



COMMUNITY MONITOR COMMITTEE

Altamont Landfill Settlement Agreement

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

AGENDA

www.altamontcmc.org

VOTING MEMBERS

Robert Carling
City of Livermore

Jerry Pentin
City of Pleasanton

Donna Cabanne
Sierra Club

David Tam
Northern California
Recycling Association

NON-VOTING MEMBERS

Sarah Fockler
Waste Management
Altamont Landfill and
Resource Recovery
Facility

Arthur Surdilla
Alameda County

Robert Cooper
Altamont Landowners
Against Rural
Mismanagement (ALARM)

STAFF

Judy Erlandson
City of Livermore
Public Works Manager

DATE: **Wednesday, April 12, 2017**
TIME: **4:00 p.m.**
PLACE: City of Livermore
Maintenance Services Center
3500 Robertson Park Road

1. Call to Order
2. Introductions
3. Roll Call
4. Approval of Minutes (From October 12, 2016 and January 11, 2017)
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:

- Sampling requirements for stormwater basin SW-2
- Update on hazardous material removal
- Update on status of Water Board violations
- Landfills using evapotranspiration covers

6.2 Five-Year Permit Review and CASP Project (ESA)

6.3 Review of Reports Provided by ALRRF (ESA)

6.4 Reports from Community Monitor (ESA)

6.5 Annual Report (ESA)

6.6 Announcements (Committee Members)

7. Agenda Building

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

8. Adjournment

The next regular Community Monitor Committee meeting is tentatively scheduled to take place at 4:00 p.m. on **July 12, 2017** at 3500 Robertson Park Road, Livermore.

Informational Materials:

- Community Monitor Roles and Responsibilities
- List of Acronyms
- Draft Minutes of October 12, 2016 and January 11, 2017
- Reports from ESA and subcontractors

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 CALL (925) 960-4586/4582 (VOICE) OR (925) 960-4104 (TDD) AT LEAST 72 HOURS 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 meeting at the Maintenance Service Center, located at 3500 Robertson Park Road, Livermore. The Community Monitor Committee Agenda is available for public review 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.

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.

Community Monitor Committee Roles and Responsibilities

Below is a summary of the duties and responsibilities of the Community Monitor Committee and related parties as defined by the Settlement Agreement between the County of Alameda, the City of Livermore, the City of Pleasanton, Sierra Club, Northern California Recycling Association, Altamont Landowners Against Rural Mismanagement, and Waste Management of Alameda County, Inc. The purpose of this document is to aid in determining if discussion items are within the scope of the Community Monitor Committee.

Community Monitor Committee's Responsibilities

Under Settlement Agreement section 5.1.2, the CMC is responsible for supervising and evaluating the performance of the Community Monitor as follows:

- A. Interviewing, retaining, supervising, overseeing the payment of, and terminating the contract with the Community Monitor;
- B. Reviewing all reports and written information prepared by the Community Monitor; and
- C. Conferring with the Community Monitor and participating in the Five Year Compliance Reviews (next due in 2015) and the Mid-Capacity Compliance Review (due when the new cell is constructed and capacity is close to 50%, unlikely to occur before 2028) (Condition number 6 of Exhibit A of the Agreement).

Community Monitor's Responsibilities

The Community Monitor supplements and confirms the enforcement efforts of the County Local Enforcement Agency. The Community Monitor is primarily responsible for:

- A. Reviewing any relevant reports and environmental compliance documents submitted to any regulatory agency (sections 5.7.1, 5.7.2, and 5.7.3);
- B. Advising the public and the Cities of Livermore and Pleasanton about environmental and technical issues relating to the operation of the Altamont Landfill via the CMC (section 5.7.4);
- C. Presenting an annual written report summarizing the Altamont Landfill's compliance record for the year to the CMC and submitting the report to Alameda County and the Cities of Livermore and Pleasanton (section 5.7.5);
- D. Notifying the County Local Enforcement Agency and Waste Management of Alameda County of any substantial noncompliance findings or environmental risk (section 5.7.6);
- E. Monitoring and accessing the Altamont Landfill site and conducting inspections (section 5.7.7);
- F. Counting trucks arriving at the Altamont Landfill (section 5.7.8); and
- G. Reviewing waste testing data and source information (section 5.7.9).

Waste Management of Alameda County's Responsibilities

Per the settlement agreement, Waste Management is responsible for:

- A. Paying for the services of the Community Monitor, based on an annual cost estimate (section 5.3.3).
- B. Paying an additional 20% over the annual cost estimate if warranted based on "credible evidence" (section 5.3.3).

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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>.¹

Updates will be provided as needed. This list was last revised on April 4, 2017.

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
DWR – Department of Water Resources
LEA – Local Enforcement Agency (i.e., County Environmental Health)
CVRWQCB, RWQCB or Water Board – Central Valley Regional Water Quality Control Board, unless otherwise noted.
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

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.
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.

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>¹
BTEX – benzene, toluene, ethylbenzene, and xylene (used in reference to testing for contamination)
CH₄ – methane
CO₂ – carbon dioxide
DO – dissolved oxygen
HHW – household hazardous waste

¹ This link may need to be typed into your search bar to work correctly.

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
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; but the “C” denotes that the pile is covered.
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 October 12, 2016

DRAFT

1. Call to Order
The meeting was called to order at 4:01 p.m.

2. Roll Call

Members Present:	Bob Woerner; Donna Cabanne; Jerry Pentin; Sarah Fockler; Arthur Surdilla
Absent:	Robert Cooper, Altamont Landowners Against Rural Mismanagement; David Tam arrived at 4:21 PM.
Staff:	Marisa Gan, City of Livermore Recycling Specialist; Kelly Runyon, Community Monitor

3. Introductions
Those in attendance introduced themselves as part of the roll call.

4. Approval of Minutes
The Chair reordered the agenda to defer approval of the July 2016 minutes until Mr. Tam's arrival.

5. Open Forum
There was no Open Forum discussion.

6. Matters for Consideration
 - 6.1 Responses to Committee Member Questions

Concentrations of Naturally Occurring Groundwater Contaminants – Mr. Runyon presented a table that compared drinking water standards to background levels of arsenic, antimony and cyanide, noting that naturally occurring background levels often exceed drinking water standards. Mr. Runyon also noted that for the ALRRF wells that have been under discussion, levels of these substances are similar to those in the table. Ms. Cabanne expressed concern about nearby residents' drinking water and asked that these levels continue to be watched. In discussion, Ms. Fockler noted that at the landfill, well water from the site is not used for any purpose.

Ms. Cabanne also noted that in the most recent groundwater monitoring reports, some detections of contaminants were attributed to laboratory contamination; and this has been an ongoing concern with these lab results. Mr. Runyon stated that Langan Engineering, part of the Community Monitor

team, had also reviewed the semiannual groundwater monitoring report with contamination concerns in mind; and Langan found that the data meet professional standards. Mr. Woerner asked about the sampling interval for these substances, and Mr. Runyon responded that it is every five years. Mr. Woerner stated that he would like to see the data from an extended period of time, and with error bars. Mr. Runyon stated that he would provide the available data going back for 10 years, but the data may be too sparse to compute error bars. Mr. Woerner also noted that it would be helpful if memos to the Committee clearly indicated areas of concern, up front, in a summary. Mr. Pentin then stated a concern that taken at face value, some of the data in Committee memos could be interpreted as showing a high level of environmental risk. He asked for the memo to provide more context or interpretation regarding the level of hazard that the table describes. Mr. Woerner concurred. Mr. Runyon suggested that data from new groundwater wells might help provide useful context. Mr. Pentin asked if more frequent testing, beyond the regulatory requirements, could be authorized or approved by the Committee. Mr. Runyon replied that such actions are outside of the Committee's scope as defined in the Settlement Agreement.

Mr. Tam arrived at 4:21 PM.

Purging Requirements in Tentative Water Board Waste Discharge Requirements (WDRs) - Ms. Cabanne expressed continuing concern about the monitoring well purging techniques used by SCS Engineers. She asked when more detail about purging will be provided, with the field data sheets modified to reflect the details of these techniques. Mr. Runyon said that he expects these changes to appear in the next semiannual groundwater monitoring report, to be received in early February and discussed at the April 2017 Committee meeting. Ms. Cabanne asked if the related amendment to the Waste Discharge Requirements [i.e., the Monitoring and Reporting Program] has been prepared. Ms. Fockler stated that it has not, because it is part of the ALRRF's ongoing discussions with the Central Valley Regional Water Quality Control Board (Water Board), regarding implementation-related details of the WDRs that are still being worked out. Ms. Cabanne asked if the Water Board would have this on their agenda. Mr. Runyon stated that he does not expect the issue to come before the Board; it should be resolved at the staff level.

Mr. Pentin noted that the purging topic has been in active discussion since April 2016, and he asked if it is typical for these types of issues to take a year or more to be resolved. Mr. Runyon stated that the number and complexity of the issues raised by the first draft of the new WDRs prolonged the WDR process. Ms. Cabanne asked that the Committee be updated on the progress of these issues at each meeting. Mr. Runyon agreed to do so and said that he would request updates from the ALRRF as well.

6.2 Review of Reports Provided by ALRRF

On the semi-annual groundwater monitoring report, Mr. Runyon stated that in response to its frequent references to sample contamination, Langan had

examined the report carefully and found it acceptable. Mr. Pentin expressed concern about these occurrences. Mr. Woerner also expressed concern that the frequent instances of contamination call into question the validity of the sampling and testing processes. Mr. Pentin concurred and asked if there are applicable standards. Ms. Cabanne noted that this has been a long term ongoing issue. Mr. Pentin asked what the testing procedures are; Mr. Runyon said that he would look into that. Mr. Pentin also asked if the Water Board would review the data. Mr. Runyon replied that they do review these data, and that likely led to the more stringent draft 2016 WDRs. Further discussion of possible contamination in samples concluded with Mr. Runyon suggesting a presentation, at the next meeting, by a person with substantial direct experience in landfill groundwater sampling and analyses.

Regarding the monitoring report for the Conservation Plan Area, Ms. Cabanne moved that the Committee require that an ESA botanist and wildlife biologist review the current, and any future, reports on the Conservation Plan Area. Mr. Tam seconded. The motion passed unanimously, 4-0.

Regarding the current (2015) Conservation Management Plan report, Ms. Fockler noted that the lack of monitoring for San Joaquin Kit Fox and Burrowing Owl was due to the ALRRF's consultant's misunderstanding that funds were not available for that work. She further stated that the consultant had not made ALRRF aware of the funding issue, and if they had, funds would have been provided. Ms. Cabanne asked when the next report could be expected. Ms. Fockler replied, March of 2017. Mr. Pentin asked if monitoring is happening now, and Ms. Fockler replied that it is. Ms. Cabanne asked Mr. Runyon to follow up and tell the Committee when the next report is received. Mr. Pentin asked if the consultant was scoped and paid to do the missing monitoring and Ms. Fockler replied that they were. He then asked if Fish and Wildlife have accepted the report. Ms. Fockler said that they have received the report and have not taken issue with it or provided comments.

Ms. Cabanne asked if the eight probes mentioned in the semiannual air emissions report were installed. Mr. Runyon replied that they were, and that their purpose is to inform Waste Management's landfill gas system designers regarding the efficiency of the system at the ALRRF.

6.3 Update re Fill Area 2 Status

Mr. Runyon provided large-format photos of Fill Area 2, Phases 1 and 2. He explained the difference between groundwater seepage (shown in the photos) and leachate seepage (noted in the monthly site visit report). Mr. Tam asked for an estimate of the area affected by groundwater seepage; Mr. Runyon described it as an acre or two. Mr. Tam asked how long it would take to fill the Phase 2 portion of Fill Area 2. Mr. Runyon stated that because of overlapping fill volumes from each phase, he could not provide an immediate answer.

6.4 Reports from Community Monitor

Referring to the tonnage summary, Ms. Cabanne asked for further explanation of the high tonnage from Newark. Mr. Runyon explained that this was due to the disposal of unmarketable salt from the salt ponds in Newark. Ms. Fockler added that before it was accepted, the material was profiled and found to be non-hazardous. Ms. Cabanne asked if the Community Monitor could review the profile. Ms. Fockler responded that profiles are kept confidential, to protect customers' information and to maintain the landfill's competitive position. In response to a question from Ms. Cabanne, Ms. Fockler stated that the landfill will be receiving the material for three years, in the summer months, to a total of 200,000 tons. Mr. Woerner asked if this activity had taken place prior to this year. Neither Ms. Fockler nor Mr. Runyon could recall seeing a similar situation, back through 2008.

Mr. Woerner expressed concern about the overturned truck incidents reported in the Special Occurrences Log. Mr. Runyon stated that the landfill takes the appropriate steps to prevent these, but there are instances when material sticks in the truck bed as it is being raised, and in some such cases an overturn cannot be prevented. Mr. Tam asked about two incidents involving City of Berkeley loads and the tippers. Mr. Runyon clarified that these were transfer trucks from the City's transfer station, and he and Ms. Fockler described the incidents further.

Regarding the tonnage bar charts, Mr. Woerner asked for some interpretation of the charts, possibly in footnotes or in text placed closer to the charts.

Ms. Cabanne asked if the possible tamarisk plants, noted in a monthly report, could be harmful to the Conservation Plan Area. Mr. Runyon explained that the County has applied herbicide to those plants, and they are now dead; however, new plants could emerge if seeds were previously produced, and this should be watched for.

Ms. Cabanne asked if the algae noted in Basin A was going to be controlled. Mr. Runyon replied that the landfill plans to excavate the basin, weather permitting.

Regarding the July grass fire near Basin C, Ms. Cabanne asked if the gaskets in the nearby stormwater pipe would be checked for damage. Ms. Fockler stated that they have been checked and are undamaged.

Mr. Tam asked if there is a way to know how much material is being delivered from the salt ponds in Newark. Mr. Runyon responded that he has no data specific to that customer but does see a total of all tons disposed from Newark.

6.5 Status of Five-Year Permit Review

In discussion of the Monitoring and Reporting Program (MRP) required as part of the site's updated Waste Discharge Requirements, Ms. Fockler explained that the MRP is still in development through discussions between Waste Management and Regional Water Quality Control Board (RWQCB) staff.

Mr. Woerner asked if the Notices of Violation issued by the LEA are continuing. Mr. Surdilla stated that they will be discontinued shortly, because the Waste Discharge Requirements have been adopted by the RWQCB. This will enable the LEA to have a complete picture of the requirements that the landfill must meet, thus the LEA's review can proceed. Mr. Woerner asked that the status and expected outcome be summarized in future reports.

Ms. Cabanne asked if the MRP could be summarized for the Committee. Mr. Runyon said that he intends to do that when the MRP is completed. In response to further questions, Ms. Fockler explained that the ALRRF cannot predict how soon that will occur. Mr. Tam asked if the landfill would be fined for the delay. Mr. Runyon explained that this is unlikely at present, while both sides are working cooperatively.

At 5:43 PM the Chair reordered the agenda to take up several items because Mr. Woerner needed to leave soon.

6.10 Agreement for Consulting Services with ESA

Ms. Gan circulated the Exercise of First Extension document for signatures by all Committee members.

4 Approval of April 13 Meeting Minutes

Mr. Tam moved approval of the minutes as submitted; Ms. Cabanne seconded. There was no discussion; the motion passed unanimously (4-0).

6.9 Meeting Dates for 2017

Ms. Gan presented the draft meeting schedule and asked Committee members if there was a need to change any of the dates. No changes were proposed. Mr. Pentin moved approval, and Ms. Cabanne seconded. The motion passed unanimously (4-0).

6.6 Reducing Truck Traffic Counts

Mr. Runyon described the limit on refuse truck traffic set by the Conditional Use Permit, and the limitations on independent truck traffic counts as defined by the Settlement Agreement. He added that he took a 2-hour truck count during the morning limit period and found that the current refuse truck traffic was less than ½ of the CUP limit. After further discussion, including consideration of additional traffic due to the new stream from Newark, Mr. Pentin moved that there be two truck counts in summer months over the next three years, with the need for truck counts to be re-evaluated after that. Mr. Woerner seconded the motion. It passed unanimously (4-0).

6.7 Annual Report Topics

In addition to the topics described in the memo on this topic, Committee members requested coverage of the following topics:

Mr. Pentin: Information regarding the kit fox and burrowing owl monitoring issue.

Ms. Cabanne: inclusion of a botanist and wildlife biologist in the review of Conservation Plan Area monitoring reports; and the status of the new Waste Discharge Requirements and MRP.

6.8 Announcements

Mr. Tam provided a letter from the Alameda County Parks, Recreation and Historical Commission to California Natural resources Secretary John Laird, advocating suspension of the approval process for expansion of Off-Highway Vehicle use on Tesla Park land. (This letter has been posted on the Committee web site.)

Mr. Woerner left at 5:50.

7. Agenda Building

Mr. Runyon stated that he had numerous questions and issues to respond to for the next meeting. No other topics were added.

8. Adjournment

The meeting was adjourned at 5:52 p.m.



COMMUNITY MONITOR COMMITTEE

Altamont Landfill Settlement Agreement

Minutes of January 11, 2017

DRAFT

1. Call to Order
The meeting was called to order at 4:01 p.m.

2. Roll Call

Members Present:	Robert Carling; Donna Cabanne; Jerry Pentin; Sarah Fockler; Arthur Surdilla
Absent:	Robert Cooper, Altamont Landowners Against Rural Mismanagement; David Tam
Staff:	Judy Erlandson, City of Livermore Public Works Manager; Marisa Gan, City of Livermore Recycling Specialist; Alona Harris, City of Livermore Recycling Programs Intern; Michael Burns, ESA; Kelly Runyon, Community Monitor
Other:	Jessica Jones, JK Jones Consulting, with Waste Management

3. Introductions
Those in attendance introduced themselves.

4. Approval of Minutes
The minutes could not be approved because a majority of Committee members that attended the October meeting was not present. Consideration of the minutes was deferred until later in the meeting.

5. Open Forum
There was no Open Forum discussion.

6. Matters for Consideration
 - 6.1 Status of Five-Year Permit Review
Mr. Runyon reported that the Monitoring and Reporting Program (MRP) for the ALRRF's permit from the Central Valley Regional Water Quality Control Board (Water Board) had been approved shortly after the Committee's October meeting. With that, the Water Board permit was substantially complete and the groundwater monitoring program could be continued as specified in the new MRP. He also presented a table comparing the new MRP with the previous one, noting that the new one requires higher monitoring frequencies and greater detail in analyses and reporting.

Referring to a table summarizing monitoring requirements, Ms. Cabanne and Mr. Pentin asked for additional detail regarding stormwater sampling requirements for stormwater basin SW-2. Mr. Runyon stated that he would provide a further explanation at the next meeting.

Mr. Runyon also noted that Five-Year Permit Review activity has now shifted to the LEA and CalRecycle, with CalRecycle reviewing the application for the renewal of the Solid Waste Facility Permit. Mr. Surdilla confirmed this. The next step, if CalRecycle concurs, will be for the LEA to issue the renewed permit.

6.2 Groundwater Analyses, Sample Contamination, and Well Purging

Michael Burns addressed Committee members' concerns about groundwater data, field sampling, and laboratory contamination, by explaining each of the steps in those processes. He also noted the types of equipment involved and the opportunities for sample contamination to occur; and he explained the terms that define several trigger levels (limits) that are referenced in laboratory reports. Special types of samples (blanks, spikes, etc.) were also described. In addition, he explained the need for low-flow purging to obtain a sample that represents the groundwater close to the well, without introducing sediment that can mask some potential contaminants. In conclusion, he noted that although laboratory contamination is a persistent problem with samples analyzed for the ALRRF, he would not recommend that a different lab be used, because (a) the problem arises to some extent with any lab running these analyses, and (b) use of a different lab could result in changes in the data that do not reflect actual changes in the groundwater.

In discussion, Mr. Pentin asked if there is a defined threshold that determines if a monitoring well has found a significant problem. Mr. Runyon responded that at these low concentrations, below regulatory trigger levels, the best practice is to watch the data for trends. An upward trend in concentrations of a contaminant would be cause for concern.

6.3 Review of Reports Provided by ALRRF

Mr. Runyon presented reviews by an ESA botanist and biologist of the 2015 Conservation Plan Area monitoring report. He noted that although there was no explicit requirement to monitor for burrowing owl or San Joaquin Kit Fox, the ALRRF apparently expected that. He also noted that the ESA reviewers had expressed several concerns about monitoring and reporting techniques that underlie the report. Ms. Fockler stated that she had passed the reviews along to the monitoring consultant. She also said that the US Fish and Wildlife Service and other permitting agencies had not raised issues with the report. Ms. Cabanne expressed some concern that the timing of some surveys was not optimal.

6.4 Update re Fill Area 2 Status and Related Issues

Mr. Runyon reported that the Water Board had conducted several inspections in November and subsequently issued several Notices of Violation. The most serious of these involved soil brought to the landfill for disposal which was

represented as Class 2 (not hazardous by Federal standards) but which was in fact hazardous based on Federal standards. The Water Board has ordered the landfill to remove that material. Ms. Fockler added that the ALRRF was granted an extension for the work plan required for this effort, and for several other requirements stemming from those Notices of Violation.

Ms. Cabanne asked for an update on the proposed work plan at the next Committee meeting.

Mr. Runyon also described the violation related to ALRRF's lessee Bio-Fuels, a waste-wood grinding operation that is having difficulties marketing its products and as a consequence, is stockpiling processed and unprocessed material for far longer than regulations permit. Mr. Surdilla added that the site was still in violation as of the date of the Committee Meeting.

Ms. Cabanne asked if there would be a fine or other penalty. Mr. Surdilla replied that his office is working with County Counsel to determine an appropriate next step.

Mr. Carling asked what options the operator would have. Mr. Runyon replied that a small amount of it was being used by the landfill. Other possible options were discussed by Committee members.

Mr. Runyon also reported that the Water Board had noted that stormwater from the Bio-Fuels operation and from the adjoining tire shredding operation was not being monitored, and their Notice of Violation required that it be included in the stormwater monitoring program for the ALRRF facilities.

Ms. Cabanne asked to be updated on the status of the violations at the next meeting.

6.5 Reports from Community Monitor

Mr. Runyon reviewed the monthly reports of site visits, noting that in October there had been a delivery of hazardous liquid into a solidification basin under an incorrect profile report; but the error (by the generator, not the landfill) was found before the material was disposed on the landfill, and the material was removed.

Ms. Cabanne expressed concern that this type of problem continues to occur. Ms. Fockler noted that because the generator provided an incorrect profile, they are responsible and they bore the cost of removal and disposal as well as rebuilding of the solidification basin where the material had been deposited.

Mr. Runyon also noted the preparation of a 10-acre test site for an evapo-transpiration (ET) final cover in Fill Area 1, and he briefly described how such a cover would function.

Ms. Cabanne asked where else this has been done. Mr. Runyon stated that he would respond in the next Committee meeting. Ms. Cabanne also asked if the

ET cover would block the escape of methane. Mr. Runyon said that unless there is an impervious membrane or clay layer in the cover system, that could not be assured; but the gas well system is expected to keep the gas from escaping into the atmosphere.

Mr. Runyon also reported on the sighting of a California tiger salamander at a pond construction area. Ms. Fockler added that the salamander was relocated to an appropriate pond in the Conservation Easement area.

Mr. Pentin pointed out that the San Francisco tonnage listed in the monthly summary has been zero for some time. Mr. Runyon agreed to delete it beginning with the 2017 reports.

6.6 Draft Annual Report

There was consensus among voting Committee members (Pentin, Carling, Cabanne) to approve the final version of the Annual Report at the next Committee meeting.

6.7 Announcements

There were no announcements.

7. Agenda Building

In addition to approval of the final Annual Report, approval of the minutes from the October 2016 meeting will be considered.

8. Adjournment

The meeting was adjourned at 5:19 p.m.

memorandum

date March 31, 2017

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 4/12/17 - Agenda Item 6.1 - Answers to Committee Members' Questions

Sampling Requirements for Stormwater Basin SW-2

During the January Committee meeting, members asked for clarification of the reference in a table comparing water sampling and analysis requirements from the 2009 and 2016 WDRs, with regard to storm water basin sampling. In the 2009 WDRs, the requirement was for samples to be taken up to three times, when discharge is occurring, from two points at each of three basins, for a maximum of 18 samples. The three basins are Basins A, B and C, which receive water from Fill Area 1 and surroundings. The two points are (i) within each basin, and (ii) at the discharge from each basin.

In the 2016 WDRs, the requirement is for a sample to be taken only from within each of six basins, twice during the wet season, whether discharging or not. The six basins are A, B and C for Fill Area 1, and SW-A, SW-1 and SW-2 for Fill Area 2. The total number of samples is twelve. This approach recognizes that the Storm Water Industrial Permit requires additional sampling of basin *discharges* for specific pollutants, and it also recognizes the Water Board's concern that the storm water basins could concentrate pollutants which might then leach into groundwater.

The table presented at the last meeting will be corrected to reflect this clarification.

Update on Hazardous Material Removal

The hazardous material in question is contaminated soil that was delivered to the landfill as Class 2 cover soil, documented by an erroneous profile sheet. The Water Board has required that this soil be removed, and that post-excavation sampling confirm successful removal.

Update: Initially, the quantity of soil was believed to be 2585.44 tons. The Water Board required a work plan for removal to be submitted by December 30, 2016, and for removal to be completed by February 28, 2017. However, in a letter dated January 19, 2017, Water Board staff modified the initial Notice of Violation as follows:

- The tonnage was revised downward to 965 tons, based on a review of trucking manifests.
- The deadline for submittal of a work plan was extended to February 28.
- The deadline for documentation of removal was extended to April 28.

Update on Status of Water Board Violations

The violations in question are those requiring that the Bio-Fuels wood grinding operation reduce and relocate its footprint, and that the ALRRF incorporate their site and surroundings into its storm water sampling and reporting. In a February 1, 2017 letter to Water Board staff, the ALRRF stated that the current size and location of the wood grinding operation is consistent with the ALRRF's permit documents, and that the wood grinding and tire shredding areas are being incorporated into storm water sampling and reporting. During the February site visit, I requested the updated storm water plans; however, they were being further revised by corporate management and were not available at that time. They will be reviewed for the Committee when they become available.

Landfills Using Evapotranspiration (ET) Final Cover

A review of information available on line has found more than 20 California landfills that have installed ET final cover on part or all of their site. The vast majority of these are in areas that are more arid than eastern Alameda County. Many of the sites on the USEPA's reference list¹ are in Kern, Los Angeles, Orange, San Bernardino, and San Diego Counties. The ET site with rainfall most similar to the ALRRF is probably the Kiefer Road Landfill in Sacramento County. In 2016 the County issued a request for bids to apply an ET cover to 12 acres of that landfill.

It was interesting to also learn that an ET cover system was tested at the ALRRF several years ago. Published summaries indicate that the test failed in its third year when rainwater penetrated the test cover. The failure was attributed to the cover soil having been overly compacted, so that cracks formed when it dried out.

The design of these systems is somewhat counterintuitive: soil that is less compacted promotes a denser mat of vegetative roots and allows water to reach those roots evenly, where it is absorbed before it can penetrate further. The design also involves a careful choice of native vegetation that is well adapted to local wet and dry seasons. Restoring 250 acres of native grassland in eastern Alameda County, to keep water from penetrating one of the largest landfills in the State, is an intriguing prospect. Preventing burrows by rodents and by their predators, as well as ponding and other potential ways for water to accumulate, may be a challenge. Sealing off the landfill gas wells while maintaining their operation is a further challenge. If the 10-acre ET test plot now being constructed at the ALRRF performs well, these larger issues will need to be addressed. Experience at other sites will be helpful.

¹ <https://clu-in.org/products/altcovers/>, accessed March 29, 2017.

memorandum

date March 31, 2017

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 4/12/17 - Agenda Item 6.2 - Five-Year Permit Review and CASP Project

Five-Year Review of Solid Waste Facilities Permit

The five-year review has progressed through the issuance of Waste Discharge Requirements and supporting documents by the Central Valley Regional Water Quality Control Board. It currently is under review by the Local Enforcement Agency (Alameda County Department of Environmental Health) and CalRecycle (the California Department of Resources Recycling and Recovery). These agencies jointly administer the Solid Waste Facility Permit and related State and local regulations governing the safe disposal of solid waste.

Development of the Covered Aerated Static Pile (CASP) Composting Project at the ALRRF

The following is provided as background information for the Community Monitor Committee, since this project may transition from the planning and permitting phase into construction this year.

The ALRRF's landfill related operations are subject to Alameda County Conditional Use Permit C-5512. A separate, more recent use permit addresses the possible future operation of a Material Recovery Facility (MRF) and a composting operation at the site.

Waste Management is currently obtaining permits to construct and operate a covered aerated static pile (CASP) compost operation. It would be on land that is within the ALRRF property but outside of the refuse placement boundaries of Fill Area 1 or Fill Area 2. Descriptive and permit-related documents are currently available from this CalRecycle web page: <http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0325/Document>. As part of the local approval process, a public meeting describing the project was held in Livermore in March.

In a Community Monitor Committee meeting on July 10, 2013, Waste Management took the position that the Committee's purview only includes those aspects of the CASP, or a future MRF, which affect the operations of the landfill. Committee members did not agree and passed a motion stating their position. Subsequent email between the Community Monitor and WMAC staff further clarified Waste Management's position but did not substantially change it. Records of these communications are available on the Committee's web site.

To date, preliminary site preparation for the CASP project has had no noticeable effect on landfill operations. Nor is it likely to have an effect while being constructed, since the CASP site is completely separate from Fill Area 1. If implemented as planned, the CASP will use space on both sides of the Fill Area 2 access road, and it may share mobile equipment with refuse landfill operations.

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memorandum

date March 31, 2017
to ALRRF Community Monitor Committee
from Kelly Runyon, Michael Burns
subject CMC Meeting of 4/12/17 - Agenda Item 6.3 - Review of Reports Provided by ALRRF

Mitigation Monitoring Report for Use Permit C-5512

At the beginning of each calendar year, the ALRRF provides a report on compliance with each of the mitigations required by the use permit for the landfill, C-5512. The 2016 report was received at the end of January 2017. In general, the requirements are being satisfied, but the following new developments are noteworthy:

1. The projected date for Fill Area 2 operations to begin is given as the first quarter of 2019. [Condition 4.6]
2. The Five-Year Permit review includes review by CalRecycle of closure and post-closure plan documents. [9]
3. As required, the ALRRF is submitting post-construction compliance reports to the US Fish and Wildlife Service as components of Fill Area 2 are constructed. In 2016 this included the Phase 1 portion of Fill Area 2 and the Leachate Storage Impoundment. [26]
4. The ALRRF states that it has satisfied the requirement to establish replacement wetlands before disturbing existing ponds in the Fill Area 2 expansion area. [32] (The replacement wetland has been constructed, and wetland features were installed there, but the functionality of that area as wetland habitat is an open question because it was heavily impacted by sediment soon after it was constructed.)
5. The required survey monuments, to measure landfill settlement, have been established. [40]

Air Emissions Report

The most recent Semi-Annual Report to the Bay Area Air Quality Management District (BAAQMD) covers the period from June 1, 2016 through November 30, 2016. The key points from this document are:

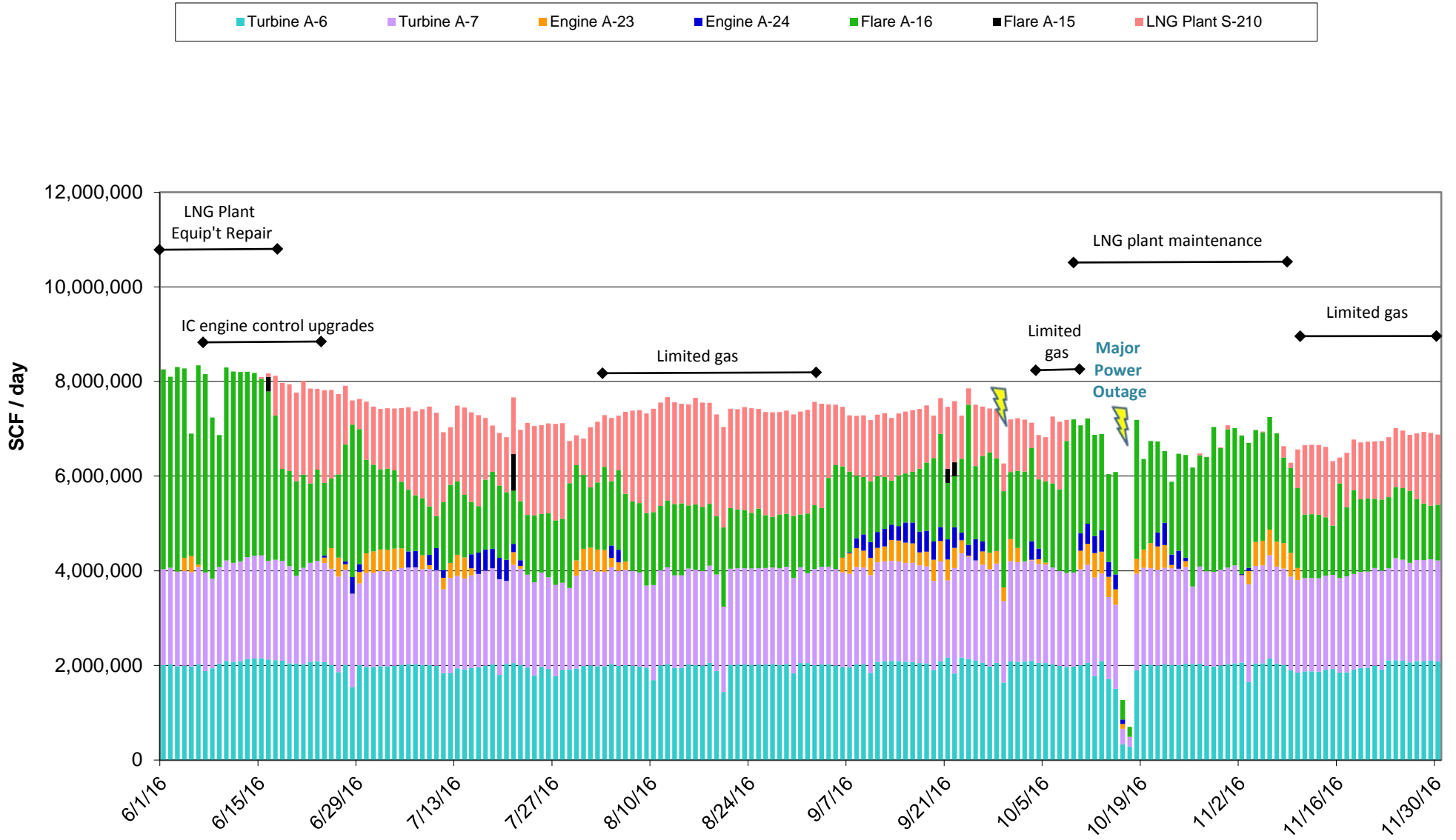
- More gas wells permitted - On June 6, 2016, the BAAQMD issued a permit to the ALRRF to continue to allow the landfill to decommission gas wells and install new wells, as needed, within specified limits. The limits in the previous version of this permit had been reached, because the ALRRF decommissions unproductive wells and installs replacements annually as needed. The new permit allows the landfill to

decommission up to 100 vertical wells and 15 horizontal wells, and install up to 120 vertical wells and 25 horizontal wells or tire trench collectors.

- Recent gas well installations - Under these new limits, nine vertical landfill gas wells were decommissioned and 22 new wells were installed. The new wells were installed in the latter part of the reporting period and were not operated until after the end of November. In addition, one well was permitted to operate at an above-normal temperature with appropriate monitoring to detect conditions that could indicate an underground fire.
- Surface emissions monitoring for the second quarter of 2015 was conducted in May 2016; for the third quarter of 2016, monitoring took place in September. There were 12 surface emission points detected in May, and 23 in September. The larger number in late summer is not surprising, as the soil has dried out and is subjected to more temperature extremes. Both of these effects can produce cracks in cover soil that allow landfill gas to escape. All of the detected leaks were repaired, and in all cases, the repairs were still intact when checked 10 days and 30 days later.
- Emission Control Devices Pass Source Tests - During the previous reporting period, most of the gas combustion devices (two internal-combustion engines, two turbines, and the smaller “backup” flare) were source-tested in February and March for compliance with emission limits; all passed. In May of 2016, the larger primary landfill gas flare was also tested, and it passed as well.
- Gas Extraction near Well E-20B - Throughout this monitoring period, the two small, shallow landfill gas wells near groundwater monitoring well E-20B were operated at a fairly high vacuum level, recovering low concentrations of methane but apparently not pulling in air from above the ground surface.

Figure 6.4-1 on the following page shows the amounts of landfill gas consumed by each of the combustion systems at the ALRRF. This bar chart illustrates two issues that arose during the reporting period. First, there was a gradual decline in gas production, which should have been relieved when the newly installed wells were first operated in December; the next semiannual report will show the change. Second, in mid-October there was a substantial power outage at a nearby substation that lasted more than a day and affected the electronic controls for all of the gas-consuming equipment, effectively shutting down energy recovery until PG&E could remedy the problem.

Figure 6.3-1 - ALRRF Daily LFG Flow
(values derived from Title V Report)



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Second Semiannual – Annual 2016 Groundwater Monitoring Report

This is the first regular groundwater report that has been prepared under the July 2016 revisions to the ALRRF's Waste Discharge Requirements (WDRs) and Monitoring and Reporting Program (MRP). In overview, we note the following:

- In printed form as submitted (with raw lab data excluded), the new report is **more than 50% thicker** than the one which preceded it. This reflects the greater number and broader scope of requirements in the July 2016 revisions.
- The scope **now includes landfill gas data** near certain existing monitoring wells, graphical illustrations of change in the landfill surface, graphs of groundwater elevations through time, and other details not previously required.
- Most aspects of **stormwater** controls and sampling have been shifted to a separate annual report focused solely on stormwater. The ALRRF is regulated as an industrial storm water generator under the state stormwater regulations that first took effect in 2015. Report documents are transitioning from the prior format and reporting method to the current requirements.
- When Fill Area 2 begins to operate (currently projected for 2019), more wells will be sampled and more analyses will be run, further expanding this report.

ESA staff have reviewed the document for consistency with the new WDRs and MRP. In general, the report complies with WDR requirements. A few clarifications and corrections were needed, but it is apparent that the report is intended to fully comply with the MRP requirements.

The attached memorandum from Langan Engineering provides findings from their review of the Second Semiannual Report. In summary:

Volatile organic compounds (VOCs) continue to be found at wells E-05, E-07 and E-20B. Concentrations are similar to historical data.

In well MW-12, which is installed downslope and downgradient of E-20B, 1,1-dichloroethane continues to be found in very low concentrations. No other VOC was found there, and farther downgradient at wells PC-1B and PC-1C, the only VOCs that have been found are attributed to laboratory cross-contamination.

Sampling of future Fill Area 2 monitoring wells has found no VOC's in most cases, and single occurrences at very low concentrations (below reporting levels) as follows:

- Toluene in MW-8A
- Naphthalene in MW-15B
- Chloroform in MW-18

All three of these wells are east of the eastern limit of Fill Area 2, quite far from any refuse disposal activity.

The new MRP requires testing of unsaturated-zone samples (from within and beneath the landfill) for the herbicide dinoseb and the organic chemical acetophenone¹. Two occurrences of dinoseb were found in

¹ Acetophenone occurs naturally in some foods and also is used to synthesize drugs, fragrances and plastics.

samples from the valley drains beneath Unit 1 and Unit 2 of Fill Area 1. Concentrations were 3.9 and 1.4 micrograms per liter (parts per billion) respectively. Acetophenone was not detected.

The new MRP requires semiannual sampling of water within sedimentation basins. Several VOC's were found: acetone, chloromethane and styrene. The laboratory report stated that the styrene and chloromethane were likely caused by a malfunction in the sampling equipment, and that the acetone is likely to be a laboratory contaminant.

Continued review of the data is recommended, especially at wells where previous detections have occurred.

Minor and One-Time Reports

The following reports have also been reviewed as they have been made available through the Water Board's GeoTracker website or directly from ALRRF staff.

The September 29, 2016 S.O.P. for Solidification describes the ALRRF's approach to blending liquid and solid wastes to prepare a mixture that prevents free liquid from being placed in the landfill. The mixing pits, mixing methods, loadout, and inspection of the blend for proper dryness are described. In a review letter dated January 24, 2017, Water Board staff express concern that (a) blended liquids might react chemically in the mixing pits, (b) the construction of the pits does not assure that leakage will not occur, (c) visual monitoring of blended material may not prevent the presence of free liquid in the mix, and (d) visual monitoring of the mixing pits may not detect leakage from them into the waste below. The letter requires submittal of a technical report to address these and other issues by April 1, 2017.

A November 15, 2016 Winterization Plan by ALRRF describes general guidelines to prepare for the rainy season, and measures that were taken in specific areas to control storm water, prevent erosion, and reduce the entrainment of silt in storm water. Photos of site features, including before-and-after photos of control measures, illustrate how the guidelines have been applied. Litter removal and the placement of energy-dissipating obstacles to flow are also shown.

A December 1, 2016 letter from SCS Engineers (on behalf of ALRRF) to Central Valley Regional Water Board staff addresses that Water Board's requirement for a Work Plan to identify and evaluate potential sources of VOCs that may have impacted stormwater at the facility. It identifies six sampling locations in drainage features (e.g. ditches) that are downstream of specific industrial activities such as the maintenance shop and the LNG plant. It proposes to sample them during storm events, twice in the current rainy season and twice in the next rainy season. A technical report would be submitted by June 30, 2018.

A December 15, 2016 report by Geosyntec addresses requirements in the 2016 WDRs to evaluate the adequacy of the current groundwater monitoring system and propose additional wells to adequately monitor Fill Area 2 throughout its development. This report, 129 pages in length, will likely become the basis for discussion with the Water Board for revisions to the MRP as Fill Area 2 is developed. This report asserts that on the whole, the existing monitoring well network is adequate; that long-term planning for Fill Area 2 monitoring wells must await the designs of later phases of Fill Area 2; and that with two added wells at the downslope edges of the Phase 1 and Phase 2 areas, the well system will provide an adequate basis for groundwater flow mapping. A well in the canyon that runs southeast from well E-20B is also proposed, and changes to groundwater wells near stormwater basins are discussed. In all, five additional wells are proposed for installation in the near future.

The January 17, 2017 Work Plan to Remove Trash/Waste, submitted to the Regional Water Board, describes methods currently used to prevent and collect windblown litter. These include mechanical and manual collection, litter fences, and landfilling techniques to reduce the spread of litter from the working face of the landfill.

A February 1, 2017 letter from ALRRF to Water Board staff describes the ALRRF's position regarding the violation requiring that the size and location of the wood grinding operation be reduced. The letter points out that the size and location are consistent with current permit documents, and it describes efforts by WMAC to (a) ensure that stockpile location and size requirements are met, and (b) storm water runoff monitoring is properly established.

Several other reports that supported development of the Waste Discharge Requirements were also reviewed earlier in 2016.

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TO: Kelly Runyon
Michael Burns, ESA

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

DATE: 28 March 2017

PROJECT: Altamont Landfill (ALRRF)
Livermore, California
Langan Project: 750477407

SUBJECT: Groundwater and Storm Water Analysis for Community Monitor Progress Report #19

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 was conducted by SCS Engineers, and presented in the following report:

- SCS Engineers, Second Semiannual 2016 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility (WDR Order Nos. R5-2016-0042 and R5-2016-0042-1), Long Beach, California dated 1 February 2017.

The report addresses the monitoring and reporting requirements defined by Monitoring and Reporting Program No. R5-2016-0042-01, (MRP) issued by the Central Valley Regional Water Quality Control Board (Water Board) for the Altamont Landfill and Resource Recovery Facility owned and operated by Waste Management of Alameda County, Inc.,

Starting with the Second Semiannual 2016 monitoring event, the monitoring and reporting requirements for Fill Area 1 and future Fill Area 2 are being conducted to fulfill the MRP which was adopted in late October 2016. However, due to the timing of the MRP adoption, this report also incorporates portions of the 2009 MRP. 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.

Fill Area 1 wells are sampled on a semiannual basis, with the exception of E-20B, which is sampled quarterly. No waste has been placed in Fill Area 2 and ALRRF anticipates Phase I of Fill Area 2 may begin receiving wastes by First Quarter 2019. The first semiannual 2016 groundwater sampling activities for Fill Area 1 and Fill Area 2 were conducted November and December 2016. Wells associated with future Fill Area 2 are monitored on a semiannual basis to establish baseline conditions. Wells and monitoring points were generally found to be in compliance during the Second Semiannual 2016 sampling event.

Second Semiannual 2016 Groundwater Sampling Results

Detection and Corrective Action Well Inorganic and Volatile Organic Compound Concentrations

Based on the analytical results of the November 2016 monitoring event, detected concentrations of inorganic compounds remain stable in the detection and corrective action wells sampled. Volatile organic compounds (VOCs) not attributable to laboratory cross contamination were detected in three wells, as indicated in the table below. At these well locations, the VOCs detected and the respective concentrations were similar to historical data.

MEMO

	Acetone	Chlorobenzene	1,4-Dichlorobenzene	Cis-1,2-dichloroethene	1,1-Dichloroethane	1,1,-Dichloroethene	1,2-Dichloropropane	Dichlorodi-fluoromethane	Dichloro-fluoromethane	Diethyl ether	Methylene Chloride	Methyl tert-butyl ether (MTBE)	Tert-Butyl/ Alcohol	Tetrachloroethene	Tetrahydrofuran	Trichloroethene	Vinyl chloride	Comments
E-03A																		No VOCs detected
E-05										X		X						Matches historical data
E-07				X	X			X	X	X		X		X		X		Matches historical data
E-17																		No VOCs detected
E-20B			X	X	X		X		X	X		X	X		X	X		Matches historical data
E-23																		No VOCs detected
MW-2A																		No VOCs detected
MW-5A																		No VOCs detected
MW-6																		No VOCs detected
MW-7																		No VOCs detected
MW-11																		No VOCs detected
PC-1B																		No VOCs detected
PC-1C																		No VOCs detected

In monitoring well E-20B, vinyl chloride was below the reporting limit of 0.5 micrograms per liter (µg/L) during the November 2016 monitoring event. Vinyl chloride has been historically detected in monitoring well E-20B since 1999. 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 13 August 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. Furthermore, the source of vinyl chloride has been attributed to landfill gas. However, in a letter dated 23 May 2014, the Central Valley Regional Water Quality Control Board (Water Board) remarked about its 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.

In addition, the MRP requires the ALRRF to report on landfill gas extraction well settings and gas composition at gas wells within 1000 feet of well E-20B.

The MRP also requires sampling of select monitoring wells for acetophenone on a semiannual basis and dinoseb on an annual basis. Included in the list of groundwater monitoring wells are the detection monitoring wells E-05, E-07 and E-20B. With the exception of a below reporting limit detection of acetophenone in E-05, no other detections were noted in these groundwater monitoring wells.

Well E-20B CAP Revision

Upon review of the First Semiannual 2013 Groundwater Monitoring Report, the Water Board identified issues related to the monitoring and corrective action program. One of the requests from the Water Board was for the re-evaluation of the monitoring program for monitoring well E-20B and preparation of a plan to address the continuing detections of VOCs in E-20B. The Revised CAP, prepared by WMAC, discussed the installation of a new monitoring well and two to three new landfill gas (LFG) extraction wells, to improve monitoring effectiveness and to address the source of the impacts detected in E-20B. In a letter dated 10 October 2014, the Water Board approved the installation of the new groundwater monitoring well.

Well installation activities were performed by ALRRF's consultant, Geosyntec, in September 2014. The well installation report, dated 16 December 2014, documented the installation and sampling of monitoring well MW-12, located 650 feet downgradient of E-20B. Monitoring well MW-12 was sampled monthly from September 2014 to March 2015

MEMO

and quarterly from May 2015 to November 2015. Based on a Water Board letter dated 22 January 2016, MW-12 is now being monitored on a semiannual basis to track the effectiveness of enhancements made to the LFG collection system in January 2015.

During the Second Semiannual 2016 period, 1,1-dichloroethane (1,1-DCA) was detected at a concentration below its laboratory reporting limits in MW-12. 1,1-DCA has historically been detected below its laboratory reporting limit. SCS Engineers have previously stated that the low concentrations of VOCs detected in MW-12 establish the downgradient extent of groundwater impacts noted in E-20B. In January 2015, two new LFG extraction wells, designated as 687 and 688, were installed in the vicinity of E-20B. Over the next few months, WMAC planned to evaluate the wells in context of overall LFG collection and control system. Langan evaluated the potential effect of gas extraction wells 687 and 688 on the VOC concentrations at Well E-20B and documented our assessment in a separate memorandum titled *Effect of Gas Extraction Wells 687 and 688 on Well E-20B* dated 17 March 2016. Our assessment concluded that if VOCs are partitioning from vapor at gas extraction wells 687 and 688 into groundwater that is migrating downgradient to E-20B, it would take a year or longer to see a reduction in VOC concentrations at E-20B as a result of landfill gas extraction at wells 687 and 688. However, to-date, a decrease in VOC concentrations has not been noted in MW-12.

Detection wells PC-1B and PC-1C are also currently used 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 are also being monitored quarterly and have not had any VOC detections since the start of monitoring in 2006, with the exception of those attributable to laboratory cross contamination (acetone and methylene chloride). In a letter dated 17 March 2015, SCS Engineers proposed sampling of MW-3B and MW-3C located near E-20B which are screened in a deeper zone. In the 22 January 2016 response letter, the Water Board said that MW-3B could be sampled on a semiannual basis and that sampling of MW-3C should be added on an annual basis. VOCs that are consistently detected in E-20B were not detected in the deeper groundwater zone monitoring wells MW-3B and MW-3C during the Second Semiannual 2016 monitoring event. Those wells had high concentrations of total dissolved solids, but this can be interpreted as high mineral content due to the age and depth of the groundwater at this location.

Fill Area 2

Waste placement in Fill Area 2 is currently due to begin in First Quarter 2019. According to the 2016 MRP, Fill Area 2 wells MW-8A, MW-8B, MW-9, MW-10, MW-13B, MW-14, PC-1B, PC-1C, PC-2A, and WM-2 will be assessed when filling begins. However, for background water quality data, Fill Area 2 wells have been sampled since 2014. During the Second Semiannual 2016 period, no VOCs were detected in samples from monitoring wells MW-8A, MW-13B, MW-14, MW-15B, MW-16, MW-18, PC-6B[R] with the exception of a single below reporting limit detection of a VOC in wells MW-8A, MW-15B and MW-18. MW-8A had a below reporting limit detection of toluene, MW-15B had a below reporting limit detection of naphthalene, and MW-18 had a below reporting limit detection of chloroform.

Violations

In September 2016, ALRRF received an NOV for acceptance of hazardous liquid waste when a customer brought hazardous waste under a non-hazardous profile number. Removal of the waste, proper disposal, and rebuilding of the solidification basin that held the waste were completed by contractors of the customer that brought in the waste.

Two NOV's were received in November 2016 —

1. For acceptance of hazardous waste/impacted soil from a former Manufactured Gas Plant (MGP) site in San Rafael. Water Board's NOV noted that approximately 2,585 tons of waste transported between 1 February and 4 August 2016 to the landfill for disposal was not properly characterized for VOCs and SVOCs. The soil disposed at the landfill consisted of benzene above its toxicity characteristic leaching procedure (TCLP) limit. ALRRF is reportedly working with the customer to facilitate removal of the impacted material. In a 19 January

MEMO

Groundwater and Storm Water Analysis for Community Monitor Progress Report #19
 Altamont Landfill (ALRRF)
 Livermore, California
 Langan Project: 750477406
 28 March 2017
 Page 4

2017 letter to the ALRRF, the Water Board reduced the estimate from 2,585 to 965 tons of contaminated soil.

2. For a large stockpile of green and wood waste and windblown litter that was noticed by the Water Board during their site walk on 25 October 2016. ALRRF is reportedly working with the third party green and wood waste grinder to remove the material.

Unsaturated Zone Inorganic and VOC Concentrations

The 2016 WDR/MRP specifies VZM-A¹, VD², and VD2³ in Fill Area 1 and UD-1⁴, LD-1⁵, SI-1⁶, and VZM-B⁷ in Fill Area 2 be monitored monthly for presence of liquid. If liquid is present in any monitoring point, samples are to be collected on a semi-annual basis.

In December 2016, samples were collected from VZM-A, VD, VD2, and VZM-B. UD-1 and LD-1 were dry. The 2016 MRP requires sampling of VZM-A, VD, and VD2 for acetophenone on a semiannual basis and dinoseb on an annual basis. With the exception of dinoseb detected in VD and VD2 at a concentration of 3.9 and 1.4 µg/L, respectively, no other detections were noted in the unsaturated monitoring points.

During Fourth Quarter 2016, detected concentrations of inorganics, VOCs, and/or dinoseb at VZM-A, VD, and VD2 were consistent with historical concentrations and appeared to be stable, i.e. concentrations have not shown an increasing trend. The VOC detections at VZM-A, VD, and VD2, have been attributed to landfill gas. Detected concentrations of VOCs and inorganics in unsaturated zone monitoring points will be evaluated in subsequent monitoring reports for any potential increasing trends.

Leachate Inorganic and VOC Concentrations

The leachate monitoring network in the 2016 MRP includes Fill Area 1 Unit 1 Leachate Sump (LS), Fill Area 1 Unit 2 Leachate Sump (LS-2), and Fill Area 2 Surface Impoundment SI-1 Leachate Sump (LS-3). The 2016 MRP requires semi-annual sampling of the leachate sumps. In addition, the 2016 MRP requires sampling of LS and LS-2 for acetophenone on a semiannual basis and dinoseb on an annual basis. With the exception of acetophenone detected at a below reporting limit concentration of 0.59 µg/L in LS, no other detections were noted in the leachate sump samples.

Inorganic, VOC and acetophenone concentrations at leachate monitoring point LS and LS2 during December 2016 were similar to historical values.

Stormwater Retention Basins

In accordance with the 2016 MRP/WDR, water inside sedimentation basins is to be sampled on a semiannual basis. During the first semiannual period of each year, samples are to be collected between January and May and for the second

¹ VZM-A is a monitoring location in the vadose zone (unsaturated zone below the landfill liner, and above the groundwater table).
² VD is the monitoring location for the valley drain system beneath the clay liner at Unit 1. This drain system is designed to collect and drain groundwater that accumulates beneath the liner, or any liquids that seep below the liner at Unit 1.
³ VD2 is the monitoring location for the subdrain beneath the engineered liner at Unit 2. This drain system is designed to collect and drain groundwater that accumulates beneath the liner, or any liquids that seep below the liner at Unit 2.
⁴ Phase I Unsaturated zone Underdrain
⁵ Leak Detection
⁶ Surface Impoundment
⁷ Vadose zone monitoring sump

MEMO

Groundwater and Storm Water Analysis for Community Monitor Progress Report #19
Altamont Landfill (ALRRF)
Livermore, California
Langan Project: 750477406
28 March 2017
Page 5

semiannual period, the samples are to be collected in October and December. For the Second Semiannual 2016 period, samples were collected from water inside Basins A, B, and C in December 2016.

Inorganics in Stormwater

Reported concentrations of inorganic compounds in stormwater during December 2016 were similar to historical values.

Volatile Organic Compounds in Stormwater

VOCs detected in stormwater basin samples collected from Basins A, B, and C during 2016-2017 rainy season included low levels of acetone, chloromethane, and styrene. Acetone is a common laboratory contaminant. The detections of chloromethane and styrene have been related to laboratory cross contamination related to a problem with the purge and trap equipment associated with the matrix spike instrument. Langan will monitor for future detections of chloromethane and styrene to ascertain the conclusion presented in the semiannual report.

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 contaminants have previously been detected.

750477406.03 MP_Final Memo_1st Semiannual 2016 GW.docx

memorandum

date March 31, 2017

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 4/12/17 - Agenda Item 6.4 - Reports From Community Monitor

Attached are inspection reports for January through March of 2016.

The January inspection was announced and took place on January 19.

The February inspection was announced and took place on February 10.

The March inspection was unannounced and took place on March 23, accompanying the LEA.

During these inspections, all landfill operating areas were observed. Recent LEA inspection reports were reviewed on-line. The Special Occurrences Log was reviewed in March.

During the February 10 site visit, on the slope above the west side of Fill Area 2 (FA2), a **small landslide** appeared to be forming. That slide continued to move, but by the March 23 visit, it had been covered to prevent additional rainwater from intruding. The two photos in the detailed reports show the situation on February 10 and March 23. Action will probably be taken to stabilize this area after it has dried. It is part of the FA2 Phase 3 excavation that is scheduled to occur later this year.

For the first three months of 2017, landfill management was focused on wet-weather operations: managing runoff, minimizing ponding and maintaining roadways. The wet weather reduced the spread of windblown litter, and although wet conditions limited access by the litter pickup crew, there was obvious improvement in reducing the amount of litter on the landscape. Recent repaving work on the main roads appears to have held up well. Several trees near the admin area, including one very large eucalyptus that was beginning to rot at the base, were taken down in February to protect buildings and power lines. A clogged-storm-drain incident in early January was handled promptly, preventing serious damage to the storm drain system (though some damage did occur to the parking areas and plumbing system in the admin area).

Additional details about these and other operations-related matters are provided in the attached reports. Issues that cause special concern are generally marked with yellow rectangles in the monthly inspection reports.

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. The large influx of Class 2 soil cover in December, the increased use of ground wood waste as ADC, and the diminished deliveries of treated auto shredder waste are new trends in the data.

ALRRF Community Monitor Monthly Report

January 2017

Monthly Tonnage Report for December 2016, received January 16, 2017

Tonnage Summary:		<u>tons</u>
Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	78,544.24
1.2	Other Out of County Disposal Tons	1,892.99
	subtotal Disposed	<u>80,437.23</u>
Disposed, By Source Type		
2.1	C&D	326.12
2.2	MSW	73,025.19
2.3	Special Wastes	7,029.10
	subtotal Disposed	<u>80,380.41</u>
	Difference involved incorrect classifications of 4 loads. Corrections have been made to the tonnage database.	-56.82 -0.07%
Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	10.73
2.5	Revenue Generating Cover	101,029.87
	Total, 2.1 - 2.5	181,421.01
Materials of Interest		
2.3.1	Friable Asbestos	1,114.89
2.3.2	Class 2 Cover Soils	70,482.36
2.5.1	Auto Shredder Fluff	13,682.80
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	151.26
2.5.3	MRF Fines for ADC	1,537.65

ALRRF Community Monitor Monthly Report**January 2017**Site Inspection January 19, 2017, 2:15 - 3:45 PM.

Attended by K. Runyon; escorted by Sarah Fockler. Announced. Weather: light showers.

- The main issue at the time of this site visit was the effects of an extensive series of storms delivering substantial precipitation. In the 6 weeks since the previous site visit, nine storm events occurred, and more than 8 inches of rain were recorded in Livermore. (Weather Underground station KLVK). Rainfall at the landfill elevation would generally be greater than the amount recorded at KLVK.
- In the main parking area and the surroundings, much of the paved area was very muddy due to a recent overflow from the storm drain system above Basin A, during a very heavy rain event. This required immediate attention late at night by landfill staff to prevent serious damage.
- Along the lower part of the landfill access road, some of the roadside lights have been damaged. The cause is unknown but it appears that an inbound vehicle took the turn too wide and hit them.
- Due to recent heavy rains, much of the active part of Fill Area 1 has standing water and soft mud that is impossible to mitigate. Any attempt to create drainage causes ruts that fill with water and more mud. However these were perfect conditions to check for escaping landfill gas along the north side of Fill Area 1, where surface emissions are most commonly found. Inspection of the landfill surface, on foot in thin mud 12 to 18 inches deep, found no instances of escaping gas across a pathway roughly 200 yards long.
- Due to wet-weather accessibility problems, construction of the ET cover demonstration area along the south edge of Fill Area 1 was suspended.
- One tipper was available at the working face, which was in the wet-weather area east of the center of Fill Area 1. One compactor was spreading and compacting refuse; no dozers were working (or needed). One Fremont transfer truck was unloading, and none were waiting in line. The public area was immediately south of the tippers.
- The C&D and the plant-debris area were roughly 2/3 full. The solidification area appeared normal.
- A large number of gulls, possibly several thousand, were present at the working face. Gull depredation was on hold until the site dries out enough to provide access on foot.
- Litter was visibly reduced along the slopes east of Fill Area 1. The 5-person litter crew had also been removing litter from the Conservation Plan Area east of Fill Area 2, when the area was accessible (i.e. when dry enough for vehicle travel.)

Stormwater Controls and Best Management Practices

- All basins were full and discharging. Water appeared turbid in all basins seen (all but Basin C).
- The vicinity of the mitigation pond, visible from the east side of Fill Area 1, appeared to be holding a substantial amount of runoff.
- No serious side-slope erosion was noted in Fill Areas 1 or 2.
- Ditches, drains and inlets were generally clear of litter. As noted above, due to recent extensive rainfall, much of the top deck of Fill Area 1 was holding water and mud that will need time to drain and dry out.
- All roadways needed for everyday operations were functional.

Fill Area 1 Leachate Ponds

- Both ponds were still under construction. Membrane liners were present in both ponds but had not been completely fitted and sealed.

ALRRF Community Monitor Monthly Report**January 2017**Fill Area 2

- The Phase 2 excavation was checked for erosion on side slopes. None was seen.
- The stockpile of pallets at the toe of the Phase 1 portion of FA2, noted in the previous inspection, was no longer there.
- In the Phase 1 portion, stormwater collects at a berm that defines the base of the lined area. It then flows to the stormwater system through a channel that has been lined with plastic sheeting to prevent erosion. This configuration appears to be handling the stormwater volume adequately; see the photo below. Also note the groundwater (not leachate) seepage occurring on the lower part of the far side slope. Due to wet weather it is more pronounced than when that slope had first been excavated. As the landfill is further developed across this area in the future, a drain system will be needed beneath the liner to remove that groundwater continuously.



- The Fill Area 2 access road and related paved areas were in good condition.

Construction of Covered Aerated Static Pile (CASP) Compost Facility

- Excavation and grading work was evidently on hold due to wet weather.

ALRRF Community Monitor Monthly Report**February 2017**Monthly Tonnage Report for January 2017, received February 13, 2017

Tonnage Summary:		<u>tons</u>	
Disposed, By Source Location			
1.1	Tons Disposed from Within Alameda County	74,148.97	
1.2	Other Out of County Disposal Tons	3,340.15	
	subtotal Disposed	<u>77,489.12</u>	
Disposed, By Source Type			
2.1	C&D	499.74	
2.2	MSW	72,709.33	
2.3	Special Wastes	4,280.05	
	subtotal Disposed	<u>77,489.12</u>	
	Difference, correction for 1 refuse load logged as cover in October	0.00	0.00%
Other Major Categories			
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	17.41	
2.5	Revenue Generating Cover	27,962.49	
	Total, 2.1 - 2.5	105,469.02	
Materials of Interest			
2.3.1	Friable Asbestos	540.42	
2.3.2	Class 2 Cover Soils	2,561.62	
2.5.1	Auto Shredder Fluff	3,414.21	
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	114.07	
2.5.3	MRF Fines for ADC	1,258.36	

ALRRF Community Monitor Monthly Report**February 2017**Site Inspection February 10, 2017, 1:00 - 3:00 PM.

- Attended by K. Runyon; escorted by Sarah Fockler. Announced.
- Although rainfall has diminished in recent weeks (compared to December and January), the upper deck of the landfill is still quite muddy with ponding that is virtually impossible to drain; it is slowly diminishing over time.
- Tree trimming and removal was taking place in the area around the Admin building, near Basin A and Altamont Pass Road. A large eucalyptus was being completely removed, and several smaller trees were being trimmed to remove weak or dead branches. This will prevent possible future damage to buildings and high voltage power lines in the area.
- Erosion was noticed alongside the lower portion of the site entry road, at the base of Fill Area 1. This had occurred during the storm drain problem described in last month's inspection report. It is a difficult access point; repairs will be made when the soil has dried further.
- Near the scale house, the truck wash settling basin was completely full of water. The secondary pond across the road was not observed.
- ALRRF staff stated that the wood-grinding operation has added a second grinder to its equipment and should be reducing its stored volume in the near future.
- Ground wood was being unloaded at the solidification area, to be added to liquid wastes in order to absorb moisture.
- Two tippers were in use at the working face, and fill was being placed rather far from the tippers, requiring a dozer to move refuse and a compactor to spread and compact it. The tippers were still located at the edge of the wet-weather pad, due to continuing wet surface conditions. During this visit, two transfer trailers were waiting in line while two others were being unloaded. One dozer was spreading waste in the public unloading area, north of the transfer trailer tippers.
- The C&D bunker was about 75% full. The green waste bunker was about 50% full. Other C&D material was piled nearby, along with appliances and wooden cabinetry.
- On the roadway along the east side of Fill Area 1, a road grader was repairing the rutted surface of the unpaved perimeter road.
- The litter crew had been working along the base of the tall litter fences on the east side of Fill Area 1. As a result, there was very little windblown litter to be found there.
- On Altamont Pass Road, west of the site, the amount of litter visible along roadsides and fences was generally low.

Fill Area 1 Leachate Ponds

- The two Fill Area 1 leachate ponds have not yet been completed, but the liner on the south pond appears to be fully installed. There is still a gap in the north pond liner.

ALRRF Community Monitor Monthly Report**February 2017**Stormwater Controls and Best Management Practices

- Erosion control (wattle, straw rolls) along the toe of the slope north of the turbine plant was overwhelmed by runoff and needs to be repaired.
- The western portion of the east alkali wetland, visible from the east side of Fill Area 1, appeared to be completely full of water.
- Basins A, B and SW-A (which is in Fill Area 2) were directly observed. All appeared to be full, and the water in them was turbid. This is unsurprising, since there had already been almost 3 inches of rain in the past ten days. See photo below.

**Basin A - February 10, 2017**Fill Area 2

- A small landslide appeared to be forming near the north end of the west slope of Fill Area 1, immediately upslope from the lined Phase 1 area. See photo below.

**Landslide Forming above Fill Area 2, Phase 1**Construction of Covered Aerated Static Pile (CASP) Compost Facility

- A minor amount of excavation work was taking place in the proposed CASP processing area, east of the Fill Area 2 entry road.
- ALRRF staff mentioned that the LEA will be holding a public meeting in connection with permitting of the CASP project, in mid March.

ALRRF Community Monitor Monthly Report

March 2017

Monthly Tonnage Report for February 2017, received March 15, 2017

Tonnage Summary:		<u>tons</u>
Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	69,897.64
1.2	Other Out of County Disposal Tons	1,306.14
	subtotal Disposed	<u>71,203.78</u>
Disposed, By Source Type		
2.1	C&D	409.56
2.2	MSW	68,582.76
2.3	Special Wastes	2,229.84
	subtotal Disposed	<u>71,222.16</u>
		18.38 0.03%
Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	6.55
2.5	Revenue Generating Cover	39,411.72
	Total, 2.1 - 2.5	131,468.56
Materials of Interest		
2.3.1	Friable Asbestos	481.03
2.3.2	Class 2 Cover Soils	634.00
2.5.1	Auto Shredder Fluff	3,219.72
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	192.01
2.5.3	MRF Fines for ADC	1,447.03

ALRRF Community Monitor Monthly Report**March 2017**Site Inspection March 23, 2017, 1:30 - 3:30 PM.

- Attended by K. Runyon, accompanying the LEA, W. Suen. Escorted by S. Fockler. Unannounced.
- The piles of scrap wood and ground wood at the Bio-Fuels site appeared to be smaller, and more of the wood appeared to have been processed.
- ALRRF staff mentioned that the other tenant, Shamrock (the tire shredding operation), had added several trailers for tire storage to reduce the size of their outdoor stockpile.
- At the scale house area, the truck wash water basin was completely full.
- The landfill operations area continued to be focused on the wet-weather pad, and fill was progressing to the north. One tipper was operating and one compactor was handling waste. No heavy equipment was operating in the public unloading area, north of the transfer truck unloading site. Two transfer trucks were waiting to unload and a third was being dumped. ALRRF staff noted that when auto shredder fluff is available for cover, it is applied immediately; it is not being stockpiled.
- The LEA expressed concern about a recently filled area that did not appear to have adequate cover material. ALRRF staff reassured her that this area would be receiving additional cover as part of normal operations.
- We observed solidification mixing and loadout for several minutes. The operation appeared to be fully compliant with the operations plan. Enough solid extender was being blended with the liquid waste so that as material was loaded into the dump truck for transport to the landfill, no liquid was dripping from the excavator bucket.
- The C&D material bunker was about 3/4 full. No prohibited materials were visible in the pile. One tire had been pulled out and set aside for disposal. The plant debris bunker was about 1/2 full.
- On-site dump trucks (operated by ALRRF) were seen bringing ground wood to the disposal area for use as Alternative Daily Cover (ADC). This is permitted in the facility operations plan within its Joint Technical Document.
- A large number of gulls were present at the working face. The bird cannon was not heard during our observations. ALRRF staff noted that recent depredation (shooting) of gulls had been more effective recently, when several gulls were killed at a time. The gulls then move off site for a few hours but typically return later the same day.
- Minor ponding was seen in a few level or low areas in the top deck of the landfill, but the situation is much improved from January and February.
- The Asbestos-Containing Waste area was briefly observed. Most of its wet-weather area has been filled, but enough space remains to provide a few weeks of unloading space. No problems were seen in this area.
- Litter was virtually absent from the litter fences near the working face and the taller, more distant fences as well. Winds were light. Most of the leeward side slopes also have less litter than in the past. It appears that wet weather and the litter crew have substantially reduced the litter problem at present.

Stormwater Controls and Best Management Practices

- Basins A and B were about a foot below their discharge elevation. Water was turbid; litter was minimal. A substantial amount of new sediment is visible near the Basin A inlet.
- Ditches, drains and inlets were generally clear. Wattle on slopes generally appeared to be in good condition.

ALRRF Community Monitor Monthly Report**March 2017**Fill Area 1 Leachate Ponds

- It appeared that the liners for both ponds are fully installed. Each pond was holding a small amount of water, presumably rain water.

Fill Area 2

- The small landslide area noted last month above the west side of FA2 continued to slump. It was covered by a large plastic sheet held in place by sandbags. A rough estimate of the area involved is 80 feet x 80 feet, or about 1/8 acre. A second, smaller slide was also seen nearby, partially below a downdrain pipe. This area will be addressed when conditions are dry enough.

**Landslide Above Fill Area 2, Phase 1**Special Occurrences Log, December 1, 2016 - March 22, 2017

- December 1: A truck from the Fremont transfer station drove to the landfill with its rear doors open. Spillage occurred on Altamont Pass Road and on site.
- December 1: A truck delivering treated auto-shredder waste had its trailer overturn while unloading.
- December 12: An ALRRF operations vehicle hit an abandoned pipe containing landfill gas condensate, releasing about 25 gallons of liquid. It was absorbed with wood chips and the liquid, chips and soil were taken to the solidification basin for mixing and disposal.
- December 21: A truck delivering cover soil had its trailer overturn while unloading. The trailer had a flat tire and was in an area with soft soil.
- December 22: A contractor caused a leak at a water tank resulted in approximately 35,000 gallons of canal water (raw, untreated water) being discharged and flowing to stormwater basin SB-A.
- January 12: A worker at the maintenance shop was struck on the lip by a pry bar he was using. He treated himself with available first aid supplies and later saw a doctor.
- January 24: A leak was found in piping connected to the lower valley drain (which runs beneath the landfill). It was repaired. There was no release of hazardous material.
- February 15: The thermostat on a customer's vehicle broke and released coolant. The affected soil was excavated and properly disposed.
- February 15: A truck delivering gravel had its trailer overturn while unloading. It had been unloading in an incorrect location.
- February 17: A truck engine "blew", spilling several quarts of oil. First, absorbent was used, then the area was washed with the water truck and the wash water was collected with the vacuum truck.
- March 17: A Shamrock Tire customer suffered a serious leg injury while trying to help move a piece of equipment in the tire processing yard. He was hospitalized.



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memorandum

date March 31, 2017
to ALRRF Community Monitor Committee
from Michael Burns, Kelly Runyon
subject CMC Meeting of 4/12/17 - Agenda Item 6.5 - Draft Annual Report

The draft Annual Report for 2015 is hereby submitted for review. There is new or updated information on virtually every page. The most substantial updates are in the following sections:

- 1.3 Regional Context and Landfill Capacity
- 1.5.2 Requirements for Fill Area 2 Development and Use
- 2.2 Monitoring of Improvements and Changes
- 2.3 Compliance and Significant Incidents (all subsections)
- 2.4.2 Storm Water
- 2.4.4 Mitigation Monitoring
- 3.2.1 Ongoing Review
- 3.2.2.4 Fill Area 2
- 3.2.2.5 Groundwater Contaminants and Groundwater Data
- 3.2.2.6 Responses to Notices of Violation

When all Committee member comments and corrections are received, the Annual Report will be finalized and posted on the Community Monitor Committee web site.

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ALRRF COMMUNITY MONITOR ANNUAL REPORT 2016

DRAFT

Prepared for
ALRRF Community Monitor
Committee

January 11, 2017



The photo on the cover of this report shows the view looking eastward at the southern portion of the excavation for Fill Area 2, Phase 2. The photo was taken on September 30, 2016.

ALRRF COMMUNITY MONITOR ANNUAL REPORT 2016

DRAFT

Prepared for
ALRRF Community Monitor Committee

January 11, 2017



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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 expansion would add 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 a technical consultant, referred to as 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 a 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 2016.

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

Available 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 Engineering (formerly Treadwell & Rollo). This team began work in February 2008. From 2008 through 2015, the team has carried out report reviews, Class 2 soil analysis file review, and site inspections as intended. 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. Two ongoing problems, windblown litter and seagull activity, worsened in 2012; and while the gull problem has varied seasonally, the litter problem has continued as Fill Area 1 approaches its maximum permitted elevation. 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 including stormwater basins, a truck wash system, a leachate containment pond and access road, etc., were monitored in 2014 and 2015.

In March of 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, which contains a detailed description of Fill Area 2 development plans, design details, and operating procedures. The ALRRF requested extensions and was granted two, through June 17, 2015. An additional extension was requested but was not granted.

On July 31, 2015, the revised JTD was submitted to the LEA and the Central Valley Regional Water Quality Control Board (Water Board). The Water Board subsequently issued a set of very stringent draft Waste Discharge Requirements (WDRs), which are the permit conditions that govern operation and monitoring to protect water resources. ALRRF staff and consultants found a number of the WDRs to be impractical, so they proposed alternatives to Water Board staff. These were discussed and revised over an extended period of time. The new Waste Discharge Requirements were issued in July 2016, with certain details to follow later in 2016.

Throughout this process, the LEA held its permit review in abeyance while the Water Board issues were resolved. This consumed more time than regulations allow; as a consequence, the LEA found it necessary to issue a series of Notices of Violation to the ALRRF from July 12 through September 9, 2016. By the end of September, the LEA had received an updated JTD and permit application, and their permit review was under way. Currently (December 2016), the Permit Review is in its final stages.

Other issues from 2016 are described below in Section 2.3, Compliance and Significant Incidents.

1.3 Regional Context and Landfill Capacity

Events in the landfill disposal industry and demographic shifts within the greater Bay Area have affected, and will continue to affect, operations and future developments at the ALRRF:

- City of San Francisco refuse disposal shifted from the ALRRF to the Hay Road landfill in Solano County, beginning in mid-January 2016. Two lawsuits that were filed in an effort to block this from happening were resolved in favor of the City of San Francisco and its hauler, Recology. This reduced the flow of municipal solid waste to the ALRRF by approximately 30%.

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.

- There are no new landfill sites currently in development in the region. However, on a regional basis there appears to be adequate capacity for refuse disposal in the short to medium term, at least through the year 2035³.
- In Alameda County two countervailing forces, population growth and policies to increase waste diversion, have kept the flow of refuse to ALRRF from Alameda County at a fairly steady volume.

In addition, in 2016 the in-place density of refuse already delivered to the landfill was found to be significantly higher than previously thought. This had the effect of increasing the capacity of Fill Area 1 and delaying the need to use Fill Area 2 by approximately two years.

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 are 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.

Also, 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 establishes the CMC and the CM role, as described above; and it establishes mitigation funding related to the landfill expansion.

The physical setting of the ALRRF site also presents certain constraints and opportunities. Hilly terrain and high winds require constant attention to windblown litter, especially film plastic. As Fill Area 1 neared its final elevation in 2016, the windblown-litter problem continued due to the increased exposure of the working face to wind. The landfill has increased its litter cleanup crew size and has taken other steps to reduce the exposure of refuse to the wind. Local and state bans on the use of plastic bags by retailers may be helping to reduce this problem, but the widespread use of plastic trash bags and plastic film continues to produce windblown litter at the ALRRF. Ultimately, the solution will be to move disposal operations into Fill Area 2, which will be less exposed to the wind for many years into the future.

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

³ This estimate is based on a simple and conservative set of calculations assuming steady growth in population, no increase in diversion, the continued delivery of San Francisco refuse to a landfill in the greater Bay Area, and the ability for some regional disposal sites to receive all materials when other facilities reach their present capacity.

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. Currently it is back-hauled to the Davis Street facility for processing and eventual use as compost or biomass fuel.
- A liner and liquid recovery system 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.
- 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, as fuel for tipper engines;
- stockpiling and processing materials for beneficial use on site, such as using waste concrete for wet-weather roads and access pads;
- blending liquids and other materials to make a soil-like 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.) as 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 (currently active) and Fill Area 2 (currently being constructed). The active parts of Fill Area 1 cover approximately 211 acres. Fill Area 1 also includes an Asbestos-Containing Waste landfill operation which occupies several acres within the Fill Area 1 footprint.

Lands surrounding the active area are managed primarily as grazing land, with portions leased for wind energy. These surrounding lands also provide suitable habitat for several special status species. Design revisions in 2010 for the final shape of Fill Area 1 increased its capacity, further increasing its expected lifetime. As noted above, the high density of in-place refuse also added to the life of Fill Area 1, so that Fill Area 2 is not expected to receive refuse until 2018.

Much of the work done by the CM involves the review of data and reports produced by, or required of, the ALRRF. This is largely driven by the requirements of 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 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 RWQCB also regulates 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 annual stormwater monitoring report, and the annual Winterization Plan update.

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 produces a "Title V report" that summarizes emission test results and system performance as required. The CM reviews these reports as they are issued. The landfill also produces an annual estimate of greenhouse gas emissions, as required by Federal regulations.

1.5.1.3 Disposed Wastes

There are two agencies that regulate solid waste disposal in Alameda County. The Alameda County Department of Environmental Health is the Local Enforcement Agency (LEA), and 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 delimits 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 delineated in 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 various mitigations identified in 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. Currently Waste Management's position is that this permit is not within the purview of

the CMC, but the CMC has taken the position that the additional permit *is* within their purview. Condition 22 of this permit requires that it begin to be implemented within three years of its issuance. At this writing, the ALRRF is preparing a site adjacent to the north end of Fill Area 1 for future use as a compost facility. Additional environmental permits for this operation will be necessary.

1.5.1.5 Local Requirements: StopWaste

The Alameda County Waste Management Authority and Recycling Board (StopWaste) waste-diversion goal is continuing to be pursued, most recently through the implementation of (a) mandatory recycling at businesses and (b) commercial source separation of compostable materials in many Alameda County cities. These requirements are implemented at the local level by agencies' opting into (or out of) the ordinance's requirements. In addition, StopWaste has developed, and most of its member agencies have adopted, a single-use bag ban ordinance and a ban on disposing of plant debris in local landfills.

These waste diversion efforts represent a constraint because they limit the flow of refuse to the ALRRF, but they are also an opportunity for the ALRRF to (a) reduce its litter cleanup effort to the extent that the bag ban has a material effect, and (b) provide processing of recyclables in a MRF that may be developed at the landfill in the future.

1.5.2 Requirements For Fill Area 2 Development and Use

The current active area (Fill Area 1) will be supplemented by the expansion area (Fill Area 2) in the near future. In 2010, the last major permits for the development of Fill Area 2 were obtained. Environmental mitigations associated with the development and use of Fill Area 2 were established in Use Permit C-5512 and were refined in meetings between ALRRF staff/consultants and several natural resource agencies, concluding in 2012. These environmental mitigations are lengthy and complex; the topics that they cover are listed in Table 1-1 below.

Table 1-1
ALRRF Environmental Mitigation Topics Associated with Fill Area 2 Development

- Establishment of Conservation Plan Area
- Need for Biological Monitor on site
- Explicit protections for special-status species: San Joaquin Kit Fox, Western Burrowing Owl, California Tiger Salamander, California Red-Legged Frog, others
- Rules regarding vehicle use, litter prevention, etc.
- Pre-construction surveys for protected species
- Staging areas: location, identification and use
- Equipment maintenance and spill prevention
- Handling of protected species, when necessary
- Elimination of invasive species
- Grazing Management and Pest Management Plans
- Procedures if cultural remains are found
- Construction of compensatory wetlands; annual status reporting
- Other periodic monitoring reports
- Protection and monitoring of surface waters

In 2016, the CM made observations during site visits that pertain to several of the above Conditions and reviewed the 2015 report of vegetation and wildlife monitoring surveys for the Conservation Plan Area. 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.

According to the September 30, 2016 draft JTD, Fill Area 2 will be developed in 12 or more Phases. In 2016, development of Fill Area 2 focused on the excavation of the Phase 2 area and long-term infrastructure including electrical power, truck wash area, leachate pond construction, access road paving, etc. Construction of additional Phases will occur in future years as needed, depending on the rate at which the Phase 1 and Phase 2 areas are consumed.

ALRRF staff have verbally reported that the use of Fill Area 2 (Phase 1) is likely to begin in 2018. In the interim, the excavation of Phase 3 is planned for 2017; and liner installation for Phase 2 is planned for 2019. All of these dates should be considered tentative.

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 2016, 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 in 2016 became apparent:

- **Landfill gas wells** that had been installed in 2015 were brought on line in 2016. Several landfill gas wells that were becoming unproductive were taken off line as well. The Air District permit was amended to allow further addition and decommissioning of gas wells in 2016 and beyond; and a further round of new well installations occurred late in 2016.
- **For Fill Area 2**, excavation of the Phase 2 portion was completed, a relocated Phase 2 access road was constructed, and the truck wash at the north end of Fill Area 2 was completed. The Fill Area 2 leachate management system was substantially completed.
- **The entry road was repaved**, from the admin area (near Altamont Pass Road) past the scale house and up to the top deck of Fill Area 1.
- **Operations roads and drainage** on the east side of Fill Area 1 were reworked to improve drainage and reduce roadside ponding. A detention basin was constructed upslope of Basin B to reduce the delivery of silt to Basin B, with the goal of improving stormwater quality as discharged from that location.
- **In Fill Area 1**, two existing pond excavations were modified to increase their capacity to their fully-permitted volume. As stipulated in the 2016 WDRs, these ponds will be used for Fill Area 1 leachate management. Impermeable synthetic liners were installed in each pond. In mid-year, refuse fill operations focused on the west edge of the landfill, creating a ridge intended to serve as a windbreak to prevent litter dispersion. Subsequently, operations shifted to the east end of the south edge, to prepare a 10-acre demonstration area for a proposed final cover method which will use vegetation to absorb rain water and prevent its infiltration. (Standard practice is to use a very-low-permeability material such as clay or plastic as a landfill cap.)
- **The litter collection crew** was augmented with five permanent employees.

- **The wood stockpile at the Bio-Fuel Systems, Inc. wood grinding operation** became much larger than normal. This is discussed further in Sections 2.3.1 and 2.3.2, below.

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. 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, the delivery of hazardous materials with incorrect profiles (showing them as non-hazardous) is considered to be beyond ALRRF's control; but the Water Board's position appears to be that ALRRF is responsible nevertheless. Either way, this is a problem that appears to be worsening. Recent personnel changes and reassignment of the profile review function within Waste Management, may be a contributing factor.

The table shows high severity totals in 2013, 2015, and especially 2016. Levels of regulatory scrutiny have been changing in the last several years, with the Water Board inspecting more frequently (though not on a regular schedule) and the LEA reducing inspections in 2015, from weekly to twice a month. Water Board staff inspections have been much more intensive, involving several Water Board staff specialists and an extended site visit. The October 25, 2016 Water Board inspection was followed by three Notice of Violation letters, listing a total of four violations and several Areas of Concern, plus more than a dozen required action items with deadlines in late 2016 or early 2017.

Table 2-1
Compliance Issues Ranked by Severity

Issue	Severity					
	2011	2012	2013	2014	2015	2016
Contamination at E-05, E-07, E-20B	2	2	2	2	2	2
Stormwater contamination	3	3	3	3	3	3
Windblown Litter	2	1	3	2	2	4
Birds	2	2	2	2	2	2
Erosion	2	1	-	-	3	2
Cover thin / absent	2	2	2	3	4	-
Worker injury	-	1	3	-	1	2
Condensate/Leachate Leakage	-	-	1	1	3	-
Ponding in low-lying area of landfill	-	1	1	2	-	-
Sediment in Wetland Mitigation Area	-	-	-	1	3	3
MRF fines suitability for ADC	4	4	-	-	-	-
Odor, on site	-	1	-	-	-	1
Leachate Seeps	-	-	-	-	1	1
Ponding on landfill due to water leak	1	-	-	-	-	-
Leachate Spill	-	4	-	-	-	-
CUPA inspection (Haz Mat Management)	-	-	4	-	-	-
Unpermitted construction of FA2	-	-	4	-	-	-
Groundwater Elevation Error	-	-	2	-	-	-
Sampling Pump Problem: VD-unsat	-	-	2	-	-	-
Late Annual Report to Water Board	-	-	-	-	4	-
Sampling Pump Problem: well E-05	-	-	-	-	2	-
Stormwater monitoring compliance (FA2 pond, tire and wood operations)	-	-	-	-	-	4
Material out of bounds (wood operation)	-	-	-	-	-	4
Erosion control (sitewide)	-	-	-	-	-	4
Waste outside active area (trash, pallets)	-	-	-	-	-	4
Totals	18	22	29	16	30	36
Issues Beyond Control of ALRRF						
Truck overturn	1	1	1	1	1	3
Hazardous material delivered (ash, high in lead)	-	4	-	-	-	-
Fire in refuse &/or stored material	-	-	2	-	-	3
Material high in copper disposed (later removed)	-	-	4	-	-	-
Dinoseb solidification & disposal (later removed)	-	-	-	4	-	-
Liquid high in chromium, nickel received (removed before being disposed)	-	-	-	-	-	4
Soil high in benzene received, disposed	-	-	-	-	-	4
Methane Gas at Perimeter Probe(s) [cleared, 2016]	-	-	-	4	4	4

 indicates that a violation was issued by a regulatory agency.

Severity Criteria

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

2.3.1 Compliance Issues Documented by the LEA

As of mid-November, a total of 5 Violations and 5 Area of Concern notices had been issued by the Local Enforcement Agency (LEA) in calendar year 2016. All of the Violations were for delay in submitting documents for the five-year permit review, as described in a previous section.

The Areas of Concern focused on Gas Monitoring and Control (4 times), and Litter Control (1 time). High winds in July led to the concern about litter control. Since then, the ALRRF has more than doubled its litter control staff; but given the site conditions, the issue is likely to recur in summer months, as long as the upper elevations of Fill Area 1 are being used for disposal.

The Gas Monitoring topic is a continuation of the concern about high methane readings that may have originated from natural “fossil fuel” methane, not landfill gas. The LEA was awaiting CalRecycle’s independent assessment of the cause. This issue was resolved in an August 29, 2016 letter from CalRecycle to the LEA, stating that the gas at probe #8 was determined to be from a non-landfill source, and the gas in probes #1 and #20 was “unlikely” to be from the landfill, based on distance from refuse and the intervening topography. The September 9, 2016 inspection report says that the issue has been addressed and removed, but the prior inspection reports on the CalRecycle SWIS database, visible on the internet, still show this issue as an Area of Concern.

2.3.1.1 ALRRF Lessee Bio-Fuels Systems, Inc.

The LEA has issued a separate permit for the Bio-Fuels waste wood processing operation on land leased from the ALRRF. The LEA inspects this operation monthly; in 2016, the LEA inspector issued Notices of Violation every month on record (through October), noting the excessive size of the stored wood pile, contamination of the wood storage area by litter and unserviceable equipment, and risk of fire. The October inspection report also stated that Bio-Fuels’ subcontractor for wood grinding had moved out and has not been on site since August 8, 2016.

The root cause of this issue is a shrinking market for waste wood biomass fuel. A July 28 editorial in Biomass Magazine begins with this sentence: “California continues to be a frustrating illustration of the paradox of biomass nationwide: so much fuel exists and needs a place to go, yet many biomass facilities [wood fired power plants] are struggling to stay open.” It then explains that the costs of transportation and processing outweigh the value of wood as fuel, and suggests that biomass’s benefits in avoided air emissions need to be incorporated into the economics. In short, an alternative energy market that began with price supports (in the 1980’s), but no longer has them, cannot compete with other alternatives in the current marketplace.

2.3.2 Water Board Violations and Concerns

2.3.2.1 2016 Violations

Stormwater monitoring compliance (Fill Area 2 pond; tire and wood operations) – In their October 25 site inspection, Water Board staff noted that the Fill Area 2 leachate pond, while substantially complete, still needed to install some permanent stormwater protection features, remove temporary construction-related features, and file a Notice of Termination for their construction stormwater permit. They also noted that the wood grinding and tire shredding operations drain northward from their location on Soil Stockpile 1, but there was no stormwater monitoring for that flow.

Material out of bounds (wood operation) – The excessive size of the wood stockpile in the Bio-Fuel Systems yard, noted on October 25, is the issue.

Erosion control and sediment basin size – The inspection report stated: “Water Board staff observed large areas of soil disturbance and erosion potential throughout the Site. Erosion control was not implemented in all inactive areas and finished slopes. Several new sediment basins have been implemented at discharge locations to capture storm water runoff, but it was unclear if these basins were designed per the industrial permit design storm standards.”

Waste outside active area (trash, pallets) – The inspection report noted windblown litter throughout the site and a pile of unused pallets near the toe of Fill Area 2 Phase 1.

Liquid high in chromium, nickel received (removed before being disposed) – In September 2016, this liquid was sent for solidification with an incorrect profile. The error was reported by the generator while the liquid was in the solidification basin but before disposal had occurred. The material and much of the basin’s clay liner were removed and sent to an approved site for disposal. The basin was tested, found to be clean, and relined; it is back in service.

Soil high in hydrocarbons received, disposed – Contaminated soil from the excavation of a former Manufactured Gas Plant (MGP) site in Marin County was sent to the ALRRF for disposal. Tests of the soil had found it to contain hazardous levels of benzene, but apparently its profile did not include this information so it was considered to be acceptable by the ALRRF. The available documentation does not explain whether the error was committed by the generator, the hauler, or the ALRRF.

This is a significant problem, involving over 2,500 tons of soil received over a six month period. During that period (February through July 2016), the total amount of Class 2 cover soil received at the ALRRF was more than 100,000 tons. Regional Water Board staff has directed the ALRRF to submit a work plan to remove the material by December 30, 2016, and to provide manifests documenting its complete removal and proper disposal by February 28, 2017.

2.3.2.2 Other Issues

In 2014, Regional Water Board staff took issue with the assertion by ALRRF and SCS Engineers that the contamination found at groundwater monitoring well E-20B can be attributed to landfill gas. After further correspondence between ALRRF and the Water Board on this issue, the Water Board required submittal of an updated Corrective Action Plan for groundwater near this well, to include more frequent sampling of groundwater wells in the vicinity, and other measures, including an estimate of the time needed to reduce VOC contamination to non-detect levels around well E-20B.

ALRRF submitted its Corrective Action Plan in August of 2014 and is executing that plan. Special gas extraction wells were installed between E-20B and the landfill, and a new groundwater monitoring well downslope / downgradient of E-20B was also installed.

The Corrective Action Plan estimated that it will be approximately 10 years before VOC concentrations reach non-detect levels, based on linear extrapolation from existing trends, without taking the special gas extraction wells into account. Independently, the Community Monitor team (Langan Engineering) estimated that it would take at least one year for groundwater remediated by the new gas wells to reach the vicinity of E-20B, and possibly longer for E-20B to

show the effect, since the new gas wells are not as deep as the aquifer being sampled at E-20B. The data from well E-20B and the new downgradient well will continue to be tracked by the CM.

2.3.3 Other Incidents

The following information is based solely on reports filed in the site's Special Occurrences Log.

2.3.3.1 Facility Damage or Worker Injury

During 2016, there was one incident that resulted in an injury requiring outside assistance. In September, a Waste Management worker received first and second degree burns when exposed to hot water from a pump that he was servicing. He was taken to an emergency room for treatment.

2.3.3.2 Fire

Two minor fires in recently disposed material were quickly extinguished by site staff. These occurred on May 18 and September 9.

On July 20, in the late afternoon, a fire began in the green waste staging area east of the SE corner of Fill Area 1. The origin was apparently spontaneous combustion within the pile of green waste. Alameda County FD fought the fire with cooperation from landfill staff. The incident received some press coverage indicating that it might burn for days, but that was not the case. It was extinguished by the following morning.

About 1 PM July 20, a fire began below a utility pole that was being serviced by AT&T. The AT&T service truck was completely destroyed, and the fire spread in all directions. It was confined to the vicinity of Basin C. Heat from the exhaust system of a vehicle parked in a grassy area can cause a fire. However, ALRRF staff have verbally reported that an AT&T crew member said the fire was caused by an electrical spark. This fire was extinguished that day. Whether this incident has an impact on stormwater quality at Basin C remains to be seen; no reports are available as yet. Observations of water in the basin, later in the year, found no oily sheen or other indication of pollution.

2.3.3.3 Vehicular Accidents

There were no reported collisions between vehicles. However, on November 23, a departing haul truck turned too widely and damaged on-site roadway lighting and a Yield sign; and earlier in the year, many of the anchored plastic pylons placed as lane dividers on the newly repaved entry road below the scale house were quickly destroyed, presumably by departing trucks. This may have been intentional; in any event, they have not been replaced.

2.3.3.4 Other Incidents

Throughout the year there were six incidents of end-dump truck trailers tipping over sideways while unloading. The usual cause is wet material that sticks to the dump bed after it is raised, causing the trailer to become unstable. Also, there was an unusually high number of mishaps associated with the handling of transfer trailers on the tippers – four in all. This appears to be a run of bad luck, compounded by apparent driver error in some cases. There were also several incidents involving leakage of small quantities (several gallons) of hydraulic or lubricating oil; in all cases, the oil was reportedly contained and captured in soil and was disposed as class 2 material.

The end dump and hydraulic oil issues are unsurprising, given the nature of the operation. However, a more unusual incident occurred in early December, when a transfer truck arrived at the landfill with its rear doors wide open. There was refuse on Altamont Pass Road and on the steep entry road within the site. The driver's employer was contacted and advised of the issue.

2.4 Review of Reports

2.4.1 Groundwater

Two groundwater monitoring reports were reviewed in 2016. The first covered the time frame from July through December of 2015; the second covered January through June of 2016. Both reports reflect the Waste Discharge Requirements issued by the Central Valley Regional Water Quality Control Board that took effect in April of 2009.

Groundwater monitoring results did not differ appreciably from prior years. Contaminants, when present, were well below regulatory limits that would require remediation. For most contaminants, trends in the data were indistinct or gradually declining. We first noted in 2013 that the fuel additive MTBE and its degradation by-product tert-butyl alcohol appeared to have concentrations that are increasing in wells E-5, E-7 and E-20B, although not steadily. In general terms, the 2016 data show no significant increase in any of these contaminants. Continued monitoring of the reports on these wells is planned.

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 now are to be taken when a "qualifying storm event"⁴ (QSE) occurs. Up to four such QSE's are to be sampled at each discharge point during a stormwater year (July through June). Under the new stormwater permit process, the ALRRF rewrote its Stormwater Pollution Prevention Plan (SWPPP) and submitted it in July 2015, as required.

Stormwater pollution prevention at an operating landfill fundamentally involves trapping waterborne particles of potentially-contaminated soil before they reach stormwater basins or discharge points. However, in a broader sense, it also involves measures such as employee training, good housekeeping, providing containment, having spill control equipment, and preventive maintenance. The current SWPPP lists a wide range of Best Management Practices that cover all of these measures. It does not list or map physical stormwater pollution prevention measures installed at the site, but the annual Winterization Plan required by the Waste Discharge Requirements provides a list of the types of measures used, together with photos of examples of the measures as installed. These measures included adding silt-trap geotextile to drainage ditches and steep side slopes; adding rice straw blankets or mulch to landfill side slopes; using "wattle" (straw rolls) on exposed slopes and around storm drains; and other similar means of preventing and controlling erosion.

The annual storm water report for 2015-2016 was submitted to the State Water Resources Control Board on July 6, 2016, under the facility ID of 5S01I000600. With the continuing drought in California, there were fewer than four QSE's that caused discharges at each of the three basins serving Fill Area 1 and its vicinity. Basin A had 3, Basin B had 1 and Basin C had 2. In general,

⁴ 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.

discharges occurred on differing days at each basin, except that on December 22 2015, Basins A and C both discharged during a QSE.

For each QSE, two types of samples were taken at the three basins: samples from within the basin and samples from the basin outlet. In addition, Basin A was sampled on May 25, immediately before an intentional release, which partially drained the basin so that it could be excavated to restore capacity.

Results from chemical analyses of these samples were provided with the First Semiannual Groundwater Monitoring Report in July 2016. A review of those results shows very low-level detections of several substances that are considered pollutants. The levels are consistent with prior years' data, with one exception. Methylene chloride was found at estimated levels between 0.32 and 0.64 micrograms per liter (parts per billion). This is about one-tenth of the USEPA drinking water standard (5 ppb) but is still of concern because the substance is categorized as a probable human carcinogen. However, it is likely that the methylene chloride is a laboratory or field contaminant, since it was also found in blank (unopened) samples associated with this round of testing. This will need to be watched in the future.

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 2016, the CM received the Title V reports for the periods June – November 2015, and December 2015 – May 2016. These reports describe landfill gas control operations and source testing, but they also document new or unique developments at the site that can have an effect on air emissions. Results from 2016 are similar to those from 2015:

- Surface emissions monitoring continued to occur, and although exceedances of methane were found, they were typically remedied on the first try, without the need for repeated repairs.
- The LNG plant continued to operate, and unscheduled down-time was minimal, especially in the second half of 2015. In the first half of 2016, there were two extensive LNG plant outages, and a very uncharacteristic outage on one of the 3MW turbines that lasted nearly two weeks while the turbine speed control was repaired.
- All control devices passed their emissions tests without incident.
- Twenty-three landfill gas wells had been installed, and nine others decommissioned, in the 2014-2015 period. The installation of these 23 wells completed the permitted number of new well installations under the current BAAQMD permit. On March 14 2016, ALRRF staff requested new gas extraction well quotas: 120 new wells to be installed, and 100 decommissioned in the future. This was granted by BAAQMD on June 6, 2016.

All devices, including the internal combustion (IC) engines, were available throughout the reporting period except when down for maintenance.

2.4.4 Mitigation Monitoring

The Mitigation Monitoring and Reporting Program Annual Progress Report covering calendar year 2015 was received in January 2016. 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 CM found that the status descriptions together with the verification notes generally reflected the current status of each mitigation measure. The updates to this table from the previous year are listed below, with reference to the applicable CUP Condition number(s):

- 4.6 - This requirement, to adjust tonnage limits for partial years, was annotated by ALRRF staff to indicate that the expected start date for Fill Area 2 operations would be in the second quarter of 2016 (revised from the 2014 revision, which stated the third quarter of 2015). This was prior to the finding of higher refuse density / additional capacity in Fill Area 1, which will extend the Fill Area 2 start date to approximately mid-2018.
- 9 - Regarding the timing and design of site closure, the Implementation Status of this Condition was revised to state that closure planning and design would be addressed during the revisions to Waste Discharge Requirements.
- 38 - This Condition requires slope stability analyses and approved grading plans prior to construction of Fill Area 2 phases. ALRRF staff have noted that this was done for the Phase 1 design using a Design Report dated August 2014.
- 40 - This Condition requires that survey monuments be established on and near the landfill to monitor long-term settlement. ALRRF staff have noted that this aspect of closure will be addressed during the revisions to Waste Discharge Requirements.
- 46 - This Condition requires that any seeps encountered during construction be managed so that groundwater and the landfill are protected. ALRRF staff have noted that this was done for Fill Area 2, Phase 1.
- 47 - This Condition requires that Fill Area 2 become active within three years of its scheduled start date. ALRRF staff noted that Fill Area 2 is expected to be receiving refuse in 2018.
- 82 - This Condition requires that the Operator offer to retrofit existing noise-sensitive uses to reduce exterior noise levels below 45dBA. ALRRF staff have noted that this was completed in 2015, with documentation on file at ALRRF.
- 102 - This Condition requires that the Operator request that the Regional Water Board concur that the landfill would not release leachate to Bethany Reservoir. ALRRF staff indicated that this has been completed, citing as verification their compliance with the 2009 Waste Discharge Requirements, which prohibit discharge of leachate and require a liner system that prevents movement of leachate to waters of the State.

In addition to the Annual Progress Report described above, the ALRRF has begun to submit annual 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 first such report, for 2014, was provided to the CM in November 2015 and a number of deficiencies were noted. The report for 2015 was provided in August of 2016; it was more thorough and clear, but it did not directly address several of the performance goals for the Conservation Plan Area. Monitoring for burrowing owls and San Joaquin kit fox was omitted from the 2015 effort, but that may not be a strictly annual requirement of the natural resource permits; further interpretation is pending. To date, the resource agencies have not commented publicly on these reports.

2.5 Review of Records

Several types of site records were reviewed by the CM in 2015. 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. Also, the **Special Occurrences Log** for the ALRRF was examined twice during the year, as part of monthly site inspections. The **LEA's weekly inspection reports** are publicly available on the CalRecycle web site and were checked by the CM every few weeks, to identify any new issues that may have arisen.

2.5.1 Class 2 Soils

An ongoing task for the CM team 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 currently conducted two to three times per year, and it requires a 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. In 2016, these reviews were conducted in May and December. A total of 194 files were reviewed, 10% fewer than the previous year. No out-of-compliance profiles were found, and all files were complete except one from the December set that was lacking a lab report. That report is being sought. Based on past experience, it is expected to be added to the file in the near future.

2.5.2 Special Occurrences Log

Each permitted solid waste disposal site in California must keep a Log of Special Occurrences to document unusual and potentially disruptive incidents, including fires, injury and property damage, accidents, explosions, receipt or rejection of prohibited wastes, lack of sufficient number of personnel, flooding, earthquake damage and other unusual occurrences. The ALRRF log was checked twice during 2016. As in prior years, the most common incident was the occasional mishap involving large end-dump semi-trailers that become unbalanced while the bed is elevated, causing the truck bed to fall to one side. Fortunately, there were no injuries associated with these incidents. Other logged incidents included a total of four fires. Two were small, in refuse, quickly extinguished by facility staff. The other two required a response from Alameda County FD: one adjacent to Basin C (a grass fire) and the other in a large green material stockpile east of the asbestos fill area. Additional detail on several of these items may be found in Section 2.3.3 above.

2.5.3 LEA Inspection Reports

In 2016, ongoing difficulties with windblown litter were again noted in many of the LEA inspection reports. High methane in perimeter gas probes was also an issue, as described in Section 2.3.1 above. The large population of seagulls was noted during the winter and spring, as well as the landfill's efforts to control them. The condition of the entry road was an occasional issue, until it was fully repaved in late spring.

2.6 Monthly Inspections

Twelve site inspections were held during 2016. To obtain the best possible understanding of the range of operating conditions, the inspection day and time were varied 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 26	Tues	10:00 AM	no	yes
Feb 9	Tues	2:30 PM	yes	no
Mar 4	Fri	11:00 PM	yes	no
Apr 13	Wed	12:00 PM	no	yes
May 11	Wed	11:00 AM	yes	yes
Jun 15	Wed	5:00 AM	yes	no
Jul 14	Thurs	4:00 PM	yes	no
Aug 2	Tues	11:00 AM	yes	no
Sep 30	Fri	10:00 AM	no	yes
Oct 12	Wed	10:00 AM	yes	no
Nov 10	Thurs	5:30 AM	yes	no
Dec 2	Fri	10:00 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. There were no observed problems regarding refuse placement, public safety or traffic management. Throughout these inspections, staff and management were forthcoming regarding operating practices and current conditions. Distinct operations, such as the stockpiling and processing of specific materials, took place in well-defined areas. No instances of unpermitted activities were noted.

In 2016, observations by the CM team continued to focus on:

- The completion of Fill Area 2 Phase 1, and the excavation for Phase 2.
- Storm drainage and erosion control, including the installation and performance of stormwater Best Management Practices.
- Traffic on site, and the adequacy of crews and equipment to handle incoming traffic and waste volumes.
- General observations of fill activities, including spreading, compaction and traffic control during normal and off-hours operations.
- Changes in staffing and operating practices as the landfill adjusted to the termination of deliveries of San Francisco refuse.
- Observation of issues of ongoing concern, including the presence of large numbers of seagulls and management of windblown litter.

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 the table above, three off-hour and four joint inspections were conducted in 2016.

In addition to the on-site inspections, counts of arriving refuse trucks were conducted by the CM in January and October of 2016. These counts continued to be well below the limit stipulated in the CUP.

SECTION 3

Looking Ahead: Anticipated Efforts and Issues

3.1 Introduction

In the 2017 contract year, the CM team will continue to perform report reviews, site inspections and Class 2 soils file review. As Fill Area 1 nears completion, operations will become more complex in order to control the final height and shape of the filled area, and windblown litter will probably continue to be an issue. Also, as the ALRRF continues the development of Fill Area 2, the CM will review mitigation plans and reports for the Conservation Plan Area or other parts of the site, as needed.

3.2 Issues to be Tracked in 2017

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.
- Groundwater monitoring methods and data quality.
- Groundwater quality, including the vadose zone.
- Stormwater quality and management practices.
- Performance of landfill gas handling equipment.
- Additional changes to the landfill gas extraction system.
- Effects of any development of composting or material recovery operations on the landfill.
- Refuse truck traffic counts, to be taken three times during high-traffic summer months.
- Installation of the 10-acre test site for the Evapotranspiration Cover Test Site.

3.2.2 Site Inspections

All operations will continue to be observed, and the following areas will receive emphasis.

3.2.2.1 Landfill Gas Control System

Performance of this system is closely related to groundwater quality, and it takes place within a complex regulatory framework involving Federal permits, local permits, new 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 2017, two topics will be of special interest:

- The effect of new gas wells on the concentrations of contaminants in well E-20B.
- The new requirement to report landfill gas data to the Regional Water Board.

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.

3.2.2.3 Windblown Litter

As noted above, this will continue to be an issue for Fill Area 1. The effectiveness of recently adopted control measures, as well as any noticeable effect from recent plastic bag bans, will be evaluated.

3.2.2.4 Fill Area 2

The CM will continue to observe construction, which may include excavation for Phase 3, west of Phase 1. Mitigation progress reports regarding the Conservation Plan Area will continue to be reviewed to the extent required by the Settlement Agreement. The mitigation pond and other wetland areas within the Conservation Plan Area will be observed.

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 2016. The team will also watch data from well E-20B and other wells that have shown traces of contamination. The quality of the groundwater data, especially the occurrence of contaminants in quality-control samples and field samples, will also be monitored.

3.2.2.6 Responses to Notices of Violation

Several NOV's were issued by the Regional Water Board in the last quarter of 2016. The CM will review the ALRRF's responses as they become available.

3.2.3 Class 2 Soils File Review

As required in the Scope of Work, the CM will conduct this review several times during 2017.

3.3 Project Management Considerations

As the current contract continues, the budget is expected to be sufficient through 2017, the first year of the 3-year extension period. Kelly Runyon will continue with the lead role as Community Monitor, as a subcontractor to ESA. The Five-Year Permit Review process should be completed in early 2017, freeing up resources that may be needed for unanticipated issues.