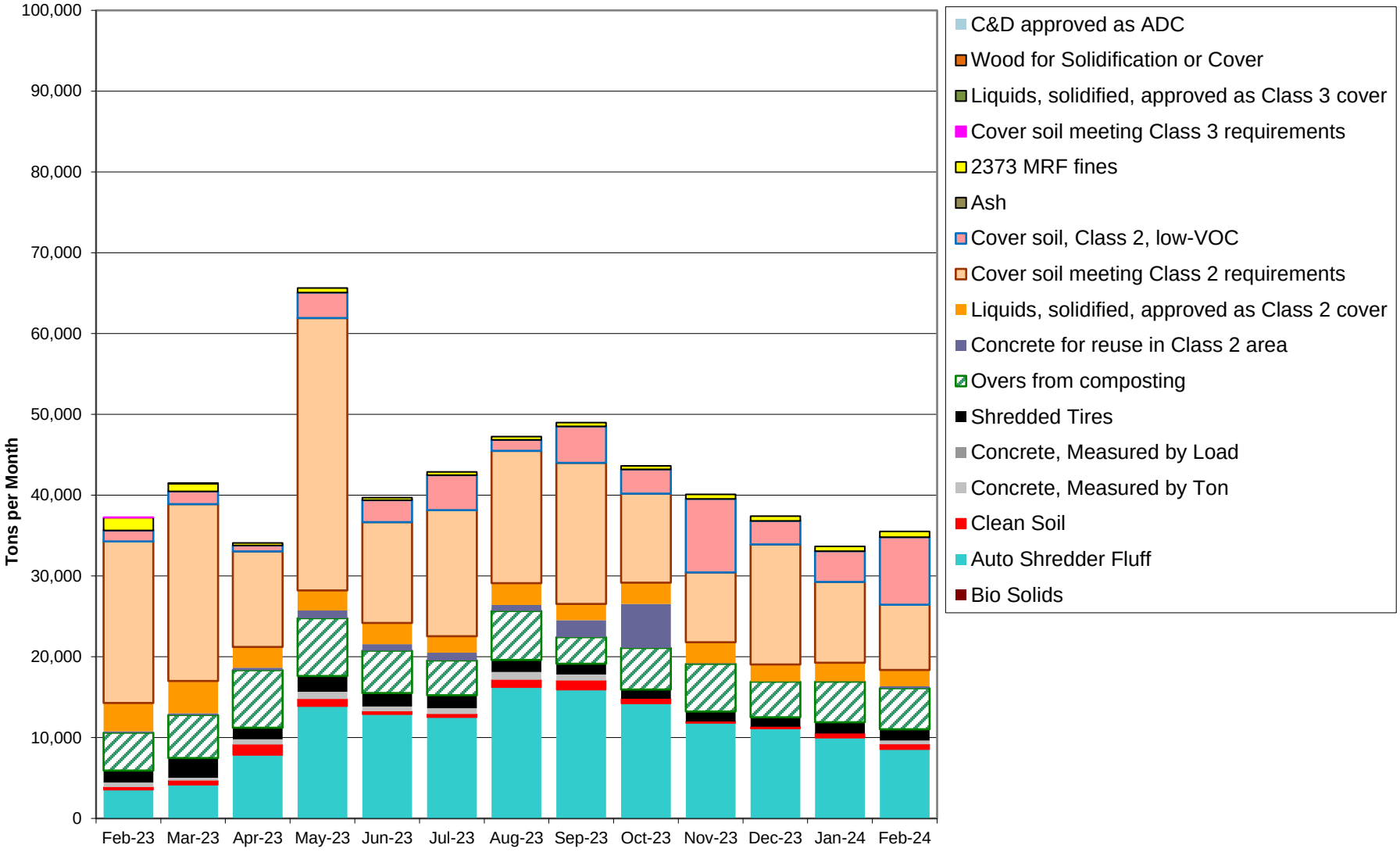
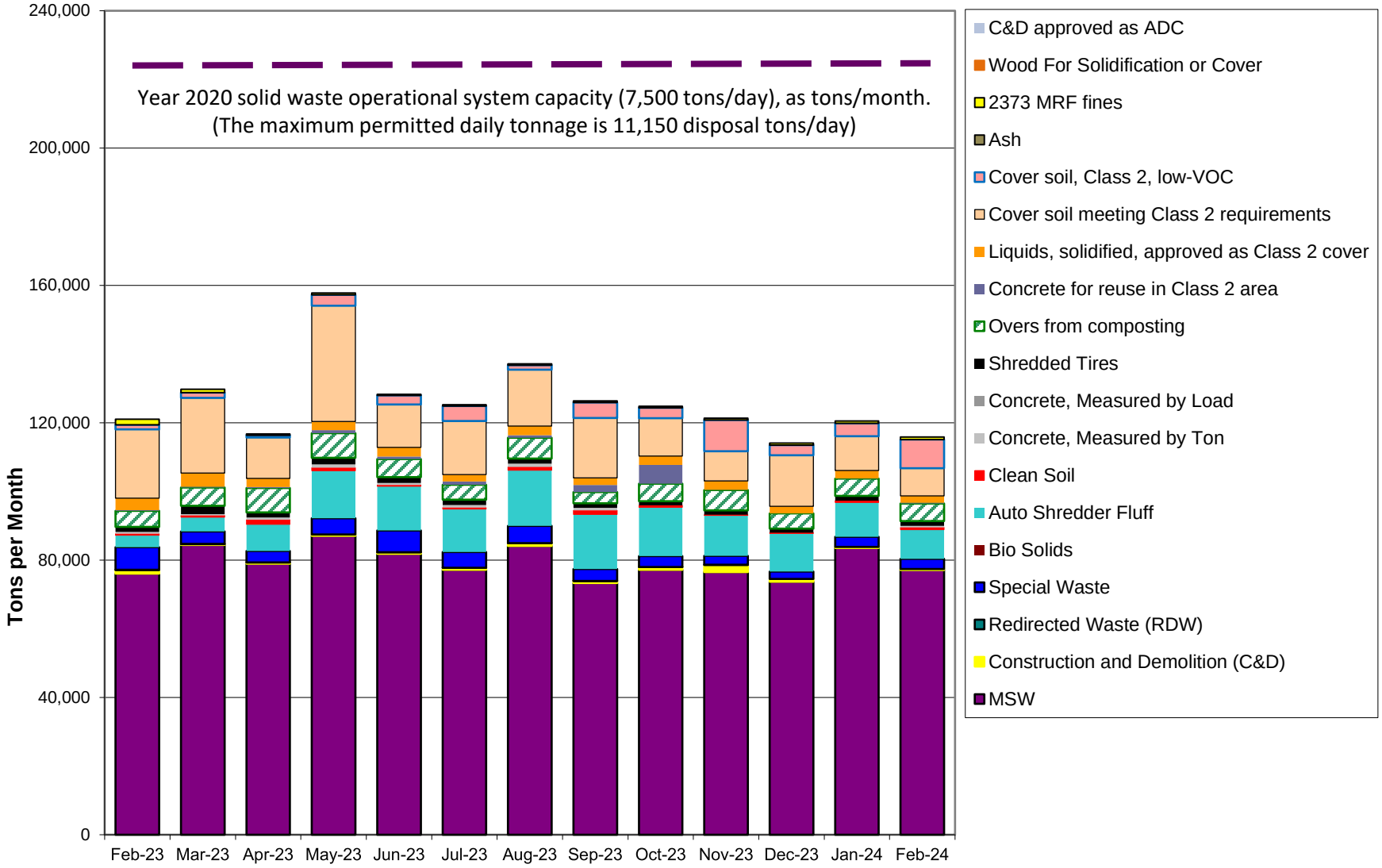


Figure 6.7-2 Monthly Volumes of Landfilled Materials



ALRRF Community Monitor Monthly Report — December 2023

Monthly Tonnage Report for December 2023, received January 15, 2024

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	75,794.19	
1.2	Other Out of County Disposal Tons	856.39	
	subtotal Disposed	76,650.58	
	Disposed, By Source Type		
2.1	C&D	771.36	
2.2	MSW	74,714.99	
2.3	Special Wastes	2,164.23	
	subtotal Disposed	77,650.58	
		1,000.00	1.29%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	0.00	
2.5	Revenue Generating Cover	48,402.23	
	Total, 2.1 - 2.5	126,052.81	
	Materials of Interest		
2.1.1	Fire Debris	771.36	
2.3.1	Friable Asbestos	466.25	
2.3.2	Treated Wood	95.91	
2.5.1	Class 2 Cover Soils	17,788.09	
2.5.2	Auto Shredder Fluff	11,109.07	
2.5.3	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00	
2.5.4	MRF Fines for ADC	590.98	

ALRRF Reports from Community Monitor

January 2024

Site Visit January 25, 2024 1:00 PM – 2:30 PM

- Attended by Megan Rollo (Langan, Community Monitor); Grace Stafford (Langan, Community Monitor)
- Escort: Luis Rocha (Waste Management); Sonam Kaur (Waste Management), Announced.
- Weather: Sunny, light wind, 60 degrees F.

General Observations

- Traffic to the site was flowing freely through the road and the entrance of the landfill upon arrival.
- The scale houses appeared to be in good condition.
- WM roadways were muddy from recent precipitation events but navigational.
- Mitigation pond was not accessible at time of visit due to soft roadways from recent precipitation events.

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 7 feet of freeboard.
- LSI-1, which holds leachate, had 11 feet of freeboard.

Back-40

- Some litter was observed right outside property boundary.
- Internal litter crew still operational on site.

Fill Area 2

- Landfill operations were occurring on Phase 5 for commercial use.
- Two tippers present at time of visit.
- South of Phase 1 is being used for public access.

- Birds present surrounding Phase 5 at time of visit.
- Many piles of ADC were observed in FA2. Piles of concrete and brick were observed in FA2.
- Construction at Phase 6 is awaiting regulatory approval.
- Next phase of construction planned to occur at Phase 7 and 8.

Other Environmental Observations / Issues

- None.

Special Occurrences

- No special occurrence occurred during the month of January.

ALRRF Community Monitor Monthly Report — January 2024

Monthly Tonnage Report for January 2024, received February 15, 2024

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	85,787.78	
1.2	Other Out of County Disposal Tons	1,018.66	
	subtotal Disposed	86,806.44	
	Disposed, By Source Type		
2.1	C&D	306.47	
2.2	MSW	83,499.80	
2.3	Special Wastes	3,000.17	
	subtotal Disposed	86,806.44	
		0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	0.00	
2.5	Revenue Generating Cover	34,991.17	
	Total, 2.1 - 2.5	121,797.61	
	Materials of Interest		
2.1.1	Fire Debris	306.47	
2.3.1	Friable Asbestos	318.23	
2.3.2	Treated Wood	58.93	
2.5.1	Class 2 Cover Soils	13,809.65	
2.5.2	Auto Shredder Fluff	9,940.11	
2.5.3	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00	
2.5.4	MRF Fines for ADC	610.42	

ALRRF Reports from Community Monitor

February 2024

Site Visit February 28, 2024 11:00 AM – 12:30 PM

- Attended by Megan Rollo (Langan, Community Monitor)
- Escort: Sonam Kaur (Waste Management), Announced.
- Weather: Sunny, 70 degrees F.

General Observations

- Traffic to the site was flowing freely through the road and the entrance of the landfill upon arrival.
- The scale houses appeared to be in good condition.
- WM roadways were mostly dried from recent precipitation events.

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 6 feet of freeboard.
- LSI-1, which holds leachate, had 7 feet of freeboard.

Solidification Basin

- No active use of the solidification basins at time of visit.
- Area looked well kept.

Back-40

- Some litter was observed.
- Internal litter crew still operational on site.

Fill Area 2

- Landfill operations were occurring on Phase 5 for commercial use.
- Two tippers present at time of visit.
- South of Phase 1 is being used for public access.
- Birds present surrounding Phase 5 at time of visit.
- Several piles of ADC were observed in FA2. Piles of concrete and brick were observed in FA2.
- Construction at Phase 6 is awaiting regulatory approval.
- Next phase of construction planned to occur at Phase 7 and 8.

Other Environmental Observations / Issues

- None.

Special Occurrences

- One special occurrence occurred during the month of February. On February 26, 2024, at 8 PM, a fire occurred at the MSW route truck area in the Fill Area 2, Phase one. The fire was extinguished.

ALRRF Community Monitor Monthly Report — February 2024

Monthly Tonnage Report for February 2024, received March 14, 2024

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	79,229.71	
1.2	Other Out of County Disposal Tons	1,102.17	
	subtotal Disposed	80,331.88	
	Disposed, By Source Type		
2.1	C&D	294.67	
2.2	MSW	77,110.33	
2.3	Special Wastes	2,926.88	
	subtotal Disposed	80,331.88	
		0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	9.44	
2.5	Revenue Generating Cover	36,043.67	
	Total, 2.1 - 2.5	116,384.99	
	Materials of Interest		
2.1.1	Fire Debris	294.67	
2.3.1	Friable Asbestos	500.75	
2.3.2	Treated Wood	84.32	
2.5.1	Class 2 Cover Soils	16,424.94	
2.5.2	Auto Shredder Fluff	9,940.11	
2.5.3	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00	
2.5.4	MRF Fines for ADC	732.29	

ALRRF Reports from Community Monitor

March 2024

Site Visit March 20, 2024 10:00 AM – 11:30 PM

- Attended by Megan Rollo (Langan, Community Monitor)
- Escort: Luis Rocha (Waste Management); Sonam Kaur (Waste Management), Announced.
- Weather: Light wind, sunny, 55 degrees F.

General Observations

- Traffic to the site was flowing freely through the road and the entrance of the landfill upon arrival.
- The scale houses appeared to be in good condition.
- WM roadways were dried from recent precipitation events.

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 6 feet of freeboard.
- LSI-1, which holds leachate, had 9 feet of freeboard.

Fill Area 2

- Landfill operations were occurring on Phase 5 for commercial use.
- Southern area of Phase 1 is used for public access.
- One tipper present at time of visit.
- Birds present surrounding Phase 5 at time of visit.
- Several piles of ADC were observed in FA2. WM actively covering Phase 5 with intermediate cover.

Back-40

- Some litter was observed.
- Internal litter crew still operational on site.

Solidification Basin

- No active use of the solidification basins at time of visit.
- Area looked well kept.

Other Environmental Observations / Issues

- None.

Special Occurrences

- No special occurrence occurred during the month of March.

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: April 10, 2024

Re: **CMC Meeting of 4/10/24 - Agenda Item 6.8 - Topics for 2023 Annual Report**

The draft of the Annual Report for 2023 is attached. The list below summarizes the topics-of-interest for 2023 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	
Monitoring well replacement	2.2 – 1st bullet
Construction Activity during 2023	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
ET cover	2.2 – 6th bullet

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

COMMUNITY MONITOR ANNUAL REPORT 2023
ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
Livermore, California

Prepared For:

ALRRF Community Monitor Committee

Prepared By:

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

Megan Rollo
Staff Scientist

Maria E. Lorca, PG
Project Geologist

Mukta Patil, PE
Senior Project Engineer

April 10, 2024
750657605

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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 2023.

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 visits, 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). The Five-Year Permit Review process was completed in 2020. Waste Discharge Requirements (WDRs) and Ceased and Deist Orders (CDOs) were issued by the CVRWQCB in mid-2016.

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.

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 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.

In 2022, FA2 Phase 5 cell and stormwater construction improvements were authorized by the CVRWQCB. These improvements were completed in October 2023. Large winter storms occurred throughout the end of 2022 into the beginning of 2023, causing erosion at the landfill. The CVRWQCB issued 14 AOCs in April of 2023 regarding these erosional areas. WM completed the improvements to damaged areas in September 2023.

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 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. Throughout 2022, Phase 4 continued to be the active phase of FA2. In October of 2023, construction at Phase 5 completed and Phase 4 and Phase 5 has been the active phase of FA2.

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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.

[5] https://calrecycle.ca.gov/organics/slcp/education, accessed December 2023.

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.

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, the LEA and CVRWQCB issued violations for windblown litter, these violations were resolved and additional litter fences were constructed. On January 5, 2023, the CVRWQCB issued a resolution letter to the Investigative Order R5-2021-00817, that required windblown litter cleanup reporting, indicating that WM reporting obligations under this Investigative Order were complete. 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 from inspections, the expected completion timeline and progress that has been made on each item.

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 2024.

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 2022, indicate that the ALRRF is the third highest GHG-emitting landfill in California, with 33,447 metric tons of total carbon dioxide ("greenhouse gas as carbon dioxide equivalent") emitted, behind the Kiefer Landfill in Sacramento County (118,060) metric tons of carbon dioxide emitted) and the Puente Hills landfill in Los Angeles County (101,138,292) 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, 2023.

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 2023 as required by the scope of work. Section 2.1 provides more details. Three of the 12 CM site visits in 2023 were performed with the LEA. The CM also reviews the LEA's monthly inspection reports which are publicly available on the CalRecycle web site[8].

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

[8] ALRRF CalRecycle profile can be accessed through: https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/7

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 fourth federally threatened species is the valley elderberry longhorn beetle. ALRRF has no direct or indirect adverse effects toward this species. 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

The wetland mitigation pond built in 2013 was damaged by sediment inflow due to unusually heavy rainfall in early 2014. To remedy this, ALRRF 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. In late 2018 the very extensive sedimentation basin SB-

H was constructed between the pond and Fill Area 2. In 2021 and 2022, the wetland mitigation pond was irrigated, shallow water was observed in the pond and vegetation grew. In the first quarter of 2023, winter storms caused large erosional damage to the SB-H culvert and waterway system at the mitigation pond. The event deposited sediment into the mitigation pond. The area has since been re-constructed. In 2023, the mitigation pond benefitted from an increased quantity of water was observed in the pond, as well as birds and amphibious life. As a part of FA2 Phase 6, the area of SB-H will be expanded. The Phase 6 construction is still in process.

In 2023, the CM reviewed a summary report describing wetland and wildlife mitigation activities and issues. Wetland and wildlife mitigation activities continued in 2023 with monitoring of construction areas and wildlife protection measures (e.g., relocating sensitive species such as California Tiger Salamander, when encountered). In 2023, the CM received the 2022 Annual Status Report by Kleinfelder that describes conservation activities.

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)

2.2 Monitoring of Improvements and Changes

Through report reviews and site visits, several new developments in ALRRF facilities and operations were monitored in 2023:

- Beginning February 27, 2023, WMAC began destroying wells MW-34A, MW-34B, MW-35A, MW-35B, MW-49A, MW-49B, MW-54, MW-55, MW-56, MW-57, UGP-11 and VP-5.

The wells were located inside the planned FA2 footprint and needed to be destroyed to accommodate for grading and continued construction of the landfill. The monitoring wells were samples prior to destruction during the First Semiannual monitoring event in 2023 and the interim point of compliance wells for FA2 Phase 6 were installed prior to the Second Semiannual monitoring event.

- On July 11, 2023, the CVRWQCB reviewed the February 14, 2023 design report for the construction and stormwater improvements for operations expansion to FA2, Phase 6 and Sediment Basin H (SB-H) and approved the proposed design report provided.

- Monitoring well MW-60 installation was completed on June 29, 2023. MW-60 was installed for the new proposed solidification basin for additional monitoring.

- On August 28, 2023 the CVRWQCB issued tentative Waste Discharge Requirements (WDRs) and monitoring program for the proposed Solidification Facility. WM provided comments, and the CVRWCB responded to the comments on November 29, 2023. A public hearing was scheduled for December 14/15, 2023.

- In the 12 months from June 2022 through May 2023, 14 poorly-performing landfill gas wells were decommissioned and 22 new landfill gas extraction wells were brought on line. Wells with higher than normal gas temperatures were monitored for possible subsurface combustion. A total of 14 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 22 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 December 2022, while the main flare, A-16, and the back-up flare, A-15, and were tested in February 2023. All four devices passed by the BAAQMD under Permits (8-34-412 and 8-34-301.1) and Condition Numbers (18773 and 19235).

- The 10-acre Evapotranspirative (ET) Cover Test area was observed during the April 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 CM team (Langan and ESA) observed 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. ESA observed portions of the ET Cover observed with limited or no groundcover include a 25 foot by 20 foot area near the entrance of the gate, a 100 foot by 20 foot area immediately southwest of stormwater diversion berm near entrance gate, a 75 foot by 40 foot area in the center portion of the southwest facing slope, and a 25 foot by 25 foot area surrounding ground monitoring well 686. ESA recommends scarifying and re-hydroseeding these areas in early winter of 2023. 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 April of 2023. The marsh appeared stable in the northeastern and central western portion of the pond, however the overall population appeared to decline compared to May of 2022. The CM team could not confirm whether or not the pond meet the goal of retaining 20 inches of water in the deepest end by the end of August, and during the August visit there was a considerable quantity of 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 2023 in comparison to previous years. The LEA issued an AOC on May 23, 2023 as litter was observed on the neighboring properties around the Back-40 access roads leading to Bethany Reservoir. WMAC cleaned up the litter and the AOC was removed in June. In 2023 WMAC completed the installation of fencing to control the windblown litter issues and continuous staffing of litter pickers prevented litter from leaving the property boundary. The windblown litter issues appear to be improving.

- Prior to September 2023, WM began implementing winter preparation requirements per WDR. A wet season inspection was performed to assess conditions of the landfills ponds, inlets, discharge points, groundwater monitoring wells and the surrounding areas. Prior to October 31, 2023, ALRRF removed any debris from v-ditches/channels, drain inlets, energy dissipaters and from erosion control matting in permanent drainage ditches. Additionally, the landfill restored rock check dams in permanent drain ditches, removed litter from fences around selective drainage inlets and constructed silt traps and soil berms in select locations.

- In the period from January through November 2023, the ratio of **Class 2 cover soil** to

municipal solid waste decreased to 21% from 23% in 2022.

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 2016-2023 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.

Table 2-1
Compliance Issues Ranked by Severity

Issue	2017	2018	2019	2020	2021	2022	2023
Contamination at E-05, E-07, E-20B	2	2	2	2	2	2	2
Stormwater contamination	3	3	3	2	2	1	1
Windblown Litter	2	3	4	3	5	4	3
Birds	2	2	2	2	2	2	2
Erosion	1	-	3	2	2	1	2
Cover thin / absent	-	-	1	1	1	2	-
Worker injury	1	-	1	1	-	-	-
Condensate/Leachate Leakage	3	3	3	2	2	2	2
Ponding in low-lying area of landfill	-	1	2	2	2	1	1
Sediment in Wetland Mitigation Area	2	-	-	-	-	-	2
Odor, on site	-	-	1	-	-	-	-
Leachate Seeps	2	-	4	2	2	1	1
Erosion control (sitewide)	-	-	3	2	1	1	2
Waste outside active area (trash, pallets)	-	-	-	-	-	-	2
Leachate Leak Disposal	4	-	-	-	-	3	-
Contaminants at monitoring well MW-4A	4	-	-	-	3	2	1
Contaminants at monitoring well MW-38	-	-	-	-	-	2	1
Windblown litter beyond last litter fence	-	4	2	2	5	3	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	**28**	**44**	**40**	**27**	**29**	**28**	**25**
Issues Beyond Control of / Refuted by ALRRF							
Truck overturn	3	3	2	2	2	2	1
Methane Gas at Perimeter Probe(s) [cleared]	-	-	4	4	-	-	-
Fire in refuse &/or stored material	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

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 2023.

The total severity score for 2023 is lower compared to 2022.

One incidents of particular concern occurred in 2023:

- **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 2023. 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 due to significant amounts of windblown litter deposited outside of the property. An internal litter cleanup crew remains a 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 2023, one AOC notice was issued by the LEA. LEA inspection reports indicate concerns about the following:

- **Windblown Litter:** On May 23, 2023, LEA staff conducted an inspection of the ALRRF and observed significant amounts of windblown waste on the neighboring properties around the Back 40 or the access roads/slopes leading to the Bethany Reservoir. Onsite accumulations of litter and offsite migration of litter, as observed during inspections, is not permitted on the California Code of Regulations.

2.3.2 CVRWQCB Violations and Concerns

2.3.2.1 2023 Violations

No violations were issued by the CVRWQCB in 2023.

2.3.2.2 2023 Areas of Concern

On April 19, 2023, CVRWQCB conducted an 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. WM has resolved these Areas of Concern, and they are listed here as for reference. The Areas of Concern included in the report are listed below:

1. Erosional damage was observed around the lower FA1 LCRS and underdrain lift station.

2. Erosional damage to the closed section of the FA1 cover was observed at two locations just north of the lower FA1 LCRS and underdrain lift station.

3. Numerous leachate seeps with pooled leachate were observed near historical Seeps A, B, and C.

4. Significant leachate ponding was observed atop FA1/U2 just east of the J-stand. Smaller areas of ponded leachate were also observed atop FA1/U2 near LFG well 790.

5. A significant volume of water is present in LSI-1 and active efforts to accelerate emplace evaporation or for the proper disposal of the liquid in accordance with the WDRs should begin soon to ensure adequate freeboard is available in accordance with the site's approved water balance for the 2023/2024 wet season.

6. A large area of sparce to absent vegetation is present atop the side slope of the 10-acre ET cover test pad in FA1, west of LFG well 686.

7. Notable amounts of waste were observed along the southeastern limit of FA2 Phase 4, outside the active face within FA2.

8. Significant erosion of the storm water diversion drainage course that runs from Basin D to SB-H, at the planned southeastern limit of FA2.

9. Significant depositional sedimentation has occurred in SB-H, from upstream erosion in the FA2 construction area. This sedimentation in SB-H dramatically reduces the basins' ability to perform as designed during future rain events.

10. Significant erosion just before the Mitigated Wetland and depositional sedimentation in the Mitigated Wetland. The erosional cuts prior to the Mitigated Wetland exceed six feet in depth.

11. Significant erosion along the eastern drainage channel off Stockpile 7, as can some repairs to the area where the entire lower section of the channel has now been lined with rock.

12. Significant depositional sedimentation has occurred in SB-F, which is now almost completely full of sediment, dramatically reducing the basins' ability to perform as designed during future rain events.

13. A significant volume of water is present in LSI-1 and active efforts to accelerate emplace evaporation or for the proper disposal of the liquid in accordance with the WDRs should begin soon to ensure adequate freeboard is available in accordance with the site's approved water balance for the 2023/2024 wet season.

14. Wells PC-2A, PC-2B, and PC-2C do not have protective locking stove pipe covers.

On September 19, 2023 the CVRWQCB conducted an inspection to observe the construction of FA 2 Phase 6, the proposed solidification facility, and other areas of the property. The inspection report summarizes the visit and did not report violations nor AOCs.

2.3.2.2 CDO

The CVRWQCB issued 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 WDRs. The CDO provided a list of various items the Discharger (ALRRF) performed out of compliance and provided a time schedule with specific requirements to that compelled the Discharger to resolve past compliance issues, achieve compliance with Title 27 and the WDRs, and conformed to its Notice of Applicability (NOA) in a time frame acceptable to the CVRWQCB. The items identified were not new and had been discussed during the past years with the CM, but the CDO raised the severity of the issues. Between 2021 and 2023, WMAC has resolved most of the issues raised by the CDO as reported below.

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 actions were requested to resolve this item:

- Installation of interim point of compliance (POC) wells in FA2 Unit 1, which will continue while FA2 is being expanded.
- Installation of final permanent FA2 limit wells, which has been completed.
- Implementation of a Water Quality Monitoring and Response Program for FA2 Unit 1.

<u>MW-4A Evaluation Monitoring Program</u>

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.

<u>Continued implementation of the FA1 Corrective Action Program</u>

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

Report outlining the Corrective Action Program (landfill gas extraction). Starting with the Second Semiannual 2021 groundwater sampling event, a Corrective Action Status Reports have been submitted to the CVRWQCB to document the effectiveness of the Corrective Action Program.

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. On August 29, 2023, the CVRWQCB issued tentative Waste Discharge Requirements (WDRs) and monitoring program for the proposed Solidification Facility. WM provided comments, and the CVRWCB responded to the comments on November 29, 2023. A public hearing was scheduled for December 14/15, 2023.Once all the permitting is 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:

- 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.
- 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), 2024.

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.

2.3.2.4 Other Concerns

Several open issues had arised between the ALRRF and the CVRWQCB since the current WDRs were finalized in July 2016. Most of these issues were included in the CDO issued by the CVRWQCB in 2021 and described in section 2.3.2.3.

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, two dump-trucks overturned in 2023. No injuries were reported.

2.3.3.2 Fire

No fires occurred on site in 2023.

2.4 Review of Reports

2.4.1 Groundwater

Two groundwater monitoring reports were reviewed in 2023. The first covered the period from July through December of 2022; the second covered January through June of 2023.

The data in these reports indicate that most monitoring wells with VOC contamination are still fluctuating. In the Second Semiannual 2022 Report, it appears VOCs are decreasing over time. In the First Semiannual 2023 sampling event it appears that VOCs are decreasing over time except for VOCs detected in E-05R, which showed a sharp increase in total VOC concentration, due to an increase in tert-butyl-alcohol concentration, compared to previous sampling events. These trends will continue to be tracked.

A new development in 2020 that continued into 2023, is an increase in concentrations of inorganic constituents (dissolved calcium, chloride, sulfate, total dissolved solids, and bicarbonate alkalinity). This appeared in E-05R, MW-8A, MW-10, PC-2A and WM-2, as reported in the Second Semiannual 2022 Report.

VOCs detected in corrective action monitoring wells E-05, and E-07, were generally consistent and within the ranges of previous detections observed at these wells. E20-B had increased detection concentrations than previous detections observed in the well. No VOCs were detected in E-03A, E-21, 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 well MW-27 during this, or any previous, 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. The amended AROWD that combined the corrective action areas on the eastern side of FA1 into one Corrective Action Program was submitted on March 20, 2023. Two trace-level detections of LFG related VOCs were detected at MW-4A. The concentrations of bicarbonate alkalinity at MW-4A have fluctuated from slightly below to slightly above the statistical concentration limit.

A corrective action Status Report for the First Semiannual 2023 period was submitted on July 29, 2023 for the CDO referenced corrective actions for MW-4A, E-20B, GP-9 and MW-38. The SCS report states that the GCCS system and LFG extraction wells are performing as expected. It is expected that the VOC concentrations are to decrease over time. The amended AROWD that

combined the corrective action areas on the eastern side of FA1 into one Corrective Action Program was submitted on March 20, 2023.

2.4.2 Storm Water

During the Second Semiannual 2022 or First Semiannual 2023, no VOCs were detected in sedimentation basin samples from FA2 Storm Water Retention Basin E (InSB-E), Basin F (InSB-F), or Basin H (InSB-H). Six VOCs were detected in samples from FA1 Storm Water Retention Basin A (InBasinA) and Basin C (InBasinC). These VOCs have been detected off and on in storm water basin samples in the past. SCS noted the VOC detections in storm water were less frequent than in prior years and attributed the improvement it to additional Best Management Practices (BMPs). ALRRF conducted a study on potential sources for these VOCs and it has not identified any industrial sources at the site.

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 2023, the CM received the Title V reports for the periods June – November 2022, and December 2022 – May 2023. 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 2022 – November 2022, 5 landfill gas wells were decommissioned, and 19 new wells were installed and began operation.

- From December 2022 – May 2023, 9 landfill gas wells were decommissioned, and 9 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 2022 to November 2022, but after each of those problems was resolved, the gas plant returned to steady production. From December 2022 to May 2023, there were

shut downs due to maintenance, testing, shutdowns due to high oxygen in the feed, a fault with the H_2O analyzer, issue with the Flare, troubleshooting due to issues with the Raw Feed H_2O analyzer, and other shut down events, potential low temperature alarm, a delayed temperature shutdown event and during a water wash. 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 2022, was reviewed by the CM during the second quarter of 2023. 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 2022. Three loads (11.65 tons) were accepted inadvertently from outside the Nine Bay Area Counties in 2022. In 2023, WM has maintained compliance with this condition. 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 18: This condition applies to mitigation monitoring prior to construction activities in FA2 and shall be monitored annually for five years (minimum) after implementation to assure success of mitigation. Implementation activities will be monitored annually during construction to verify the California DFG and USFWS approved performance standards and requirements are met. This monitoring period was restarted due to damage of the wetland area.

- Condition 26: Operator shall submit a post-construction compliance report to FWS within 45 days of completion of each major project component. ALRRF will prepare and submit Post-Construction Compliance reports to the USFWS as required. A consultant has been contracted to implement program.

- Condition 29: Operator shall monitor the replacement wetlands after they are created to assess whether they are meeting performance standards of approved Wetlands Mitigation Plan. Monitoring shall be conducted for five-years or until performance standards are met. ALRRF will conduct monitoring of replacement wetlands in accordance to approved plan. Performance standards are om process after damage to wetlands occurred.

- Condition 47: Seeps were encountered during Phase 5 construction on the lower portions of south-west side slopes, which were anticipated and mitigated by the Phase 5 design that incorporates geocomposite underdrains to intercept and convey groundwater to the underdrain system. One seep was encountered on the floor at the toe of the side slope which will be mitigated by the floor underdrain in this area. The pipes that collect seepage from Springs 1 and 2 were extended to outlet beyond the Phase 5.

- 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. In 2023, the CM did not received any Status Report for Mitigation Wetland Report (prepared by Kleinfelder in previous years). The Community Monitor will continue to request updates on these reports.

2021 Annual Progress Report for the Evapotranspirative Cover report prepared by Geosyntec documents observations, maintenance, and data analysis regarding the performance of the Evapotranspirative Cover, and the inspections performed through the end of 2021. Geosyntec noted that:

- Vegetation along the sideslopes was generally well established, and limited areas remained sparsely vegetated along the top deck. Areas that had been re-seeded in 2020 will continue to be monitored.

- The Evapotranspirative cover appeared to experience minimal erosion along the top deck and sideslopes, and minor cracks were observed. Geosyntec recommended continued monitoring for these areas.

- The monitoring sensors were operating with no issues. Monitoring will continue through the end of the pilot test period.

2.5 Review of Records

Several types of site records were reviewed by the CM in 2023. 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 2023, on May 25, 2023 for Class 2 soils accepted in December 2022 through May 2023; and on November 2, 2023 for Class 2 soils accepted through May 2023 through October 2023. The files are made accessible electronically from WMAC's Livermore office.

A total of 91 profiles were reviewed on May 25, 2023, that corresponded to Class 2 soil accepted at the landfill between December 2022 through May 2023. A total of 91 profiles were reviewed on November 2, 2023, that corresponded to Class 2 soil accepted at the landfill between December 2022 and May 2023. 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. Two dump trucks overturned in 2023.

2.5.3 LEA Inspection Reports

In 2023, there was one type of AOC noted in these reports. It pertained to windblown litter within the property boundaries as well as on surrounding properties. The LEA requested for ALRRF to

reduce the liter quantity on ALRRF property and completely removed liter cited outside ALRRF property boundary. This AOC has been removed.

2.6 Monthly Site Visits

Twelve site visits were held during 2023. The visit day and time were as shown in Table 2-2 below.

In general, satisfactory conditions were observed, although windblown litter presence was still a persistent issue. 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
2023 Site Visit Summary

Date	Day of Week	Visit Time	Announced in Advance?	With LEA staff?
January 31	Tues	10:00 AM	yes	no
February 27	Mon	9:30 AM	no	yes
March 24	Thurs	9:50 AM	yes	no
April 6	Thurs	1:00 PM	yes	no
May 16	Mon	10:00 AM	yes	no
June 13	Tues	10:00 AM	yes	no
July 25	Tues	5:00 AM	yes	yes
August 22	Tues	10:45 AM	yes	no
September 19	Tues	10:25 AM	yes	no
October 17	Tues	10:00 AM	yes	no
November 6	Mon	9:00 AM	yes	yes
December 15	Fri	10:00 AM	yes	no

In 2023, 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 2023, 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. This included Emergency Planning and Community Right-to-Know Act and Toxic Substances Control Act Regulation, Safe Drinking Water Act Regulation, Clean Water Act Regulation, plans to initiate the addition of PFOA, PFOS, Perfluorobutane sulfonic acid (PFBS), and GenX[9] to the list of Resource Conservation and Recovery Act (RCRA) Hazardous Constituents, as well as clarify that constituents classified as RCRA hazardous wastes can be cleaned up through RCRA corrective action process.[10] Additionally, 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. More information on the progression of PFAS regulations throughout 2021-2022 are available in the 2022 Annual Report.

In 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 for PFAS have not yet been established as of March 2023, and the proposed regulations do not require any actions until finalized, likely by the end of 2023. On May 4, 2023, the EPA generated tables that reflect changes in the toxicity and chemical specific parameters per regional screening levels hierarchies. The table compares the previous toxicity database to this new and current table. This update is in response to the Integrated Risk Information System (IRIS) which is a part of the risk assessment process in which hazard identification and dose-response assessment are applied to derive toxicity values.

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

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

3.0 LOOKING AHEAD: ANTICIPATED EFFORTS AND ISSUES

3.1 Introduction

The 2023 contract year was the beginning of an extended 3-year 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.

The four-year test of evapotranspirative (ET) cover methods is expected to be completed in 2024; the liquids separation system continued to operate. Exceedances at monitoring wells and windblown litter issues will continue to be tracked.

3.2 Issues to be Tracked in 2024

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.
- 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 2024, 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 stormwater pollution controls – skimmers, flocculant addition, Filtrexx™ check dams, and additional discharge points appear to have reduced contamination, although sporadic VOCs have been 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 an internal 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 any well that shows 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 2024.

3.2.4 Permit Requirements

As required by the Scope of Work, the CM will continue to review compliance with the Conditional Use Permit and other conditions.

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 Specifically:

- 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 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.

We will continue to request progress reports in the future.

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: April 10, 2024

Re: **CMC Meeting of 4/10/2024 - Agenda Item 6.9 - Altamont Community Monitor Budget**

The Altamont Landfill and Resource Recovery Facility (ALRRF) Community Monitor Agreement for Consulting Services with Langan was executed for one, three-year extension in an amount not to exceed $90,000 for services conducted in the first year (2023) of the agreement. At the October 11, 2023, the Community Monitor Committee approved an increased budget for the year 2023.

The Altamont Community Monitor has needed to track more information with the Fill Area 2 expansion, including a larger groundwater monitoring network due to the Cease and Desist Order (CDO), litter issues, and general updates on contaminants of emerging concern, including per- and polyfluoroalkyl substances (PFAS).

With the expansion of Fill Area 2 and issuance of the CDO, there has been an increase in the number of documents that need review and discussion. In addition, the monthly site visits now require more time on site due to the expanded footprint of the landfill.

Langan has been conducting work which was not considered in the original budget for the Community Monitor. The Community Monitor team has been working diligently to keep up with the workload, but it has become increasingly challenging to maintain the budget.

Langan kindly requests the Community Monitor Committee provides guidance on the budget:

- If the Community Monitor Committee thinks this continued work is necessary to keep the community informed, additional budget will need to be authorized.
- Alternatively, prioritization of the scope items and role of the Community Monitor should be discussed.

In accordance with the settlement agreement, the Community Monitor Committee shall consult with WWAC prior to authorizing any additional work to be funded by WMAC.