



COMMUNITY MONITOR COMMITTEE

Altamont Landfill Settlement Agreement

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

AGENDA

www.altamontcmc.org

VOTING MEMBERS

Bob Woerner
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 13, 2016**
TIME: **4:00 p.m.**
PLACE: City of Livermore
Maintenance Services Division
3500 Robertson Park Road

1. Call to Order
2. Introductions
3. Roll Call
4. Approval of Minutes (Minutes from January 13, 2016)
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: Methane Testing; Conservation Plan Area Reports (ESA)**
- 6.2 **Update re Fill Area 2 Status (ESA)**
- 6.3 **Reports from Community Monitor (ESA)**
- 6.4 **Review of Reports Provided by ALRRF: MMRP Summary for CUP C-5512, Air Emissions Control, Groundwater Monitoring (ESA)**
- 6.5 **Status of Five-Year Permit Review (ESA)**
- 6.6 **2015 Annual Report (ESA)**
- 6.7 **Announcements (Committee Members)**
- 6.8 **Agreement for Consulting Services with ESA (Staff)**

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 13, 2016** at 3500 Robertson Park Road, Livermore.

Informational Materials:

- Community Monitor Roles and Responsibilities
- List of Acronyms
- Draft Minutes of January 13, 2016
- Reports from ESA, including 2015 Annual Report

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>.

Updates will be provided as needed. This list was last revised on September 25, 2013.

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)
RWQCB – Regional Water Quality Control Board
SWRCB – State Water Resources Control Board

Waste Categories

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

Water Quality Terminology

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.

Substances or Pollutants

ACM – asbestos-containing material
ACW – asbestos-containing waste
ADC – Alternative Daily Cover. For more information: <http://www.ciwmb.ca.gov/lqcentral/basics/adcbasic.htm>
BTEX – benzene, toluene, ethylbenzene, and xylene (used in reference to testing for contamination)
CH4 – methane
CO2 – carbon dioxide
DO – dissolved oxygen
HHW – household hazardous waste
LFG – landfill gas
LNG – liquefied natural gas
MEK – methyl ethyl ketone
MIBK – methyl isobutyl ketone
MTBE – methyl tertiary butyl ether, a gasoline additive
NMOC – Non-methane organic compounds
NTU – nephelometric turbidity units, a measure of the cloudiness of water

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.

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 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

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

TTLIC – Total Threshold Limit Concentration, similar to STLC but determined using a different method of analysis

TPD, TPM, TPY – Tons per day, month, year

WMAC – Waste Management of Alameda County



COMMUNITY MONITOR COMMITTEE

Altamont Landfill Settlement Agreement

Minutes of January 13, 2016

DRAFT

1. Call to Order
The meeting was called to order at 4:03 p.m.
2. Roll Call
Members Present: Bob Woerner; Donna Cabanne; David Tam; Sarah Fockler; Arthur Surdilla, Alameda County Department of Environmental Health, L.E.A.
Absent: Jerry Pentin (arrived 4:08); Robert Cooper, Altamont Landowners Against Rural Mismanagement
Others: Marisa Gan, City of Livermore Recycling Specialist; Michael Burns, Project Manager, ESA
Staff: Judy Erlandson, City of Livermore Public Works Department; Kelly Runyon, Community Monitor
3. Introductions
Those in attendance introduced themselves. Mr. Surdilla stated that he will be replacing Ms. Suen with regard to landfill inspections and Committee meeting attendance, but Ms. Suen will remain involved with the LEA's review of site permits and related documents.
4. Approval of Minutes
The approval of the October 2015 minutes was moved by Ms. Cabanne and seconded by Mr. Tam. The motion passed 3 – 0 with Mr. Woerner abstaining because he had not attended the October meeting.
5. Open Forum
There was no Open Forum discussion.
6. Matters for Consideration
 - 6.1 Selection of Chairperson.
Ms. Erlandson described the role of the Chairperson and noted that although the Settlement Agreement does not require the Committee to have a Chairperson, staff recommends selection of a chair to facilitate Committee meetings. Mr. Tam suggested that Mr. Pentin serve as Chairperson. Ms. Cabanne so moved, and Mr. Tam seconded the motion. The motion was approved 3 – 0 with Mr. Pentin abstaining.

6.2 Responses to Committee Member Questions

Wetland Mitigation Project – Mr. Runyon stated that under the Altamont Settlement Agreement, the Committee’s purview does not enable the Committee to impose a time limit on the wetland mitigation project or any other activity at the ALRRF. Other requirements related to that project were summarized.

Methane at Perimeter Probes – Mr. Runyon explained that CalRecycle intends to independently test the methane to confirm that it does not originate from the landfill. Ms. Fockler added that the time for that testing is uncertain because CalRecycle staff are handling tasks related to last summer’s severe fires. Ms. Cabanne asked that the Committee be kept up to date on the progress of the methane testing. Mr. Runyon also stated, and Ms. Fockler confirmed, that CalRecycle is allowing the ALRRF to monitor the probes quarterly, rather than weekly or monthly as had been required when the methane was first detected.

Reduction of contaminants at well E-20B – Mr. Runyon summarized the preliminary finding that it could take a year or more for the recently installed landfill gas wells to have an effect on groundwater quality at E-20B.

Regional Water Board office – In response to a question at the previous meeting, Mr. Runyon noted that the Regional Water Board office that oversees the ALRRF is in Rancho Cordova, outside Sacramento.

Time constraints on the review of Joint Technical Document (JTD) Revisions – Mr. Runyon explained that if the revisions do not require a revision to the current permit, there is a 120-day period during which the LEA must process the revisions and resolve any issues. However, in this case the LEA has stated that the ALRRF’s draft revisions describe significant changes at the site, and this could lead to a more involved permit renewal process. The ALRRF does not agree and the matter is in discussion. It could require CEQA documentation of potential environmental effects, and that process would require a meeting to describe the changes to the public. Committee members asked about the noticing and location of the project and the meeting, if it is needed. Mr. Surdilla stated that notice would be posted on the County Environmental Health web site, and that such meetings are typically held within one mile of the facility involved. Mr. Pentin noted that there might not be a suitable meeting place that close to the ALRRF. Ms. Erlandson stated that she would pass on any information provided by the County to the Committee.

6.3 Update re Fill Area 2 Status

Mr. Runyon noted that construction of Fill Area 2 Phase 1 is essentially complete, with work being done on the leachate containment pond and the truck wash area, as weather permits. He described: (1) an erosion problem that had occurred (and been repaired) at the toe of the Phase 1 area; (2) an effort to remove windblown litter from the west-side slope of the FA2 excavation; and (3) the use of hydroseeding to stabilize that slope while it is exposed.

6.4 Reports from Community Monitor

In reviewing the monthly site visit reports, Mr. Runyon noted the following: Recent surveys of landfill volume indicate a higher density of in-place refuse than had been assumed previously. This would enable the ALRRF to continue to use Fill Area 1 longer than previously expected.

Deliveries of San Francisco refuse are expected to cease before the end of January.

A gradual decline in tonnage was apparent in the monthly tonnage reports. This was not a decline in San Francisco volume but in the volume from the Davis Street Transfer Station in Oakland. Mr. Surdilla added that this may be due to new methods for handling Oakland discards at Davis Street, and a reduction in the processing of recyclables at Davis Street.

Mr. Woerner asked about the relationship between declining tonnage and the mitigation funding related to Altamont Landfill volume. Mr. Runyon responded that under the Settlement Agreement, the Committee's purview is limited to environmental rather than financial matters. Ms. Cabanne added that Pleasanton or Livermore may track that, and the County as well. Mr. Tam suggested that StopWaste may also track that information.

Mr. Tam asked that the Legend on the tonnage bar charts be enlarged for better legibility.

6.5 Review of Reports provided by ALRRF

Conservation Plan Area Surveys and Fill Area 2 Mitigation Monitoring Report for 2013 / 2014 – Committee members expressed concern about deficiencies in this report, as described in the Community Monitor's January 4 memorandum.

Ms. Cabanne asked if the regulatory agencies had taken issue with the report; Mr. Runyon stated that he would look into that and report back at the next Committee meeting. Committee members also expressed concern about low staffing levels at the agencies, specifically the California Department of Fish and Wildlife, limiting their ability to review and comment. Mr. Runyon mentioned that review of this document was assisted by ESA staff, a botanist and a field biologist who perform similar services.

Hydrogeologic Model – Mr. Runyon described the ongoing effort to estimate the time needed for gas extraction wells near groundwater well E-20B to have an effect on contaminant levels at that well. Mr. Burns also introduced himself further, describing his experience with landfill groundwater issues such as the E-20B situation.

6.6 Status of Five-Year Permit Review

Mr. Runyon stated that the discussion under item 6.2 covered this subject, and an update will be provided at the next Committee meeting.

6.7 2015 Annual Report

Committee members had several comments and requests for additional information:

Mr. Tam expressed gratitude for the cover memo's pointers to information new in the 2015 Report.

Mr. Woerner asked that section 2.1 provide a more complete description of the duties of the Community Monitor and the Committee. He also asked that Section 2.3 identify the regulatory agencies and their roles with regard to the ALRRF.

More generally, Mr. Woerner asked that the report discuss the compliance record of the ALRRF across a more extended period of time, i.e. the past several years, rather than simply a snapshot of the current year. Mr. Runyon agreed to add that discussion to the report.

6.8 Announcements

Mr. Tam noted that County staff are making progress toward provision of a stipend for Committee members' attendance at meetings. He also noted that a hearing will be held February 5 in Tracy regarding the proposed expansion of a nearby off-road vehicle park.

Ms. Cabanne thanked Marisa Gan for arranging a recent document-shredding event as a local public service.

6.9 Community Monitor Staffing, 2016

Mr. Runyon and Mr. Burns explained their respective roles with regard to Community Monitor services in 2016. Mr. Runyon recently retired from ESA but will continue to provide his services as a subcontractor to ESA. Mr. Burns will administer the Committee's contract with ESA and will provide his expertise on landfill groundwater issues where appropriate. Langan will remain with the team and continue to review groundwater reports and soil reports.

7. Agenda Building

Ms. Erlandson noted that at the next Committee meeting, it would be timely for the Committee to either consider invoking the 2017-2019 extension provision in ESA's contract, or begin the Request for Proposal process to select a Community Monitor by the end of 2016.

Mr. Tam noted that he may not be available for the April 2016 Committee meeting but would seek a replacement to represent the Northern California Recycling Association if necessary.

8. Adjournment

The meeting was adjourned at 5:20 p.m. The next meeting will be held on **Wednesday, April 13 at 4:00 p.m.** at the Livermore Maintenance Services Center at 3500 Robertson Park Road.

memorandum

date April 1, 2016

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 4/13/16 - Agenda Item 6.1 - Responses to Committee Member Questions:

- Methane Testing
- Conservation Plan Area Reports

Methane Testing

At the January 13 Committee meeting, Ms. Cabanne asked that the Committee be kept informed regarding the testing of methane found in perimeter probes. Independent tests had found that the methane was of natural origin (not landfill gas), but CalRecycle was planning to test it as well, when staff were able to do so.

As of March 28, there has been no testing activity at the ALRRF site by CalRecycle.

Conservation Plan Area Reports

At the January 13 Committee meeting, members expressed concern about the reported shortcomings of the Conservation Plan Area Baseline Report, and asked to be kept apprised of any feedback from regulatory agencies on the quality and content of the report. ALRRF staff report that there have been no questions or comments from the regulatory agencies.

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memorandum

date April 1, 2016
to ALRRF Community Monitor Committee
from Kelly Runyon
subject CMC Meeting of 4/13/16 - Agenda Item 6.2 - Update re Fill Area 2 Status

In Fill Area 2, the construction of the liner for the Phase 1 area is complete, and the liner contractor has left the site. The photos on the following pages show conditions through early March.

It is obvious from the photos that the winter rains have supported substantial growth of vegetation, both on the base of the Phase 1 area and in the foreground of the photos. Not as obvious, but visible upon close inspection, is the beginning of vegetative growth on the hydroseeded side slope of the Phase 1 area.

It is also apparent in the left-hand portion of the photos that the litter removal effort on side slopes has had a lasting effect. Windblown litter is somewhat reduced by wet conditions, so litter may reappear in drier summer months.

With the completion of the liner, work on related facilities has continued as weather has allowed:

- The truck wash is fully installed, and electrical power has been brought to that area via a pole-mounted power line, visible in the lower photo.
- The Fill Area 2 leachate pond has been constructed, and leachate piping is in place from the toe of the Phase 1 area to the pond.
- Stormwater conveyances (ditches and downdrains) in the area between Fill Area 1 and Fill Area 2 have been modified to accommodate future refuse placement.

Repair of the eroded area visible in the right-hand side of the photo is expected to take place when dry conditions make it possible to do the work with minimal damage to the surroundings.

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View of Fill Area 2, looking west from east ridge

January 26, 2016



minimal litter on upper slopes

hydroseeding on side slope

erosion gully lined, awaiting repair

March 4, 2016



↑ Leachate tank

Ponded water reduced ↑

Vegetative growth on bottom, also on west side (hard to see)

Truck wash and power line completed

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memorandum

date April 1, 2016

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 4/13/16 - Agenda Item 6.3 - Reports from Community Monitor

Attached are our inspection reports for January through March of 2016.

The January inspection was unannounced and took place on January 26, with the LEA.

The February inspection was announced and took place on February 9.

The March inspection was announced and took place on March 4.

During these inspections, all landfill operating areas were observed. Recent LEA inspection reports were reviewed on-line.

In preparing these reports, issues that cause special concern are marked with yellow rectangles in the monthly inspection reports. There have been several ongoing issues, listed below. None of these is serious enough to be considered a violation of permit conditions or regulations, but they will require further attention from ALRRF operations staff:

- The seagull population increases in winter months and has been quite high this season. Unfortunately, efforts to scare seagulls away from the site by killing individual birds have not been effective. Reportedly, when a gull is shot, other gulls do not leave the area, and some gulls will feed on the dead one.
- In a few locations, stormwater "BMPs" need minor maintenance to remove built-up silt and restore their full effectiveness.
- The channel above the wetland mitigation project has been eroded by high stormwater flows and will need some repair and cleanout after the current rainy season has ended.

Also attached are graphs showing monthly tonnages by type of material for the most recent 12-month period, as in prior reports. Figure 6.3-1 shows the breakdown of materials that make up Revenue-Generating Cover. Figure 6.3-2 shows these same quantities, plus the Municipal Solid Waste (MSW) and Special Waste tonnage for each month. This graph makes two recent developments apparent:

- The tonnage of MSW has declined substantially - more than 30%. This is due to the cessation of deliveries from the San Francisco transfer station (roughly 1/3 of all MSW tonnage received) as well as a decline in deliveries from the Davis Street transfer station in Oakland.
- In February, the amount of Special Waste was unusually high. ALRRF staff report that this was mainly due to a single large project in the East Bay that needed to dispose of a high volume of Special Waste. The Special Waste designation identifies materials that are potentially more hazardous than MSW but present a relatively low level of hazard. Typically they are inorganic compounds that do not exceed regulatory thresholds in toxicity tests but could present a danger to humans or the environment if not managed with special care. These materials are generally disposed in the Class 2 portion of Fill Area 1, which has a synthetic membrane liner.

ALRRF Community Monitor Monthly Report

January 2016

Reports Received

Monthly Tonnage Report for December 2015, received January 15, 2016

Tonnage Summary:		<u>tons</u>	
Disposed, By Source Location			
1.1	Tons Disposed from Within Alameda County	55,474.82	
1.2	Tons Disposed from City of San Francisco TS	34,507.09	
1.3	Other Out of County Disposal Tons	3,215.30	
	subtotal Disposed	93,197.21	
Disposed, By Source Type			
2.1	C&D	463.12	
2.2	MSW	87,939.87	
2.3	Special Wastes	4,811.36	
	subtotal Disposed	93,214.35	
	Difference (due to correction of error made in October)	17.14	0.02%
Other Major Categories			
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	357.90	
2.5	Revenue Generating Cover	28,089.69	
	Total, 2.1 - 2.5	121,661.94	
Materials of Interest			
2.3.1	Friable Asbestos	450.03	
2.3.2	Class 2 Cover Soils	5,256.61	
2.5.1	Auto Shredder Fluff	12,496.75	
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	399.22	
2.5.3	MRF Fines for ADC	3,025.32	

ALRRF Community Monitor Monthly Report**January 2016****Site Visit**

Site Inspection January 26, 2016, 10:00 AM to 11:30 AM.

- Attended by Arthur Surdilla (LEA) and K. Runyon; escorted by Sarah Fockler. Unannounced.
- Tonnage from San Francisco is no longer arriving. Truck count from 6:45 to 8:45 AM noted a significant reduction in refuse truck traffic. Community Monitor Committee may wish to consider temporarily discontinuing semiannual truck monitoring.
- Two truck-tippers owned by Recology are still on site but no longer in use. One replacement tipper is on site and another is being fabricated.
- ALRRF is now operating one tipper only, throughout the work day. The adjacent tipper is available as a spare if needed.
- At the current location, tippers are very close to the refuse placement area. One dozer and one compactor are sufficient to move and place tipped refuse, east of the winter operations area.
- C&D, plant debris, scrap metal and solidification areas all appear normal.

Observation of Environmental Controls

- Due to recent rains, a minor amount of standing water was seen north of the asbestos area.
- A large number of seagulls were observed, typical for this time of year. The bird cannon was operating, and Ms. Fockler stated that the tipper operator was using bird-scare munitions as needed.
- The liner protecting the edges of the raw water pond has not yet been repaired. The unlined embankment has not been damaged by wave action.
- On the slope between Fill Area 1 and Fill Area 2, litter has been removed by using a dozer to scrape downslope to each drainage bench, then hand-picking from the scraped material. This appears to be quite effective.

Stormwater Controls and Best Management Practices

- Stormwater basins A, B and C were not observed. The new basin north of the new truck wash (SB-1) had several feet of capacity.
- A basin is being constructed to replace Basin B on the east side of Fill Area 1. Ditches to divert runoff to the new basin have been constructed but are not yet in service. They have been lined with fabric to help trap silt.
- Stormwater BMP's (drain screens, wattle, etc.) are generally in good condition.
- On the outside slopes of Fill Area 1 that have been covered with mulch for several months or more, grasses and other vegetation are providing good erosion protection.
- A small amount of standing water was observed, north of the asbestos area.

ALRRF Community Monitor Monthly Report**January 2016**Fill Area 2

- Recent wet weather has caused erosion damage at the north end of the west side slope of Fill Area 2. Repair will take place when the slope is sufficiently dry; could be weeks from now.
- Liner contractor has left the site; Phase 1 liner work is complete.
- East of the FA2 truck wash, some excavation work is being performed on the roadway.
- The pipeline to the leachate containment pond has been installed, and a pump station is being installed on the side slope between FA2 and the pond.
- The pole-mounted portion of the power line from the former leachate treatment plant to the Fill Area 2 truck wash has been installed. Work on the power line is continuing.
- As part of the environmental mitigations for Fill Area 2, wind turbines and their towers are being removed from the vicinity of Fill Area 2.
- ALRRF staff report that management is currently considering options for the extension of the Fill Area 2 access road into the Phase 2 area.

Planned Composting "CASP" System

- Arthur Surdilla (LEA) reports that the LEA office is still considering if the JTD revisions (for the five-year permit review) represent a significant change that would require a permit modification or amendment.

ALRRF Community Monitor Monthly Report

February 2016

Reports Received

Monthly Tonnage Report for January 2016, received February 15, 2016

Tonnage Summary:		<u>tons</u>	
Disposed, By Source Location			
1.1	Tons Disposed from Within Alameda County	52,684.57	
1.2	Tons Disposed from City of San Francisco TS	16,322.31	
1.3	Other Out of County Disposal Tons	2,586.78	
	subtotal Disposed	71,593.66	
Disposed, By Source Type			
2.1	C&D	158.03	
2.2	MSW	67,336.03	
2.3	Special Wastes	4,099.60	
	subtotal Disposed	71,593.66	
	Difference	0.00	0.00%
Other Major Categories			
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	2,455.26	
2.5	Revenue Generating Cover	26,670.73	
	Total, 2.1 - 2.5	100,719.65	
Materials of Interest			
2.3.1	Friable Asbestos	457.69	
2.3.2	Class 2 Cover Soils	2,020.87	
2.5.1	Auto Shredder Fluff	13,611.24	
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	249.55	
2.5.3	MRF Fines for ADC	2,203.14	

ALRRF Community Monitor Monthly Report**February 2016****Site Visit**

Site Inspection February 9, 2016, 2:30 PM to 4:15 PM.

- Attended by K. Runyon, escorted by Sarah Fockler.
- Refuse placement continues from the winter pad, pushing east and slightly south. One compactor and one dozer were in use. At the public area (farther north, in the Class 2 portion of Fill Area 1), a wheeled loader was consolidating and spreading public disposal materials and treated wood (pieces of utility poles).
- ALRRF staff report that the solidification area has been very busy recently, during this break in the wet weather.
- In the bunker area, there was a substantial amount of brush to be removed for chipping. Also some C&D material, but no sign of hazardous materials. The scrap metal area was empty.

Observation of Environmental Controls

- Seagulls were very numerous. The depredation permit has been obtained and should be implemented soon. A small number of seagulls will be shot to frighten away the others.
- The liner protecting the edges of the raw water pond has not yet been repaired. The pond is nearly empty. More of the side-slope liner panels have been displaced by wind and wave action.
- Most ditches and drains were free of litter and debris. A few contained tumbleweeds and wind-blown plastic.
- The litter cleanup area on the east side of FA1 was closely observed and photographed. The "scrape and pick" method that was tried in this area appears to have worked well.
- The two diesel-powered tippers owned by Recology are still on site. One replacement tipper, CNG powered, has arrived, and a second one is being fabricated. Their air permits are in progress.

Stormwater Controls and Best Management Practices

- One minor erosion problem was noted on the east side of Fill Area 1. Wattle has been overtopped by silt, and the silt has been carried downslope to the edge of an access road.

ALRRF Community Monitor Monthly Report**February 2016**Fill Area 2

- The truck wash is fully installed, with several pumps, air compressors, and a large clarifier for water recirculation and silt removal.
- The eroded area at the north end of the west side slope has not yet been repaired.
- The leachate pond is fully excavated and bermed. The leachate pipe appears to be completely installed, with access ports every few hundred feet.
- ALRRF staff indicate that when filling begins in Fill Area 2, the entire operations area will be covered with a 10-foot lift of refuse, to protect the lining system.
- In the bottom portion of the operations layer, plants have begun to germinate. There is no sign of plant growth on the hydroseeded west side slope of FA2.

Planned Composting "CASP" System

- The area intended for the CASP system has been graded. Future development of the CASP system is uncertain at this time.

Wetland Mitigation Project

- In spite of heavy rains in previous months, the wetland mitigation project does not appear to have been seriously affected.
- The impact of the rains was largely absorbed by the channel upslope of the mitigation project. The series of weirs placed in the channel had the desired "pool and drop" effect, trapping a substantial amount of silt behind each weir. However, just below each weir, the flow of stormwater was high enough to cause severe scouring, which will need to be repaired in order to hold the weirs in place. The trapped silt will need to be cleaned out as well.
- Some windblown plastic litter, and several head of cattle, were seen in the area.

ALRRF Community Monitor Monthly Report

March 2016

Reports Received

Monthly Tonnage Report for February 2015, received March 15, 2016 (corrected March 21)

Tonnage Summary:		<u>tons</u>	
Disposed, By Source Location			
1.1	Tons Disposed from Within Alameda County	60,074.08	
1.2	Tons Disposed from City of San Francisco TS	0.00	
1.3	Other Out of County Disposal Tons	<u>2,751.21</u>	
	subtotal Disposed	<u>62,825.29</u>	
Disposed, By Source Type			
2.1	C&D	239.08	
2.2	MSW	50,503.23	
2.3	Special Wastes	<u>12,082.98</u>	
	subtotal Disposed	<u>62,825.29</u>	
	Difference	0.00	0.00%
Other Major Categories			
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	217.43	
2.5	Revenue Generating Cover	31,315.89	
	Total, 2.1 - 2.5	94,358.61	
Materials of Interest			
2.3.1	Friable Asbestos	526.19	
2.3.2	Class 2 Cover Soils	7,916.93	
2.5.1	Auto Shredder Fluff	12,499.41	
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	200.91	
2.5.3	MRF Fines for ADC	2,759.78	

ALRRF Community Monitor Monthly Report**March 2016****Site Visit**

Site Inspection March 4, 2016, 11:00 AM - 12:15 PM.

- Attended by K. Runyon; escorted by Sarah Fockler. Announced.
- Refuse fill in transfer trucks continues to be handled from the wet-weather pad in the Class 3 area. One tipper is operated at all times, with the second tipper available as a spare. Public disposal is farther north in the Class 2 area.
- One compactor was being used to push refuse away from the tipper, and another was pushing, spreading and compacting refuse. No dozers were operating. Three transfer trucks were waiting in line when these observations began; ten minutes later, the waiting line was down to two trucks.
- Cover material was being staged near the working face for use later in the day, to cover all refuse at the end of the week.
- The two tippers owned by Recology remain on site but are not in use. The air permit is still in progress for two additional CNG tippers.
- The C&D bunker contained many pallets. No prohibited wastes were seen. At the public area, a semi-trailer full of consumer products (solid-state space heaters) was being unloaded, along with a semi-trailer from a food distributor.
- No ponding of stormwater was observed anywhere in Fill Area 1.

Observation of Environmental Controls

- Use of the gull depredation permit has begun. Reportedly, when a bird is shot, other birds remain in the area, and some gulls feed on the dead one.
- The gull population on site is typical for winter months (much higher than summer). Many gulls (hundreds) were observed at the reservoir near Dyer Road as well.
- The liner protecting the edges of the raw water pond has not yet been repaired. More and more of the liner is being pulled away from the edges, apparently by wind. The earthen berm behind the liner is not being visibly damaged.
- Litter on Altamont Pass Road was light. In the trailer parking area of the ALRRF, several trailers with the new style of tarp (solid instead of open mesh) were seen. The transition to solid tarps is continuing.
- A herd of about 20 goats is being used to control vegetation near the site entrance. Repaving and repair of the main access road, from the scale house to Fill Area 1, is anticipated in April.
- At the turbine house, the source of some visible emissions, seen in a prior inspection, was discussed with the turbine operator. The source of this intermittent blue smoke is reportedly an oil heater that is used to dewater the turbine oil.

ALRRF Community Monitor Monthly Report**March 2016**Fill Area 2

- Vegetation is covering most of the bottom of the Phase 1 area, and is beginning to sprout on the west side slope.
- The eroded area at the north end of the west side slope has not yet been repaired. That area appears stable, and no other erosion problems were seen.
- The area on the southwest side slope that was cleaned of litter several months ago is remaining fairly clean. Wet weather may be making some of the light plastics too heavy to be blown over long distances.

Stormwater Controls and Best Management Practices

- At several locations around the site, stormwater BMP's have reached capacity (trapped all of the silt that they can hold). Maintenance would consist of removing trapped silt behind straw rolls and in silt traps near downdrains.
- Stormwater basin A was at its normal level; the water level was below the inlet of the discharge riser.
- Stormwater basin B contained some water, well below the discharge level. Litter was minimal around the perimeter of the basin.
- Basin C was not observed.
- Basin SB-1 north of Fill Area 2, contained water but the water level was several feet below the inlet of the discharge riser. SB-2, farther north, and SB-A near the south end of FA2 were not observed.

Figure 6.3-1 Monthly Volumes of Revenue-Generating Cover

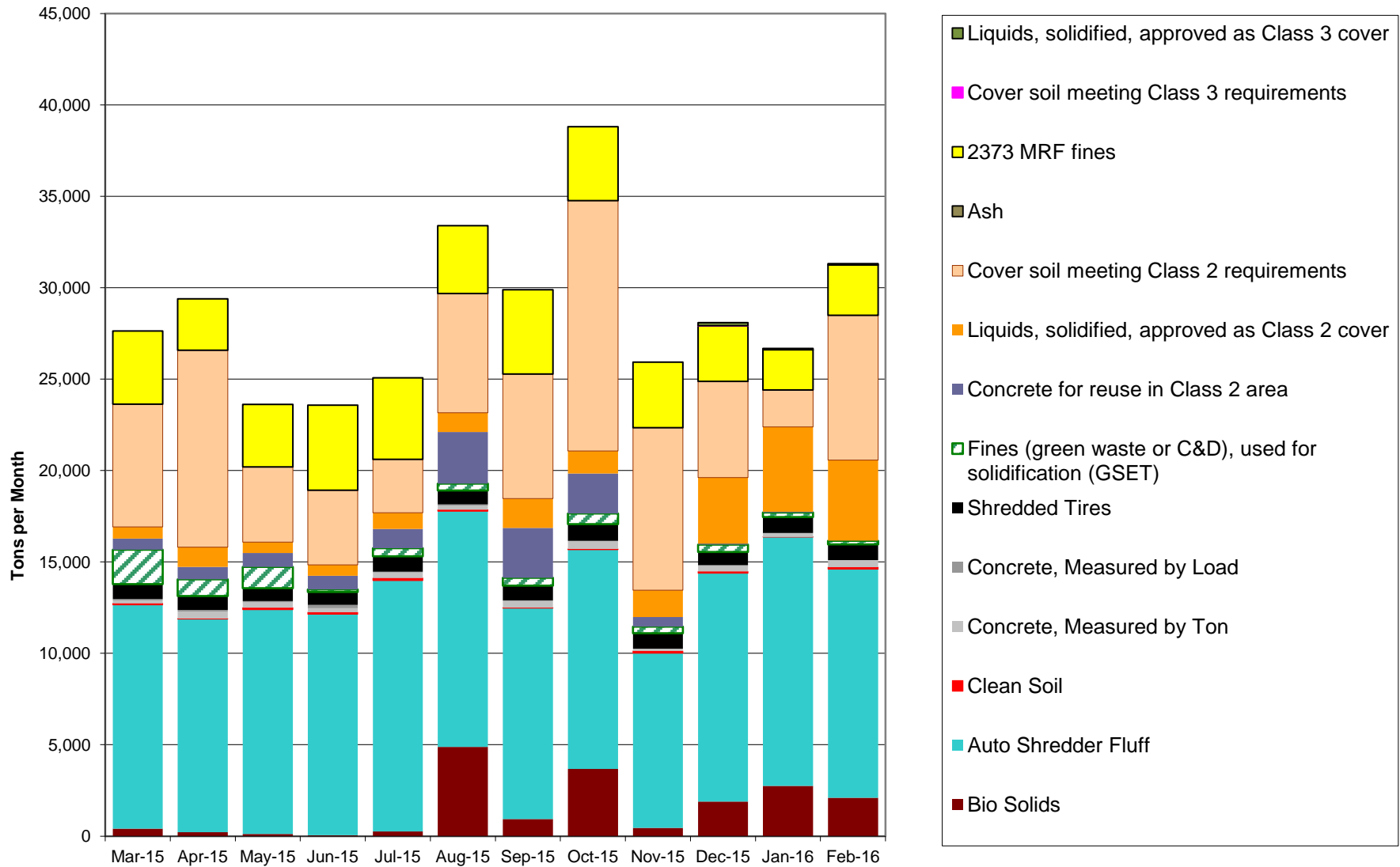
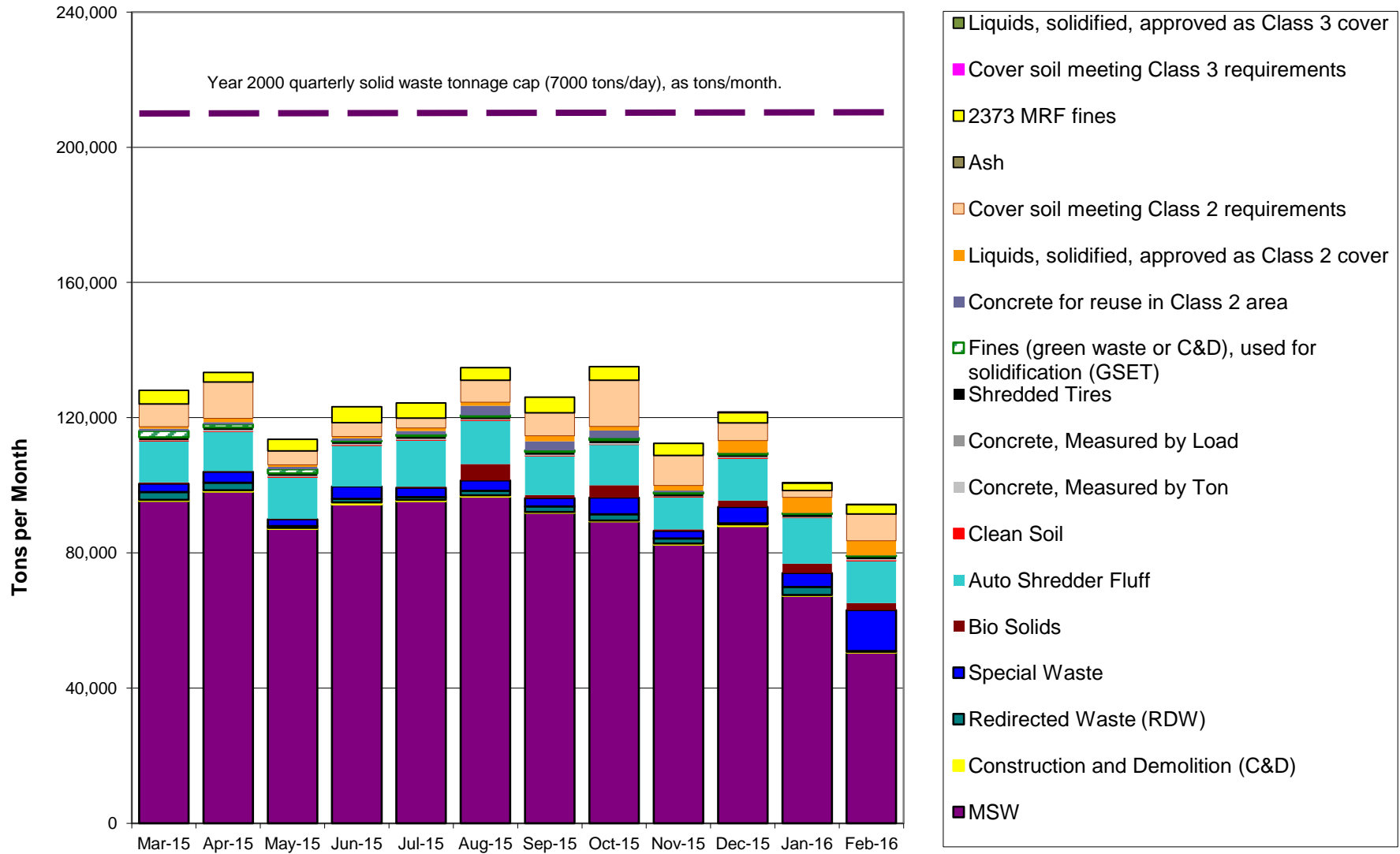


Figure 6.3-2 Monthly Volumes of Landfilled Materials



memorandum

date April 1, 2016
 to ALRRF Community Monitor Committee
 from Kelly Runyon
 subject CMC Meeting of 4/13/16 - Agenda Item 6.4 - Review of Reports Provided by ALRRF

MMRP Summary for CUP C-5512

At the end of January 2016, the ALRRF submitted its Mitigation Monitoring and Reporting Program (MMRP) Annual Progress Report for 2015, informing the Alameda County Planning Department about the ALRRF's compliance with the environmental requirements of Conditional Use Permit C-5512. The MMRP is a lengthy table that provides, for each Condition:

- The Condition number
- What the Condition requires
- When that Condition is applicable
- What must be done to comply
- The status of compliance
- How compliance will be verified

On the whole, the MMRP clearly indicates compliance with the currently-applicable requirements. However, there are three entries that should be clarified or corrected. Each of those is shown and discussed below.

No.	Condition	Applicable Phase	Implementation Activity	Status	Verification
4.1.1	With respect to the franchise waste accepted for disposal from the City and County of San Francisco, during the remaining term of the existing contract for such disposal the City and County of San Francisco must meet the recycling rate requirement specified pursuant to the existing permit for the acceptance of Franchise Waste from San Francisco issued by the ACWMA (ACWMA's Resolution No. 78) (a copy of this recycling rate requirement is attached to this permit Exhibit "2.").	No Longer Applicable	The contract with CCSF to accept their franchise waste was the same one in effect when C-5512 was adopted in March 2000. San Francisco was in compliance with the AB939 diversion requirements, and, therefore, with the requirements of ACWMA Resolution 78 for the entirety of the contract.	Contract Complete	Contract with City and County of San Francisco: State (CIWMB) records on CCSF compliance with State laws

Resolution 78 requires that San Francisco maintain a recycling rate at least as high as that of all of Alameda County. San Francisco's compliance with AB939 diversion requirements would not be sufficient to assure its compliance with Resolution 78. However, this Condition is probably moot, since San Francisco refuse is no longer being transferred to the ALRRF.

No.	Condition	Applicable Phase	Implementation Activity	Status	Verification
26	The operator shall submit a post-construction compliance report to USFWS within 45 days of completion of each major project component (e.g., stockpiles, water pipeline, storm-drain, basin construction).	During Construction of Fill Area 2	ALRRF will prepare and submit Post-Construction Compliance Reports to the USFWS as required by that agency.	Report will be submitted for Phase 1 after construction is completed.	Post-Construction Compliance Reports when completed

If the Phase 1 report is complete, the Community Monitor should receive a copy.

No.	Condition	Applicable Phase	Implementation Activity	Status	Verification
102	RWQCB Concurrence Regarding Bethany Reservoir. The operator shall request that the RWQCB's review of the landfill expansion include that Board's concurrence that ALRRF is designed to ensure that there is no drainage of landfill leachate to the Bethany Reservoir.	Prior to Construction	ALRRF will request this review and concurrence when applicable.	Completed	Compliance with WDR R5- 2009-0055 which prohibits discharge of leachate, and requires a liner system that prevents movement of leachate to waters of the State.

The 2009 Waste Discharge Requirements (WDR R5-2009-0055) indirectly protect Bethany Reservoir as required, but it is not clear that the Regional Water Quality Control Board's concurrence with the design requirement was requested or explicitly provided.

Air Emissions Report

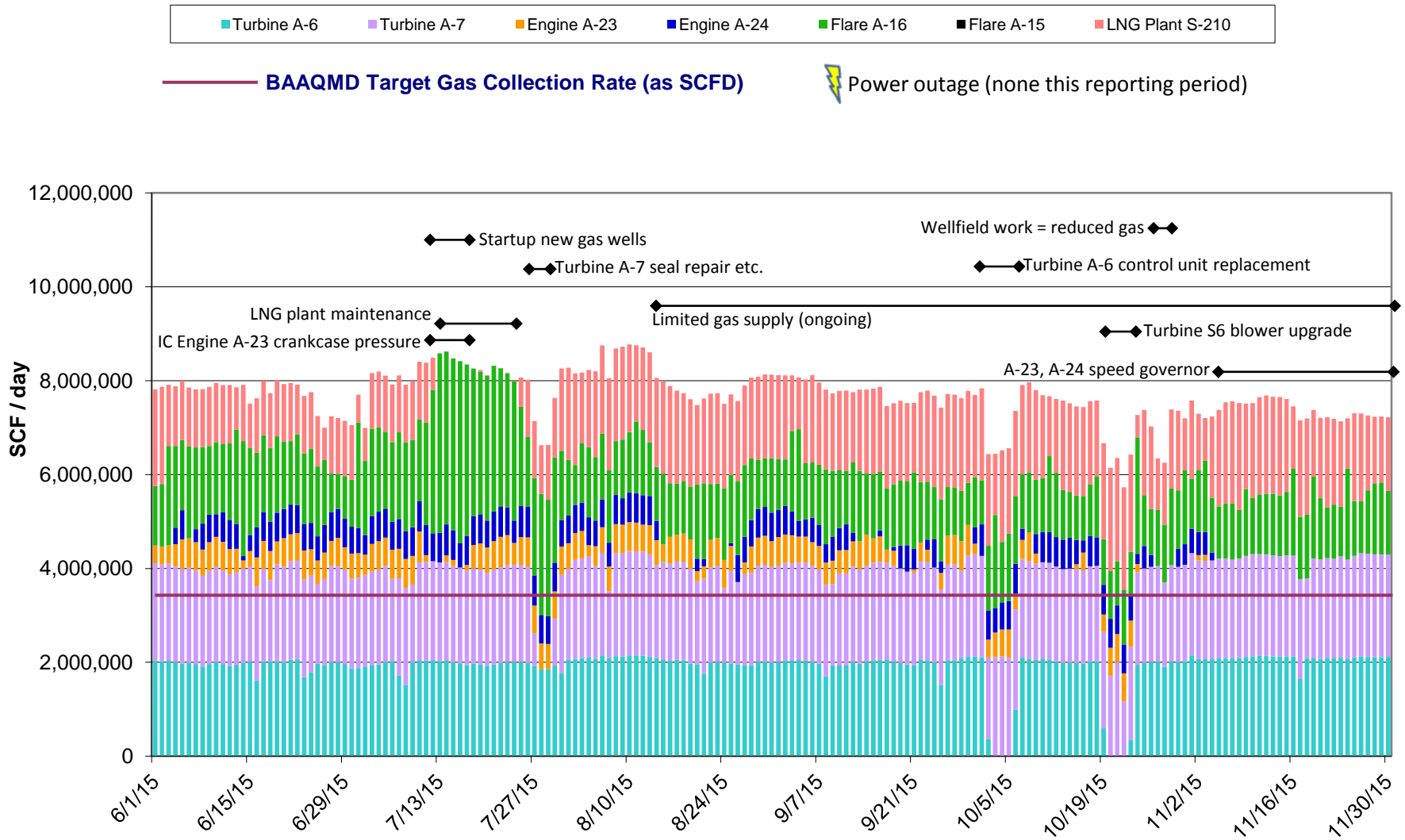
The Semi-Annual Report to the Bay Area Air Quality Management District (BAAQMD) covers the period from June 1, 2015 through November 30, 2015. The key points from this document are:

- At various times during the 6-month reporting period, a total of 13 vertical wells were decommissioned; also, one well was permitted to operate at an above-normal temperature with appropriate monitoring to detect conditions that could indicate underground combustion.
- In the latter part of the reporting period, the landfill gas combustion systems (turbines, LNG plant, and engines) were consuming all of the landfill gas that the gas extraction system could provide.
- In November 2015, 23 new vertical landfill gas wells were installed, and they were planned to be brought on line in December. Under current permit limitations, the ALRRF may install 23 additional vertical wells in the future.
- Surface emissions monitoring for the second and third quarters of 2015 was conducted in June, July, August and September. During these dry months, a greater number of surface emissions exceedances occurred than in the previous 6-month cycle, with 13 in the second quarter and 36 in the third quarter. This is unsurprising, as dry weather can cause very small fissures to occur in the landfill cover, enabling gas to escape. All emissions points were repaired, and were re-monitored at 10 days and 30 days after repair. No recurrences of these emissions were found.
- Two diesel-powered truck tippers have been taken off line; they will be replaced by tippers powered by compressed natural gas (CNG) that is produced from landfill gas extracted at the site. The diesel tippers are

- The tonnage limit for decomposable refuse deposited in Fill Area 1 has been increased to 51,020,000 tons, from the previous 47,100,000 tons, taking into account recent findings of higher-than-anticipated waste density.

Figure 6.4-1 on the following page shows the amounts of landfill gas consumed by each of the combustion systems at the ALRRF. Unlike most other reporting periods, there were no significant down times due to PG&E power outages in this period. Also, throughout the period, the minimum required gas extraction volume was exceeded every day.

Figure 6.4-1 - ALRRF Daily LFG Flow
(values derived from Title V Report)



Second Semiannual / Annual 2015 Groundwater Monitoring Report

Two attached documents from Langan Treadwell Rollo provide:

- Findings from their review of groundwater and stormwater monitoring as described in the Second Semiannual Report.
- Conclusions regarding the potential for contaminants found at groundwater well E-20B to be reduced by the nearby gas extraction wells.

To summarize the first item:

The five-year sampling for Constituents of Concern (COCs, defined in the landfill permit) was conducted in 2015, and several contaminants were detected:

- Among the inorganic COCs:
 - Cyanide was found at several monitoring points, at concentrations below the MCL (USEPA drinking water standards); it may be naturally occurring in the ALRRF area.
 - Arsenic and antimony also were found at several monitoring points. Their broad occurrence suggests that they are also naturally occurring, but the values at MW-5A were noticeably higher than at the other detections.
 - Arsenic concentrations were also higher than past detections at LS2, the leachate sump that serves the Class 2 section of Fill Area 1.
- Semivolatile Organic compounds were detected at very low levels in several wells, at levels below the laboratory reporting limits (i.e. at levels so low, in the parts-per-billion range, that they are considered to be estimates rather than measurements). Nevertheless this is a concern because these compounds are man-made and do not occur in nature. The wells where detections occurred will be resampled.
- Chlorophenoxy herbicides were not found at most sampling locations, but one such herbicide - dinoseb - was found at two sample points in the unsaturated zone below the Class 2 portion of Fill Area 1. This is of concern because the landfill inadvertently received material containing dinoseb in 2014. An effort was made to remove that material later in 2014, and no dinoseb was detected in the removal area afterward. Also, there were low-level detections of dinoseb in the COC sampling done in 2010.
- Other detections of COCs were at very low levels and consistent with historical results.

Quarterly sampling of groundwater monitoring wells found volatile organic compound (VOC) contaminants in wells E-05, E-07 and E-20B, in concentrations consistent with historical data. Other wells at Fill Area 1, as well as monitoring wells at Fill Area 2, had no VOCs apart from common laboratory contaminants.

For those three wells, we again reviewed the detailed data for the concentrations of methyl tert-butyl ether (MTBE), tert-butyl alcohol, and tetrahydrofuran, to determine if their concentrations were increasing at a rate that is cause for concern. In general, the concentrations are in the same range as prior data, so there is no new cause for concern; but we will continue to track these three substances. In particular, MTBE in E-05 bears watching.

In general, continued monitoring is advised but in our judgment there is no immediate need for further action. However, the RWQCB is seeking to impose more stringent monitoring and reporting requirements as part of their Five-Year Permit Review process, apparently due to concern about repeated detections of some contaminants. The next agenda item provides further detail.

Langan's study of the potential effect of gas extraction on groundwater well E-20B has found the following:

For soil, rock and groundwater conditions in the area, the time for groundwater to travel from the nearby gas extraction wells to the location of E-20B is on the order of one year. However, the gas wells are shallower than E-20B, and in the Altamont hills, groundwater travels vertically at a much slower rate than horizontally. Hence, it is very difficult to know how quickly the gas extraction system will have an effect on water at the screened depth of E-20B, but it is likely to take longer than a year to see a change in the groundwater data due to gas extraction.

555 Montgomery Street, Suite 1300 San Francisco, CA 94111 T: 415.955.5200 F: 415.955.5201

TO: ^k
Kelly Runyon
Michael Burns, ESA

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

DATE: 24 March 2016

PROJECT: Altamont Landfill (ALRRF)
Livermore, California
Project: 750477406

SUBJECT: Groundwater and Storm Water Analysis for Community Monitor Progress Report #17

Langan Treadwell Rollo (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 2015 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility (WDR Order R5-2009-0055), Long Beach, California dated 29 January 2015.

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 and storm water analytical data over recent years. The second semiannual 2015 groundwater sampling activities for Fill Area 1 and future Fill Area 2 were conducted on November 10 through 13, 16, and 17, 2015. Fill Area 1 wells are sampled on a semiannual basis, with the exception of E-20B. Wells associated with corrective action-for E-20B (MW-12, PC-1B, PC-1C, MW-3B) are monitored on a quarterly basis. Wells associated with future Fill Area 2 are monitored on a semiannual basis. In addition, during the Fourth Quarter 2015, Fill Area 1 monitoring wells were sampled for the 5-year constituents of concern (COC) event, as required in Order No. R5-2009-0055. The last 5-year COC monitoring event was conducted during 2010. Groundwater monitoring activities and findings, as required by the Waste Discharge Requirements (WDR), were generally found to be in compliance during the November 2015 sampling event. The groundwater monitoring activities and findings are discussed below; organized by Five-Year, Semiannual, and Annual Results.

Five Year COC Monitoring Results

All monitoring points including detection, corrective action, unsaturated zone, leachate, and surface water sampling points are required to be tested for the 5-year COC list. Samples from all monitoring points were analyzed for the 5-year COCs which include:

- Dissolved inorganics (California assessment manual (CAM) 17 metals¹ plus aluminum, iron, manganese, cyanide, and sulfide);
- Volatile organic compounds (VOCs) extended list;
- Semi-volatile organic compounds (SVOCs);
- Chlorophenoxy herbicides;

¹ As defined in the California Assessment Manual for Hazardous Wastes, issued by the California Department of Toxic Substances Control in 1981.

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- Organochlorine pesticides (OCPs);
- Organophosphorus compounds;
- Polychlorinated biphenyls (PCBs); and
- Total organic carbon (TOC).

Dissolved inorganics (CAM 17 metals plus aluminum, iron, manganese, cyanide, and sulfide)

Cyanide was detected above the reporting limit (0.01 milligrams per liter (mg/L)) in monitoring well E-03A, at a concentration of 0.023 mg/L, which is below the established primary maximum contaminant level (MCL²), 0.15 mg/L. Trace concentrations of cyanide were also detected in monitoring wells E-05, E-17, E-23, MW-2A, MW-6, and MW-7, at concentrations ranging from 0.0027 mg/L to 0.0048 mg/L. These detected trace concentrations of cyanide are approximately two orders of magnitude less than the 0.15 mg/L MCL. The Second Semiannual-Annual 2015 Report stated that cyanide may occur naturally in groundwater. The consistent site-wide data indicates a natural occurrence of cyanide. In our review, at least one study³ of background concentrations in California groundwater indicates that cyanide can occur naturally in groundwater, although it is not common.

The Second Semiannual-Annual 2015 Report stated that the Central Valley Regional Water Quality Control Board (Water Board) was notified of the detections by phone on 14 December 2015, and in a letter dated 16 December 2015. The ALRRF proposed to resample monitoring well E-03A for cyanide analysis. The Report stated that the resampling results will be submitted under separate cover.

Trace concentrations of cyanide were detected in the unsaturated zone monitoring points VD (valley drain) and VD2; and in the leachate monitoring points LS (leachate sump) and LS2; and also in the surface water samples from the discharge (denoted as 'Basin A') and from the water inside Basin A (denoted as 'In Basin A'). The detected trace concentrations of cyanide ranged from 0.0041 to 0.0082 mg/L, which are approximately two orders of magnitude below the cyanide MCL, 0.15mg/L.

Sulfide was detected in both the primary and duplicate samples from monitoring well E-23, at concentrations of 1.3 mg/L and 0.96 mg/L, respectively. These detections are below the laboratory reporting limit of 4 mg/L.

Antimony and arsenic were detected in monitoring well MW-5A at concentrations of 9.4 micrograms per liter (µg/L) and 120 µg/L, respectively. Both of these detections exceed the established MCLs for antimony and arsenic, which are 6 µg/L and 10 µg/L, respectively. The 2015 Semiannual-Annual Report stated that the concentrations detected in MW-5A are similar to historical concentrations, and that antimony and arsenic were detected during historical background sampling at concentrations that exceeded MCLs. This data can be found in the historical database, but was not included in the 2015 Semiannual-Annual Report. The 2015 Semiannual-Annual report stated that antimony and arsenic are natural components of soil and rock and that these metals have historically been detected in several wells. The report also stated that trace metal concentrations are generally consistent in monitoring points across the site, supporting the conclusion that metals are naturally occurring. While there are numerous detections of metals in monitoring points across the site, and metals may be naturally occurring, the concentrations of arsenic and antimony detected at MW-5A are between one and two orders of magnitude greater than arsenic and antimony concentrations at other groundwater monitoring wells. With the exception of antimony and arsenic, historical concentrations of other dissolved metals have not exceeded MCLs in MW-5A, and VOCs have not been detected historically in MW-5A.

² Maximum Contaminant Levels (MCLs) are standards that are set by the United States Environmental Protection Agency (EPA) for drinking water quality. An MCL is the legal threshold limit on the amount of a substance that is allowed in public water systems under the Safe Drinking Water Act.

³ Hunter, P.M. and Davis, B.K., 2001. Naturally Occurring Concentrations of Inorganic Chemicals at California Air Force Bases. The Toxicologist, Supplement to Toxicological Sciences 60:432.

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Also, inorganic parameters are generally consistent with other groundwater monitoring wells at the site, with the exception of slightly greater chloride levels detected in MW-5A.

Antimony was detected in the sample from LS2, at a concentration of 26 µg/L, which also exceeds the MCL, 6 µg/L. Arsenic concentrations were detected in the samples from VD2 and LS2, at concentrations of 14 µg/L and 190 µg/L, respectively, which exceed the MCL, 10 µg/L. The arsenic detected in VD2 was similar to historical concentrations, however, the detected arsenic concentration in LS2 was approximately three times greater than the concentration detected in 2010.

Volatile organic compounds (VOCs) extended list

Volatile organic compounds are discussed in the semiannual and annual results section below.

Semivolatile Organic Compounds

No SVOCs were detected at concentrations exceeding the reporting limits⁴. Samples from monitoring wells E-05, MW-5A, and MW-6 detected trace concentrations of bis(2-ethylhexyl)phthalate. A trace concentration of acetophenone was also detected in monitoring well E-05, below laboratory reporting limits. Phthalates have historically been detected in both of these monitoring wells at similar concentrations. Phthalates are commonly used as plasticizer chemicals added to plastics or polyvinyl chloride (PVC). The Second Semiannual-Annual 2015 Report stated that the Water Board was notified of the detections by phone on 14 December 2015, and in a letter dated 16 December 2015. The ALRRF proposed to resample the E-05, MW-5A, and MW-6 and analyze for the detected SVOCs. The Report stated that the resampling results will be submitted under separate cover.

Benzyl alcohol was detected in unsaturated zone monitoring point VZM-A and bis(2-ethylhexyl)phthalate was detected in VD2, both at concentrations below laboratory reporting limits. In the leachate monitoring point LS, eight SVOCs (2,4-dimethylphenol, 2-methylnaphthalene, 2-methylphenol, acenaphthene, acetophenone, bis(2-ethylhexyl)phthalate, flouranthene, and o-toluidine), were detected at concentrations below laboratory reporting limits.

Bis(2-ethylhexyl)phthalate was also detected in both the discharge (Basin A) and from the water inside Basin A (In Basin A) at concentrations of 0.82 µg/L and 0.60 µg/L, respectively, which are below the laboratory reporting limit.

The WDR groups OCPs and PCBs with the 5-year COC list of SVOCs. EPA Method 8270C, used for SVOCs, does not attain the lowest reporting limits for OCPs and PCBs, so other methods (Method 8081A, and 8082) were used to analyze these COCs. OCPs and PCBs are discussed below.

Organophosphorus compounds, OCPs, and PCBs

No organophosphorus compounds, OCPs, or PCBs were detected at any groundwater monitoring wells, unsaturated zone monitoring points, or surface water sampling points. Leachate sumps LS and LS2 had trace level detections of atrazine, an organophosphorus compound. The Second Semiannual-Annual 2015 Report stated that according to Test America Laboratory (TAL), the atrazine had more than 40 percent relative percent difference between the primary and confirmation column results and that this anomaly suggests matrix interference. There are no MCLs established for this organophosphorus compound.

Chlorophenoxy herbicides

No chlorophenoxy herbicides were detected in any groundwater monitoring wells, leachate sumps, or surface water sampling points. Unsaturated zone monitoring points VZM-A and VD2 detected dinoseb at concentrations of 2.5

⁴ Reporting limit is defined as the lower limit at which a laboratory can accurately detect the concentration of a specific compound, using the method specified in the permit requirement.

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µg/L and 5.3 µg/L, respectively. Dinoseb is an herbicide or fungicide that was banned by the US Environmental Protection Agency (EPA) in 1986. The Second Semiannual-Annual 2015 Report stated that VZM-A and VD2 will be resampled during the First Semiannual 2016 period to determine if the detections of this substance are confirmed.

Total Organic Carbon (TOC)

TOC concentrations in 10 groundwater monitoring wells were generally consistent and ranged from 0.79 mg/L and 3.5 mg/L. In contrast, VD2 in the unsaturated zone detected TOC at a concentration of 19 mg/L and the leachate samples from LS and LS2 detected TOC concentrations of 110 mg/L and 480 mg/L, respectively. These results are consistent with historical TOC detections.

Second Semiannual 2015 Groundwater Sampling Results

Detection and Corrective Action Well Inorganic and Volatile Organic Compound Concentrations

Based on the analytical results of the November 2015 monitoring event, detected concentrations of inorganic compounds remain stable in the detection and corrective action wells sampled. 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.

In monitoring well E-20B, vinyl chloride was detected at a concentration of 0.4 µg/L and 0.43 µg/L⁵ during the September and November monitoring events, respectively, below its MCL of 0.5 µg/L. 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 to monitor conditions favorable for VOC degradation.

⁵ The detected concentration is flagged denoting that the concentration reported is estimated because it is below the reporting limit and above its method detection limit.

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	Acetone	Chlorobenzene	1,4-Dichlorobenzene	Cis-1,2-dichloroethene	1,1,1-Dichloroethane	1,2-Dichloropropane	Dichloro-difluoromethane	Dichloro-fluoromethane	Diethyl ether	Methylene Chloride	Methyl tert-butyl ether (MTBE)	Tert-Butyl Alcohol	Tetrachloroethene	Tetrahydrofuran	Trichloroethene	Vinyl chloride	
E-03A																	No VOCs detected
E-05									X		X						Matches historical data
E-07			X	X	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		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

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 and requested that a report be submitted by 20 December 2014, documenting the well installation.

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. Currently, both MW-12 and E-20B are being monitored quarterly to track the effectiveness of enhancements made to the LFG collection system in January 2015. VOCs diethyl ether, cis-1,2-dichloroethene, and 1,1-dichloroethane were detected at concentrations below their laboratory reporting limits in MW-12 during the first and/or second quarter 2015, however, no VOCs were detected during the third and fourth quarter 2015. In a letter dated 17 March 2015, SCS Engineers 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 plans 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.

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).

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Fill Area 2

In an email dated 6 May 2014, the Water Board requested a work plan for the installation of background and detection monitoring wells for Fill Area 2, as required by the current WDRs. In a work plan dated 29 May 2014, ALRRF proposed to comply with the WDR by installing monitoring wells at seven locations including a background monitoring well (West Fault), a monitoring well cluster downgradient of Phase 1, and a monitoring well cluster downgradient of the Phase 2 and Phase 3 areas. All wells were installed in 2014. Upon approval from the Water Board, detection wells MW-13A, MW-13B, and MW-14, located downgradient of the Phase 1 through Phase 3 areas, were installed in September 2014. Geosyntec (on behalf of ALRRF) prepared a well installation report, dated 31 October 2014, and submitted the report to the Water Board.

For Fill Area 2, no VOCs, other than those attributable to laboratory cross contamination (acetone or carbon disulfide), were detected in samples from monitoring wells MW-8B, MW-9, MW-10, MW-11, PC-1C, and MW-13B in November 2015. In addition to the laboratory cross contaminants, monitoring well MW-4A and MW-14 samples contained benzene concentrations below laboratory reporting limits; and the sample from MW-8A detected a concentration of tert-butyl alcohol (TBA) below the laboratory reporting limit. These monitoring wells should be closely monitored for any further detections in the future sampling events.

Other Notes

In a letter dated 13 October 2014, the Water Board requested the assessment of high turbidity measured in monitoring well E-05 samples. During March and April 2015, ALRRF performed the assessment. The assessment included: removing and inspecting the dedicated pump and hose, measuring total well depth to compare to as-built construction information; removing silt from the bottom of the well, and installing a clean dedicated pump with a longer hose to bring the pump inlet closer to the bottom of the well. During First Quarter 2015 sampling, E-05 was purged until turbidity was zero NTU (Nephelometric Turbidity Units). During the Second Semiannual 2015 event, the final field turbidity in the sample from E-05 was also zero NTU. As noted in the table above, other than diethyl ether (2.0 µg/L) and MTBE (0.69 µg/L⁶) no other VOCs were detected in monitoring well E-05, during the May 2015 sampling.

In a letter dated 13 October 2014, the Water Board also requested that ALRRF submit a geologic evaluation and review of the site conceptual model. A report titled *Hydrogeologic Evaluation Report* dated 27 February 2015 was submitted to the Water Board. Langan made use of this report in preparing our recent memo, *Effect of Gas Extraction Wells 687 and 688 on Well E-20B* dated 17 March 2016, cited above.

Violations

During the Third and Fourth Quarter 2015 monitoring period, the ALRRF continued to receive Notices of Violation (NOV) from the Local Enforcement Agency (LEA) for a perimeter gas probe exceedance of methane > 5%. The analysis of the gas collected from the probes concluded that the methane detected was occurring naturally and was not landfill related. ALRRF submitted this information to the LEA and additional testing was requested by CalRecycle. Additional testing was performed, and after preliminary review of the test results, CalRecycle agrees with the assertion that the methane is naturally occurring. ALRRF has been allowed to return to quarterly monitoring of the probes, and the issue will be closed when CalRecycle sends staff to the site to test the probes a final time.

Unsaturated Zone Inorganic and VOC Concentrations

The unsaturated zone sampling program consists of sampling monitoring points VZM-A, VD, and VD2 annually during the fourth quarter of each year. During Fourth Quarter 2015, detected concentrations of inorganics and VOCs at

⁶ The MTBE concentration is flagged as estimated because the concentration is below the reporting limit and above its method detection limit.

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VZM-A⁷, VD⁸, and VD2⁹ were consistent with historical concentrations and appear to be stable, i.e. concentrations have not shown an increasing trend. VD was also sampled in January 2015 in order to collect additional data, and the VOC data obtained were consistent with historical results. 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

Inorganic and VOC concentrations at leachate monitoring point LS and LS2¹⁰ during December 2015 were similar to historical values.

Storm Water Retention Basins

In accordance with the 2009 WDR, stormwater discharges are sampled at the points where they cross the facility boundary, during times when discharge from the storm water retention basins is occurring. In December 2015, one set of samples was collected at Basins A and C, for the 2015-2016 rainy season.

Inorganics in Storm Water

Reported concentrations of inorganic compounds in storm water during December 2015 were similar to historical values.

Volatile Organic Compounds in Storm Water

VOCs detected in storm water basin samples collected from Basins A and C in December 2015 included low levels of acetone, 2-butanone, and methylene chloride. As discussed earlier, acetone and methylene chloride are common laboratory contaminants. 2-Butanone is not a common laboratory contaminant and has been historically detected in samples from Basins A, B, and C.

Recommendation

We recommend continuing review of groundwater and storm water data as it becomes available, and evaluating for trends in data, especially for groundwater monitoring wells where contaminants have previously been detected.

⁷ VZM-A is a monitoring location in the vadose zone (unsaturated zone below the landfill liner, and above the groundwater table).

⁸ 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.

⁹ 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.

¹⁰ LS and LS2 are leachate sumps, where leachate is collected at the bottom of landfill prior to being pumped to a storage and recirculation system.

555 Montgomery Street, Suite 1300 San Francisco, CA 94111 T: 415.955.5200 F: 415.955.5201

TO: Kelly Runyon, ESA

FROM: Noel Liner, PG, Project Geologist
Dorinda Shipman, PG, CHG, Principal

DATE: 17 March 2016

PROJECT: Altamont Landfill (ALRRF)
Livermore, California
Langan Project: 750477406

SUBJECT: Effect of Gas Extraction Wells 687 and 688 on Well E-20B

This memorandum presents the results of our effort to answer the question posed by the Community Monitor Committee per your email on 16 October 2015 regarding groundwater monitoring well E-20B, which consistently contains low levels of several volatile organic compounds (VOCs). Waste Management attributes the VOCs to the effect of landfill gas coming in contact with groundwater, and the groundwater then migrating downslope. The Central Valley Regional Water Quality Control Board (Water Board) staff does not concur with the assessment, but is willing to let the landfill try extracting more gas nearby to address the issue. Two gas extraction wells constructed using four-inch diameter casing and placed within 24-inch boreholes were installed to depths of 45 and 80 feet early in 2015 (SCS, July 2015).

Background

Historical data indicates that groundwater monitoring well E-20B consistently contains low levels of several VOCs, which have been reported at levels below or near laboratory reporting limits (as estimated concentrations). We understand that Waste Management, the landfill operator, attributes the detections of VOCs in the well E-20B to the potential presence of landfill gas per the *Revised E-20B Corrective Action Plan, Altamont Landfill and Resource Recovery Facility, Alameda County, California* by Waste Management dated 13 August 2014. Although the Water Board does not concur with this assessment, the Water Board did agree to a proposal by Waste Management to install and operate two additional landfill gas extraction wells upgradient of the monitoring well E-20B, in an attempt to verify Waste Management's supposition. Based on the *First Semiannual 2015 Groundwater Monitoring Report* by SCS dated 30 July 2015, detections of VOCs in E-20B have exhibited a decline since 2001, suggesting that LFG extraction has produced a reduction in VOC concentration in groundwater. Effects from extraction at the newly installed gas wells have not yet been apparent from monitoring data collected downgradient at well E-20B.

Previous investigators working for Waste Management have concluded that impacts to groundwater at E-20B are associated with landfill gas (HLA 1999, SCS 2003, and SCS 2005) based on the following (WM, 2014):

- Landfill gas typically contains VOCs that can migrate in the vadose zone¹ as a result of pressure gradients beneath a landfill facility by the following mechanism:
 - The overlying pressure of the landfill causes landfill gas to mix with groundwater and dissolve into the groundwater, resulting in measurable VOC concentrations in groundwater.
 - This overlying pressure, combined with a downward flow of groundwater, causes the dissolved VOCs to be transported downslope, where they are detected at monitoring well E-20B.

¹ the vadose zone extends from the top of the ground surface beneath the refuse to the water table

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Supporting evidence that the presence of landfill gas is creating groundwater impacts was presented in the *Revised Feasibility Study Altamont Landfill and Resource Recovery Facility, Alameda County, California* (Revised FS) by SCS dated November 2004, revised March 2005. Supporting evidence includes the following observations:

- Groundwater chemistry at E-20B was considered typical of landfill gas contact with groundwater (SCS, 2005).
- Presence of elevated concentrations of VOCs have been reported in LFG samples (collected from the header of the landfill gas extraction system [near the A-16 flare station] and gas monitoring probes GP-20C and 8C [WM, 2015]).

For gas extraction at wells 687 and 688 to reduce VOC concentrations in groundwater at monitoring well E-20B, VOCs must be present in landfill gas at wells 687 and 688, there must be a driver for VOCs in gas to partition to groundwater and there must be a flow path for VOCs to migrate in groundwater from beneath the landfill to E-20B. To date, landfill gas samples from new gas extraction wells 687 and 688 have not been tested for VOCs. The Revised FS concluded that pressure gradients beneath the landfill are sufficient to drive VOCs from the vapor to the dissolved liquid phase (SCS, 2005).

Well Construction and Lithology

Elevation, rock type and well construction are presented on Harding Lawson Associates Log of Boring B-20B (converted to monitoring well E-20B) and Well Completion E-20B dated July 1999. Ground surface elevation at monitoring well E-20B is recorded on the boring log as 897.7 feet. Monitoring well E-20B has 2-inch diameter casing that extends to 60 feet below ground surface (bgs) with screen between elevations of 860.7 to 840.7 feet having horizontal openings of 0.02 inches (Attachment A).

The well was completed within fractured bedrock of the Panoche sandstone formation below elevation approximately 885 feet; sandy clay with gravel and clay resulting from deep weathering of underlying bedrock is present in the upper 15 feet of the boring. The bedrock contains occasional intervals between one to three feet thick of mudstone and siltstone but is otherwise described as moderately to well consolidated, hard, strong and weathered. The 27 February 2015 *Hydrogeologic Evaluation Report, Altamont Landfill and Resource Recovery Facility, Alameda County, California* by GeoSyntec presented the conceptual site model (CSM) for groundwater flow. Consistent with the CSM of upward groundwater flow in the valley bottoms (GeoSyntec, 2015), E-20B had an initial groundwater level observed at 42 feet bgs (elevation 855 feet), and stabilizing overnight to 27.7 feet bgs (elevation 869.3 feet). Recent groundwater monitoring data from May 2015 show stabilized water level at E-20B at 22.80 feet bgs.

The two gas extraction wells, numbers 687 and 688, are relatively shallow, and were placed upslope (and upgradient) of monitoring well E-20B (Figure 1). Ground surface elevations at gas extraction wells 687 and 688 are reportedly at 994 and 983 feet, or 96.3 and 85.3 feet higher in elevation than E-20B. Gas extraction wells 687 and 688 were completed in municipal solid waste.

VOC Migration to E-20B

As discussed above, for gas extraction at wells 687 and 688 to reduce VOC concentrations at monitoring well E-20B, the following conditions must occur:

- VOCs must be present in landfill gas at gas extraction wells 687 and 688,
- Pressure gradients in landfill that can drive VOCs from vapor into the liquid or dissolved phase must be present, and

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- A groundwater flow path from the landfill to monitoring well E-20B needs to exist.

Although VOCs have not been tested in vapor directly from wells 687 and 688, based on the presence of VOCs in samples collected from the header of the landfill gas extraction system (near the A-16 flare station) (WM, 2015) VOCs are present in landfill gas, and therefore could be present at wells 687 and 688. While not all of these elements can be verified, to estimate a timeframe for potential VOC reduction at E-20B, Langan assumed that VOCs from landfill gas have entered groundwater and are migrating from the location of wells 687 and 688 to E-20B as indicated below.

Groundwater Flow Travel Time Estimation

Langan used groundwater levels, hydraulic properties and geologic information from site-specific studies by others to estimate a travel time from the newly installed gas extraction wells to E-20B, to evaluate when an effect from the gas extraction wells could potentially become apparent at E-20B.

A groundwater flow travel time was estimated to provide a rough approximation of when effectiveness of the newly installed 687 and 688 LFG wells would become apparent at E-20B. Elements relevant to the travel time estimation were taken from GeoSyntec (2015) and from SCS (2015).

The CSM was presented and verified using numerical modeling (GeoSyntec 2015). The following groundwater occurrence and flow elements are relevant to the travel time determination.

1. Groundwater occurs primarily in valley alluvium, and the weathered Panoche formation bedrock.
2. Groundwater flow direction follows topography, as opposed to geologic or boundary conditions, such as faulting.
3. Areas of recharge occur along hilltops and ridgelines, and discharge is to the valley bottom.
4. Vertical conductivity is very low, and thus vertical flow is limited, with horizontal hydraulic conductivity ranging between one to five orders of magnitude greater than vertical conductivity.
5. The majority of groundwater recharge and discharge occurs at shallow depths.
6. Deeper groundwater is relatively old, with a residence time of approximately 10,000 years.

Travel Time Calculation

Langan estimated the travel time for groundwater flowing along a path from the locations of LFG extraction wells 687 and 688 to monitoring well E-20B (Figure 1). Similar to SCS Engineers, Langan used the combined average hydraulic conductivity for alluvium and weathered bedrock of 1.4 feet per day (ft/day). The groundwater gradient was estimated from SCS average 2015 groundwater gradient data in the fill pad area of 0.12 (equivalent to a 12% slope) (SCS, 2015). The hydraulic conductivity (K) values of un-weathered bedrock used by SCS are nearly identical to the site-specific value of 1.39 presented in Section 3.9.1, GeoSyntec's 27 February 2015, *Hydrogeologic Evaluation Report*. Velocity was estimated using:

$$V_s = (K_h) / n;$$

Travel time estimated by dividing distance between wells by seepage velocity.

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Input parameters and results are presented below.

Input Parameters and Results for Travel Time Estimates from Gas Extraction Wells 687 and 688 to Monitoring Well E-20B		
Porosity of Un-Weathered Bedrock and Alluvium ¹ unitless	n	0.2
Hydraulic Gradient ¹ unitless	i	0.12
Hydraulic Conductivity ¹ feet/day	K _h	1.4
Seepage Velocity feet/day	V _s	0.84
Approximate distance from LFG well 687 to E-20B	320 feet	
Estimated Horizontal Travel Time from LFG well 687 to E-20B	380 days	
Approximate distance from LFG well 688 to E-20B	250 feet	
Estimated Horizontal Travel Time from LFG well 688 to E-20B	300 days	
1 — SCS Engineers, <i>First Semiannual 2015 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility</i> , July 2105		

Based on the input parameters developed for the Altamont Landfill, horizontal travel time was estimated as ranging between 10 to 13 months (300 to 380 days) from gas extraction wells 687 and 688 to monitoring well E-20B.

Discussion of Results

The evaluation indicates horizontal groundwater travel times of approximately one year for wells screened in alluvium and weathered bedrock. The estimates assume a linear flow path from 687/688 to E-20B as shown on Figure 1. The evaluation is therefore simplified in that the flow paths may be somewhat longer, as shown on figures presented in the CSM (GeoSyntec 2015) due to the effect of downward and returning upward gradients, also shown on Figure 1. Based on the CSM, the vertical conductivity is, at a minimum, one order of magnitude lower than the horizontal conductivity. Therefore, estimated likely travel time represents the most rapid groundwater migration scenario. Thus, 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.

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REFERENCES

SCS Engineers, 2004 (revised March 2005). *Updated Engineering Feasibility Study Well E-20B Area Altamont Landfill and Resource Recovery Facility, Livermore, California*. November.

Waste Management, 2014. *Revised E-20B Corrective Action Plan - Altamont Landfill and Resource Recovery Facility, Alameda County, CA*. 13 August.

SCS Engineers, 2015. *First Semiannual 2015 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility, Alameda County (Order No. R5-2009-0055)*. July.

Geosyntec, 2015. *Hydrogeologic Evaluation Report, Altamont Landfill and Resource Recovery Facility, Alameda County, California*. 27 February.

Waste Management, 2015. *Response to LEA/CalRecycle letters dated May 15, 2015 and April 16, 2015 for Methane Exceedances in Perimeter Gas Probe GP-1B, GP-8C, and GP-20C; Altamont Landfill and Resource Recovery Facility (ALRRF) 10840 Altamont Pass Road, Alameda County, CA*. 14 August.

memorandum

date April 1, 2016

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 4/13/16 - Agenda Item 6.5 - Status of Five-Year Permit Review

As part of the five-year permit review process, the ALRRF has prepared a revised Joint Technical Document (JTD), which describes the operational and environmental measures that the ALRRF will take to comply with applicable regulations. The ALRRF has further revised the JTD in response to input from the Central Valley Regional Water Quality Control Board (RWQCB) and the Alameda County Department of Health (Local Enforcement Agency or LEA).

The RWQCB recently issued a tentative update to its Waste Discharge Requirements (WDRs) which will be reviewed and adopted or modified after the April 21/22 RWQCB Board meeting in Fresno. It is substantially more stringent than the current WDRs, requiring significant design, operational, and monitoring changes to current practices. These are outlined in 200 Findings in the first part of the 94-page tentative WDRs. The justifications for the changes, and the changes themselves, are summarized below.

Findings of Non-Compliance

Among the 200 numbered Findings listed in the WDRs, there are several that mention non-compliance with State regulations that are administered by the RWQCB (California Code of Regulations, Title 27). Most of these refer to future operations in Fill Area 2, but several refer to ongoing Fill Area 1 operations and monitoring. These several Findings, shown with the Finding number underlined, were not formally identified as violations prior to the issuance of these WDRs.

Finding(s)	CCR Section(s)	Description
<u>45</u>	20200(d)	Solidified liquid wastes at ALRRF are too wet; can release liquid when compacted or during landfill settlement.
<u>98(a)</u>	20415(b)(1)(B), 20420	Insufficient number of groundwater monitoring points at toe of Fill Area 1 Unit 1 (oldest part of ALRRF).
<u>98(b)</u>	20415(b)(1)(B)(1), 20420	Insufficient spatial distribution of groundwater monitoring points near wells E-05, E-07 (downslope of oldest part of ALRRF).
98(c)	20415(b)(1)(B)(1), 20420	Insufficient spatial distribution of groundwater monitoring points downslope of Fill Area 2 Phase 1 and future Phases.
<u>98(d)</u>	20415(b)(1)(B)(1), 20420	Unlined storm water basins near certain wells that monitor FA1 and FA2; these may influence samples at wells.
<u>98(e)</u>	20415(b)(1)(B)(1), 20420	Where monitoring wells were installed after waste had been placed upgradient, background water quality prior to waste placement was not established.

Finding(s)	CCR Section(s)	Description
98(f)	20415(b)(1)(B)(1), 20420	Need more / better groundwater monitoring in canyon areas.
98(g)	20415(b)(1)(B)(1), 20420	Need more / better groundwater monitoring along geologic faults with high hydraulic conductivity.
100	20415(e)(6)	Need 1 year of background data for groundwater potentially affected by three new and planned surface impoundments (ponds).
108	20420(e)	Monitoring of unsaturated zone beneath Fill Area 2 should begin with Unit 1 Phase 1 and should include soil-pore gas monitoring.
115	20420(b)	Sampling of Fill Area 2 leachate should be as close to edge of waste as possible, not at leachate pond as proposed.
<u>129</u>	20415(b)(1)(A)	Method of establishing monitoring well concentration limits should be based on each well's background levels, not detection limits as proposed.
<u>129</u>	20415(e)(4)-(5)	Current groundwater sample collection methods do not comply (purging techniques).
174	20950(a)(2)(A)(1)	Final closure of Fill Area 1, proposed to take place in phases through 2040, should be completed "expeditiously" to limit further releases; work plan required.
183, 186	21820, 22206	Provide closure cost estimates and corrective action cost estimates for three surface impoundments now part of Fill Area 2 design.

In addition, the tentative WDR's make numerous requirements to enhance containment of potential contaminants, and to detect any release at the earliest possible time. The RWQCB staff summary of proposed changes (one page) is attached.

The Findings portion of the Tentative WDRs also states the following regarding future composting and materials recovery activities (bold font added):

- On 16 December 2015 the Discharger requested that the revised waste discharge requirements (WDRs) Order **not include waste discharge requirements for a composting facility** since the Discharger is currently reevaluating and considering other siting alternatives. Therefore, these revised WDRs do not include provisions allowing construction or operation of a composting facility. (Finding 3)
- The Discharger in its JTD has proposed the development of ...[a] Materials Recovery Facility (MRF) to complement and expand on the recovery of recyclables, wood waste and green waste materials. The MRF will be an enclosed facility with several processing/sorting lines that will be capable of handling 400 to 500 tons per day (tpd) of incoming waste to recover recyclables (e.g., metal, glass, plastic, paper, wood and green materials). ... These WDRs require the discharger to **monitor and report all liquid waste generated at the MRF Facility** that is classified as non-hazardous waste or designated waste and requires [sic] the Discharger to appropriately dispose of such liquid. (Finding 131a)

The ALRRF and the LEA are also continuing to work on reaching agreement regarding the JTD revisions.

INFORMATION SHEET

ORDER R5-2016-XXXX
 WASTE MANAGEMENT OF ALAMEDA COUNTY, INC.
 ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
 CLASS II AND CLASS III LANDFILL
 CONSTRUCTION, OPERATION, CLOSURE, POST-CLOSURE MAINTENANCE, AND CORRECTIVE ACTION

WASTE MANAGEMENT OF ALAMEDA COUNTY, INC.; ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY CLASS II AND CLASS III LANDFILL; ALAMEDA COUNTY

The active landfill facility is a municipal solid waste (MSW) landfill regulated under authority given in Water Code section 13000 et seq.; Title 27 section 20005 et seq.; and 40 Code of Federal Regulations section 258 (aka Subtitle D) in accordance with State Water Resources Control Board (State Water Board) Resolution 93-62.

The facility is on a 2,064 acre property at 10840 Altamont Pass Road, in the unincorporated area of Alameda County. The existing and future landfill area is approximately 472 acres (in plan) of which 259 acres have been constructed. The facility consists of 7 waste management units (WMU or Unit), Fill Area 1 Unit 1 (active), Fill Area 1 Unit 2 (active), Fill Area 2 Unit 1 (active), Fill Area 2 Unit 2 (future), and three class II surface impoundments (1 constructed and 2 planned). The facility also has other ancillary operations such as but not limited to gas-to-energy plant and a landfill gas to liquid natural gas conversion facility. Fill Area 1 is currently in corrective action for known releases of volatile organic compounds (VOCs).

Information submitted by the Discharger has been used to make the following major revisions to WDRs No. R5-2009-0055:

- a. requirements for expeditious closure of Fill Area 1;
- b. construction of a Materials Recovery Facility (MRF);
- c. construction of three new Class II surface impoundments;
- d. provisions requiring improvements to the facility's groundwater monitoring system;
- e. provisions requiring additional water quality monitoring in Fill Area 2;
- f. additional corrective action for gas and/or leachate releases from Fill Area 1;
- g. provisions requiring submittal of a Title 27 compliant water quality protection standards (WQPS) including appropriate concentration limits and an approved sample collection and analysis plan;
- h. additional requirements associated with the collection and disposal/beneficial reuse of liquids generated at the site including but not limited to underdrains, landfill leachate, landfill gas condensate, recycling operations, truck wash facilities, landfill gas-to-energy plants, and vehicle maintenance facilities;
- i. additional requirements associated with operation of a non-hazardous liquid and semi-solid waste solidification process; and
- j. provisions requiring continued operation of the groundwater interceptor barrier.

VKJ/WMH

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memorandum

date April 1, 2016
to ALRRF Community Monitor Committee
from Kelly Runyon
subject CMC Meeting of 4/13/16 - Agenda Item 6.6 - 2015 Annual Report

The 2015 Annual Report is attached. The report repeats some information from prior years in order to provide a stand-alone document. Significant new information for 2015 appears in the following sections:

- Section 1.3 on pages 1-2 to 1-3
- Section 1.5.2 on pages 1-6 to 1-7
- Section 2.3 on pages 2-2 to 2-4
- Section 2.4.4 on page 2-5
- Section 2.6 on page 2-7

In response to input from Committee members and further internal review, the draft 2015 Annual Report has been revised to address the following points and make other minor corrections. Changed text is shown with yellow highlight, which will be removed for the final version.

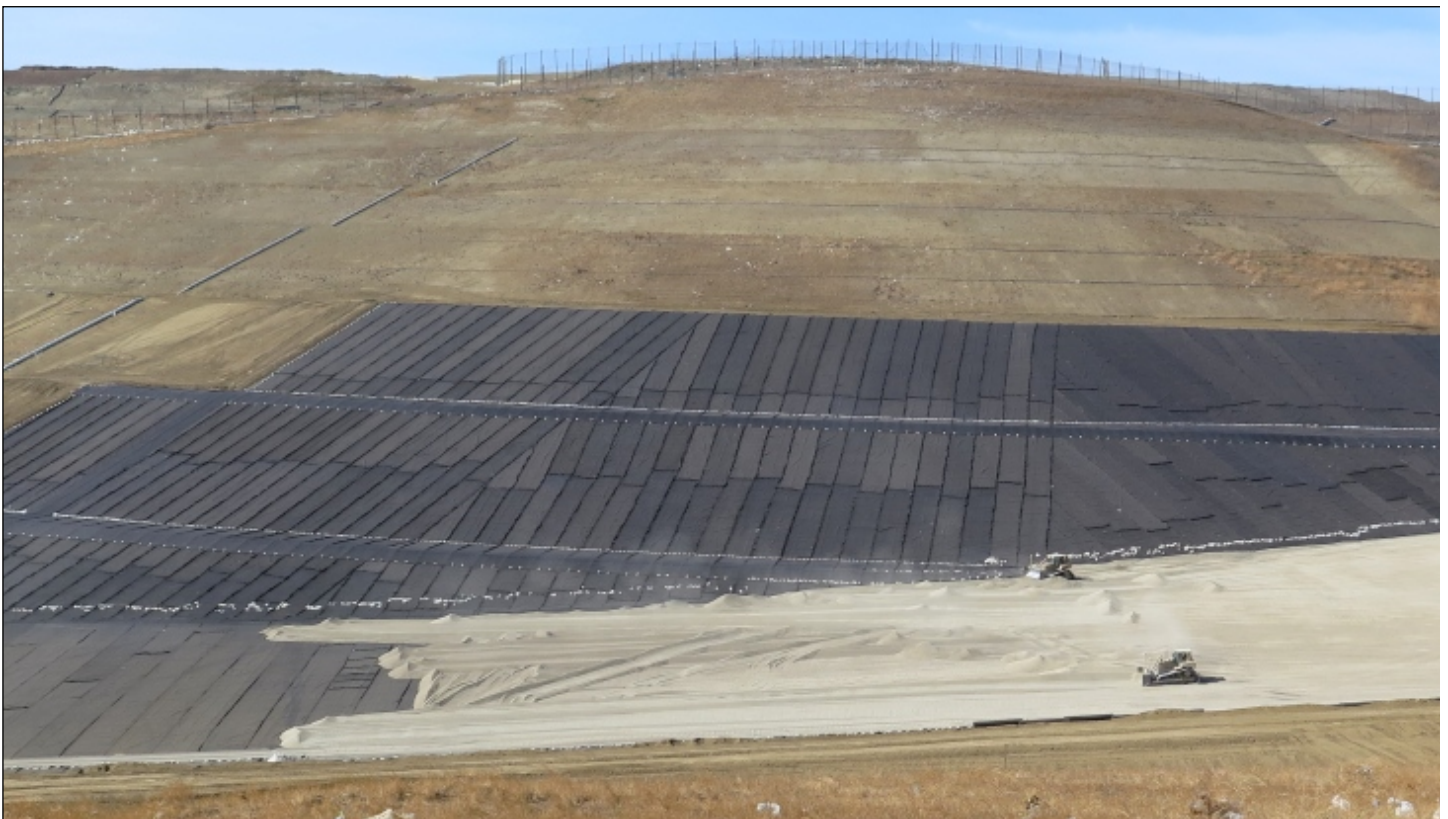
- Section 2.1: When describing the Community Monitor's duties, reference the relevant sections of the Settlement Agreement.
- Section 2.3: Identify the regulatory agencies that administer the environmental laws and regulations with which the ALRRF must comply. Also, provide a general statement about the ALRRF's compliance with regulatory requirements and note any trends in the type or severity of compliance issues.
- Section 2.3.2.1: Clarify the name and location of the State Water Resources Control Board's "violations database."
- Section 2.4.4: Correct the summary of the requirements of CUP Condition 105.

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ALRRF COMMUNITY MONITOR ANNUAL REPORT 2015

Prepared for
ALRRF Community Monitor
Committee

April 1, 2016



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550 Kearny Street
Suite 800
San Francisco, CA 94108
415.896.5900
www.esassoc.com

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SECTION 1

Introduction

1.1 Background: Settlement Agreement

In December 1999, a Settlement Agreement was reached among parties involved in a lawsuit regarding the proposed expansion of the Altamont Landfill and Resource Recovery Facility (ALRRF). The Settlement 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 2015.

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 Treadwell & Rollo (now Langan). 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. After some concern from the LEA about the fines containing municipal solid waste materials, such as plastics from consumer goods, 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. Other issues from 2015 are described below in Section 2.3, Compliance and Significant Incidents.

1.3 Regional Context

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

- Although populations and economic activity have increased in the Bay Area in the past few years, the average quantity of refuse brought to the ALRRF declined from 2008 through 2014, and rose very slightly in the first part of 2015, then leveled off and began to decline. It continues to appear that ongoing efforts to reduce waste disposal and increase waste diversion have largely offset a population-driven upward trend in disposal tonnages.
- 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 2035². Capacity (in years) at the ALRRF will increase substantially if San Francisco tonnage shifts to the Hay Road landfill in Solano County, and that appears likely at this writing (December 2015).
- Three issues that would affect disposal capacity for the region are being resolved:
 - The aforementioned shift in disposal the City of San Francisco refuse, from the ALRRF to the Hay Road landfill, would reduce the inbound refuse tonnage to the ALRRF by roughly 30 percent. Two lawsuits have been filed in an effort to stop this from happening. One of those suits challenged the procurement process that chose Recology's Hay Road site over the continued use of the ALRRF; this suit has been partially decided in favor of Hay Road, but appeal is still a possibility. The other suit challenged the CEQA process that accompanied approval of the use of Hay Road by San Francisco officials. On December 23, 2015 a Case Management Statement was filed, containing the following information:
 - A case management conference was held on December 9
 - A settlement appears imminent
 - If the case goes to trial, the parties are opting for a 2-hour non-jury trial
 - Regarding the proposed Potrero Hills Landfill expansion in Solano County, in April 2014 the State Court of Appeal overruled a lower court's denial of a landfill expansion permit from the Bay Conservation and Development

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

² 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.

Commission. In Late July of 2014, the State Supreme Court declined to review that decision. No other actions to restrict expansion are known at this time. Hence, it appears likely that this landfill will expand.

- Redwood Landfill near Novato faced opposition to the adoption of the mitigated alternative in its Environmental Impact Report for its planned expansion. A court ruling set aside the EIR and the associated solid waste facility permit, but this was overturned on appeal. In May of 2015, the State Supreme Court declined to review that decision.

1.4 Site-Specific Constraints and Opportunities

The 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. In 2015, the windblown-litter problem continued due to the increased exposure of the working face to wind as Fill Area 1 neared completion. However, the construction of the Phase 1 portion of Fill Area 2 continued throughout 2015; and this lower, less windy area may begin to receive refuse in 2016. At that point the litter problem is expected to greatly diminish, because most landfill activity will be taking place within canyons at lower elevations, rather than on hilltops.

1.5 Overview of Operations, Regulations and Permits

1.5.1 Operational Functions and Requirements

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

- Wastes are covered to control litter, prevent fire, and prevent the spread of disease.
- Wastes are placed and compacted to be physically stable.
- Plant debris is not to be disposed; if received, it must be separated and reclaimed by composting or other methods. 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 is controlled by an extraction system. Currently the gas is used to produce fuel (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 on the ALRRF include:

- using landfill gas 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 dry fine materials to make a soil-like product that can be landfilled;
- 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.

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 the ALRRF property drains into the Central Valley, the Central Valley RWQCB issues the Waste Discharge Requirements (WDRs) for the site. These WDRs set various operating requirements and 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 works with staff at the ALRRF to address special problems that may arise, such as the proper disposition of wastes that may have been brought to the landfill without

necessary testing for 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 in great detail, 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 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 the next section of this report. The CM tracks compliance through a combination of 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.

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 Committee 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.

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 mandatory recycling at businesses and 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.

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 if 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 regulatory agencies, concluding in 2012. These environmental mitigations are lengthy and complex; the topics that they cover are listed in Table 1-1 below. A more detailed listing is available on the CMC web site.

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 2015, the CM made observations during site visits that pertain to several of the above Conditions and reviewed the first Conservation Plan Area Baseline Survey and Mitigation Monitoring Plan Report (pertaining to the resource agencies' permit mitigations). The CM also reviews the ALRRF annual mitigation monitoring report, which briefly summarizes the status of compliance with each of the 106 CUP Conditions.

According to the recently submitted draft Joint Technical Document³, Fill Area 2 will be developed in 12 or more Phases. Earthwork for Fill Area 2 began in 2013 and continued into 2015, focusing on the Phase 1 area and long-term infrastructure including stormwater basins, truck wash area, leachate pond, access road, etc. Liner installation took place in 2015, and some infrastructure construction will continue into 2016. Construction of additional Phases will occur in future years as needed, depending on the rate at which the Phase 1 area is consumed.

³ 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.

SECTION 2

Community Monitor Activities and Issues

2.1 Introduction

Under the terms of the Settlement Agreement, when the ALRRF is in compliance with operating requirements, 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 2015, 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 2015 became apparent:

- **Landfill gas wells** that had been installed in the latter part of 2014 were brought on line in early 2015. Several landfill gas wells that were becoming unproductive were taken off line as well. Landfill gas production, which had been declining, showed an obvious increase when the new wells came on line.
- **For Fill Area 2**, excavation of the Phase 1 portion was completed, the liner for that area was installed, the access road was constructed and paved, and other associated features were partially or completely constructed. The storm water basins are now operational, the truck wash at the north end of Fill Area 2 is nearly complete, and the leachate management system is still being constructed. It appears that Fill Area 2 could be ready to receive refuse in a matter of a few months, but wet weather is likely to impede the remaining work.
- **A second transfer-truck tipper was converted to use CNG fuel.**
- **The litter collection crew** was augmented with several temporary workers, and their efforts continued through the latter part of 2015.

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, we reviewed publicly available data from the regulatory agencies listed above, ALRRF correspondence with those agencies, and Community Monitor monthly site inspection reports. The severity of the issues was rated subjectively by the Community Monitor using the 1 to 5 scale shown at the bottom of Table 2-1. Issues that were beyond the control of the ALRRF are not included in the annual total of severity scores and are listed below the Total line.

The table shows apparent "spikes" in severity totals in 2013 and 2015. This is driven more by increased regulatory scrutiny, in those years, than by changes in operational or management methods. Higher scrutiny is the result of several factors including the persistence of some issues such as windblown litter and low-level groundwater contamination; personnel changes at some regulatory agencies; and the expansion of operations and mitigations related to Fill Area 2 development. Certain issues indicate aging infrastructure at the site (Condensate/Leachate Leakage; Sampling Pump problems), but the only issue with an apparent steady upward trend involves thin or absent cover over refuse.

Looking ahead, the discontinuation of refuse deliveries from the San Francisco transfer station, combined with the planned start of refuse fill in Fill Area 2 in mid 2016, will present further operational and compliance challenges. This table can be extended for the next few years as one method of monitoring ALRRF performance during this transitional period.

Table 2-1
Compliance Issues Ranked by Severity

Issue	Severity				
	2011	2012	2013	2014	2015
Contamination at E-05, E-07, E-20B	2	2	2	2	2
Stormwater contamination	3	3	3	3	3
Windblown Litter	2	1	3	2	2
Birds	2	2	2	2	2
Erosion	2	1	-	-	3
Cover thin / absent	2	2	2	3	4
Worker injury	-	1	3	-	1
Condensate/Leachate Leakage	-	-	1	1	3
Ponding in low-lying area of landfill	-	1	1	2	-
MRF fines suitability for ADC	4	4	-	-	-
Ponding on landfill due to water leak	1	-	-	-	-
Leachate Spill	-	4	-	-	-
Odor, on site	-	1	-	-	-
CUPA inspection (Haz Mat Management)	-	-	4	-	-
Unpermitted construction of FA2	-	-	4	-	-
Groundwater Elevation Error	-	-	2	-	-
Sampling Pump Problem: VD-unsat	-	-	2	-	-
Sediment in Wetland Mitigation Area	-	-	-	1	3
Late Annual Report to Water Board	-	-	-	-	4
Leachate Seeps	-	-	-	-	1
Sampling Pump Problem: well E-05	-	-	-	-	2
Totals	18	22	29	16	30
Issues Beyond Control of ALRRF					
Truck overturn	1	1	1	1	1
Hazardous Ash Delivered	-	4	-	-	-
Fire in refuse	-	-	2	-	-
Material High in Copper Disposed	-	-	4	-	-
Dinoseb Disposal	-	-	-	4	-
Methane Gas at Perimeter Probe(s)	-	-	-	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 2015, a total of 15 Violations and 19 Area of Concern notices had been issued by the Local Enforcement Agency (LEA) in calendar year 2015. All but one of the Violations were for high levels of methane gas in two perimeter probes. This was addressed by the operator when it first occurred (late 2014), and initial tests indicated that the gas was not of recent origin and was most likely from a natural source. Subsequently, more stringent tests specified by CalRecycle confirmed this finding; and in September 2015 the LEA issued an inspection report stating that (a) the Notices of Violation would be cleared, and (b) CalRecycle would take its own samples to further confirm the result. CalRecycle sampling has not yet occurred, and the Notices of Violation continue to appear on CalRecycle's web site, but the landfill has been allowed to reduce its probe sampling frequency to quarterly, which is the normal interval.

The other Violation was for a lack of daily cover in a recently covered area. This was promptly corrected by landfill staff, but the Notice of Violation stands.

Areas of Concern noted by the LEA cover several topics:

- Incomplete permit documents related to a new lease-holder at the site (the wood grinding operation, Bio Fuels Inc.)
- Stockpiling of BioFuels feedstock (demolition waste rich in wood) in Fill Area 1.
- Late submittal of the proposed Joint Technical Document (JTD) revisions and other permit documents associated with the Five-Year permit review process (submittal occurred on July 31, 2015).
- A litter complaint that had been filed with the LEA.

To the best of our knowledge these have all been resolved.

At the ALRRF, the Asbestos-Containing Waste (ACW) area is permitted as a separate "Activity" on the site. Ordinarily, the LEA inspects this area quarterly, in conjunction with a regular inspection of the refuse disposal operation. However, the July inspection found that refuse fill operations had caused the removal of some fences, signs and barriers between the ACW area and the main part of the landfill. This was noted as an Area of Concern and the ACW area was inspected twice in August; by the end of August the problem had been rectified.

2.3.2 Water Board Violations and Concerns

2.3.2.1 Prior Violations

A search of the State Water Resources Control Board violations database⁴ found **one violation on record for the ALRRF in 2015: late filing of the 2014/2015 Annual Report required by the facility's stormwater permit.** In 2013 and 2014, violations were issued for three issues described in our 2014 Annual Report:

- Material with High Copper Content (received mixed with refuse from the San Francisco transfer station)
- Rough Grading of Fill Area 2 (work begun without submittal of plans to Water Board)
- Remediation of Wastes Containing Dinoseb (wastes subsequently removed)

⁴<https://ciwqs/waterboards.ca.gov/ciwqs/readOnly/CiwqsReportServlet?inCommand=reset&reportName=PublicViolationSummaryReport>

It appears that Water Board staff were satisfied with the ALRRF's resolution of the high-copper waste issue and that the first of these violations was rescinded. The rough grading violation and the dinoseb violation remain on the record.

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. This plan describes the proposed installation of special gas extraction wells between E-20B and the landfill, and a new groundwater monitoring well downslope / downgradient of E-20B. The Corrective Action Plan also estimates 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. The additional gas wells presumably provide more confidence in the ability to achieve this result.

The new groundwater monitoring well was installed next to stormwater Basin B in September of 2014. The landfill gas extraction wells came on line in January 2015. CMC members have asked when the new gas wells might be expected to have a noticeable effect on the concentrations of contaminants in monitoring well E-20B. The CM team is developing an estimate based on well locations and a model of groundwater flow rate. Preliminary results indicate a time span of about one year. This will be refined when we receive additional information about geologic conditions at the new gas wells.

2.3.3 Other Incidents

2.3.3.1 Facility Damage or Worker Injury

During 2015, the Special Occurrences Log recorded no incidents occurred that caused significant damage to facilities or equipment. There was one incident that resulted in an injury requiring outside assistance. In December, a contractor's trenching machine working on a steep slope in Fill Area 2 became unbalanced and fell on its side. The operator reported back pain. He was stabilized and was taken by EMS to a hospital for evaluation.

2.3.3.2 Earthquake

On August 24, 2014, a magnitude 6.0 earthquake occurred in Napa, approximately 40 miles from the ALRRF. Thorough inspections found no damage to roads, equipment and landfill slopes. However, a spontaneous drop in the water level in stormwater Basin A became apparent a few weeks after the earthquake. Field observations in 2015 indicate that this water level has since returned to its normal level and is quite stable, apparently depending on both surface water and ground water for replenishment.

2.3.3.3 Fire

A large grass fire occurred on May 28, partially on WMAC lands but north of Fill Areas 1 and 2. It was reported by ALRRF staff at 10:30 AM and was fought by State and local forces. Several

hundred acres were affected. The cause was attributed to sparks from a failed power-line capacitor connected to the nearby wind power system.

2.3.3.4 Wet Weather

During the January 5, 2015 site inspection, significant erosional damage was noted on the west side of the new Fill Area 2 excavation. This likely occurred during the wet weather in early to mid December of 2014, but it had not been addressed because muddy conditions made access impractical. This was repaired by the end of March, and no other damage of this type was noted during the rainy period in early 2015. In the latter part of 2015, wet weather began in October with rain occurring intermittently through December, in manageable amounts. No serious damage was noted except for a washout of the uppermost layer at the lower edge of the newly installed Fill Area 2 Phase 1 liner. This was repaired within two weeks and the problem has not recurred in 2015.

2.3.3.5 Other Incidents

Throughout the year there were several incidents of end-dump trucks falling over sideways while unloading. This can happen if the rear wheels are on uneven ground or if some of the material sticks to the dump bed after it is raised, causing the trailer to become unstable. Also, there were three reported incidents of leakage from leachate or condensate lines. Leaking fluid was contained and repairs were made.

2.4 Review of Reports

2.4.1 Groundwater

Two groundwater monitoring reports were reviewed in 2015. The first covered the time frame from July through December of 2014; the second covered January through June of 2015. 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 situation in 2014 and 2015 has been the same, with no significant increase in any of these contaminants. Continued monitoring of the reports on these wells is recommended.

2.4.2 Storm Water

The annual storm water report for 2014-2015 was issued in late June of 2015, as required. It documents storm water protection measures and monitoring efforts as required by regulations and permits. The lack of rain in the 2014-2015 monitoring period meant that only one discharge event requiring sampling took place, on December 3, 2014. From those samples, the few pollutants that exceeded "benchmark" (guideline) levels generally were less concentrated than in the previous sample, from November 2012. The exceptions occurred in Basin C, where iron, zinc, nitrate, and chemical oxygen demand (COD) exceeded benchmark values and were noticeably higher than the March, April and November 2012 sample values. This could reflect a change in grazing practices near Basin C (especially for nitrate and COD), and it might also reflect a lack of flushing, with no discharges having occurred since 2012. In 2014-15 there were

several improvements to the storm water pollution protection systems at the site. These improvements included Best Management Practices (BMP's) such as adding silt-trap geotextile to drainage ditches and steep side slopes; adding rice straw blankets to landfill side slopes; and other means of preventing and controlling erosion.

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 2015, we received the Title V reports for the periods June – November 2014, and December 2014 – May 2015. 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 2015 are similar to those from 2014:

- 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. In general there were fewer surface emission points - essentially, landfill gas leaking out of the landfill - found than in the previous year.
- The LNG plant continued to operate, and unscheduled down-time was minimal, especially in the first half of 2015.
- All control devices passed their emissions tests without incident.
- The installation of additional landfill gas wells in 2014 took place later than usual and was hindered to an extent by wet weather.

Twenty wells were added, and six were decommissioned, during the 2014-2015 reporting period. This increased the amount of available gas such that the gas-to-energy systems at the site were not constrained by a lack of gas availability. All devices, including the IC engines, were running concurrently from January through May of 2015.

2.4.4 Mitigation Monitoring

The MMRP Annual Progress Report covering calendar year 2014 was received in January 2015. 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. We found that the status descriptions accurately reflected the current status of each mitigation measure.

Several of the CUP Conditions relate to the Fill Area 2 permitting, operations and start date:

- 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 third quarter of 2015.
- 20 - This Condition requires that certain USFWS- and CDFW-required wildlife surveys and mitigations be conducted prior to Fill Area 2 construction, and that sensitive species be managed appropriately. ALRRF staff have noted that Mitigation Plan implementation began in 2013.
- 73 - This Condition requires that the Landfill Gas Management Plan be revised to include Fill Area 2. ALRRF staff have noted that this is In Progress.

- 82 - This Condition requires that the Operator offer to retrofit existing noise-sensitive uses to reduce exterior noise levels below 45dBA. ALRRF staff have reported to the Committee that this has been done.
- 105 - This Condition requires that Fill Area 2 become active within three years of its scheduled start date.

In addition to the Annual Progress Report described above, the ALRRF has begun to submit annual reports to inform the 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 was provided to the CM in November 2015 and is currently under review. Two concerns have arisen in connection with the structure of this report:

- 1 - The descriptions of some mitigation measures are incomplete, making it difficult to be sure that the measure is being fully satisfied; and
- 2 - The descriptions of some compliance actions may be incomplete; they do not clearly address all of the requirements of the mitigation measures.

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 several times 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 2015, these reviews were conducted in May and November. A total of 214 files were reviewed, 70% more than the previous year. No out-of-compliance profiles were found, and all files were complete.

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 quarterly throughout 2015. 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 major grass fire in the area north of the active landfill, and minor leaks from leachate and condensate handling systems, which were quickly contained. Additional detail on several of these items may be found in Section 2.3.3 above.

2.5.3 LEA Inspection Reports

In 2015, ongoing difficulties with windblown litter were again noted in many of the LEA inspection reports. High methane in three perimeter gas probes were also noted, as described in Section 2.3.1 above.

2.6 Monthly Inspections

Twelve site inspections were held during 2015. To obtain the best possible understanding of the range of operating conditions, the inspection day and time were varied as shown in Table 2-1 below.

Table 2-2
Site Inspection Summary

Date	Day of Week	Inspection Time	Announced in Advance?	With LEA staff?
Jan 5	Mon	10:00 AM	yes	no
Feb 12	Thurs	12:30 PM	yes	no
Mar 31	Tues	11:00 PM	yes	no
Apr 8	Wed	10:00 AM	no	yes
May 5	Tues	9:00 AM	yes	no
Jun 11	Thurs	1:30 PM	no	yes
Jul 29	Wed	6:00 PM	yes	no
Aug 6	Thurs	10:00 AM	no	yes
Sep 9	Wed	5:30 AM	yes	no
Oct 8	Thurs	10:00 AM	no	yes
Nov 4	Wed	2:30 PM	yes	no
Dec 14	Mon	3:00 PM	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 to CMC members. 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 2015 our observations continued to focus on:

- 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.
- Observation of issues of concern, including the increased presence of seagulls and the quality of materials used as Alternative Daily Cover.

- Management of windblown litter, which is an ongoing problem as Fill Area 1 reaches its maximum height.

In addition, the construction of Phase 1 of Fill Area 2 was observed throughout the year, concluding with completion of the Phase 1 liner and with continuing construction of the leachate pond and truck wash area.

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 2015.

In addition to the on-site inspections, counts of arriving refuse trucks were conducted by the CM in January and July of 2015. 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 2016 contract year, the CM 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.

3.2 Issues to be Tracked in 2016

3.2.1 Ongoing Report Review

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

- Groundwater monitoring methods.
- 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.
- Surface emissions monitoring.
- Reports related to the development and use of Fill Area 2.
- Effects of any development of composting, digestion or material recovery operations on the landfill.

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 2016, two topics will be of special interest:

- The effect of new gas wells on the concentrations of contaminants in well E-20B
- The need to take into account naturally occurring methane at perimeter gas probes

3.2.2.2 Stormwater Controls and Monitoring

Throughout the year, and especially during wet weather months, we 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.

3.2.2.4 Fill Area 2

The CM will continue to observe construction, which will likely involve the completion of the truck wash area, the leachate pond and other appurtenances. Mitigation progress reports regarding the Conservation Plan Area or the Conservation Easement will be reviewed to the extent required by the Settlement Agreement.

3.2.2.5 Possible Increases in Certain Groundwater Contaminants

Although they are below regulatory trigger levels, the concentrations of MTBE, tert-butyl alcohol, and tetrahydrofuran appeared to be increasing in three groundwater monitoring wells in 2014. In 2015 they have remained fairly stable, but we will continue to check these levels as data become available.

3.2.2.6 Adjustments if San Francisco Refuse is Discontinued

There is a real possibility that refuse from San Francisco will no longer be brought to the Altamont Landfill, beginning in early 2016. This may lead to changes in the management of the ALRRF, such as shorter operating shifts or reduced use of some equipment. It may also lead to lower impacts from traffic, litter, etc. We will track these developments as they occur.

3.2.3 Class 2 Soils File Review

As required in our Scope of Work, we intend to conduct this review several times during 2016.

3.3 Project Management Considerations

As our current contract continues, we expect the budget to be sufficient through the remaining year of the current 3-year contract period.



COMMUNITY MONITOR COMMITTEE STAFF REPORT

TO: Community Monitor Committee Members

FROM: Judy Erlandson, Public Works Manager

SUBJECT: Agreement for Consulting Services with Environmental Science Associates

RECOMMENDED ACTION

Staff recommends that the Community Monitor Committee discuss and either approve a three-year extension to the Agreement for Consulting Services with Environmental Science Associates pursuant to the existing contract, or the Committee Monitor Committee may initiate a Request for Proposal for the services of a Community Monitor.

BACKGROUND

The Settlement Agreement, dated November 30, 1999, between the County of Alameda, the City of Livermore, the City of Pleasanton, Sierra Club, Northern California Recycling Association, Altamont Landowners Against Rural Mismanagement, and Waste Management of Alameda County, Inc. (Settlement Agreement), created the Community Monitor Committee to hire and oversee the work of a Community Monitor.

The Community Monitor is a technical expert retained to monitor the Altamont Landfill and Resource Recovery Facility's (ALRRF) compliance with environmental laws and regulations, and to advise the public and the Cities of Livermore and Pleasanton about technical issues relating to the ALRRF.

On October 8, 2013, the Community Monitor Committee (Committee) and Environmental Science Associates (ESA) entered into an Agreement for Consulting Services for ESA (Agreement) to perform the duties of the Community Monitor as defined by the Settlement Agreement.

DISCUSSION

The term of the current Agreement with ESA is from October 8, 2013 to December 31, 2016. The Agreement has a provision for one three-year extension with unanimous approval from Committee members at a Committee meeting. Therefore, the Committee

MEETING DATE: April 13, 2016

AGENDA ITEM: 6.8

may choose to extend the Agreement with ESA or initiate a Request for Proposal (RFP) for the services of a Community Monitor for the Committee.

Option 1: Extend Agreement with ESA

Should the Committee decide to extend the current Agreement with ESA for the services of a Community Monitor; the amended Agreement process will involve the following steps:

1. At a Community Monitor Meeting the Committee will approve a motion to exercise the three-year extension option of the current Agreement with ESA for the services of a Community Monitor upon a unanimous approval from the Committee.
2. The Committee shall notify ESA of the intention to exercise the three-year extension of the current Agreement with ESA for the services of a Community Monitor.
3. The Agreement specifies that if the agreement is extended for one three-year term, the compensation for each year will be determined by applying the Consumer Price Index – All Urban Consumers (CPI-U) for San Francisco-Oakland-San Jose to the maximum compensation amount determined in year 3.
4. The Committee may negotiate other terms to be applied to the amended Agreement with ESA. Any revision shall be in writing as an amendment to the Agreement with ESA and signed by both the Committee and ESA.
5. The amended Agreement with ESA shall be effective upon receipt in writing by personal service upon the authorized agent of the Committee or upon U.S. Mail to the parties of the Agreement.

Option 2: Complete a Request for Proposal for a Community Monitor

Should the Committee decide to initiate a RFP for the services of a Community Monitor, the consultant selection and RFP preparation process will involve the following steps:

1. Prior to releasing the RFP, the Committee will give Waste Management of Alameda County (WMAC) five (5) working days to review and comment on the contents of the RFP.
2. The Committee will release the RFP and RFP Notice. The RFP Notice is to be posted to the public at least 10 days before the submittal deadline.
3. The Committee will coordinate the evaluation of responses to the RFP, and then invite a select number of consultants that are deemed to be most qualified to an interview. Emphasis will be placed on overall experience and the consultant's approach to providing services as expressed during the interview process.
4. The Committee shall provide WMAC with copies of all submitted proposals.

5. Within fifteen days after receiving all submitted proposals, WMAC shall have the right to submit to the Committee objections to any proposal based upon an objective showing that (1) the applicant does not individually or collectively possess the minimum qualifications set forth in the scope of services, and/or (2) the proposal exceeds the scope of work.
6. If three or fewer qualifying bids are submitted, then the Committee must accept either the lowest bid for the Community Monitor work, or any bid within a certain range of the lowest bid as described below.
7. The Committee may accept any qualifying bid which does not exceed the lowest by the applicable amounts set forth below:
 - a. If the lowest bid is fifty thousand dollars (\$50,000) per year or less, then twenty-five percent (25%) of the lowest bid;
 - b. If the lowest bid is greater than fifty thousand dollars (\$50,000) per year and equal to or less than seventy-five thousand dollars; (\$75,000) per year, then twenty percent (20%) of the lowest bid, or \$12,500, whichever is higher;
 - c. If the lowest bid is greater than seventy-five thousand dollars (\$75,000) per year, then ten percent (10%) of the lowest bid, or \$15,000, whichever is higher.
8. If the Committee reasonably determines that a higher bidder would provide better community monitoring services, the Committee may ask WMAC to waive the requirements of the low bid.
9. The Committee shall consult with WMAC prior to accepting any bid for the Community Monitor work.
10. The Committee shall take action by majority vote of the voting members for approval of a new Monitor.
11. The Committee will negotiate Agreement with the selected bidder.

The previous RFP process for a Community Monitor took six months to complete from posting of the RFP Notice to agreement execution.

Approved by:



Judy Erlandson
Public Works Manager

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