



COMMUNITY MONITOR COMMITTEE

Altamont Landfill Settlement Agreement

AGENDA

www.altamontcmc.org

VOTING MEMBERS

Robert Carling
City of Livermore

Julie Testa
City of Pleasanton

Donna Cabanne
Sierra Club

David Tam
Northern California
Recycling Association

NON-VOTING MEMBERS

Enrique Perez
Waste Management
Altamont Landfill and
Resource Recovery
Facility

Arthur Surdilla / Wing Suen
Alameda County

Robert Cooper
Altamont Landowners
Against Rural
Mismanagement (ALARM)

STAFF

Judy Erlandson
City of Livermore
Public Works Manager

DATE: **Wednesday, July 8, 2020**
TIME: **4:00 p.m.**
PLACE: Online Zoom Meeting

Zoom Link: us02web.zoom.us/j/87627118627

Zoom dial in phone number: 1-408-638-0968

Webinar ID: 876 2711 8627

1. Call to Order
2. Introductions
3. Roll Call
4. Approval of Minutes (From January 15, 2020)
5. Open Forum This is an opportunity for members of the audience to comment on a subject not listed on the agenda. No action may be taken on these items.
6. Matters for Consideration
 - 6.1 **Responses to Committee Member Questions:**
 - Submittal of Concentration Limits
 - Five-year Permit Review
 - Possible Source of Tetrahydrofuran at Well MW-8B
 - PFAS Compounds Hold Times
 - Artesian Well MW-23B
 - ET cover reporting
 - 6.2 **Five-Year Permit Review**
 - 6.3 **Review of Reports From ALRRF**
 - 6.4 **Review of Documents on GeoTracker web site**
 - 6.5 **Reports from Community Monitor**
 - 6.6 **ALRRF operations during Shelter-in-Place period**
 - 6.7 **2019 Annual Report** A vote to approve the Annual Report is needed. A revised copy of the draft is included in this packet.
 - 6.8 **2020 January Agenda Packet Item 6.6 Revision**
 - 6.9 **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 **October 14, 2020**, at 3500 Robertson Park Road, Livermore.

Informational Materials:

- Community Monitor Roles and Responsibilities
- List of Acronyms
- Draft Minutes of January 15, 2020

City of Livermore
TDD (Telecommunications for the Deaf)
(925) 960-4104

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

The Community Monitor Committee Agenda and Agenda Reports are prepared by City staff and are available for public review on the Thursday prior to the Community Monitor Committee at the Maintenance Service Center, 3500 Robertson Park Road, Livermore, and on the Community Monitor Committee web site <http://www.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 upon request at 3500 Robertson Park Road., Livermore or by contacting us at 925-960-8000 and included in the agenda packet available on the Community Monitor Committee web site <http://www.altamontcmc.org>.

If supplemental materials are made available to the members of the Community Monitor Committee at the meeting, a copy will be available for public review at the Maintenance Service Center, at 3500 Robertson Park Road, Livermore.

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 CIWMB acronyms page:

<http://www.ciwmb.ca.gov/LEACentral/Acronyms/default.htm>.

Updates will be provided as needed. This list was last revised on December 30, 2019.

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
CDFG or DFG – California Department of Fish and Game
CDRRR – California Department of Resources Recycling and Recovery, or CalRecycle
CIWMB – California Integrated Waste Management Board (predecessor to CDRRR – see above)
CMC – Community Monitor Committee
CVRWQCB – Central Valley Regional Water Quality Control Board
DWR – Department of Water Resources
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

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: <http://www.ciwmb.ca.gov/lqcentral/basics/adcbasic.htm>
BTEX – benzene, toluene, ethylbenzene, and xylene (used in reference to testing for contamination)
CH₄ – methane
CO₂ – 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.

Rev. 03/10/2020

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)
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.
BGS – below ground surface
BMP – Best Management Practice
CASP – Same as ASP, above.
CEQA – California Environmental Quality Act
CQA – Construction Quality Assurance (relates to initial construction, and closure, of landfill Units)
CY – cubic yards
GCL – geosynthetic clay liner
GPS – Global Positioning System
IC engine – Internal combustion engine
LCRS – leachate collection and removal system
LEL – lower explosive limit
mg/L – milligrams per liter, or (approximately) parts per million
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.
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 January 15, 2020

DRAFT

1. Call to Order
The meeting came to order at 4:00 PM.
2. Roll Call
Members Present: Robert Carling, City of Livermore; Julie Testa, City of Pleasanton ; Donna Cabanne, Sierra Club; Arthur Surdilla, Alameda County Department of Environmental Health (LEA); Luis Rocha, Environmental Protection Specialist, Altamont Landfill and Resource Recovery Facility (ALRRF); Marcus Netz II, Senior District Manager, ALRRF

Absent: David Tam, NCRA; Robert Cooper, Altamont Landowners Against Rural Mismanagement

Staff: Judy Erlandson, City of Livermore Public Works Department; Mukta Patil, Langan/Community Monitor, Kelly Runyon (Community Monitor Subcontractor)

Others: Marisa Gan, Livermore Recycling Specialist
3. Introductions
All those present introduced themselves.
4. Approval of Minutes of October 9, 2019 meeting
Approval of the October 2019 minutes was moved by Ms. Testa. Ms. Cabanne seconded, and the minutes were approved 3-0. Mr. Tam absent
5. Open Forum
There was an Open Forum discussion regarding the Chair of the Committee for 2020. Ms. Cabanne was nominated to be the Chair, which she declined. Mr. Carling agreed to continue as the Chair of the Committee for 2020. Ms. Testa moved approval, Ms. Cabanne seconded; approval 3-0.
6. Matters for Consideration

6.1 Response to Committee Member Questions

Submittal of Concentration Limits

On 21 February 2020, Geochem Applications presented additional concentration limits for the three groundwater zones for monitoring wells in FA2: alluvial, weathered bedrock and unweathered bedrock zones. No comments had been provided yet by the Water Board.

Proximity of Residences: At the October 9, 2019 Committee meeting, Ms. Testa asked how close residences are to the landfill. Mr. Runyon had replied that the closest residences are $\frac{1}{4}$ to $\frac{1}{2}$ mile away, on Dyer Road, west of the landfill. However, Ms. Patil explained that a subsequent check of a regional map has found that in fact, the Dyer Road residences are one mile west of the landfill, but there are other residences, on Altamont Pass Road, that are about $\frac{1}{2}$ mile from the southern boundary of Fill Area 1. Ms. Testa requested a tour of the ALRRF.

Laboratory Quality Assurance: At the October 9, 2019 Committee meeting, Mr. Carling asked two questions related to apparent quality control problems at the TestAmerica Colorado laboratory that analyzes groundwater samples from the ALRRF. Ms. Patil noted that the questions were conveyed to ALRRF staff, who then forwarded them to the firm that prepares the groundwater monitoring reports, SCS Engineers. SCS Engineers defended the lab's quality of work and stated that Test America is one of the best labs around. SCS also stated that the issues with hold time, lab cross contamination, etc. are normal for all laboratories. The second part of the question was if local labs in Northern or Central California can be used instead of Denver. SCS Engineers responded that Denver is better equipped with management staff and a variety of ASTM and EPA methods, than the local labs. Mr. Netz stated that Mr. Rocha would have more information for the next CMC meeting. CMC members were not satisfied with this explanation.

Analysis method for COD: At the October 9, 2019 meeting, Mr. Carling asked a question regarding Chemical Oxygen Demand analytical method. Ms. Patil explained that COD can be measured by chemically oxidizing organic matter under conditions of heat and strong acids. The presence of a very strong oxidant is crucial for proper measurement. The most commonly used acid is potassium dichromate, which is a hexavalent chromium salt and very strong oxidant, which is bright yellow-orange in color. Ms. Patil further explained that the technique involves placing a dosed sample in a sealed tube and heating to 150°C for two hours. After 2 hour digestion is complete, the oxidation is measured considering the electrons consumed for the reduction of Cr⁶⁺ (hexavalent chromium) to Cr³⁺ (trivalent chromium, no color). After cooling, the intensity of the yellow-orange color is measured using a spectrophotometer set for the yellow-orange wavelength (600-nanometers).

6.2 Five-Year Permit Review

Mr. Arthur Surdilla noted that the Five-Year Permit Review document is close to being finalized between the LEA, CalRecycle and ALRRF, and that by the next committee meeting, there would be an agreement between the parties regarding the conditions of modification of the permit. After the conditions of the modified permit are met, a Public Notice will be posted, but a public meeting will not be required.

6.3 Review of Reports Provided by ALRRF

Stormwater Monitoring and Reporting: Mr. Runyon provided explanation regarding stormwater regulations, plans and reports, and how ALRRF's situation is unusually complex and confusing. Mr. Runyon noted that there are two kinds of stormwater permits that apply to the ALRRF: industrial and construction permits. The landfill operations are considered industrial operations, but its stormwater controls require frequent updating due to the inherent characteristics of the landfill, with its constantly changing topography. In addition, there are ongoing construction projects as Fill Area 2 expands to its full footprint. Mr. Carling asked if the two types of permits are ever in conflict to which Mr. Runyon replied, typically not, but they sometimes overlap.

Mr. Runyon further explained that the Stormwater Pollution Prevention Plan (SWPPP) for any facility is based on its terrain. The SWPPP requirements for the landfill are to control (1) silt movement (2) erosion control. Mr. Runyon noted that there are ditches and basins catching stormwater, which ultimately reaches a channel or a roadside ditch and leaves the property. Stormwater should be sampled where it leaves the facility, and those locations are the low points in the on-site drainage system. Mr. Runyon further explained that in the past, there were only three areas: Basin A, B and C, where stormwater from operating areas was collected prior to discharge. However, due to the construction of FA2, the current SWPPP has defined six drainage zones (Basin A, Basin C, Basin E, Basin F, Northwest Discharge and Basin H) and a zero-discharge area (CASP area). Basin B will be covered beneath FA2, hence Basin H receives discharge from Basin B and all of FA2. CASP area does not discharge outside as the composting area is designed to recycle its stormwater.

VOCs are typically not sampled for industrial general stormwater permits, because they are volatile. Metals and nitrates are sampled to assess impact to receiving waters. However, Water Board disagrees, due to the WDRs issued for the ALRRF, which requires a focused study of VOCs in stormwater, with the goal of identifying sources of any VOCs found.

Mr. Runyon explained Table 6.4-2 Summary of Stormwater VOC Sampling Results, 2017-18 and 2018-19 in detail. SCS Engineers has been conducting this evaluation and reporting the results. Sampling point SW-2 (Basin B) was most prevalent with VOCs, hence the sampling points SW-2A and -2B were installed. If this pattern continues, this would become an area of the site to focus on for additional VOC controls.

Ms. Cabanne asked if Basins A and C will still be open. Mr. Runyon replied affirmatively and added that Basins A and C may receive runoff from FA-1, scales and truck wash, LNG Plant, and solidification basins.

Ms. Cabanne asked what kind of contaminants would livestock contribute (Cattle was seen in Basin B in a photo from 2019). Mr. Runyon noted that nitrates are typical, although he was not sure how much they contribute.

- 6.4 Review of Documents on GeoTracker Web Site – Mr. Carling asked about the standard operating procedures for dump trucks. Mr. Netz responded that there are standard safety protocols established by the landfill. ALRRF provides spotters and directs drivers to dump safely, however, most of the dump truck accidents happen due to inexperienced or negligent drivers.

Ms. Testa asked what kind of injuries are reported. The response from Mr. Netz was that no injuries are sustained by the drivers. Mr. Runyon added that when trailers trip over, the front cab will still be in place on the ground, only the back trailer trips.

Other topics from the GeoTracker documents list were verbally summarized by Mr. Runyon, with no discussion from Committee members or other attendees.

- 6.5 2019 Annual Report- Mr. Runyon presented the relevant topics from the draft report. Ms. Cabanne asked about the greenhouse gas emission assessment from the EPA. Mr. Netz replied that ALRRF disagrees with EPA's assessment that the most recent data available, for 2018, indicate that the ALRRF is the third highest GHG-emitting landfill in California, behind the Puente Hills landfill in Los Angeles County and the Kiefer Landfill in Sacramento County.

Ms. Cabanne asked a question about the mitigation bank credits. If there is something that can be done locally, such as re-establishing the wildlife corridors? Mr. Runyon replied that it was a one-time credit purchase in lieu of on-site improvements.

Ms. Cabanne asked about the 10-acre ET cover area and when will the 4-years be up to check the progress. Ms. Patil to check and report back in the next meeting. Ms. Cabanne also requested that the Natural Resource Protection and Reporting be looked into. Mr. Rocha agreed to provide and Ms. Patil to check and report back.

7. Agenda Building

No items were added to the next agenda.

8. Adjournment

The meeting was adjourned at 6:02 p.m. The next meeting will be held on **Wednesday, April 8, 2020, at 4:00 p.m.** at the Livermore Maintenance Services Center at 3500 Robertson Park Road.

501 14th Street, 3rd Floor Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

To: ALRRF Community Monitor Committee
From: Langan – Community Monitor
Date: June 26, 2020
Re: **CMC Meeting of 7/8/20 - Agenda Item 6.1 - Responses to Committee Members' Questions**

SUBMITTAL OF CONCENTRATION LIMITS

On February 21, 2020, Geochem applications presented additional concentration limits for the three groundwater zones for monitoring wells in FA2: alluvial, weathered bedrock and unweathered bedrock zones. However, the report did not include discussion regarding the five difficult to monitor wells: P-2, ARC-2, MW-15A, MW-17 and MW-17R. According to the report, the upgradient wells used for establishing concentration limits in the different groundwater zones are:

1. Alluvium: MW-8A and PC-2A;
2. Weathered Bedrock: MW-13B, MW-14, MW-14R, MW-19, and MW-21; and
3. Unweathered Bedrock: MW-10, PC-1B, PC-6B[R] and WM-2.

MW-15A, MW-17 and ARC-2 were dry during the second semiannual 2019 groundwater sampling event. Other than laboratory attributable carbon-disulfide, no other VOCs were detected in MW-17R and P-2. No comments have been provided by the Water Board on the Geochem report.

FIVE-YEAR PERMIT REVIEW

The LEA received the application package for the Five-Year Solid Waste Facility Permit (SWFP) Review document for ALRRF on April 13, 2020. The LEA completed the review per Title 27, California Code of Regulations, Section 21675 and prepared a Five-Year Permit Review Report (PRR). ALRRF also concurrently submitted an application package for a Permit Modification on April 13, 2020, addressing all the comments from the LEA and CalRecycle. The LEA concluded no further action is required. A Public Notice was issued by the LEA on June 10, 2020 regarding the modified SWFP.

POSSIBLE SOURCE OF TETRAHYDROFURAN AT WELL MW-8B

At the October 9, 2019 Committee meeting, Mr. Runyon described a test result that showed an unusually high concentration of tetrahydrofuran (THF), a known carcinogen, in a sample from well MW-8B. At the January 15, 2020 meeting he explained that a new protective sleeve pipe used for the sleeve of the well head was composed of PVC, and could be the source of the THF. The second semiannual 2019 groundwater monitoring report suggests the construction of PVC pipe for Basin H is likely the cause for the THF detections.

PFAS COMPOUNDS HOLD TIMES

At the January 15, 2020 meeting there was a concern if there would be problems with the hold times when ALRRF analyzes for PFAS. Laboratory testing for PFAS have historically followed the EPA Method 537 for PFAS in drinking water that stated the holding time was 14 days. In 2019, the EPA ran time-based studies on degradation or loss of target analytes during sample storage (45 days) and assessed the effects of different sample vessel materials (e.g., plastic, glass) on analyte recovery. Based on these studies, the SW-846 methods for waste analyses, currently under development, will utilize and recommend PFAS-free, high-density polyethylene containers, whole sample preparation, and sample holding times of 28 days. Considering the EPA's plan to update PFAS standards of extended holding times as well as sampling practices, the Committee's concerns will be alleviated as the new standards are established.

References:

EPA, 2019. *Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS), Methods and guidance for sampling and analyzing water and other environmental media*. Updated June, accessed on 19 June 2020. Available on:
https://www.epa.gov/sites/production/files/2019-02/documents/pfas_methods_tech_brief_28feb19_update.pdf

ARTESIAN WELL MW-23B

At the January 15, 2020 meeting Ms. Cabanne asked if there could be other wells located in the toe of Fill Area 2 that were likely to become artesian, such as MW-23B. Based on review of hydrogeology of the area, there is a natural spring near the PC-1 well cluster downgradient of MW-23. The 2015 Joint Technical Document (JTD) noted several areas where the piezometric surface is higher than the subgrade, where it would not be a surprise if there is an artesian well in that location, and there could be others. Another fact is that those areas required a minimum 12-inches thick general earthfill, to prevent potential groundwater movement from the bedrock into the refuse. Moreover, the design of FA2 provides for subdrains to be installed beneath the landfill liner when seeps are encountered during construction.

EVAPOTRANSPIRATIVE (ET) COVER REPORTING

At the January 15, 2020 meeting Ms. Cabanne asked about the reporting period for the ET pilot test cover. Based on information provided in the construction quality assurance report (Geosyntec, December 29, 2018), the cover was substantially completed on November 14, 2018 and the submittal of Performance Monitoring Technical Report is scheduled for April 1, 2024. Langan reached out to the ALRRF to determine if this information is correct, but no response has been received.

501 14th Street, 3rd Floor Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

To: ALRRF Community Monitor Committee

From: Langan – Community Monitor

Date: June 26, 2020

Re: **CMC Meeting of 7/8/20 - Agenda Item 6.2 - Five-Year Permit Review**

FIVE-YEAR REVIEW OF SOLID WASTE FACILITIES PERMIT

On April 13, 2020 Waste Management submitted a complete application package for the Five-Year Solid Waste Facility Permit (SWFP) review for ALRRF to the LEA. ALRRF also concurrently submitted an application package for a Permit Modification on April 13, 2020, addressing all the comments from the LEA and CalRecycle. The LEA completed the review per Title 27, California Code of Regulations, Section 21675, and on May 8, 2020, the LEA provided their comments in a Five-Year Permit Review Report (PRR), findings, conclusions and directives. The LEA concluded that no further action is required at this time. On June 10, 2020, CalRecycle issued a Public Notice¹ to inform interested parties who wish to provide comments on the modified SWFP.

The LEA concluded that Permit Modification was required, because there are significant, but non-materials related, changes in the existing permit and Joint Technical Document (JTD).

The estimated closure date was modified from 2025 to 2070. Currently, Fill Area 1 Unit 1 is scheduled to initiate closure operations in 2023, pending the results of the alternative final cover (AFC) evaluation. Based on landfill capacity, it is expected that Fill Area 2 Unit 1 reaches its capacity in 2065, and the phased closure would be completed by 2070.

The area of the site was reduced from the original 2,170 acres to 2,063.6 acres . 71.78 acres were transferred to the State of California Department of Water Resources to construct a reservoir, 30.27 acres for the Zone 7 Water Agency aqueduct/pipeline area, and 4.4 acres for two Alameda County Flood Control areas.

The new permit and JTD note the updated Central Valley Regional Water Quality Control Board (CVRWQCB) Waste Discharge Requirements (WDRs) for the ALRRF. The WDR was issued in July 2016, and the Monitoring and Reporting Program (MRP) was finalized in mid-October. The updated WDR and a detailed comparison of the groundwater monitoring requirements were reviewed by the Community Monitor team, and included in the CMC packet for the January 2, 2017 meeting².

¹ The public notice was posted to the Altamont Community Monitor Committee website on 11 June 2020, and can be accessed in the following link:

http://altamontcmc.org/uploads/Altamont_Landfill_Public_Notice_June_2020.pdf

² http://altamontcmc.org/uploads/20170102_Packet.pdf

The LEA deferred the technical review of the Non-Water Release Corrective Action Plan (NWRCAP) to CalRecycle's Engineering Support Branch. The cover letter by Tetra Tech BAS, notes that the causal event scenarios were reexamined, and it was determined that the 2015 causal event scenarios were still reasonable. The two most significant causal events correspond to the surface fire (which considers inspection, revegetation and repairs to the LFG collection system) and the 1,000-year, 24-hour storm (which considers final cover and drainage control repairs). The cost estimates for the two most significant causal events determined in the July 2015 NWRCAP were updated to 2020 dollars, using annual inflation factors. No additional changes were noted in our review.

The PRR summarizes areas of concern (AOCs) and violations noted in the LEA's inspection reports for the review period. Most of the AOCs were related to Gas Monitoring and Control (27 CCR Section 20921) and Litter Control (27 CCR Section 20830). These AOCs were in place during several inspections, but had been removed at the time of the review. Two violations reported for the period; a violation was issued for the full permit review (27 CCR Section 21640) and remained in place between July 12, 2016 and September 30, 2016, another violation was issued on July 31, 2019 for Gas control (27 CCR Section 20919) and was removed on August 15, 2019.

Based on the review of the PRR and changes to the JTD, no significant modifications other than the ones noted in this memorandum were included. We recommend any permit modifications continued to be reviewed by the Community Monitor and summarized to the CMC.

135 Main Street, Suite 1500 San Francisco, CA 94105 T: 415.955.5200 F: 415.955.5201

To: Community Monitor Committee

From: Langan – Community Monitor

Date: June 26, 2020

Re: CMC Meeting of 7/8/20 – Agenda Item 6.3 – Review of Reports from ALRRF
Groundwater Analysis Progress Report #25
Altamont Landfill and Resource Recovery Facility (ALRRF)
Livermore, California
Langan Project No.: 750657601

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 2019 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility (WDR Order No. R5-2016-0042-01), Long Beach, California dated February 7, 2020.
- SCS Engineers, Addendum to Second Semiannual-Annual 2019 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility (WDR Order No. R5-2016-0042-01), Long Beach, California dated March 2, 2020.

The report addresses 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. This memorandum describes the results of the above effort 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 and for potential trends in groundwater analytical data over recent years.

The Phase 1 portion of Fill Area 2 began receiving wastes on March 25, 2019. The second semiannual 2019 groundwater sampling activities for Fill Area 1 and Fill Area 2 were conducted in August and November 2019. Wells associated with Fill Area 2 were monitored on a semiannual basis to establish baseline conditions. New monitoring wells were installed downgradient of the active face of Fill Area 2 in 2019; these new wells were sampled on a more frequent interval (two to four weeks) to support the development of concentration limits. Wells and monitoring points were generally found to be in compliance during the Second Semiannual 2019 sampling event.

Laboratory QA/QC

Several occurrences of benzo[a]pyrene, benzo[b]fluoranthene, benzo[g,h,i]perylene, benzo[k]fluoranthene, diben(a,h)anthracene, and indeno[1,2,3-cd]pyrene, acetone, carbon disulfide, dissolved potassium and sodium, methylene chloride, and total dissolved solids were observed in method blanks at levels below the laboratory reporting limit (RL¹). No corrective action was taken for any values in method blanks as all were below the RLs. These samples were flagged and detections were attributed to cross-contamination. The volatile organic compounds (VOCs): acetone, 1,2-Dichloroethane, 2-butanone (MEK), chloroform, carbon disulfide, methylene chloride, styrene, and tert-butyl alcohol (TBA) were also detected in trip, field and equipment blanks. One or more of these VOCs was also detected in ALRRF groundwater samples. These VOC detections attributable to cross-contamination were flagged where appropriate.

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

The laboratory reports (by TestAmerica in Colorado) mention the detections in several of the case narratives. The laboratory states that when samples had detections similar to the blanks, the detections in the samples were likely due to laboratory artifacts, and because these detections were below the RLs, the laboratory reports note that no corrections were required.

Another problem noted during the Second Semiannual 2019 sampling events were that two sampling events had delays in courier deliveries which caused three samples to be received outside of the temperature criteria and four nitrate samples to be analyzed outside the hold time. Similar issues had been observed in previous monitoring events, fortunately for the Second Semiannual 2019 sampling event, the number of analyses outside of standard protocol decreased.

Second Semiannual 2019 Groundwater Sampling Results

Detection and Corrective Action Wells² Inorganic and Volatile Organic Compound Concentrations

The 2016 MRP identifies two sets of corrective action wells: 1) well E-20B along the east side of Fill Area 1 and downgradient (detection) well MW-12, and 2) wells E-05 and E-07 in the main canyon south of Fill Area 1 and their downgradient (detection) well E-03A. Additional detection wells have been added to the MRP, due to indications of possible groundwater impacts at other locations on site. Table 6.3-1 (below) summarizes the monitoring well network which is also presented in Figure 6.3-5.

¹ Please see the Acronyms list in this agenda packet for definitions of "Reporting Limit" and related terms.

² Monitoring wells included in the Corrective Action Program (CAP) and Detection Monitoring Program (DMP) of the MRP, used for compliance monitoring.

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Table 6.3-1

Fill Area 1	
Detection Monitoring Groundwater Monitoring Wells	MW-3B
Corrective Action Program Groundwater Monitoring Wells	E-03A, E-05, E-07, E-20B, E- 23, MW-12, MW-20, MW-27, PC-1B, PC-1C
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
Fill Area 2	
Detection Monitoring Groundwater Monitoring Wells	MW-10, MW-13A, MW-13B, MW-19, MW-23A, MW-23B, MW-28, MW-22, PC-1A, PC-1B, PC-1C, PC-6B, PC-6B[R], WM-2, PC-2A, PC-2C, P-2
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

Based on the analytical results of the second semiannual monitoring event, four initial statistical exceedances were observed for inorganic monitoring parameters in Fill Area 2 (FA2) monitoring wells only. The four initial statistical exceedances of inorganic compounds correspond to: chloride at MW-8B and MW-10 (FA2), bicarbonate alkalinity at PC-1B (FA2), and dissolved calcium, chloride, and total dissolved solids at PC-2A (FA2). Upon receipt of the Data Quality Review (DQR), Waste Management will notify the CVRWQCB of any errors found and if resampling will be conducted. Recurring exceedances of dissolved calcium were observed at PC-1B and recurring exceedances of dissolved calcium, chloride, sulfate, and total dissolved solids, were observed again at PC-1C. COD exceedances for MW-8A and MW-8B observed during the previous period were not observed.

Fill Area 1

VOCs not attributable to laboratory cross contamination were detected in seven wells, as indicated in Table 6.3-2, attached at the end of the memo. At these well locations, the concentrations were similar to historical data. In monitoring well E-20B, 1,1-dichloroethane (1,1-DCA) and dichlorofluoromethane were detected at concentrations above RL. These VOCs have been detected in E-20B since 1999. Below RL concentrations of 1,4-dichlorobenzene (1,4-DCB), cis-1,2-dichloroethene (cis-1,2-DCE), dichlorodifluoromethane, diethyl ether, methyl tert-butyl ether (MTBE), TBA, and tetrahydrofuran were also detected in E-20B during the Second Semiannual 2019 monitoring event. The Updated Engineering Feasibility Study (EFS), completed by SCS Engineers (November 2004, Revised March 2005), and the Revised E-20B Corrective Action Plan (CAP), dated August 13, 2014, prepared by Waste Management of Alameda County, Inc. (WMAC) concluded that the VOC detections at E-20B do not appear to be indicative of leachate impacts. However, in a letter dated May 23, 2014, the CVRWQCB remarked about its

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reservations regarding this conclusion. As discussed below, the area surrounding E-20B is currently undergoing corrective action, including landfill gas control; and E-20B is also sampled for natural attenuation parameters to monitor conditions favorable for VOC degradation. Well MW-12 (installed in September 2014), located 650 feet downgradient of E-20B, had detections above the MDL of 1,2-DCA. 1,2-DCA has been detected in other ALRRF samples and was attributed to laboratory cross contamination.

Corrective action well E-07 had detections of 10 VOCs, two of which were above the RL: 1,1-DCA and dichlorodifluoromethane. The compounds detected below the RL were: cis-1,2-DCE, diethyl ether, MTBE, TBA, tetrachloroethene (PCE), trichloroethene (TCE), dichlorofluoromethane and tetrahydrofuran. The corrective action well E-05 had above RL concentrations of diethyl ether and tetrahydrofuran, and below RL concentrations of two additional VOCs. With the exception of tetrahydrofuran in E-05, which has been detected at a slightly higher concentration in the past two years, all other VOC concentrations in these two wells were within the historical range. Evaluation well E-03A had new detections of TBA, at concentrations below the RL during the First Semi Annual 2019 Monitoring Report. These detections were not found in the Second Annual 2019 Monitoring Report. E-23, another downgradient well of E-05 and E-07 had no detections of VOCs.

E-20B

At the CVRWQCB staff's request, to improve monitoring effectiveness and to address the source of VOC impacts detected in the corrective action well E-20B, WMAC installed one groundwater monitoring well (MW-12, installed 650 feet downgradient of E-20B in September 2014) and two new landfill gas extraction wells (687 and 688, installed in the vicinity of E-20B in January 2015). MW-12 has been sampled since installation to track the effectiveness of enhancements made to the LFG collection system in January 2015. Starting in December 2014, VOCs diethyl ether, cis-1,2-DCE, acetone, methylene chloride, and 1,1-DCA were detected occasionally in MW-12. During the Second Semiannual 2019, there were no VOC detections.

Based on the E-20B VOC time series, and operation of the LFG control system, corrective measures are performing as expected and groundwater VOCs are continuing to decrease over time.

MW-20

As a consequence of VOCs in MW-12 groundwater, another well, MW-20, was installed downgradient of E-20B in September 2017 at the request of the CVRWQCB. Below RL concentrations of five VOCs were detected in the initial sample collected from MW-20 in October 2017. Two of the five VOCs, 1,1-DCA and diethyl ether were detected in subsequent sampling events, confirming the initial sampling results. During the Second Semiannual 2019 sampling event, MW-20 had below RL detections of 1,1-DCA in November.

Due to the detections of VOCs in MW-20, during a meeting with the CVRWQCB on July 17, 2018, a new monitoring well was proposed to be installed downgradient of MW-20. A Work Plan dated August 3, 2018 for the installation of well MW-27 was submitted to the CVRWQCB. MW-27 was proposed to be installed in the center of the canyon, approximately 400 feet

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downgradient from MW-20, in the first encountered groundwater. The installation of MW-27 was postponed until safe conditions for installation in the dry season of 2019. The CVRWQCB accepted the timeline an email on October 31, 2018, but requested that the new well be sampled during the first half of 2019 and the data included in the First Semiannual 2019 report. In a letter dated May 28, 2019, WMAC proposed a new location for MW-27, approximately 1,350 feet downgradient from MW-20, because overhead electrical lines made the originally approved location unsafe. MW-27 was installed in late October 2019 by Geosyntec and sampled on November 12, 2019. No detections of VOCs were reported for this well in the Addendum to the groundwater monitoring report dated March 2, 2020.

PC-1B and PC-1C

Detection wells PC-1B and PC-1C were added to the monitoring network, at the request of CVRWQCB, to monitor for potential migration of VOCs further downgradient of E-20B. Wells PC-1B and PC-1C, located approximately 2,000 feet from E-20B and approximately 1,500 feet downgradient of MW-12 have not had any landfill associated VOC detections since the start of monitoring in 2006 with the exception of those attributable to laboratory cross contamination (acetone, carbon disulfide, and methylene chloride), and field contamination of naphthalene as explained below. VOCs that are consistently detected in E-20B also have not been detected downgradient in the deeper groundwater zone monitoring wells MW-3B and MW-3C during the 2018 and 2019 monitoring events.

The first semiannual 2018 sample from PC-1B had an above RL detection of naphthalene at 2.1 µg/L. Given the fact that no landfilling had occurred within 1,750 feet of PC-1B, the detection of naphthalene was deemed anomalous. In a letter dated October 12, 2018, WMAC concluded that the source of the naphthalene was unknown but may be cross-contamination from components of the dedicated pump used for sampling the well. The CVRWQCB concurred with the findings in a letter dated January 11, 2019 and requested continued quarterly sampling of PC-1B. PC-1B was sampled in March and May during the First Semiannual 2019 period. The March 2019 sample had below RL concentrations of laboratory attributed acetone and carbon disulfide. The May 2019 PC-1B sample had a below RL concentration of naphthalene. The August and December 2019 samples during the Second Semiannual 2019 period, had below RL concentrations of laboratory attributed acetone and below RL concentrations of naphthalene. Quarterly sampling will continue to be conducted.

MW-4A

In May 2017, bicarbonate, calcium and five VOCs were detected in monitoring well MW-4A above the concentration limits established for these constituents in the WDRs. A Notice of Violation (NOV) for recurring VOCs was issued by the CVRWQCB on October 19, 2017. The March 2019 sample presented detections below the RL for cis-1,2-DCE and 1,1-DCA, the May 2019 presented detections below RL for acetone and 1,1-DCA, and the August and November 2019 presented detections below the RL for cis-1,2-DCE and 1,1-DCA. These detections have been decreasing since the initial detection in May 2017. Bicarbonate alkalinity continues to exceed the background concentration limit. In November 2018 new downgradient monitoring well MW-31 was installed. No VOCs were detected above the RL in well MW-31 during the First Semiannual

2019 sampled in March and May or the Second Semiannual 2019 sampled in August and November. These wells are to be monitored quarterly for two years.

Fill Area 2

Waste placement in Fill Area 2 Phase I began on March 25, 2019. To establish background water quality, most of the wells associated with Fill Area 2 have been sampled since 2014. A summary of VOCs detected in Fill Area 2 is presented in Table 6.3-3, attached at the end of the memo. During the First Semiannual 2019 period, no VOCs were detected in samples from Fill Area 2 wells MW-1B, MW-4B, MW-5B, MW-10, MW-13B, MW-16, MW-17R³, MW-18, MW-19, MW-20, PC-1B, PC-1C, PC-6B(R), and WM-2, aside from laboratory attributed acetone. MW-14, MW-14R, MW-15B, MW-21 also presented laboratory attributed carbon disulfide. During the Second Semiannual 2019 period, VOCs below the RL were detected in MW-19, MW-20 and PC-1B: carbon disulfide, 1,1-DCA and Naphthalene respectively. MW-10 presented laboratory attributed carbon disulfide, MW-20 presented laboratory attributed TBA, and PC-1B presented laboratory attributed acetone. All other wells in Fill Area 2 presented no VOC concentrations.

Wells MW-14, MW-14R, and MW-21 were abandoned in late May 2019 because they were located in future Fill Area 2 Phase 2 grading and construction limits.

MW-8A and MW-8B presented initial measurably significant concentrations of COD and some VOCs. During the First Semiannual sampling, tetrahydrofuran was detected below the RL at a concentration of 480 µg/L in MW-8A; tetrahydrofuran and toluene were detected above the RL at respective concentrations of 11,000 µg/L and 1.5 µg/L in MW-8B, and two additional VOCs (acetone and bromomethane) were detected below the RL. During the Second Semiannual 2019 sampling, tetrahydrofuran was detected above the RL in MW-8A at 200 µg/L and was not detected at all in MW-8B. MW-8A and MW-8B did not present significant concentrations of COD during the Second Semiannual 2019 sampling.

New wells were installed for Fill Area 2 and sampled five times between November 12, 2019 and February 7, 2020 to support implementation of intrawell statistics of concentration limits prior to placement of waste in Phase 2 of Fill Area 2. One or more of the VOC species, naphthalene, 1,2-dichloroethene, dichlorofluoromethane, acetone, carbon disulfide, chloroform, diethyl ether, TBA, and tetrahydrofuran were detected in one or more samples from the new wells MW-22, MW-23A, MW-23B, and MW-28. In five samples the indicated VOCs were reported to be above the RL:

- naphthalene in MW-22 sampled on January 31, 2020,
- carbon disulfide in MW-23B sampled on June 1, 2020, and
- 1,2-Dichloroethane in MW-23A sampled on November 12, 2019 and MW-28 sampled on June 12, 2019 and July 2, 2020.

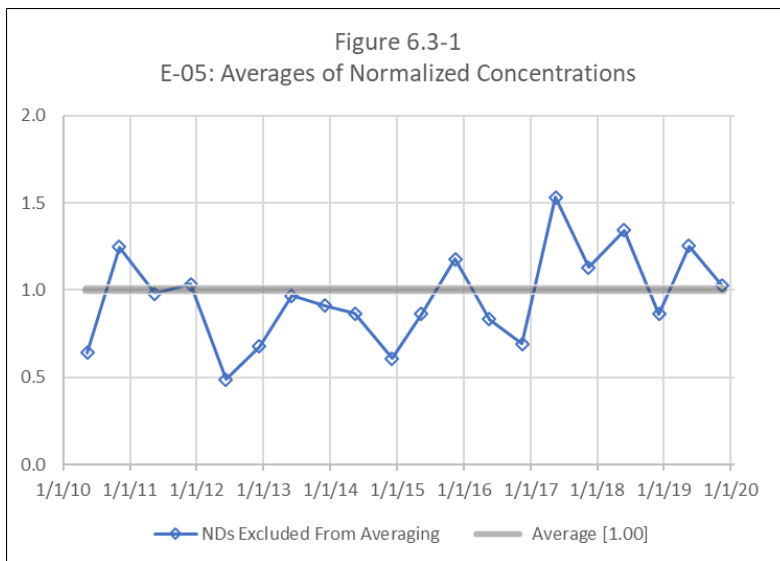
According to the monitoring report, two of the five detections appear to be due to sampling and laboratory cross contamination. Naphthalene was constantly detected in samples collected from

³ Wells that have an "R" after their number are replacement wells, installed because the original well became dry.

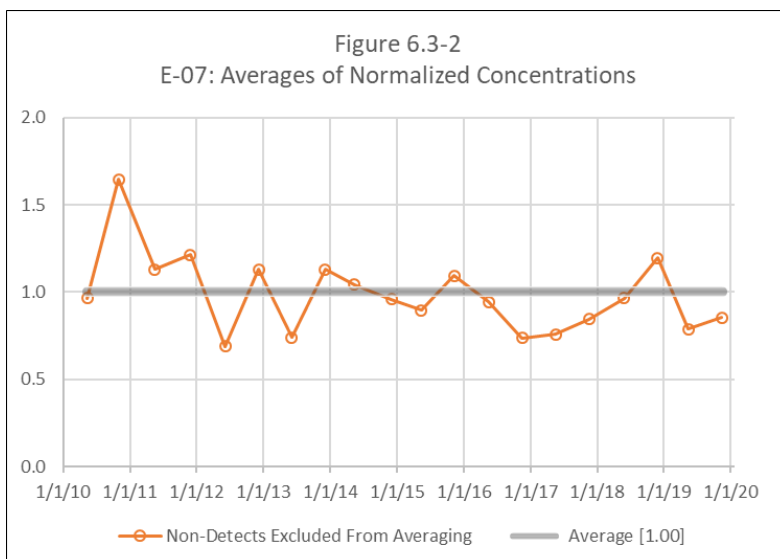
well MW-22, but based on interpretation by SCS a non-landfill source for the naphthalene detections is indicated.

Trends in VOC Data

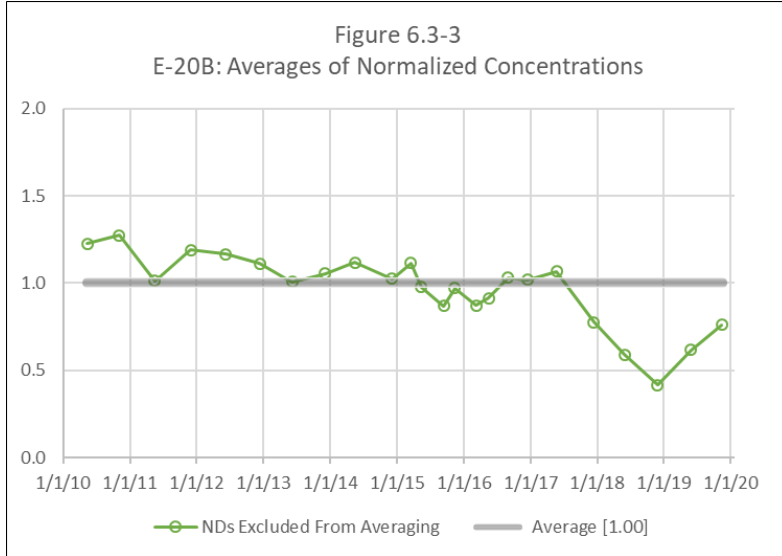
We continued to review the trends in data from monitoring wells where VOCs have been detected and continued graphing the data over time for each contaminant in each such well. We have normalized the concentration data (dividing each data point by the average for that substance at that well, with non-detects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



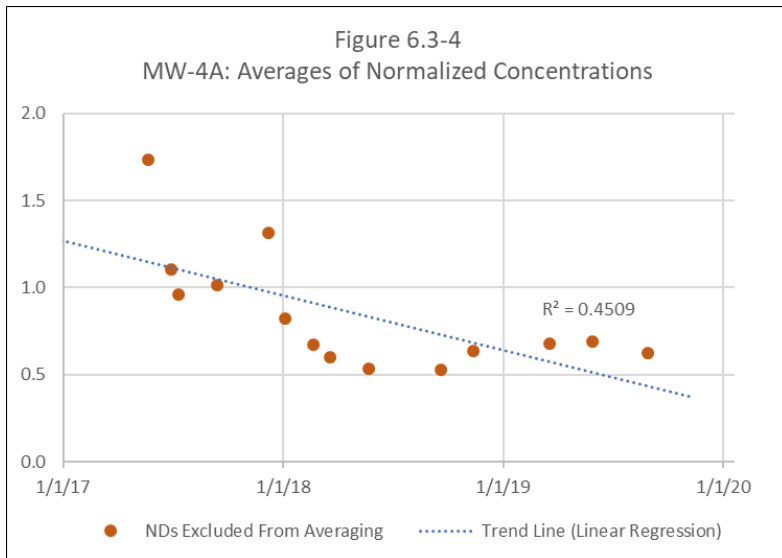
At Well E-05, at the toe of Fill Area 1, as noted previously, the data vary too widely to provide a clear trend. The November 2019 sample showed average concentrations.



At well E-07, in the same location but sampling at a greater depth, the most recent VOC data appeared to present an upward trend until the March 2019 sample. The November 2019 sample was similar, in showing less than average concentrations.



At well E-20B on the east side of Fill Area 1, the average across all VOC's was showing a clear decline in 2017 – 2018, but the most recent samples (2019) show a slight increase. This should continue to be tracked.



At well MW-4A, at the northeast corner of Fill Area 1, the first two 2019 samples appeared to have weakened the downward trend in average VOC concentrations. The November 2019 sample had no detections and therefore it appears that the downward trend continues.

Summary of Groundwater Results

VOCs detected in corrective action monitoring wells E-05, E-07, E-21, E-20B, MW-20 and MW-12 were generally consistent and within the ranges of previous detections observed at these wells. Due to the continued detections of VOCs in MW-20, a new downgradient well MW-27 has been

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installed. It was sampled on November 12, 2019. All newly installed wells, MW-22, MW-23, MW-23B, MW-27, and MW-28 were sampled during the Second Semiannual event and data from these reported low levels of VOCs, with concentrations similar to wells in the vicinity of Fill Area 2, and non-detects for VOCs in MW-27, located downgradient of MW-20. VOCs detected in E-20B and MW-20 were not detected in downgradient wells PC-1B and PC-1C. No VOCs were detected in E-23 located downgradient of E-05 and E-07. Naphthalene was detected in PC-1B during the July and November sampling events and will continue to be monitored quarterly at the request of the CVRWQCB. The result of resampling for the occurrence of tetrahydrofuran in MW-8A and MW-8B resulted in detection of tetrahydrofuran in MW-8A but not MW-8B. The detection of tetrahydrofuran has been attributed to PVC cement used for piping construction related to the adjacent Basin H. The several occurrences of laboratory QA/QC issues, including acetone, 1,2-DCA, and carbon disulfide concentrations that were observed in method blanks at levels below the laboratory reporting limit (RL) during the First Semiannual 2019 and some of the previous reports improved for the Second Semiannual 2019 Report. 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.

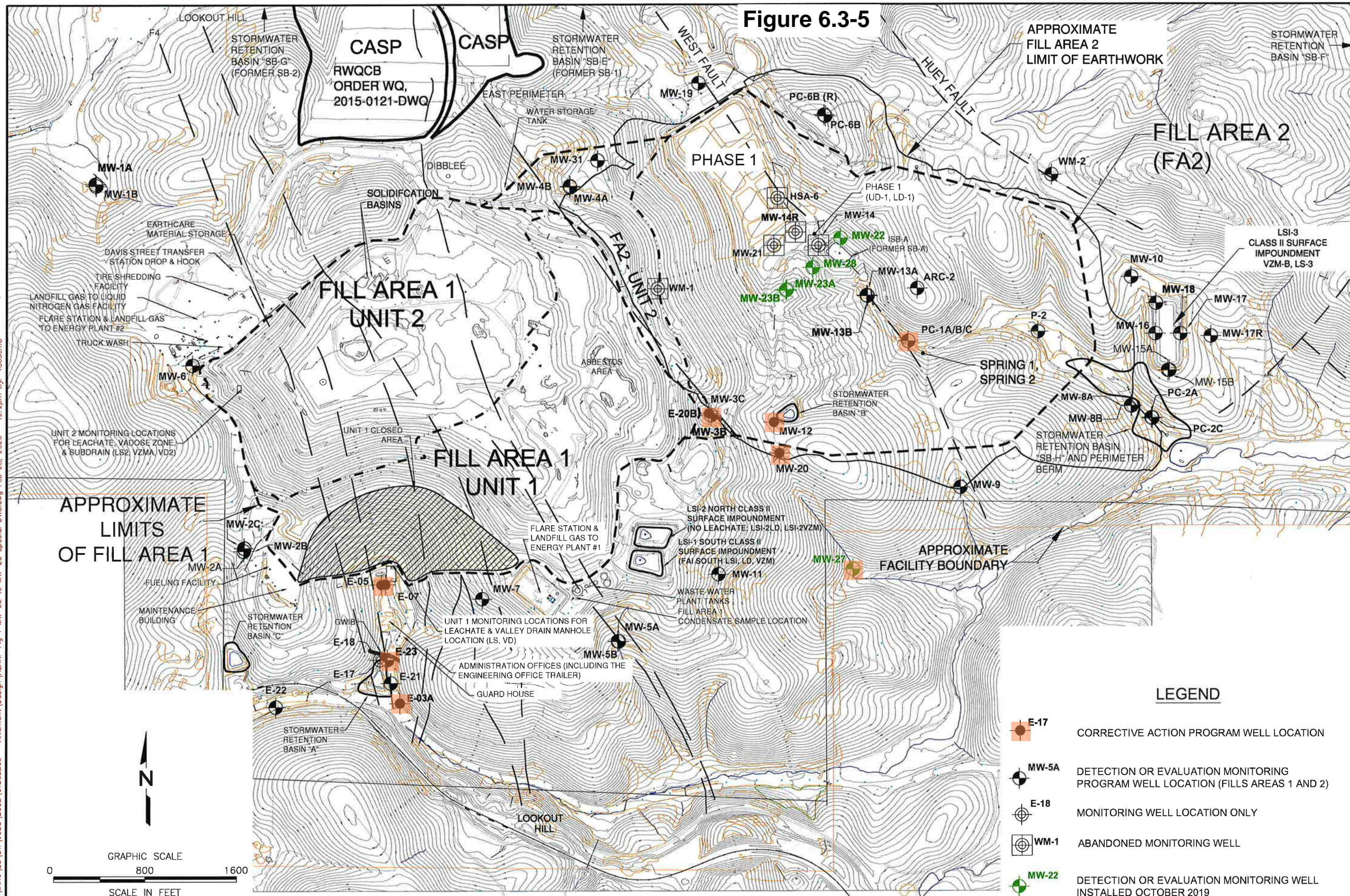
Recommendation

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 6.3-5 Site Plan showing Monitoring Wells
- Table 6.3-2 Fill Area 1 Analytical Results Summary
- Table 6.3-3 Fill Area 2 Analytical Results Summary

Figure 6.3-5



DATE	
REVISION	
NO.	
SHEET TITLE:	GROUNDWATER MONITORING NETWORK
CLIENT:	Waste Management of Alameda County, Inc.
PROJECT TITLE:	ALTA MOUNT LANDFILL AND RESOURCE RECOVERY FACILITY ALAMEDA COUNTY, CALIFORNIA
DATE:	FEBRUARY 2020
SCALE:	1" = 800'
FIGURE NO.	1

\\pac-fs01\Data\ES\SW\OBS\2002\01202209 - Altamont\Design\ALRRF Fig 1 MW-22 to MW-28 Special DWG.dwg Feb 28, 2020 - 12:2pm By: 4803emo

SOURCE: DECEMBER 29, 2017 TOPO PROVIDED BY WASTE MANAGEMENT

**Table 6.3-2
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-fluoromethane	Diethyl ether	Methylene Chloride	Methyl tert-butyl ether	Napthalene	Styrene	Tert-Butyl-Alcohol	Tetrachloroethene	Tetrahydrofuran	Toluene	Trichloroethene	Vinyl chloride	Comment	
West of FA1	MW-2A																									Monitoring Well	
	MW-6																										Monitoring Well
Canyon South of Area 1	E-05														X		X			X		X					Corrective Action Well Matches Historical data
	E-07							X	X				X	X	X		X			X	X	X		X			Corrective Action Well Matches Historical data
	E-23																										Corrective Action Well
	E-21																										Evaluation Well
	E-03A																										Correction Action Well
NE of FA1	MW-4A							X ³	X ³																		Monitoring Well
	MW-31				X ^{1,2,3}																						Monitoring Well
South of FA1	MW-5A																										Monitoring Well
	MW-7																										Monitoring Well
	MW-11																										Monitoring Well
East of Fill Area 1	E-20B						X	X	X				X	X	X		X			X		X					Corrective Action Well Matches Historical data
	MW-20								X											X ¹							Downgradient Corrective Action Well
	MW-12																										Downgradient Corrective Action Well
	MW-27																										Downgradient Evaluation Well
Down-gradient of MW-12	PC-1B	X ¹																X									Monitoring Well
	PC-1C																										Monitoring Well

Notes

VOCs - Volatile organic compounds

¹ Compound was also detected in field or method blank at similar levels below the method RL. These detections could be a laboratory artifact.

² First detection

³ MW-4A and MW-31 was sampled in August and November 2019. Only Samples collected in August presented detections. The November samples had no detections of VOCs.

**Table 6.3-3
Fill Area 2 Analytical Results Summary
Altamont Landfill Resource and Recovery
Livermore, CA**

Area	Sample ID	Sample Date	Acetone	Benzyl Alcohol	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-fluoromethane	Diethyl ether	Methylene Chloride	Methyl tert-butyl ether	Napthalene	Styrene	Tert-Butyl-Alcohol	Tetrachloroethene	Tetrahydrofuran	Toluene	Trichloroethene	Vinyl chloride	Comment		
N of FA2	MW-19	12/3/2019				X ³																						Monitoring Well		
FA2 - Phase 2	MW-22 ¹	11/12/2019																										Detection Well		
		12/6/2019																			X									
		1/6/2020																			X									
		1/31/2020																			X									
		2/7/2020																			X									
		SA 2																			X									
	MW-23A ¹	11/12/2019												X		X ⁴													Detection Well	
		12/6/2019														X ⁴														
		1/6/2020																												
		1/31/2020																												
		2/7/2020																												
		SA 2												X		X ⁴														
	MW-23B ¹	11/12/2019	X ²																										Detection Well	
		12/6/2019				X ²		X																						
		1/6/2020				X ²																								
		1/31/2020				X ²																								
		2/7/2020																												
		SA 2	X ^{2,4}			X ^{2,4}		X ⁴																						
	MW-28 ¹	11/12/2019																											Detection Well	
		12/6/2019	X											X				X					X		X					
		1/6/2020														X								X						
1/31/2020														X																
2/7/2020														X ²																
SA 2														X ⁴		X ⁴	X ⁴					X ⁴		X ⁴						
LSI-3	MW-8A	1/25/2019																										Monitoring Well		
	MW-8B	1/25/2019																										Monitoring Well		
	MW-15B	11/18/2019																										Monitoring Well		

Notes

VOCs - Volatile organic compounds

¹ New wells were installed for Fill Area 2 and sampled five times, 12 November 2019, 6 December 2019, 6 January 2020, 31 January 2020, and 7 February 2020.

² Compound was also detected in field or method blank at similar levels below the method RL. These detections could be a laboratory artifact.

³ First detection (not noted for newly installed wells)

⁴ One or more of the five samples collected between November 2019 and February 2020 detected this constituent.

501 14th Street, 3rd Floor Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

To: ALRRF Community Monitor Committee

From: Langan – Community Monitor

Date: June 26, 2020

Re: CMC Meeting of 7/8/20 – Agenda Item 6.3 – Review of Reports from ALRRF
Review of Data Submittal for Compliance with
13267 Order WQ 2019-0006-DWQ (PFAS Order)
Altamont Landfill and Resource Recovery Facility (ALRRF)
Livermore, California
Langan Project No.: 750657601

The per- and polyfluoroalkyl substances (PFAS) Order is part of a statewide effort to obtain preliminary understanding of PFAS compounds concentrations in groundwater and leachate at different landfills. The State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs) will evaluate the data collected, and use it in support of any regulatory action to be implemented.

The data submittal report for the Altamont Landfill was prepared by Wood Environment & Infrastructure Solutions, Inc. (Wood), in general accordance with the work plan and work plan addendum approved by the Central Valley RWQCB (CVRWQCB). This data are a one-time sampling event for PFAS, as required by the Water Code Section 13267 Order WQ 2019-0006-DWQ (PFAS Order).

The PFAS samples were analyzed by Eurofins TestAmerica in West Sacramento. Three PFAS compounds were detected in the method blank. Trace concentrations (below RL) of four different PFAS compounds were reported in the trip, field, or equipment blanks. One duplicate sample was collected, and the results were consistent with the primary sample result.

Total PFAS sample results are presented in Figure 6.3-6, attached to the 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.

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. Data summarized to date by the SWRCB is presented in Table 6.3-4¹.

Table 6.3-4
Water Board Investigation Summary – March 2020
TABLE 1. PFAS CONCENTRATIONS (parts per trillion) (as of January 2020)

	Airports - Groundwater/ Surface Water (4 of 30 airports sampled)			Landfills – Groundwater (53 of 196 landfills sampled)			Landfills – Leachate (53 of 196 landfills sampled)		
	Min	Max	% detected	Min	Max	% detected	Min	Max	% detected
PFHxS	1.98	37,000	84%	ND	560	64%	66	770	100%
PFOS	ND	5,960	84%	ND	330	53%	ND	230	73%
PFOA	2.07	59,700	92%	ND	1,300	56%	630	26,000	96%
PFBS	ND	39,400	76%	ND	200	55%	230	5,200	100%
PFHxA	ND	69,000	88%	ND	570	58%	3,800	51,000	93%
PFHpA	1.79	48,700	82%	ND	170	55%	350	2,600	93%
PFNA	ND	19,100	54%	ND	7,300	26%	53	180	71%

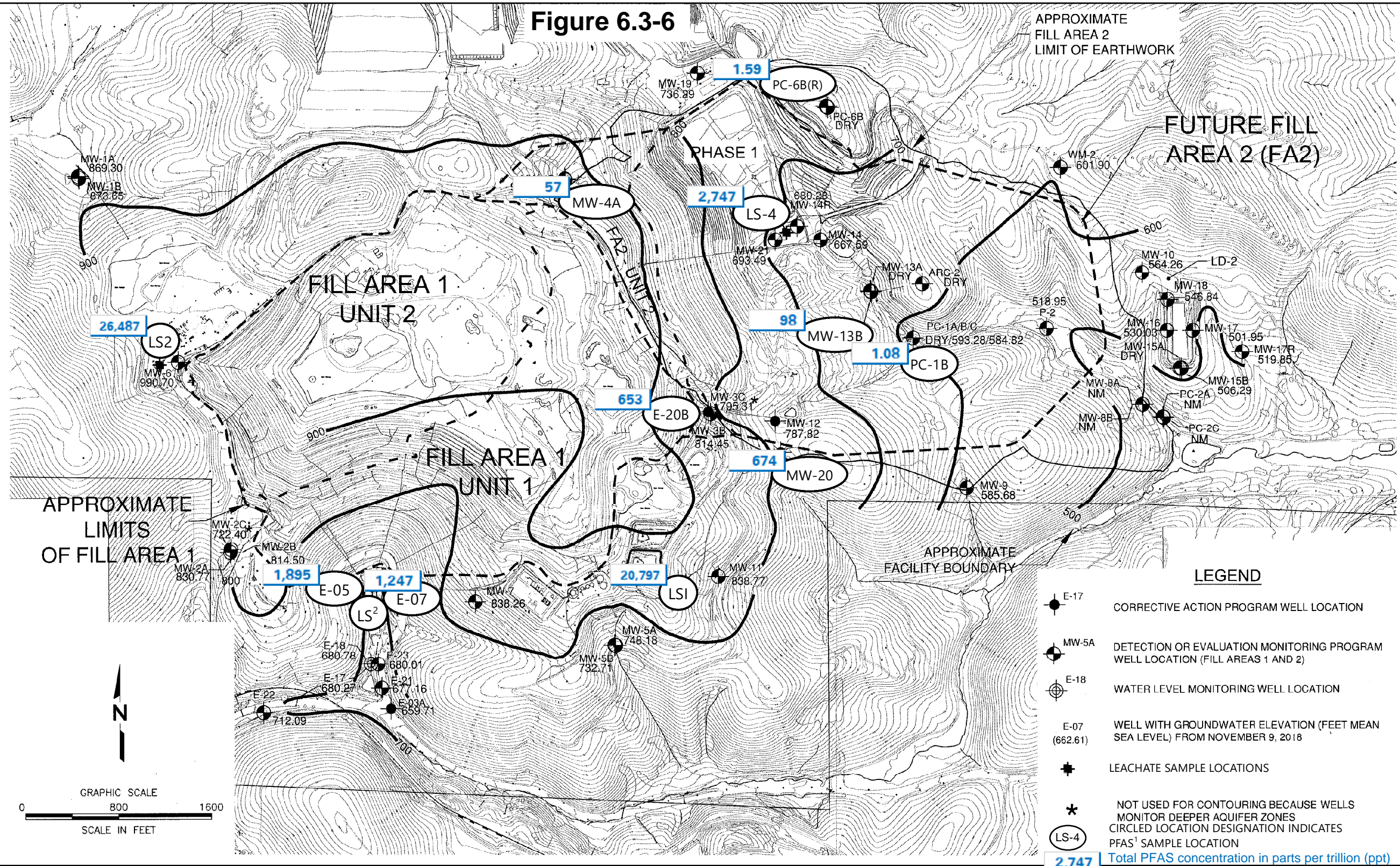
The concentrations reported at the ALRRF were below the maximum concentrations for groundwater and leachate at other landfills covered by the PFAS Order, and within the middle of the range. We recommend continuing monitoring this topic, and updating the committee on this topic as information becomes available.

Attachment:

Figure 6.3-6 PFAS Sample Locations and Results

¹ PFAS Water Board Investigation Summary - March 2020 (updated 03/09/20). Retrieved from: https://www.waterboards.ca.gov/pfas/docs/pfas_results_summary_march2020.pdf

Figure 6.3-6



APPROXIMATE LIMITS OF FILL AREA 1

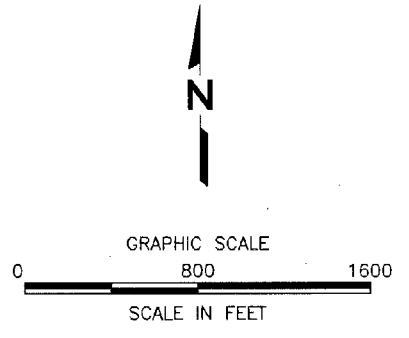
APPROXIMATE FILL AREA 2 LIMIT OF EARTHWORK

FUTURE FILL AREA 2 (FA2)

APPROXIMATE FACILITY BOUNDARY

LEGEND

- E-17 CORRECTIVE ACTION PROGRAM WELL LOCATION
- MW-5A DETECTION OR EVALUATION MONITORING PROGRAM WELL LOCATION (FILL AREAS 1 AND 2)
- E-18 WATER LEVEL MONITORING WELL LOCATION
- E-07 (662.61) WELL WITH GROUNDWATER ELEVATION (FEET MEAN SEA LEVEL) FROM NOVEMBER 9, 2018
- LEACHATE SAMPLE LOCATIONS
- NOT USED FOR CONTOURING BECAUSE WELLS MONITOR DEEPER AQUIFER ZONES
- CIRCLED LOCATION DESIGNATION INDICATES PFAS¹ SAMPLE LOCATION
- 2,747** Total PFAS concentration in parts per trillion (ppt)



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

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

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

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



Figure 1

Date: 1/23/2020 Printed by: elizabeth.chapman Path: N:\FR_projects\FR19161340\WM\GIS\Altamont_fig01_PFAS_GW_contours.mxd

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

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501 14th Street, 3rd Floor Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

To: Community Monitor Committee

From: Langan – Community Monitor

Date: June 26, 2020

Re: CMC Meeting of 7/8/20 – Agenda Item 6.3 – Review of Reports Provided by ALRRF: Air Emission Report
Altamont Landfill and Resource Recovery Facility (ALRRF)
Livermore, California
Langan Project No.: 750657601

Air Emissions Report

The most recent Semi-Annual Report to the Bay Area Air Quality Management District (BAAQMD) dated December 20, 2019 covers the period from June 1, 2019 through November 30, 2019. The key points from this document are:

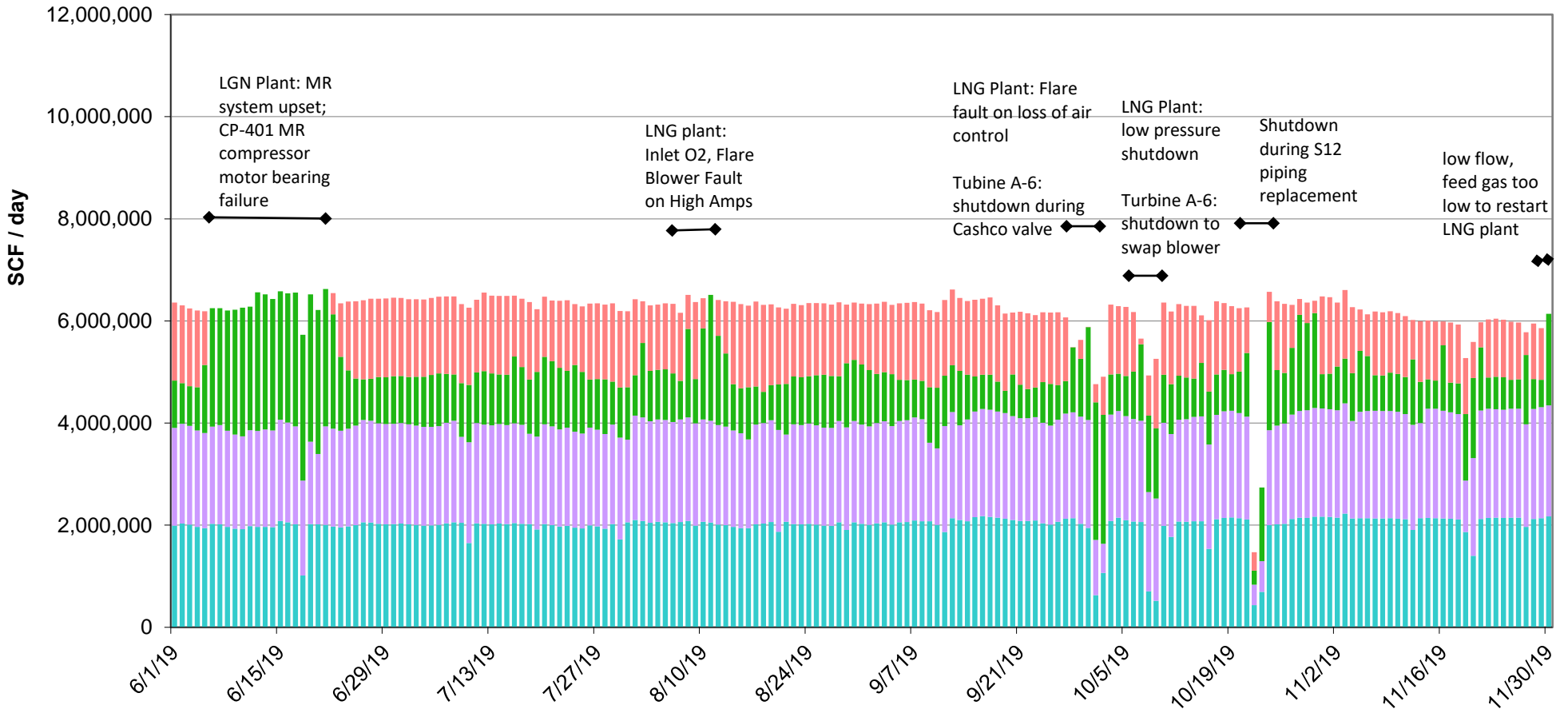
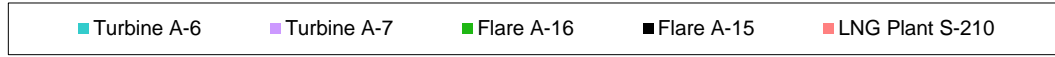
- New gas wells brought on line – During the reporting period, no new landfill gas extraction wells were brought on line.
- High temperature wells – During the reporting period, there were discrepancies in the Monthly Wellhead Monitoring Data and the Wellhead Deviation Report. In the Monthly Wellhead Monitoring Data, it stated that during the reporting period, 10 wells showed high temperature (131 F or higher) in at least one month, and five of these had high temperatures in at least three out of six months. Carbon monoxide was only monitored in select months for select wells. In the later, it stated that during the reporting period, two wells showed high temperatures (131 F or higher) in one of the six months. One well showed low levels of carbon monoxide throughout the reporting period while the second well was thus not monitored for carbon monoxide.
- Recent gas well decommissions – During the reporting period, a total of 8 vertical gas collection 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 2019, monitoring took place in April and June; for the third quarter of 2019, it took place in September. In April and June, there were 88 exceedances of the 500 ppmv methane threshold. In September, that number decreased to 32. 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 and two flares. However, one of the flares, A-15, is used so infrequently that the BAAQMD agreed to reduce its source test requirement from annual to every three years. It was last tested (and passed) in 2017. Flare A-15 was not used at all during this reporting period. The two turbines were tested

for compliance with emission limits in January 2019, and the main flare, A-16, was tested in April 2019; all three devices passed. The two internal combustion engines, S-23 and S-24, were decommissioned in 2017 and were surrendered in 2018; the units were removed from the current Permit to Operate document.

- Gas Migration at Perimeter Probes – In this reporting period, a significant level of methane was found in three of the 26 perimeter probes installed around Fill Areas 1 and 2 for methane detection purposes. Probe GP-8C, on the west side of Fill Area 1, had 41.6% and 43.1% methane in June and July 2019, respectively. Methane at this location previously had been shown to be of natural origin, not from landfill decomposition. Probe GP-9C, also located on the west side of Fill Area 1, had 11.5% methane in July 2019. The probe was re-monitored twice in July which identified methane concentrations of 11.3% and 11.8%. Methane at this location, due to positive gas pressure observed assumes liquid interference is not an issue but WMAC will further investigate the source of methane as initial results may indicate that the source is naturally occurring. WMAC will continue to monitor the probe on a quarterly basis in August 2019 WMAC confirmed the methane concentrations were within compliance limits. Probe GP-20C, north of Fill Area 2, had 50.8% and 2.5% methane in June and July 2019 respectively.
- Gas Migration Near Groundwater Monitoring Wells – Throughout this monitoring period, the landfill gas wells nearest to groundwater monitoring wells 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 6.3-7, taken from the December 20, 2019 report, 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 smoothly for most of the six-month reporting period. There were down times for each of the two turbines, a unique event in June where the LNG plant was down for over 14 days due to a motor bearing failure, and a unique incident in October that involved an almost complete shutdown for 2 days to complete piping replacement. Other unplanned interruptions were few, and brief, and were confined to a single gas control device at any given time.

Figure 6.3-7 - ALRRF Daily LFG Flow
 (values derived from Title V Report)



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501 14th Street, 3rd Floor Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

To: ALRRF Community Monitor Committee

From: Maria Lorca, Staff Geologist
Mukta Patil, PE, Senior Project Engineer

Date: June 26, 2020

Re: CMC Meeting of 7/8/20 – Agenda Item 6.4 – Review of Documents on
Geotracker Web Site
Altamont Landfill and Resource Recovery Facility (ALRRF)
Livermore, California
Langan Project No.: 750657601

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 January 2020 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 five 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 ALRRF responses to Central Valley Regional Water Quality Control Board 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.

¹ http://www.altamontcmc.org/uploads/20200708_GeoTracker_Complete.pdf

MEMO

CMC Meeting of 7/8/20 – Agenda Item 6.4 – Review of Documents on
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 Altamont Landfill and Resource Recovery Facility (ALRRF)
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Topic List

Landfill Operations

- [ET Cover Planning, Design and Installation](#)
- [Revised Configuration and Phasing Schedule for Fill Area 2](#)

Monitoring Wells

- [Concentration Limits for Monitoring Wells](#)
- [New or Pending Monitoring Wells](#)
- [Change in Water Quality Fill Area 2 Monitoring Well PC-1C](#)
- [Exceedances in Monitoring Wells](#)

Other Topics

- [Testing for PFA Compounds](#)

LANDFILL OPERATIONS

ET Cover Planning, Design and Installation

[Topics](#)

From	Format Date	Key Point(s)
ALRRF/ Geosyntec	Construction Report Feb 12, 2019	The Construction Quality Assurance report was transmitted. It documents the placement of soil (including thickness and compaction), hydroseed, and monitoring devices. The scope of this report had been approved by the CVRWQCB on July 27, 2018.
ALRRF/ Geosyntec	Letter Feb 21, 2020	This letter transmits the written responses to the comments received on the CQA for ET cover that were verbally discussed during a conference call on January 8, 2020.

Revised Configuration and Phasing Schedule for Fill Area 2

[Topics](#)

From	Format Date	Key Point(s)
ALRRF	Design Report Feb 19, 2019	This Design Report – Fill Area 2, Phase 2B – was submitted to the CVRWQCB for approval of an extension to Phase 2 of Fill Area 2, as proposed in a meeting on May 17, 2018. It extends the footprint of Fill Area 2 Phase 2 roughly 500 feet farther south at the base, and 200 to 700 feet on the sides of the canyon. The cover letter explains that the extension to Phase 2 “is needed for the anticipated waste flows that we will receive in 2020.” This does not modify the final footprint of Fill Area 2.
ALRRF	Letter Mar 13, 2019	This letter transmits a report by Geosyntec Consultants describing the pending construction of an on-site earthen pad to test the permeability of recently excavated on-site clay soils for use in construction of the next Phases (2 and 2B) in Fill Area 2.

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From	Format Date	Key Point(s)
ALRRF	Design Report Aug 30, 2019	Resubmitted the February 19 <u>Design Report – Fill Area 2, Phase 2B</u> with the required Professional Engineer’s stamp and certification. The resubmittal also responds to 16 highly technical comments emailed by Water Board staff on August 1. Where necessary, the resubmittal modifies the construction specifications to satisfy the Water Board’s concerns as expressed in those comments.
ALRRF / Geosyntec	CQA Report Jan 9, 2020	Report of Construction Quality Assurance for construction of the Phase 2 and 2B containment cells in Fill Area 2 at Altamont Landfill. Construction of FA2 Phase 2 and 2b occurred between June 4 and December 23, 2019. Geosyntec notes that all significant construction and CQA were completed in accordance to the technical specifications, with the exception of three items that need to be completed prior to waste placement. Once the remaining activities are completed, a supplemental CQA memo will be prepared.
ALRRF	Design Report Feb 4, 2020	This Design Report – Fill Area 2, Phase 3 was submitted to the CVRWQCB. Phase 3 will adjoin Phase 2B. The cover letter notes that ALRRF plans to start construction of the liner containment system at the beginning of May, upon approval. The report is stamped by a Professional Engineer.
ALRRF/ Geosyntec	CQA Report Addendum Letter Mar 13, 2020	This letter report documents construction of the remaining three activities from Phases 2 and 2B containment system that were left to be completed prior to waste placement in 2020, as documented in Geosyntec’s CQA Phase 2 and 2B Construction dated Jan 9, 2020. The letter also presents other activities requested by the CVRWQCB during a visit to ALRRF on March 4, 2020 and subsequent emails on March 9, 10, and 11, 2020. Geosyntec notes that all significant construction and CQA were completed in accordance to the technical specifications.
ALRRF	Letter Mar 18. 2020	This letter transmits a notification by WMAC describing the schedule for commencing landfill operations in Fill Area 2 Phase 2/2B. WMAC anticipated beginning waste filling activities in Phase 2 during the week of March 23.

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MONITORING WELLS

Concentration Limits for Monitoring Wells

[Topics](#)

CVRWQCB	Letter Jan 11, 2019	Concurred with most of the limits proposed in the October report but noted that for wells PC-2A and WM-2, not enough samples were taken. Prior limits to remain until four samples taken from each well. Also adjusted downward 17 limits at 7 different wells, excluding outliers in historical data.
ALRRF	Letter Feb 15, 2019	Provided a summary table of agreed-upon concentration limits for monitoring wells in FA1 and FA2.
ALRRF/ Geochem Applications	Report Jul 31, 2019	For FA2 monitoring wells not yet installed, provides proposed concentration limits that would be applicable immediately after well installation, so that groundwater quality can be evaluated as soon as the wells are in service. Methodology is based on values from several nearby existing wells, as discussed between ALLRF and CVRWQCB staff.
ALRRF/GeoChem Applications	Letter Report Feb 21, 2020	Provided additional concentration limits for both the alluvial and unweathered bedrock zones for monitoring wells in FA2, based on combined interwell/intrawell statistical analysis, which may be used to define concentration limits as soon as a new well is installed.

New or Pending Monitoring Wells

[Topics](#)

From	Format Date	Key Point(s)
ALRRF	Letter May 28, 2019	This letter proposes a new location for the not-yet-installed monitoring well MW-27 (see first four items above), because of PG&E high voltage overhead power lines near the previously proposed location. The new location is downslope and downgradient of the earlier location, and it is away from power lines and steep slopes.
ALRRF / Geosyntec	Letter Report Jul 31, 2019	Letter summarizes an attached report which details how monitoring wells within FA2 are to be destroyed and replaced as the landfill expands downslope, phase by phase. Specifically, because Phase 2B of FA2 is currently being constructed immediately downslope of Phase 1, wells MW-14, MW-14R and MW-21 at the toe of Phase 1 will be replaced by wells MW-22, MW-23 and MW-28 at the toe of Phase 2B, as shown on a drawing within the report.

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From	Format Date	Key Point(s)
ALRRF / Geosyntec	Report Nov 15, 2019	Provides report documenting the installation of Fill Area 2 monitoring wells MW-22, MW-23A, MW-23B, MW-27, MW-28 and soil gas probe VP-2. Most of the installations were typical, but MW-23B, initially drilled to 101 feet, became artesian after the casing was installed. It was fitted with a cap and pressure gauge. Groundwater sampling by SCS was planned for November, and soil gas testing at VP-2 was being done by ALRRF staff.
ALRRF / Geosyntec	Work Plan Feb 25, 2020	Provides a work plan for Fill Area 2 Phase 3 monitoring well installation and destruction. The plan proposed the installation of three new monitoring wells, MW-24, MW-25, and MW-26 as well as one gas probe, VP-3, in Fill Area 2. The proposed schedule states that on April 27, 2020 MW-24 and VP-3 will be installed and MW-22, MW28, and VP-2 (from Phase 2) will be destroyed. In addition, in August 2020, monitoring wells MW-23A and MW-23B (from Phase 2) will be destroyed and monitoring wells MW-25 and MW-26, will be installed.

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Change in Water Quality, Future Fill Area 2 Monitoring Well PC-1C [Topics](#)

From	Format Date	Key Point(s)
ALRRF	Letter Jun 24, 2019	At this well, downslope of Fill Area 2 Phase 1, several inorganic parameters increased prior to landfilling in Fill Area 2. A new pump within that well may be part of the problem. The ALRRF will keep the RWQCB informed.
ALRRF	Letter Aug 28, 2019	Provided an update regarding adjustments made to the pump and tubing in this well in August. Sampling was done and results will be provided when available.
ALRRF/SCS	Letter Report Feb 5, 2020	<p>Update of Fill Area 2 Monitoring Well PC-1C Activities. No significant difference in water quality was observed in August 2019 data between samples collected using the traditional sampling method (triple purge with bailer) and the samples collected using the dedicated bladder pump and the low-flow technique.</p> <p>The sample collected in November 2019 (after well redevelopment) showed a decrease in inorganic parameter concentrations.</p> <p>It is recommended that additional groundwater quality information be obtained as part of the next (1st Semiannual 2020) routine semiannual monitoring event before any decisions are made concerning the next steps for this well, including potential replacement.</p> <p>Note: PC-1C was installed in August 1993. It seems to have had low yield since the beginning. In Nov 2019, the well purged dry after 3 casing volumes were removed and turbidity was high > 1,000 NTU. These data and other notes indicate the well may have a compromised filter pack.</p>

Exceedances in Monitoring Wells [Topics](#)

From	Format Date	Key Point(s)
ALRRF/SCS	Report Aug 2018	Naphthalene first found in well PC-1B, May 2018.
ALRRF/SCS	Letter Oct 12, 2018	Naphthalene diminishing but still present, Jul & Aug 2018. Resampling proposed, with a summary report by Feb 1, 2019.
ALRRF/SCS	Letter Report Jan 3, 2019	Well PC-1B was overhauled and resampled, Nov and Dec 2018. Naphthalene continued to be detected but in diminishing trace concentrations. Source of the naphthalene is uncertain; could be the pump inside the well. Continued sampling and monitoring for naphthalene proposed, semiannually.
CVRWQCB	Letter Jan 11, 2019	Responded to ALRRF Oct 12, 2018 letter; concurred with proposed actions and required quarterly sampling.

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From	Format Date	Key Point(s)
ALRRF/SCS	Letter Report Nov 12, 2019	Follows up on initial report (August 2019) of exceedances in wells MW-2A (nitrogen), PC-1B (calcium), MW-8A (COD and tetrahydrofuran), and MW-8B (COD, tetrahydrofuran and other VOCs). The wells were resampled. Exceedances were confirmed for PC-1B (calcium), MW-8A (COD and tetrahydrofuran), and MW-8B (COD only). Asserts that the exceedances are unrelated to FA2 activities due to distance from the Phase 1 fill area. Proposes further study and an Optional Demonstration Report due in early January.
ALRRF/SCS	Letter & Report Jan 9, 2020	Optional Demonstration Report. Verified statistical exceedances. Exceedances do not appear to be due to landfill leachate or LFG migration. The presence of the unlined storm water basin SB-H adjacent to wells MW-8A and MW-8B, soil disturbance during construction, and increased infiltration of storm water through the underlying soil and into groundwater, may be the causes of the increases in COD concentrations that triggered the statistical exceedances. Pipe-joining materials used for pipe installation during construction of the storm water basin appears to be the source of the THF detections in these wells. Recommend continued semiannual groundwater monitoring and tracking the resulting data.
CVRWQCB	Letter Jan 24, 2020	Agrees with optional demonstration and requires: 1. Quarterly sampling of PC-2A, PC-2C, P-2, and ARC-2 (surrounding wells). This sampling shall begin with the Second Quarter 2020 sampling event and shall extend for a minimum two-years. 2. Comparison of exceedance wells to surrounding wells. 3. Reporting 30 days after sampling events

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From	Format Date	Key Point(s)
CVRWQCB	Letter Jun 1, 2020	<p>Response to statistical exceedance of inorganic constituent concentrations in well PC-1C in FA2. Once the Discharger's PC-1C investigation was expanded to include other up-gradient wells, a clear pattern of increasing inorganic concentrations in groundwater west of PC-1C was also observed in E-20B and MW-12. The E-20B release from FA1 impacted groundwater in FA2 and by August 31, 2020, Waste Management must submit:</p> <ol style="list-style-type: none"> 1. A revised site conceptual model to address the far reaching impact of the E-20B release, as well as the LFG releases recorded at MW-4, GP-8, and GP-9. 2. An updated Engineering Feasibility Study (EFS) to make appropriate changes to the E-20B corrective action program. 3. A proposal to expedite the establishment of background groundwater concentration limits across FA2 before E-20B release impacts other FA2 wells. Well will need to be installed immediately, so that a background data set for each individual well can be obtained before any other FA2 wells are impacted. 4. An amended Report of Waste Discharge to make appropriate changes to the E-20B release correction action program 90 days after submitting the EFS as required above.

OTHER TOPICS

Testing for PFAS

[Topics](#)

From	Format Date	Key Point(s)
CVRWQCB	Letter Mar 20, 2019	Statewide survey: Requirement to provide a work plan by May 19 for the one-time testing of groundwater samples for 23 designated types of per- and polyfluoroalkyl substances (PFASs).

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CMC Meeting of 7/8/20 – Agenda Item 6.4 – Review of Documents on
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 Altamont Landfill and Resource Recovery Facility (ALRRF)
 Livermore, California
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From	Format Date	Key Point(s)
ALRRF	Letter & Report May 17, 2019	Transmits, for approval, a sampling plan by Wood Environment & Infrastructure Solutions to comply with the requirements for PFAS sampling. It identifies five groundwater well sampling locations (1 upgradient, 1 downgradient, and 3 wells near Fill Area 1 where other contaminants have been found) and three leachate sampling sites (1 for each of the three units currently in operation). The report also cautions that PFA compounds are commonly used in the groundwater sampling devices in place at many of the ALRRF monitoring wells. Sampling is planned for the next round of groundwater monitoring, after this sampling plan is approved. Results will be included in the subsequent groundwater monitoring report. Analyses will be conducted by TestAmerica’s facility in West Sacramento. (The laboratory that analyzes most ALRRF water samples is a different facility in Arvada, Colorado.) The Reporting Limit for PFASs at the West Sacramento facility is 2 parts per <i>trillion</i> , which is extremely low.
ALRRF	Addendum Oct 16, 2019	Reviewed the additional requirements provided by the CVRWQCB on October 1, 2019, and generally agreed to them. Explained the analytical procedures to be used by the lab, and how they conform to Federal standards. Notes that the selected lab (Eurofins TestAmerica) has a longer sample hold time in its protocol than the Water Board has requested, and the lab will be asked to meet the Water Board requirement; but “If samples are extracted and analyzed within the default holding times listed in Eurofins TestAmerica SOPs (14/40 days) and no other quality control issues are identified with the analysis, the analysis will be considered acceptable and reported. ... Given the large volume of samples being collected for this state-wide initiative, it is anticipated that Eurofins TestAmerica will have a considerable workload of PFASs analysis and that their internal scheduling and coordination will already be tight.”
CVRWQCB	Letter Oct 23, 2019	Accepted the Work Plan as modified by the October 16 Addendum.
ALRRF/Wood	Letter & Report Jan 31, 2020	Multiple PFAS were detected in the leachate samples. The concentrations of PFAS detected in Fill Area 2 leachate are considerably less than concentrations from Fill Area 1. PFAS were reported at higher concentrations in groundwater monitoring wells in the previously affected assessment and corrective action areas.

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501 14th Street, 3rd Floor Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

To: ALRRF Community Monitor Committee

From: Maria Lorca, Staff Geologist
Mukta Patil, PE, Senior Project Engineer

Date: June 26, 2020

Re: CMC Meeting of 7/8/20 – Agenda Item 6.5 – Reports From Community Monitor
Altamont Landfill and Resource Recovery Facility (ALRRF)
Livermore, California
Langan Project No.: 750657601

Attached are site visits reports for January and February of 2020.

- The January visit was unannounced and took place on January 28, 2020, with the LEA.
- The February visit was announced and took place on February 28, 2020.

Community Monitor site visits have been suspended by ALRRF during the Shelter-in-Place period. Waste Management has declared that the COVID-19 pandemic is a force majeure event, and therefore their policy formally “only allows for agency inspectors, or regulators who perform compliance related activities, to have access to the site at this time.” No update has been provided on current policy changes or when the Community Monitor visits can be resumed.

In lieu of site visit reports, summaries of LEA inspections available on CalRecycle’s website are provided for the following months:

- LEA Inspection for March, which took place on March, 27, 2020.
- LEA Inspection for April, which took place on April 27, 2020.

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 first quarter, construction of additional landfill space in Fill Area 2 (Phases 2 / 2B) was mostly complete, and minor repairs were undertaken to comply with CVRWQCB requirements. Windblown litter issues continued. Fill Area 2 Phase 2/2B began operations at the end of March.

In the tonnage records we noted that one load for disposal in January was from Sacramento County. The LEA inspection report noted that the Sacramento load was a mistake by a new employee at the scale house, and the employee underwent additional training to prevent this happening in the future.

Also attached are graphs showing monthly tonnages by type of material for the most recent 12-month period. Figure 6.5-1 shows the breakdown of materials that make up Revenue-Generating Cover. Figure 6.5-2 shows these same quantities, plus the Municipal Solid Waste (MSW) and Special Waste tonnage for each month.

ALRRF Community Monitor Monthly Report

January 2020

Monthly Tonnage Report for December 2019, received January 15, 2020

Tonnage Summary:		<u>tons</u>
Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	77,904.96
1.2	Other Out of County Disposal Tons	<u>2,547.97</u>
	subtotal Disposed	80,452.93
Disposed, By Source Type		
2.1	C&D	896.15
2.2	MSW	75,321.49
2.3	Special Wastes	<u>4,235.29</u>
	subtotal Disposed	80,452.93
		0.00 0.00%
Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	7,530.47
2.5	Revenue Generating Cover	20,913.30
	Total, 2.1 - 2.5	108,896.70
Materials of Interest		
2.3.1	Friable Asbestos	148.10
2.3.2	Class 2 Cover Soils	4,148.06
2.5.1	Auto Shredder Fluff	4,682.65
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00
2.5.3	MRF Fines for ADC	514.05

ALRRF Reports from Community Monitor

January 2020

Site Visit January 28, 2020, 12:00 PM - 2:45 PM

- Attended by Mukta Patil and Maria Lorca, community monitors, accompanying the LEA. Escort: Luis Rocha. Unannounced.
- Weather: partly cloudy, cold, light to medium winds.

General Observations

- Altamont Pass Road was clear and free of windblown debris near the entrance to the site. Traffic to the site was flowing freely through the road and the entrance of the Landfill.
- The tire shredding facility was observed to be in good condition.
- The scale houses were in good condition and had a green light indicator.

Fill Area 1

- At the Fill Area 1 solidification basins, the yellow basin (cover material production) was active and had a pile of absorbent material next to it. The blue basin (blending for Class 2 disposal) was active and had visible liquid.
- Leachate seeps were observed in three areas. Excavators were working to contain seeps during the site visit. Mr. Rocha indicated these were mostly contained. The photo below shows a seep and excavator on the south face of Fill Area 1.



- Erosion previously observed on the access road to the top of Fill Area 1. Mr. Rocha reported they would continue to monitor the erosion-prone areas and repair when weather permits.
- Minimal activity was taking place on top of Fill Area 1, only piles of inert debris were observed on the top deck of Fill Area 1.

LSI ponds/basins

- Construction was in progress at the east access road to connect a leachate line from Fill Area 2 to LSI 1. The east access road was blocked for through access.
- Leachate ponds were in good condition. LSI-2 was nearly drained and contained subdrain water. CASP water had been pumped out of LSI-2.



Fill Area 2 Operations

- Several hundred seagulls were present in Fill Area 2. Bird screamer and cannon were used by ALRRF to scatter birds from the active face of this area.
- One dozer, one wheel loader and two compactors were handling incoming refuse, with one tipper operating during the observation period.
- Soil and ADC stockpiles were present on top of Fill Area 2. Thin cover was noted within portions of Fill Area 2.
- Windblown litter was present in this area.



Fill Area 2 Construction

- Construction of Phase 2/2B was reportedly nearly complete. No construction work was observed during site visit, but contractor machines were parked nearby.

ET Cover Test Area

- This area was examined on foot on the south face of Fill Area 1.
- The ET cover area was in good condition. New grass was growing on the cover.



Mitigation Pond

- The mitigation pond was observed from distance from LSI-3, located to the northeast. The road to the pond had no access due to muddy conditions. Minimal windblown litter was observed in this area.

Other Environmental Observations / Issues

- LEA informed that inspections, which were occurring twice a month, were to occur monthly given improvements by ALRRF.
- No special occurrences had been logged.

Monthly Tonnage Report for January 2020, received February 17, 2020

Tonnage Summary:		<u>tons</u>
Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	87,955.86
1.2	Other Out of County Disposal Tons*	1,102.13 *
	subtotal Disposed	89,057.99
Disposed, By Source Type		
2.1	C&D	855.17
2.2	MSW	85,057.70
2.3	Special Wastes	3,145.12
	subtotal Disposed	89,057.99
		0.00 0.00%
Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	7,483.57
2.5	Revenue Generating Cover	40,016.97
	Total, 2.1 - 2.5	136,558.53
Materials of Interest		
2.3.1	Friable Asbestos	323.12
2.3.2	Class 2 Cover Soils	86.55
2.5.1	Auto Shredder Fluff	10,404.12
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00
2.5.3	MRF Fines for ADC	670.13

* Line 1.2 includes one load, of 1.06 tons, from Sacramento County

ALRRF Reports from Community Monitor

February 2020

Site Visit February 28, 2020, 09:30 AM - 11:00 AM

- Attended by Maria Lorca (Community Monitor).
- Escort: Luis Rocha (Waste Management). Announced.
- Weather: Sunny, warm, light winds.
- Altamont Pass Road was clear and free of windblown debris near the entrance to the site, and traffic to the site was flowing freely through the road and the entrance of the Landfill.
- The tire shredding facility and scale houses were observed to be in good condition.

Fill Area 1

- Leachate seeps were observed. The excavators were working to contain Seep C. Seeps A and B had been contained.



- Erosion observed during the previous visit on the road accessing the top of Fill Area 1 was fixed.
- The top of Fill Area 1 had piles of inert debris. One truck was present in this area.

Fill Area 2 Operations

- Several hundred seagulls were present in Fill Area 2. Bird screamer and cannon were used by ALRRF to scatter birds from the active face of this area.
- Soil and ADC stockpiles were present on top of Fill Area 2. Compactors were working on the toe of the active face to place ADC on top of refuse.
- Tippers were active on the top of Fill Area 2. Two loads were disposed during the observation.
- Windblown litter had increased in comparison to the previous Community Monitor site visit. There was litter along the property line fences.

Fill Area 2 Construction

- Construction was reportedly complete for Phase 2/2B. No construction work was observed during site visit, but contractor machines were parked nearby. The CVRWQCB had not yet approved the use of Fill Area 2 Phase 2/2B. The monitoring wells located at the toe of Fill Area 2 active face were observed from a distance.

Basin H

- Basin H was completely dry during this site visit. Monitoring wells MW-8A and MW-8B were observed. These wells were in good condition.



Other Environmental Observations / Issues

- Windblown litter was observed scattered through the site due to strong winds that had occurred the weekend before. Waste Management staff noted that crews have been actively gathering the litter throughout the site.
- The LEA issued an Area of Concern during the February inspection conducted on February 27. A load of medical waste was unloaded in Fill Area 2. At the time of inspection, the waste profile provided to the inspector indicated that medical waste could be accepted, but restricted the presence of sharp material. The LEA noted the load contained sharps. An updated waste manifest was provided to the LEA on March 3 that corrected information.
- The LEA records review indicated that in January, ALRRF accepted a load of non-friable asbestos from Sacramento County, outside of the nine bay area counties restriction.

Monthly Tonnage Report for February 2020, received March 15, 2020

Tonnage Summary:		<u>tons</u>
Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	78,107.72
1.2	Other Out of County Disposal Tons	880.97
	subtotal Disposed	<u>78,988.69</u>
Disposed, By Source Type		
2.1	C&D	169.36
2.2	MSW	75,722.93
2.3	Special Wastes	3,096.40
	subtotal Disposed	<u>78,988.69</u>
		0.00 0.00%
Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	7,884.01
2.5	Revenue Generating Cover	44,464.97
	Total, 2.1 - 2.5	131,337.67
Materials of Interest		
2.3.1	Friable Asbestos	313.15
2.3.2	Class 2 Cover Soils	17,741.73
2.5.1	Auto Shredder Fluff	10,039.08
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00
2.5.3	MRF Fines for ADC	583.48

ALRRF Reports from Community Monitor

March 2020

Review of LEA Site Inspection March 27, 2020, 9:30 AM

For the month of March, the ALRRF did not allow site visits from the Community Monitor, because of the COVID-19 emergency and Shelter-in-Place order. The LEA conducted inspection using a modified procedure to limit person-to-person contact.

LEA conducted an inspection on March 27, 2020 starting at 9:30 AM. The general conditions noted in the report and pictures appear to be good and similar to the previous Community Monitor visit. The inspector noted improvements to the seepage and eroded portions on Fill Area 1. Some windblown litter was reported on the slopes adjacent to the open face in Fill Area 2. There appeared to be fewer birds during this inspection than on previous LEA inspections, and the bird screamers were operational.

One Area of Concern was noted during the inspection. The Area of Concern was issued because the operator failed to meet the submission deadline, March 31, 2020, for the Non-Water Release Corrective Action Plan (CAP) as part of the Five-Year Permit application review. The operator did submit the Solid Waste Facility Permit (SWFP) Application and other required documents as part of the Five-Year review on March 16, 2020. Since the March 27, 2020 inspection, the operator submitted the CAP on April 16, 2020. No other violations or areas of concern were noted. The Area of Concern on the February 27, 2020 inspection report was removed.

Monthly Tonnage Report for March 2020, received April 14, 2020

Tonnage Summary:		<u>tons</u>
Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	83,419.96
1.2	Other Out of County Disposal Tons	906.75
	subtotal Disposed	<u>84,326.71</u>
Disposed, By Source Type		
2.1	C&D	276.81
2.2	MSW	79,920.41
2.3	Special Wastes	4,129.49
	subtotal Disposed	<u>84,326.71</u>
		0.00 0.00%
Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	8,310.66
2.5	Revenue Generating Cover	44,220.04
	Total, 2.1 - 2.5	136,857.41
Materials of Interest		
2.3.1	Friable Asbestos	364.70
2.3.2	Class 2 Cover Soils	14,527.25
2.5.1	Auto Shredder Fluff	12,183.37
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00
2.5.3	MRF Fines for ADC	543.59

ALRRF Reports from Community Monitor**April 2020**Review of LEA Site Inspection April 27, 2020

For the month of April, ALRRF did not allow site visits from the Community Monitor because of the COVID-19 emergency and Shelter-in-Place order. The LEA conducted inspection using a modified procedure to limit person-to-person contact.

The LEA conducted an inspection on April 27, 2020. The general conditions noted in the report and pictures appear to be good and similar to previous inspections. Reportedly, an additional crew of 25 employees were working on litter control. The inspector noted that Fill Area 2, Phase 2 began filling on April 1, 2020. On Fill Area 2 there appeared to be fewer birds during this inspection than on previous LEA inspections, and the bird cannon was fired during the observation. Phase 2B completion and Phase 3 earthwork was being performed.

Prior to the inspection, on April 17, 2020, WMAC notified LEA via e-mail that perimeter gas probe 9A (GP-9A) had readings greater than 5 percent methane by volume (mbv). The 7-day follow up identified that GP-9A on April 17, 2020 had methane gas levels of 13.2% mbv. In addition, the 7-day follow up identified monitoring on April 20 through April 22, 2020 that showed methane gas levels at highs of 10%, 11.2%, and 7.5% mbv respectively. **One violation was issued on April 27, 2020** for not meeting the requirements of 27 CCR Section 20921(a)(2) that states that the operator shall ensure that the landfill gas that is generated has a concentration of methane gas migrating from the disposal site that doesn't exceed 5 percent volume in air at the disposal site permitted boundary. The GP-9 cluster was also issued a **violation in the July 2019** inspection due to elevated methane concentrations at a greater depth.

Reportedly, Waste Management has taken steps to improve the drainage in landfill areas in the vicinity of GP-9A in order to reduce soil saturation from recent rain observed in localized areas. The site also observed recent cattle manure in the vicinity of GP-9A and will continue to evaluate whether these factors potentially contribute to the measured exceedance. WMAC staff undertook immediate response actions to the elevated methane and completed surface monitoring utilizing a Flame Ionization Detector in the vicinity of the probe. No methane was detected during surface monitoring.

LEA noted they will follow up on the status of methane gas levels at GP-9A at the next monthly routine inspection to determine if the Violation has been corrected.

Monthly Tonnage Report for April 2020, received May 14, 2020

Tonnage Summary:		<u>tons</u>
Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	75,479.36
1.2	Other Out of County Disposal Tons	<u>850.53</u>
	subtotal Disposed	76,329.89
Disposed, By Source Type		
2.1	C&D	181.94
2.2	MSW	74,576.58
2.3	Special Wastes	<u>1,571.37</u>
	subtotal Disposed	76,329.89
		0.00 0.00%
Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	1.86
2.5	Revenue Generating Cover	<u>27,636.34</u>
	Total, 2.1 - 2.5	103,968.09
Materials of Interest		
2.3.1	Friable Asbestos	475.25
2.3.2	Class 2 Cover Soils	14,215.06
2.5.1	Auto Shredder Fluff	9,780.42
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00
2.5.3	MRF Fines for ADC	6.74

ALRRF Reports from Community Monitor

May 2020

Review of LEA Site Inspection May 29, 2020

For the month of May, ALRRF did not allow site visits from the Community Monitor because of the COVID-19 emergency and Shelter-in-Place order. The LEA conducted inspection using a modified procedure to limit person-to-person contact. There were signs posted at the ALRRF office door with COVID-19 safety protocols visible for employees.

The LEA conducted an inspection on May 29, 2020. The general conditions noted in the report and pictures appear to be good and similar to previous inspections. Vehicles were observed queuing at the scale house area, nevertheless no issues were observed. Fill Area 1 was reportedly in good conditions, with minimal activity observed on the top deck. Fill Area 2, Phase 1 is complete for the time being, and the current fill sequence is on the southwest portion of Fill Area 2 Phase 2 area. One to two hundreds of birds were flying above Fill Area 2, but not observed within the wastes, due to high winds. The bird cannon was being repaired due to interference from the high winds. Fill Area 2 Phase 3 earthwork was being performed. Some windblown litter was observed to the east of the active face, and litter control crew was removing debris.

After the inspection but on the same day, the LEA was notified that approximately 10 gallons of leachate over sprayed containment at the Fill Area 1 Leachate lift station. The spray had been stopped, it did not reach waterways, and clean up was started. A report of this event was to be provided to the CVRWQCB and the LEA within 7 days.

The violation issued on April 27, 2020 was removed. During the inspection, the LEA verified that gas perimeter probe 9A (GP-9A) had readings below 5 percent methane by volume (mbv). To help maintain the methane below the regulatory threshold, ALRRF recommissioned two horizontal gas collectors on April 30.

No violations or areas of concern were reported in the May inspection report.

Monthly Tonnage Report for May 2020, received June 12, 2020

Tonnage Summary:		<u>tons</u>
Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	73,988.62
1.2	Other Out of County Disposal Tons	568.21
	subtotal Disposed	<u>74,556.83</u>
Disposed, By Source Type		
2.1	C&D	176.33
2.2	MSW	73,172.45
2.3	Special Wastes	1,208.05
	subtotal Disposed	<u>74,556.83</u>
		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	32,858.65
	Total, 2.1 - 2.5	107,415.48
Materials of Interest		
2.3.1	Friable Asbestos	155.33
2.3.2	Class 2 Cover Soils	18,063.09
2.5.1	Auto Shredder Fluff	9,260.45
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	0.00
2.5.3	MRF Fines for ADC	280.65

Figure 6.5-1 Monthly Volumes of Revenue-Generating Cover

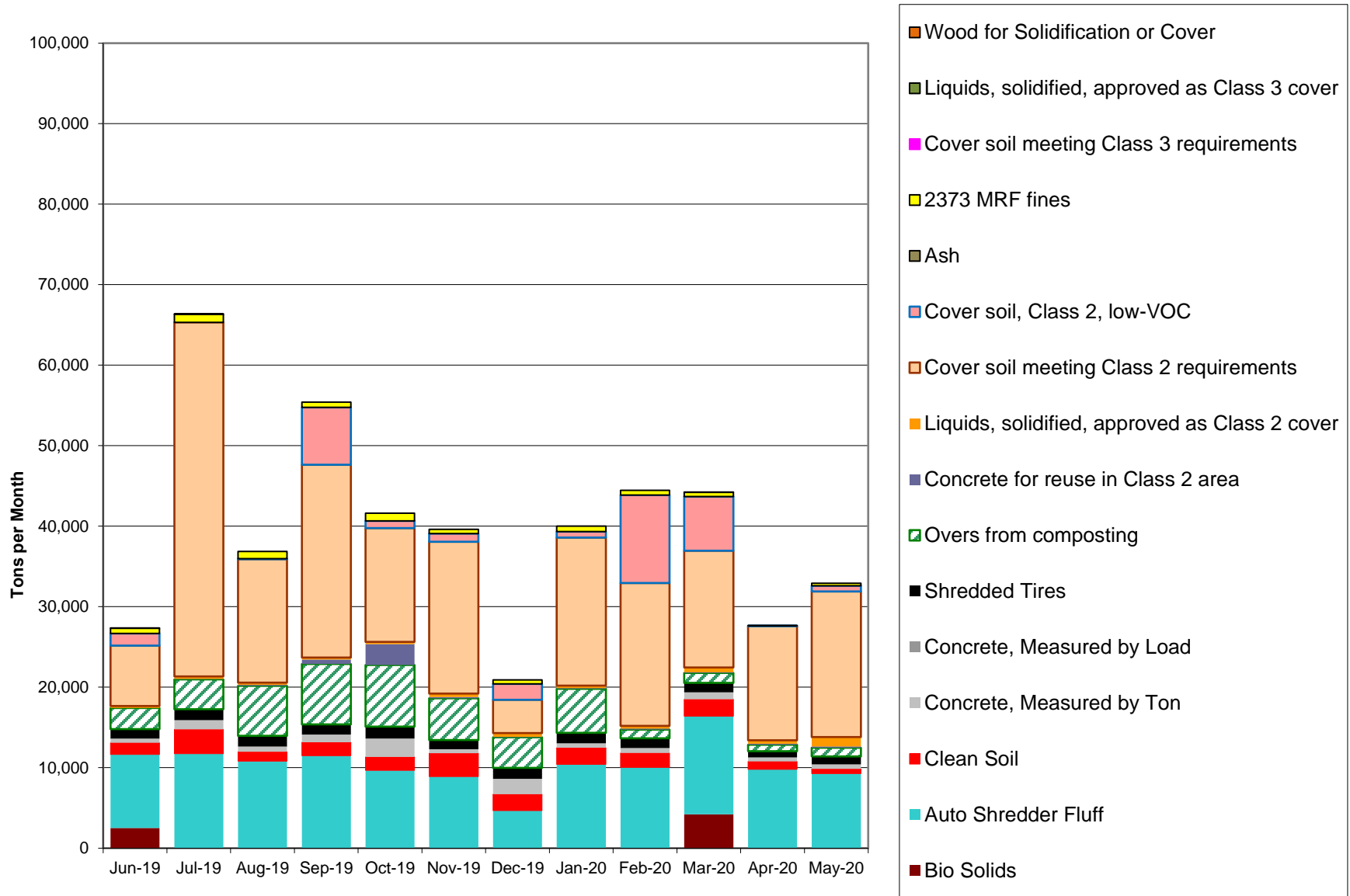
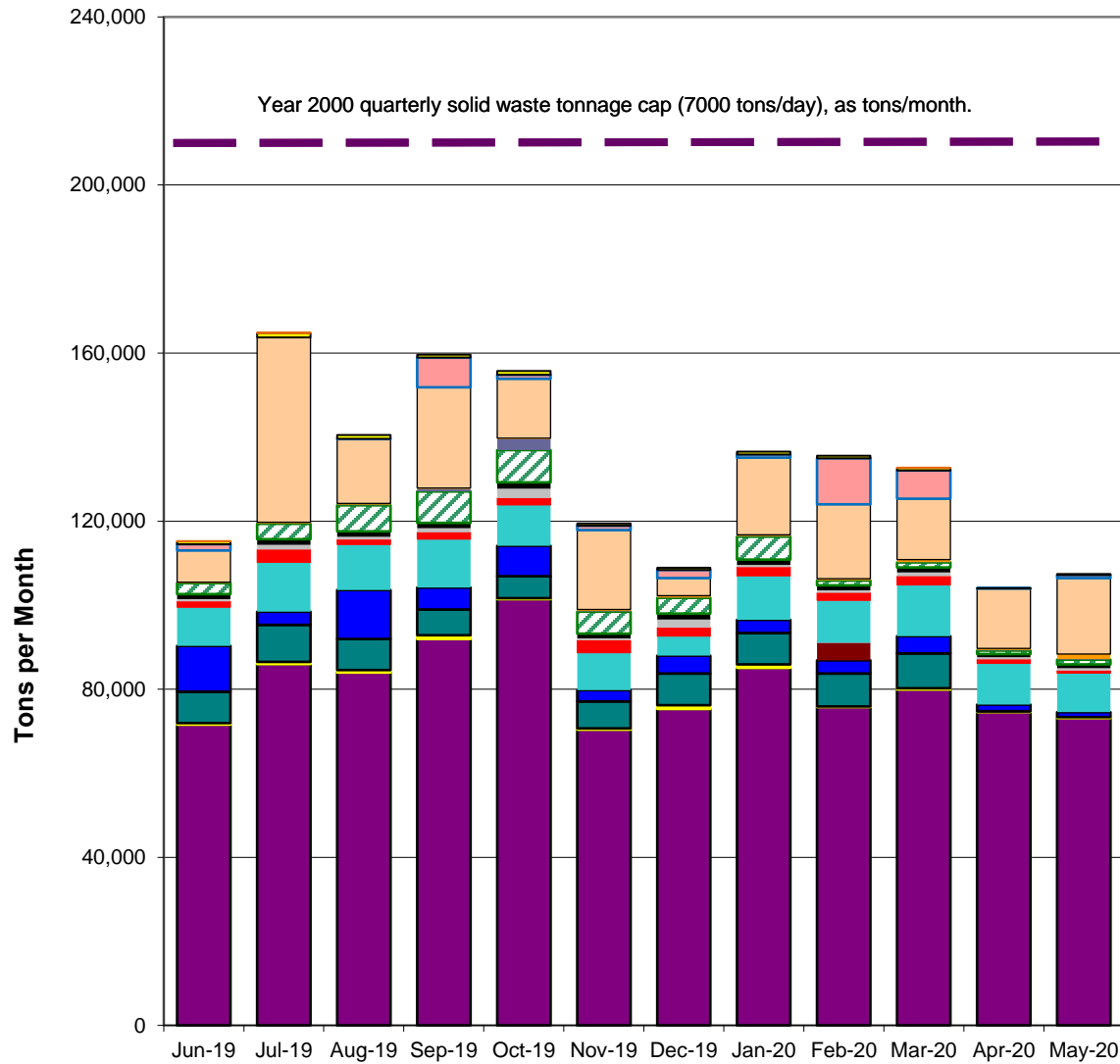


Figure 6.5-2 Monthly Volumes of Landfilled Materials



- Wood For Solidification or Cover
- 2373 MRF fines
- Ash
- Cover soil, Class 2, low-VOC
- Cover soil meeting Class 2 requirements
- Liquids, solidified, approved as Class 2 cover
- Concrete for reuse in Class 2 area
- Overs from composting
- Shredded Tires
- Concrete, Measured by Load
- Concrete, Measured by Ton
- Clean Soil
- Auto Shredder Fluff
- Bio Solids
- Special Waste
- Redirected Waste (RDW)
- Construction and Demolition (C&D)
- MSW

501 14th Street, 3rd Floor Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

To: ALRRF Community Monitor Committee

From: Mukta Patil, PE, Senior Project Engineer
Dorinda Shipman, PG, CHG, Principal

Date: June 26, 2020

Re: CMC Meeting of 7/8/20 – Agenda Item 6.6 – ALRRF operations during Shelter-in-place period
Altamont Landfill and Resource Recovery Facility (ALRRF)
Livermore, California
Langan Project No.: 750657601

As a result of COVID-19, Community Monitor site visits were suspended for the duration of Shelter-in-Place. Waste Management’s emergency policy in response to COVID-19 “only allows for agency inspectors, or regulators who perform compliance related activities, to have access to the site at this time”. Due to the suspension of site visits, the special occurrences log was not reviewed by the Community Monitor and is not reported. The special occurrences log was last reviewed in January 2020. No special occurrences were noted in January 2020.

On March 27, 2020, Waste Management requested an emergency waiver of minimum standards for landfill operations pursuant to 14 CRR, section 17210 et seq. and ALRRF’s Conditional Use Permit: C-5512. The waiver was requested as a contingency in case of a direct or indirect impact from the virus. Based on our review of CalRecycle website, several other landfills through the state were granted similar waivers. On April 3, 2020, the Alameda County Department of Environmental Health (ACDEH) granted approval of the Emergency Waiver with the following conditions:

1. Increase of 2,500 tons per day, up to 13,650 tons per day (from the maximum permitted of 11,150 tons per day) for the duration of the Emergency Waiver only.
2. Increase of 125 vehicles per day, allowing up to 682 refuse vehicles per day (from the permitted peak daily traffic volume of 557 refuse vehicles per day) for the duration of the Emergency Waiver only.
3. WMAC must prepare a written report and submit copies to the Alameda County Planning Department (LEA) and the Alameda County Waste Management Authority (StopWaste) within 90 days of April 3, 2020 and every 90 days thereafter for the period of the Emergency Waiver. Furthermore, a final report must be submitted within 30 days of the termination of the Emergency Wavier.

The Emergency Waiver began on April 3, 2020 and continued until 30 days after the lifting of the Shelter-in-Place Order. However, the Emergency Waiver shall not exceed 120 days from April 3, 2020.

MEMO

CMC Meeting of 7/8/20 – Agenda Item 6.6 – ALRRF operations during
Shelter-in-place period
Altamont Landfill and Resource Recovery Facility (ALRRF)
Livermore, California
Langan Project No.: 750657601
June 26, 2020- Page 2 of 2

On April 29, 2020, the Community Monitor team had a conference call with Waste Management staff to better understand the situation during the health emergency. Waste Management anticipated that it would not be necessary to use the additional allowances granted on the Emergency Waiver. ALRRF staff reported that the waivers would only be necessary if a COVID-19 outbreak occurred at another landfill and ALRRF was required to accept additional waste. As of April 29, 2020, most small businesses were closed and 40-50% of ALRRF's business previously was commercial, so the total tonnage delivered to Altamont was reduced. Below is a summary of some of the changes seen since the Shelter-in-Place period:

- Municipal solid waste (MSW) decreased to 380 tons per day;
- Small increase in green waste some days;
- Few changes in the amounts of treated medical waste received, which are usually small;
- One transfer station was closed, so additional waste was being disposed of at ALRRF;
- No loads had been received from outside of the nine Bay Area counties during this period; and
- At the time, ALRRF had experienced no COVID-19 related issues.

Furthermore, Fill Area 2 Phase 2 at Altamont was approved by the CVRWQCB and had been online for about three weeks (at the time of the call), approximately since April 8, 2020. Air emissions testing for the flare occurred around the same time and experienced no delays. All other regularly scheduled monitoring activities had occurred according to plan.

Waste Management has implemented COVID-19 guidelines by keeping employees informed on the county level decisions, orders, and news as well as CDC guidelines. Posters are up in visible places. Meeting points, and patterns to be followed for inspections are discussed prior to the visit. During the LEA March and April inspections, Waste Management employees maintained social distancing by following in a vehicle and maintaining proper distance in areas the inspector wanted to visit.

No update has been provided on current policy changes or when the Community Monitor visits can be resumed. Waste Management requests flexibility on the number of visits required as the duration of the current situation and its ramifications are unknown. Of the total 12 visits allowed per year, Langan has performed two site visits in January and February of 2020. Langan has reached out to Waste Management regarding scheduling further visits, but as of date, has not had a response from Waste Management. In the meantime, Langan will compile site information through LEA reports and correspondence with Waste Management staff.

Based on review of LEA inspection reports, no other COVID-19 related changes have been reported, and modified operations at the landfill appear to not have an impact on compliance.

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To: ALRRF Community Monitor Committee

From: Maria Lorca, Staff Scientist
Mukta Patil, PE, Senior Project Engineer

Date: June 26, 2020

Re: CMC Meeting of 7/8/20 – Agenda Item 6.7 – Corrections to 2019 Annual Report by Kelly Runyon
Altamont Landfill and Resource Recovery Facility (ALRRF)
Livermore, California
Langan Project No.: 750657601

A draft of the Annual Report for 2019 is attached and requires a vote of the Committee to be approved. The list below summarizes the topics-of-interest for 2019 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.

<u>Topic</u>	<u>Section(s)</u>
Evapotranspiration (ET) cover performance	2.2 – 6 th bullet
Mitigation pond and new basin SB-H	1.5.2.3 first para., 2.4 - end
Windblown litter incidents and controls	1.4 end, 2.2 – 7 th bullet, 2.3 – end, 2.3.2.1 2 nd para., 2.3.3.4
PFAS investigation	3.2.2.5
End-dump truck overturns	2.3.3.3
Requirements to be triggered by disposal in FA 2	
Tonnage limitations	1.4
Construction activity	1.4, 2.2
Monitoring well replacement	2.2 – 1 st bullet
Use of FA1 pond for CASP runoff	2.2 – 3 rd bullet, 2.3.2.1 – 4 th para.
Laboratory contamination of samples	2.4.1 – end
Class 2 soil file completeness	2.5.1

Corrections to the 2019 report were received via email on May 8, 2020 from Kelly Runyon. Mr. Runyon stated that contrary to his impression during his November and December 2019 site visits, Fill Area 2 Phase 2 had not begun to be used. Information has been updated in the report and packet below. The most substantial updates occurred in the following sections:

2019 Annual Report – Section 2.2 – Monitoring of Improvements and Changes

The revision is provided as an attachment to this memo.

ALRRF COMMUNITY MONITOR ANNUAL REPORT 2019

DRAFT

Prepared for
ALRRF Community Monitor
Committee

January 15, 2020
Revised May 8, 2020



The photo on the cover of this report shows construction of the liner for the Phase 2/2B portion of Fill Area 2, viewed from the hill immediately to the west. The photo was taken on October 11, 2019.

ALRRF COMMUNITY MONITOR ANNUAL REPORT 2019

DRAFT

Prepared for

January 15, 2020

ALRRF Community Monitor Committee

Revised May 8, 2020



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SECTION 1

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, adjacent to the existing Fill Area 1. 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 2019.

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 and Langan (formerly Treadwell & Rollo). This team began work in February 2008. From 2008 through 2019, the team has carried out report reviews, Class 2 soil analysis file review, and site inspections 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 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 material¹ 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 Fill Area 2 and related mitigation measures. The excavation and preparation of the Phase 1 portion of Fill Area 2, together with related improvements, were monitored in 2014 and 2015.

In 2015, the Five-Year Permit Review process began when the Local Enforcement Agency (LEA), which is the Alameda County Department of Environmental Health, requested the ALRRF to submit an application and a revised draft of its Joint Technical Document²(JTD), which contains a detailed description of Fill Area 2 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 (Water Board). Waste Discharge Requirements (WDRs) were issued by the Water Board in mid 2016.

Throughout this process, the LEA held its permit review in abeyance while Water Board staff prepared, and the Water Board adopted, the WDRs. Subsequently, the LEA's review has required more than three years to complete. It has been difficult for the ALRRF to refine its JTD to conform to the requirements of the WDRs and subsequent directives from Water Board staff, and the sheer size and complexity of the JTD itself has also impeded progress. The JTD was in the final stages of review in December 2019.

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. It stipulates that beginning in 2020, green material alternative daily cover (ADC) will no longer be counted as diversion for compliance with the 50 percent diversion mandate for local jurisdictions established by AB 939. Green material ADC will instead be counted as disposal from that year forward.

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.

The 2015-16 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 CalRecycle. The intended effect is to provide a more accurate assessment of progress toward State goals. Regulations that implement AB 901 are now in place, and the regulations implementing SB 1383 are being completed.

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 ton per day 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 Fill Area 2 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.

1.4 Site-Specific Constraints and Opportunities

The 1999 Settlement Agreement added constraints on operations, by adding new conditions to the 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 Central Valley Regional Water Quality Control Board. This process required several years and concluded in 2012.

Some of these conditions did not take effect until Fill Area 2 began to receive refuse, on March 25, 2019. These conditions include limitations on the amounts of Sludges, Inert Waste and

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.

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 sludges, 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 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 Fill Area 1 has neared its final elevation, windblown litter has 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 Fill Area 2 at a lower elevation. The landfill has added staff dedicated to litter cleanup and has repaired and augmented litter fencing downwind of Fill Area 2. 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 quickly replenished windblown litter in those areas, requiring repeated cleanups.

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 (covered aerated static pile) 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 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);
- Using CNG fuel for on-site operations, and to fuel trucks in Waste Management's regional fleet;
- 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 Fill Area 1 and Fill Area 2. Fill Area 1 covers approximately 235 acres, including an Asbestos-Containing Waste landfill operation which occupies several acres within the Fill Area 1 footprint. The Fill Area 2 footprint is approximately 250 acres. Although most refuse and cover material are currently being delivered to Fill Area 2, Fill Area 1 has not closed, and it will likely receive additional refuse to reach its permitted final elevation. It is currently the site of an active asbestos landfill and two solidification basins.

Lands surrounding Fill Areas 1 and 2 contain grazing land and some construction-support activities related to the continuing construction of Fill Area 2, 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 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 Central Valley RWQCB (Water Board) issues and administers the Waste Discharge Requirements (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 Water Board 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 Water Board posts on its GeoTracker web site.

1.5.1.2 Air

The Bay Area Air Quality Management District (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 2018, indicate that the ALRRF is the third highest GHG-emitting landfill in California, behind the Puente Hills landfill in Los Angeles County and the Kiefer Landfill in Sacramento County.⁵

1.5.1.3 Disposed Wastes

Two agencies regulate solid waste disposal in Alameda County. The Alameda County Department of Environmental Health is the Local Enforcement Agency (LEA), and at the State level, the California Department of Resources Recycling and Recovery (CalRecycle) supports and oversees the LEA. The LEA is the main 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.

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 direct inspection, 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 Covered Aerated Static Pile (CASP) compost facility northeast of Fill Area 1. 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.

⁵ Air Resources Board file <https://www.arb.ca.gov/cc/reporting/ghg-rep/reported-data/2018-ghg-emissions-2019-11-04.xlsx>, accessed December 24, 2019.

1.5.1.5 Waste Diversion Requirements

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

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

1.5.2 Requirements For Fill Area 2 Development and Use

1.5.2.1 Background

In 2011, the last major permits for the development of Fill Area 2 were obtained after agreement was reached between regulatory agencies and Waste Management regarding mitigation for the loss of a wetland channel and the loss of habitat for special status species. Mitigations were established through Alameda County 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, which consulted on wildlife protective measures.
- Central Valley RWQCB, which certified that the mitigations would protect water quality.
- California Department of Fish and Wildlife, 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 wetland, in the form of a new pond between Fill Area 2 and the Eastern Alkali Wetland.
- The enhancement of a riparian channel approximately the same size as the channel to be displaced by Fill Area 2.

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

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

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

1.5.2.2 Corridors and Connectivity

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

MIN-31 – The project proponent will contribute funding to conduct a research study of wildlife passage at local over- and under- crossings to determine if these conduits provide conductivity [sic] for wildlife through the Interstate 580 corridor. The study will entail the periodic placement of motion-activated camera station, track plates, and other approved sampling method. The project proponent will provide the Service and/or CDFG with as much as \$50,000 to perform the study. With the approval of the Service and CDFG, the project proponent may contract the study to an approved third party.

MIT-7 – The mitigation pond/wetland will be constructed in an upland area... immediately upstream from the Eastern Alkali Wetland. ... This area provides suitable upland refugial habitat for tiger salamanders and suitable dispersal habitat for red-legged frogs to the Eastern Alkali Wetland and the Southern Alkali Wetland.

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

1.5.2.3 Current Status

Unfortunately, the wetland mitigation pond built in 2013 was badly damaged by sediment inflow due to unusually heavy rainfall in early 2014. Also, the channel enhancement was put on hold due to the drought that occurred between 2011 and 2016. To remedy this situation, the ALRRF has purchased off-site wetland channel mitigation credits from the Cosumnes Floodplain Mitigation Bank in southern Sacramento County and had the pond rebuilt and replanted in 2018. Also, to protect the pond from sediment inflow, in late 2018 the very extensive sedimentation basin SB-H was constructed between the pond and Fill Area 2. This performed well throughout the 2018-2019 wet season. In the pond itself, it appeared that there was some mortality among the plants that were installed in late 2018, but the extent of this problem will need to be evaluated by the consultant that is monitoring the pond for the ALRRF.

In 2017, the CM reviewed a summary of wetland and wildlife mitigation activities and issues. Wetland and wildlife mitigation activities continued in 2018 and 2019, with monitoring of construction areas and wildlife protection measures (e.g., relocating sensitive species such as California Tiger Salamander, when encountered). ALRRF staff have stated that a report is being prepared by their natural resources consultant, Dudek, but no reports were provided to the CM for review in 2019.

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

SECTION 2

Community Monitor Activities and Issues

2.1 Introduction

Under the Settlement Agreement, the Community Monitor (CM) has three ongoing duties:

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

Throughout 2019, the CM was active in each of these areas, as described below.

2.2 Monitoring of Improvements and Changes

Through report reviews and site visits, several new developments in ALRRF facilities and operations were monitored in 2019:

- On March 25, 2019, refuse disposal operations began in the Phase 1 portion of Fill Area 2. Excavation of the Phase 2/2B portion of Fill Area 2 began in June, and liner construction began in August. Also, the monitoring wells at the toe of the Phase 1 area were decommissioned and replaced by wells at the toe of the Phase 2/2B area. The lower portion of the Phase 2/2B Area was ~~in~~ ready for use in late 2019 while liner installation was being completed on the side slopes.
- In the 12 months from June 2018 through May 2019, 23 poorly-performing landfill gas wells were decommissioned and 24 new wells were brought on line. Wells with higher than normal gas temperatures were monitored for possible subsurface combustion (none was detected).
- For the two Fill Area 1 ponds intended to hold leachate and underdrain water separately, installation of the liquids separation equipment and piping was completed in 2019, but earlier in 2019 the future underdrain water pond (LSI-2) was needed to hold excess stormwater from the CASP compost facility. This delayed the use of the liquid separation system through 2019.
- In 2019, further efforts were made to reduce stormwater pollution. Drop inlets were fitted with "Ertec" filter cloth barriers to screen out silt. Specialized Filtrexx™ wattles, designed to trap metals and hydrocarbons, were placed in ditches and along the bases of slopes, to trap hydrocarbons and other pollutants.
- Stormwater was sampled upstream of the Fill Area 1 stormwater basins, in an effort to identify the sources of volatile organic compounds that have previously been detected in the basins. It was not possible to identify specific sources, so monitoring will continue in 2020.

- The 10-acre Evapotranspirative (ET) Cover Test area was observed several times throughout the year as the hydroseeded plants grew in and local plants also appeared. These observations have found that the hydroseeded species germinated successfully but were joined by local species, including some invasives, as the year progressed. No erosion problems were seen. A late-summer inspection by the Water Board noted some surface cracking of the soil in sparsely vegetated areas. In late 2019, with the return of the rainy season, grasses and forbs began to reappear. The plans for the ET Cover Test Area includes annual monitoring, followed by a report to the Water Board at the conclusion of the four-year study period.
- The windblown litter problem was expected to improve with the move to Fill Area 2, but that was not the case. Several high-wind events, and generally windy conditions throughout the site, caused litter to repeatedly spread toward and occasionally beyond the east and north boundaries of the site.
- In the period from January through November 2019, as disposal activities shifted to Fill Area 2, the ratio of **Class 2 cover soil** to municipal solid waste declined to 25%. In 2018 that ratio was 68%, as cover soil for Fill Area 1 was accumulated in anticipation of the shift to Fill Area 2.

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, as well as 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 (CalRecycle)
- 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; it is shown in Table 2-1, below. Persistent issues appear in the upper part of the table, followed by infrequent or one-time issues. Issues from 2011 – 2014 are shown in the 2017 Annual Report.

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

For the purposes of this report and table, incidents involving the delivery of hazardous materials with incorrect profiles (showing them as non-hazardous) are considered to be beyond ALRRF's control; but the Water Board's position appears to be that ALRRF is responsible nevertheless. Fortunately, no such issues occurred in 2019.


The total severity score for 2019 is slightly lower than in 2018.

Three types of incidents that are of particular concern occurred in 2019:

- **End-dump Truck Overturns.** Within the ALRRF operating area, four end-dump truck overturns occurred during 2019, and the average number of overturns per year from 2012 through 2019 has been 6. This is a tiny fraction of the roughly 16,000 truckloads of class 2 soil and treated auto shredder fluff brought to the facility each year, but the risk of injury and damage in such incidents continues to be a concern for Committee members and ALRRF management. The ALRRF increased its oversight of end-dump truck unloading in 2018, which moderated the problem but did not eliminate it. An analysis of end-dump overturn statistics is provided in section 2.3.3.3 below.
- **Fire.** There were three fires in the ALRRF in 2019. One occurred in Fill Area 2 near the toe of the active area, and the other two occurred in grasslands close to Fill Area 2. They are described further in section 2.3.3.2 below.
- **Windblown Litter.** This may be the single most persistent problem at the ALRRF. With the move of refuse fill operations from the Fill Area 1 hilltop into the Fill Area 2 canyon, a reduction in windblown litter was expected. However, this did not occur, and due to strong west winds, litter was being deposited beyond the east property line. Damaged litter fences are being repaired, and the number of portable fences has increased. The litter cleanup crew has been enlarged and is now a permanent part of the ALRRF work force. When necessary, the crew removes litter from neighboring properties to the east of the ALRRF. The ALRRF also redeploys other staff to retrieve litter when necessary.

Table 2-1: Compliance Issues Ranked by Severity

Issue	Severity				
	2015	2016	2017	2018	2019
Contamination at E-05, E-07, E-20B	2	2	2	2	2
Stormwater contamination	3	3	3	3	3
Windblown Litter	2	4	2	3	4
Birds	2	2	2	2	2
Erosion	3	2	1	-	3
Cover thin / absent	4	-	-	-	1
Worker injury	1	2	1	-	1
Condensate/Leachate Leakage	3	-	3	3	3
Ponding in low-lying area of landfill	-	-	-	1	2
Sediment in Wetland Mitigation Area	3	3	2	-	-
Odor, on site	-	1	-	-	1
Leachate Seeps	1	1	2	-	4
Late Annual Report to Water Board	4	-	-	-	-
Sampling Pump Problem: well E-05	2	-	-	-	-
Stormwater monitoring compliance (FA2 pond, tire and wood operations)	-	4	2	2	-
Material out of bounds (wood operation)	-	4	-	-	-
Erosion control (sitewide)	-	4	-	-	3
Waste outside active area (trash, pallets)	-	4	-	-	-
Leachate Leak Disposal	-	-	4	-	-
Contaminants at monitoring well MW-4A	-	-	4	-	-
Release of condensate from secondary containment	-	-	-	4	-
Release of leachate at leaking flange	-	-	-	4	-
Windblown litter beyond last litter fence	-	-	-	4	2
Disposal of liquid into pond without prior approval	-	-	-	4	5
Lack of means to record liquid level in ponds	-	-	-	4	-
Failure to monitor landfill gas well	-	-	-	4	-
Incomplete groundwater monitoring report	-	-	-	4	-
Liquid separation not implemented, Fill Area 1					4
Totals	30	36	28	44	40
Issues Beyond Control of/ Refuted by ALRRF					
Truck overturn	1	3	3	3	2
Methane Gas at Perimeter Probe(s) [cleared]	4	4	-	-	4
Liquid high in chromium, nickel received (removed before being disposed)	-	4	-	-	-
Soil high in benzene received, disposed	-	4	-	-	-
Fire in refuse &/or stored material	-	3	1	-	3
Fire on ALRRF property, outside active areas	-	-	2	2	3
Hazardous material delivered (high in lead)	-	-	-	4	-
Water Board not notified before ET Cover area constructed	-	-	-	4	-

 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.

2.3.1 Compliance Issues Documented by the LEA

In 2019, several Area of Concern notices were issued by the Local Enforcement Agency (LEA). LEA inspection reports indicate concerns about the following:

- Frequent need for litter control east of Fill Area 2
- Erosion and ponding in wheel ruts during wet weather
- Bird control, especially during winter months

The LEA issued a Notice of Violation for methane in perimeter gas probe GP-9C, on July 31. The ALRRF adjusted gas extraction in nearby wells, and the methane was not found when the probe was tested on August 10, so the Violation was removed.

2.3.2 Water Board Violations and Concerns

2.3.2.1 2019 Violations

Holding excess storm water from CASP operation in underdrain water pond – Although Water Board staff acknowledged that this was a sensible approach to preventing destructive overtopping of the basin in the CASP facility, they issued several violations, both to the CASP and the ALRRF, for this action. In addition to the initial violations dated February 13, they issued an additional Notice of Violation dated August 14 for continuing to hold CASP stormwater in the underdrain pond. The remaining stormwater has since been returned to the CASP area, but the ALRRF has advised Water Board staff that until the CASP has additional stormwater capacity, the underdrain pond might be used for this purpose again.

Windblown Litter – On February 27, prior to the opening of Fill Area 2, Water Board staff issued a violation stating that “Windblown trash was observed in FA2, well outside the boundaries of the active working face of FA1, in violation of WDR Prohibition A.4, which states: The discharge of wastes outside of a Unit or portions of a Unit specifically designed for their containment is prohibited.” ALRRF management contested the logic of this Violation, because it was based on a regulation that was written to control materials that present special risks to groundwater, not to control litter. However, the violation was not withdrawn.

Leachate Seeps – On August 14, a Violation was issued for failure to correct persistent leachate seeps in Fill Area 1. The ALRRF has since installed leachate extraction systems in the three areas where those seeps were noted.

Liquid Separation – On August 14, a Violation was also issued for failure to implement the separation of underdrain water from leachate in Fill Area 1, as explicitly required by the WDRs. The ALRRF has not implemented this because the underdrain pond, LSI-2, has been, and may continue to be, used for emergency storage of stormwater runoff from the CASP area.

2.3.2.2 Other Concerns

There are several open issues that have arisen between the ALRRF and the Water Board since the current Waste Discharge Requirements (WDRs) were finalized in July 2016. They are briefly described below.

Identifying Sources of VOCs in Storm Water –The ALRRF’s 2018-2019 stormwater sampling again detected VOCs in several locations, but the data still did not clearly indicate specific sources, in spite of having added sample points to narrow down the possible sources. Meanwhile, more is being done to reduce stormwater pollution throughout the site, and other improvements (e.g., eliminating leachate seeps) may further reduce stormwater pollution. We will continue to track this issue.

Solidification Basin Compliance –Water Board staff has expressed concern when they find standing liquid in the solidification basins. The ALRRF has responded by pointing out that this is inherent in the operation of these basins. ALRRF staff have mentioned that the basins will be moved, and constructed to be impermeable, in a location not above refuse. However, that has not yet taken place.

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 Accidents

In addition to trailer overturns (discussed below), there was an incident on May 23 in which a large trash compactor fell off of the rolloff truck that had brought it to the site. Later in the year, on August 19, a bulldozer backed into a rolloff truck, which was also backing at the time. Fortunately, there were no injuries in either incident.

2.3.3.2 Fire

Three fires occurred at the ALRRF site in 2019:

- June 9: A fire caused by hot material in refuse in Fill Area 2 spread to grasses on the adjacent hillside. This occurred on a Sunday morning with limited staff on site. Local fire agencies assisted with on-ground equipment and crews. The extent of the burned area was approximately 3 acres.
- July 10: Failure of a pole-mounted electrical transformer at the edge of the CASP composting area ignited dry grasses on the hillside above the Fill Area 2 access road. Fire agencies responded with ground and air support, limiting the burned area to approximately 8 acres.
- July 12: A refuse fire occurred near the toe of the active area. It was extinguished by on-site staff in less than an hour. The apparent cause: hot material in refuse.

2.3.3.3 Trailer Overturns

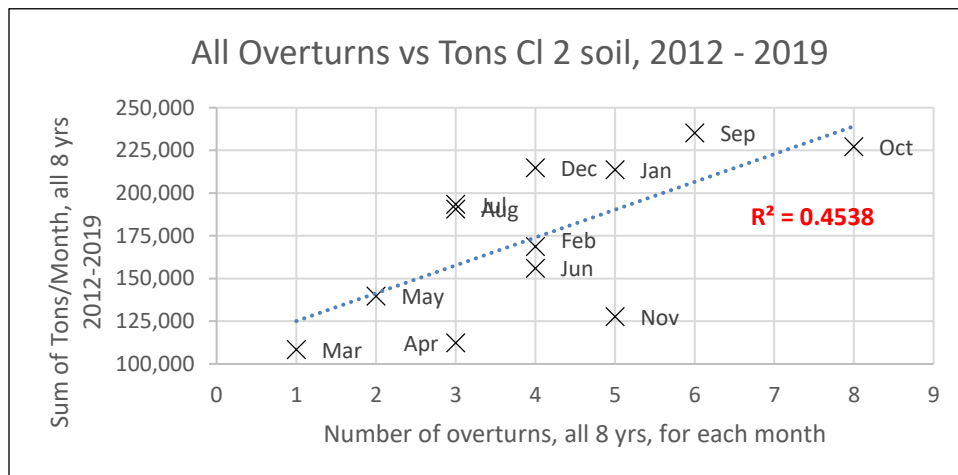
One collision was recorded in 2019, and there were four incidents of end-dump trailers overturning. At the request of Committee members, records of prior overturns have been summarized and analyzed, with the goal of suggesting ways to reduce these incidents based on causative factors.

As background, there are three high-volume material streams delivered using end-dump trailers: Class 2 soils (62% of loads), treated auto shredder waste (36%), and clean soil(2%). All of them are somewhat susceptible to one factor that contributes to overturn accidents: when a portion of their load remains stuck in the trailer while it is elevated for unloading, the center of gravity of the truck and payload is suddenly high off the ground, and what was a minor imbalance can cause an overturn.

Records were readily accessible for the time period 2012 – 2019 (the most recent eight years). We found that in that period, the average number of these incidents was 6 per calendar year. Dividing the calendar into dry seasons (April – September) and wet seasons (October – March), we found that the average number of occurrences was slightly higher during the wet season (3.6 then, vs. 2.7 in the dry season). This was surprising, since it is generally true that more end-dump deliveries occur during the dry season. This suggests that wet-season conditions such as lower visibility and softer soils may be causative factors.

Overturn accident records often cite driver inexperience as a factor. There are likely to be more inexperienced drivers when deliveries surge, as haulers are using all available drivers to expedite their projects. Auto fluff deliveries are generally steady, and clean soil is a tiny fraction of the total, so we focused on Class 2 soil haulers to investigate this further.

We used the sum total of tonnage each month as a proxy for the number of loads and compared that to the number of overturns – for all types of loads – in a given month. To reduce the effect of year-to-year variation, we made this comparison using the sums of tonnage and overturns for all eight years. For example, the number of January overturns for all 8 years is 5, and the amount of Class 2 soil received in all eight Januaries is 213,621 tons. Graphing these pairs for all 12 months and calculating the best-fit straight line gives the result shown in Figure 2-1 below.



In the figure above, the R² value, known as the coefficient of determination, indicates the extent to which the number of overturns correlates with the number of tons. R² = 1 would indicate a perfect correlation; the data points would all be in a straight line. An R² value of 0.45 indicates a moderate correlation. There appears to be a relationship between these two factors, but other factors are probably also having an effect.

This suggests that the ALRRF should consider making a greater effort to prevent overturns during months when Class 2 soil deliveries are at their peak. While this may seem like an obvious result, it is interesting to note that when the same analysis was run for the treated auto shredder waste tonnage, there was no relationship between that tonnage and the overturns per month. It may be that in the busiest months, the unloading areas are more congested, some drivers are inexperienced, some drivers are more hasty, and some are distracted by other traffic. There also may be trucks coming to the site with mechanical problems, as older equipment is placed in service to move more material.

2.3.3.4 High Wind Incidents

In an effort to understand the windblown litter problem in 2019 more completely, we examined wind data from the closest State of California weather station, comparing 2019 to 2018. The “Altamont” weather station is approximately 4 miles SSE of the ALRRF and should have wind speed data that correlates reasonably well with windspeeds at the landfill.

To compare the two years, we defined a wind event as any day containing a period of 4 hours or more when the wind velocity did not drop below 20 MPH. We then counted the number of wind events each month by visually examining monthly graphs of wind speed over time.

The two years were quite similar. The number of wind events in a month ranged from 1 to 18 and averaged 8 per month. The primary difference was that 2018 had fewer wind events in winter months and more wind events in summer months. This suggests that the more difficult windblown litter problem in 2019 was not due to an exceptionally windy year, but rather to the location of the active landfill area, at the north end of Fill Area 2.

2.4 Review of Reports

2.4.1 Groundwater

Two groundwater monitoring reports were reviewed in 2019. The first covered the period from July through December of 2018; the second covered January through June of 2019.

The data in these reports indicate that monitoring wells with VOC contamination are responding to intensified landfill gas extraction nearby, but some VOCs diminish more quickly than others.

One new development has been an increase in concentrations of inorganic constituents in certain wells in Fill Areas 1 and 2. Near Fill Area 1 these are MW-2A and MW-4A, on opposite sides of Fill Area 1 itself. In Fill Area 2 these are MW-8A, MW-8B, PC-1A and PC-1C, all near the bottom of the Fill Area 2 canyon and over half a mile from the active portion of Fill Area 2. The groundwater reports do not explain these phenomena but will continue to track them.

In other respects, groundwater monitoring results were similar to those from prior years. Contaminants, when present, were below regulatory limits that would require immediate corrective action.

The two groundwater reports, especially the second one, present some disturbing QA/QC issues with field sampling and laboratory practices: contaminated trip and equipment blanks, hold time exceedances, and an increasing number of VOCs attributed to laboratory contamination. SCS Engineers has responded to this concern by defending the quality of the laboratory work, stating that these issues are normal for all laboratories.

2.4.2 Storm Water

A new set of annual requirements for industrial storm water monitoring and reporting took effect throughout California on July 1, 2015. Stormwater samples are to be taken when a “qualifying

storm event”⁶ (QSE) occurs. Up to four such QSE’s are to be sampled at each discharge point during a stormwater year (July through June). For each type of industrial facility, certain key pollutants must be monitored; and if concentrations of those pollutants exceed specified Numeric Action Levels (NALs), the facility must make a plan that describes Exceedance Response Actions (ERAs) to be implemented. In the first year of exceedance, “Level 1” ERAs are selected, which emphasize minimum Best Management Practices (BMPs). These are low-cost measures such as improving housekeeping, cleaning drain pipes, etc. If the exceedance continues into its second consecutive year, Level 2 ERAs must be developed, and these typically involve advanced BMPs such as specialized equipment, paving projects, etc.

Stormwater monitoring and reporting is especially complex at a landfill site, and even more so at a site that is expanding, like the ALRRF. Since the current regulations took effect, the number of sampling points has increased from three to six, and exceedances have persisted in spite of initial efforts to reduce silt, metals and organics. Each year the ALRRF has applied more Best Management Practices, especially in the current wet season (2019-2020). The landfill has implemented all applicable minimum BMPs and several types of advanced BMPs. Sampling and analyses will take place as the wet season continues, and the results should indicate improvement, especially in the vicinity of Fill Area 1 where disposal activity is diminished. The Stormwater Pollution Prevention Plan does need to be updated to include Fill Area 2 in its Industrial Activity Area.

It is important to note that under these stormwater regulations, a Violation is not triggered by the exceedance of an NAL. Rather, an industry will receive a violation if it fails to (a) sample its stormwater discharges or (b) plan and implement any necessary ERAs. ALRRF has exceeded several NALs but has not received any Notices of Violation.

The ALRRF has also been tracking the presence of VOCs in stormwater, under a separate requirement in the WDRs. After two years of sampling, the program has found VOCs in some channels, and not in others, but more sampling is needed to identify the origins of these VOCs. This program is continuing in the 2019-2020 wet season.

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 2019, the CM received the Title V reports for the periods June – November 2018, and December 2018 – May 2019. 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.

⁶ a precipitation event that: (1) produces a discharge for at least one drainage area; and, (2) is preceded by 48 hours with no discharge from any drainage area.

- From June 2018 – May 2019, 23 landfill gas wells were decommissioned, and 24 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 (several days at most), but after each of those 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 2018, was received by the CM on February 4, 2019. 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.

- 4.6 – This requirement, to adjust tonnage limits for partial years, was annotated by ALRRF staff as follows: “Expect Fill Area 2 Operations to begin in March – April 2019” (revised from the previous year’ report, which stated March 2019).

In addition to the Annual Progress Report described above, in prior years the ALRRF has prepared reports to inform the natural-resource agencies about progress on their permit requirements for Fill Area 2 expansion: establishing the Conservation Plan Area, constructing the wetland mitigation project, protecting existing wetlands and surface waters, etc. The Community Monitor did not receive any formal reports on mitigation activities in 2019. Considerable mitigation work took place in 2019, establishing an irrigation system in the mitigation pond and supplying it with water, by truck, in late summer. According to ALRRF staff, biological surveys were conducted in the Conservation Plan Area, and a report on this subject is in preparation.

2.5 Review of Records

Several types of site records were reviewed by the CM in 2019. The CM’s scope of work requires the periodic review of files that contain lab analyses and other descriptions of **Class 2 soils** (considered hazardous by California standards, but not by Federal standards) 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 weekly inspection reports** are publicly available on the CalRecycle web site and were checked by the CM every few weeks, 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 from Langan to review each file to be sure that it is complete and within the regulatory limits for Class 2 materials. This review was conducted once in 2019, in mid July. Attempts to schedule a second review near the end of the year were hindered by

schedule conflicts, but the next review will be scheduled as soon as possible in 2020. The files are made accessible electronically from Waste Management's Oakland office.

A total of 119 files were reviewed in July 2019. No out-of-compliance profiles were found, but there were 19 files in the review that required further attention. Langan staff are looking into this issue and will update the CM team when more is known.

2.5.2 Other Materials

In late 2019, a large surge of soil (approximately 30,000 tons) containing high concentrations of salt was delivered to the ALRRF for disposal in September and October. This material originated from development project on salt flats in the City of Newark.

2.5.3 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 checked by the CM four times during 2019. As in prior years, a common incident involved large end-dump semi-trailers that became unbalanced while the bed was elevated, causing the bed to fall to one side. Fortunately, there were no injuries associated with these incidents, and they were relatively infrequent in 2019 (a total of 4, versus 10 in 2018). In their reporting, ALRRF staff attributed many of these overturns to driver inexperience.

Other logged incidents included three fires, two employee injuries (one serious), a condensate spill near Basin A, and several minor vehicular accidents on site.

2.5.4 LEA Inspection Reports

In 2019, there were three types of Areas of Concern noted in these reports. Eight involved windblown litter, one concerned bird activity, and two focused on erosion on and near roadways. These Areas of Concern were consistent with Community Monitor observations.

2.6 Monthly Inspections

Twelve site inspections were held during 2019. The inspection day and time were as shown in Table 2-2 below. Off-hours inspections, outside of the hours that the landfill is open to the public, are shown with gray highlighter.

Table 2-2
Site Inspection Summary

Date	Day of Week	Inspection Time	Announced in Advance?	With LEA staff?
Jan 17	Thurs	1:00 PM	no	yes
Feb 8	Fri	8:15 AM	yes	no
Mar 18	Mon	1:00 PM	yes	no
Apr 9	Tues	1:00 PM	no	yes
May 28	Tues	5:30 AM	yes	no
Jun 18	Tues	11:00 AM	yes	no
Jul 12	Fri	1:00 PM	no	yes
Aug 15	Thurs	5:00 AM	yes	no
Sep 9	Mon	11:00 AM	yes	no
Oct 11	Fri	12:00 PM	no	yes
Nov 14	Thurs	8:00 PM	yes	no
Dec 12	Thurs	8:30 AM	yes	no

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

In 2019, observations by the CM focused on:

- The transition to the use of Fill Area 2.
- Completion and maintenance of the mitigation pond.
- Plant growth and soil conditions in the evapotranspirative cover test area.
- Storm drainage and erosion control, including the sampling points chosen for stormwater VOC testing.
- Observation of issues of ongoing concern, including the presence of large numbers of seagulls and management of windblown litter east of Fill Area 2.
- Excavation and construction of Fill Area 2 phases 2 and 2B.
- Any changes at the site that could harm the environment or public health.

The Scope of Work for the CM specifies that at least three inspections be performed off hours, and that approximately four to six be performed jointly with the LEA. As shown in Table 2-2 above, three off-hour and four joint inspections were conducted in 2019.

No truck traffic counts were conducted in 2019, because ALRRF data on tonnage and traffic made it clear that the traffic volume requirements of the Conditional Use Permit were being met.

SECTION 3

Looking Ahead: Anticipated Efforts and Issues

3.1 Introduction

The 2020 contract year is the beginning of a new Community Monitor contract, with Langan providing CM services, assisted by ESA. The CM team will continue to perform report reviews, site inspections and Class 2 soils file reviews.

The four-year test of evapotranspirative (ET) cover methods will be ongoing; the liquids separation system may begin to operate; and the mitigation pond with stormwater basin SB-H will be functioning. Exceedances at several monitoring wells will continue to be tracked. The ALRRF may also be installing and operating new solidification basins that meet recent Water Board prescriptive requirements.

3.2 Issues to be Tracked in 2020

3.2.1 Ongoing Review

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

- Implementation of requirements of the 2016 Waste Discharge Requirements.
- Completion of the Five Year Permit Review, and possibly, the initiation of the next such review.
- Concurrence of natural-resource agencies with off-site wetland mitigations.
- Groundwater monitoring methods and data quality.
- Groundwater quality, including the vadose zone below the landfill liners.
- Stormwater quality and management practices.
- Performance of the landfill gas system; decommissioning and installation of gas wells.
- Effects of any composting or material recovery development or operations on the landfill.
- Refuse truck traffic counts, if needed.
- Performance of the 10-acre ET cover test site.

3.2.2 Site Inspections

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 2020, 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.
- Gas temperatures, particularly in the high-temperature cluster of wells in Fill Area 1 Unit 2.
- Implementation of gas collection in Fill Area 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 effects of the newest additions to stormwater pollution controls – skimmers, flocculant addition, Filtrexx check dams, and additional discharge points – will be of special interest.

3.2.2.3 Windblown Litter

This will continue to be an issue for Fill Area 2 and downwind areas.

3.2.2.4 New Systems

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

- The ET cover test area
- The reconstructed wetland mitigation pond
- Sediment basin SB-H
- Tipper and truck wash equipment in Fill Area 2
- The liquids separation system, if it begins operation.
- Modifications to 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 MTBE, tert-butyl alcohol, and tetrahydrofuran, which showed an increase in 2015 but not since then. The team will also watch data from wells E-20B, MW-4, MW-12, MW-20 and other wells that have shown evidence of contamination. The quality of the groundwater sampling and analyses, especially the occurrence of contaminants in quality-control samples and field samples, will also continue to be monitored.

In addition, the results of a one-time round of sampling and testing for per- and polyfluoroalkyl substances (PFAS) will be reported. This was mandated by the State Water Resources Control Board (SWRCB) in 2019 to determine the extent of PFAS presence at landfills throughout California. These substances are present in a wide variety of consumer products, and certain members of this class of substances have been found to cause negative health effects in humans and animals. The SWRCB’s web page on PFAS states that “The four major sources of PFAS are: fire training/fire response sites, industrial sites, landfills, and wastewater treatment plants/biosolids.”⁷ Testing for PFAS is intended to detect it at extremely low concentrations (parts per trillion), and this requires extreme care during sampling and analysis.

⁷ Source: <https://www.waterboards.ca.gov/pfas/>, accessed December 30, 2019.

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 2020.

3.2.4 Permit Requirements Triggered by Expansion Date

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

3.2.4.1 Tonnage Limitations

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

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

3.2.4.2 Natural Resource Protections and Reporting

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

- Every four years after the start of construction of Fill Area 2 (which began in 2015), the California Department of Fish and Wildlife (CDFW) is to receive a status report on the required periodic surveys of the Conservation Plan Area. The wildlife surveys focus on Western Burrowing Owl, San Joaquin Kit Fox, California Red-legged Frog, and California Tiger Salamander.
- Annual wetland monitoring reports are required by the Lake and Streambed Alteration Agreement, which was issued by the CDFW, for the first five years of operation of the wetland mitigations, i.e. the constructed pond.
- Reconnaissance survey reports for the Conservation Plan Area are also required by the CDFW. These include baseline and periodic surveys for sensitive wildlife species (see list above), and annual rangeland and general reconnaissance surveys. These are due on January 15 of the calendar year following the survey.

In 2019, these reports reportedly were being prepared, but none were received by the CM.

3.3 Project Management Considerations

In 2020 Kelly Runyon’s role will be limited to assisting Langan with its transition to the lead role as Community Monitor; ESA will continue as a subcontractor. Rachel Brownsey will serve as ESA’s Project Manager and will provide her expertise in biology / botany and that of other ESA staff. Langan’s work will continue to include reviewing groundwater monitoring reports and Class 2 soil files.

501 14th Street, 3rd Floor Oakland, CA 94612 T: 510.874.7000 F: 510.874.7001

To: ALRRF Community Monitor Committee

From: Maria Lorca, Staff Scientist
Mukta Patil, PE, Senior Project Engineer

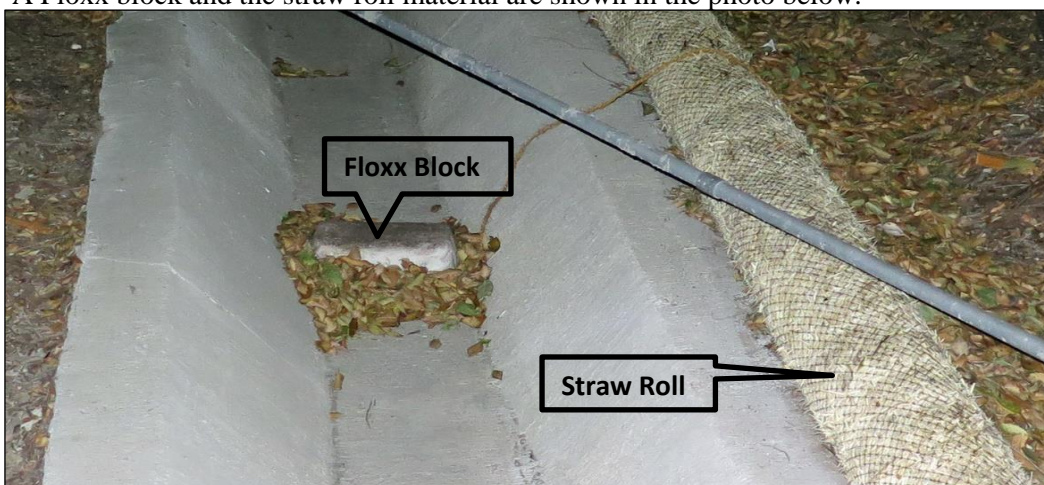
Date: June 26, 2020

Re: CMC Meeting of 7/8/20 – Agenda Item 6.8 – 2020 January Agenda Packet Item
6.6 Revision by Kelly Runyon
Altamont Landfill and Resource Recovery Facility (ALRRF)
Livermore, California
Langan Project No.: 750657601

Corrections to the January 2020 CMC Agenda Packet were received via email on May 8, 2020 from Kelly Runyon. Mr. Runyon stated that during the November and December site visits, he was under the mistaken impression that Fill Area 2 Phase 2 had begun to be used. After careful review of the Phase 2 engineering drawings and site photos taken at the time, Mr. Runyon indicated that was not the case. Information has been updated in the packet below. The redline revisions on the concerned pages (page 40 and 44 of the packet) are provided as an attachment to this memo.

Site Inspection November 14, 2019, 8:00 PM - 9:30 PM

- Attended by K. Runyon and Maria Lorca. Escorted by Luis Rocha. Announced.
Weather: partly cloudy, warm, winds light.
- One objective of this visit was to observe night-time operations when transfer truck traffic was arriving steadily, to note if trucks were able to unload without delay. However, traffic was very light during these observations, and queuing did not occur. All trucks were serviced promptly.
- A second purpose was to observe stormwater pollution prevention measures, and these were very much in evidence. They included:
 - Silt barriers at storm drain inlets.
 - Straw rolls at the edge of ditches and on slopes to trap suspended solids.
 - Adsorbent wattle ("Filtrex") installed across drainage ditches to remove VOC's and metals.
 - "Floxx blocks", tethered brick-shaped objects that release flocculant into stormwater channels.
 The flocculant is delivered to stormwater basins where it causes suspended solids to clump together and settle out, reducing Total Suspended Solids within the basin and in its discharge. A Floxx block and the straw roll material are shown in the photo below.

Fill Area 1

- At the Fill Area 1 solidification basins, the yellow basin (cover material production) had absorbent material staged for mixing. The blue basin (blending for Class 2 disposal) had some refuse showing (plastic membrane and what appeared to be soil). Neither basin had any free liquid visible.
- Some concrete material was being received for use as winter pad paving on Fill Area 1.
- The small reservoir for truck wash water near the scales was essentially dry. The tamarisk plants on the north side of this basin were growing.

Fill Area 2 Operations

- No material was received while we were observing. One dozer and one compactor were idling. It was apparent that some refuse had recently been placed, spread and compacted in the lower Phase 21 area. A substantial amount of cover material was staged alongside the tippers, ready to be applied on Friday when cover is spread across most of the working face.

Fill Area 2 Construction

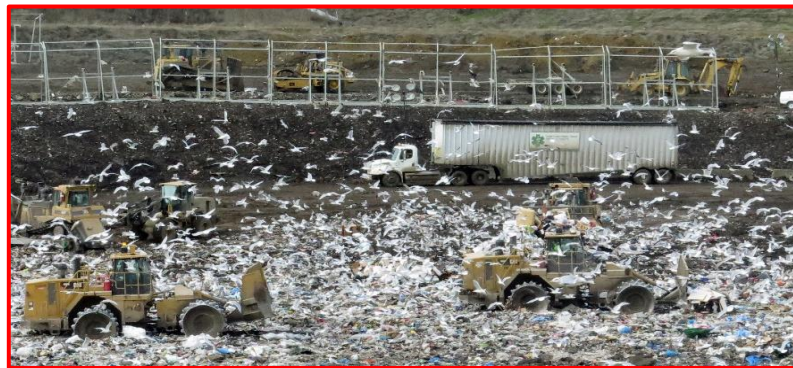
- Although the northern portion of the bottom of Phase 2 had been completed **and placed in service**, the sloped sides of the Phase 2 area **was-were** not yet completed **and (of course) was not in use**.

Fill Area 2 Operations

- Filling was taking place in the north end of Phase 1, with two tippers, two compactors, and two dozers working. The working area had portable litter fences nearby along the east and west sides. During these observations, winds were light, but there was a noticeable amount of litter to the northwest of Fill Area 2 on the slope below (east of) the CASP operation. That litter was probably blown there by southeast winds that occurred during recent storms.
- The number of birds at Fill Area 2 was very large, probably several thousand. See photos below.



The photo to the right is a close-up of the area shown in the red box above.



- The tall permanent litter fence east of Fill Area 2, which had been destroyed by high winds and built-up litter earlier this year, has been replaced with an equally tall fence having steel pipe posts rather than the timber posts used previously.

Fill Area 2 Construction

- Construction was nearly complete, with current work focused on the edges of the newly lined areas. Most of the synthetic liner materials were in place but layers of soil still had to be placed and compacted, especially on the east side of Phase 2B. Phase 2A is complete ~~and in use~~.
- During construction of this phase, the leachate and underdrain capture pipes are being directed to temporary portable tanks which are emptied as needed. The leachate pipe will later be reconnected to the permanent pumping system that will deliver leachate to the pond east of Fill Area 2.

ET Cover Test Area

- This area was examined on foot, along the roadway near the slope-break between the gently sloped top deck and the steeply sloped south face of Fill Area 1.
- Some of the plant species in the original hydroseed mix were emerging, including white yarrow and one or more of the perennial grasses. Numerous emerging seedlings were too small and young to be identified.
- A variety of other species were also emerging, many of them non-native invasives, including stork's-bill and mustard. There was evidence of use by rabbits, and there were several very small burrows near the slope break.