COMMUNITY MONITOR COMMITTEE
Altamont Landfill Settlement Agreement

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

AGENDA

DATE: **Wednesday, October 12, 2016**
TIME: **4:00 p.m.**
PLACE: City of Livermore
Maintenance Services Center
3500 Robertson Park Road

1. Call to Order
2. Introductions
3. Roll Call
4. Approval of Minutes (Minutes from April 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: Concentrations of Naturally Occurring Groundwater Contaminants; Purging Requirements in Tentative Water Board Waste Discharge Requirements (ESA)**
   - **6.2 Review of Reports Provided by ALRRF (ESA)**
   - **6.3 Update re Fill Area 2 Status (ESA)**
   - **6.4 Reports from Community Monitor (ESA)**
   - **6.5 Status of Five-Year Permit Review (ESA)**
   - **6.6 Reducing Truck Traffic Counts (ESA)**
   - **6.7 Annual Report Topics (ESA)**
   - **6.8 Announcements (Committee Members)**
   - **6.9 Meeting Dates for 2017 (Staff)**
   - **6.10 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 **January 11, 2017** at 3500 Robertson Park Road, Livermore.

Informational Materials:

- Community Monitor Roles and Responsibilities
- List of Acronyms
- Draft Minutes of April 13, 2016
- Reports from ESA and City of Livermore staff

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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

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 AND28 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
CDFW or DFW – California Department of Fish and Wildlife
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/lgcentral/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
TTLC – Total Threshold Limit Concentration, similar to STLC but determined using a different method of analysis
TPD, TPM, TPY – Tons per day, month, year
WMAC – Waste Management of Alameda County

COMMUNITY MONITOR COMMITTEE
Altamont Landfill Settlement Agreement
Minutes of April 13, 2016

DRAFT

1. Call to Order
The meeting was called to order at 4:09 p.m.

2. Roll Call

Members Present:	Bob Woerner; Donna Cabanne; David Tam; Jerry Pentin; Sarah Fockler; Arthur Surdilla
Absent:	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.

4. Approval of Minutes
The approval of the January 2016 minutes was deferred to follow item 6.6 in this meeting, to provide additional time for review.

5. Open Forum
There was no Open Forum discussion.

6. Matters for Consideration

6.1 Responses to Committee Member Questions
Methane Testing – Mr. Runyon noted that CalRecycle has not yet run their independent test of methane found at perimeter probes, to determine if that methane is naturally occurring, as previous tests by ALRRF have found. Ms. Fockler confirmed this.

Conservation Plan Area (CPA) Reports – Mr. Runyon reported that ALRRF has not received comments from regulatory agencies on the initial CPA report. In response to a question from Mr. Pentin, Ms. Fockler added that given the amount of time that has passed since the initial report was submitted, the ALRRF is not expecting comments. She added that the second report, covering 2015, is not yet complete but will be forwarded to the agencies as soon as it is ready.

6.2 Update re Fill Area 2 Status

Mr. Runyon stated that Phase 1 of the liner is fully built and the area is not yet being used; some paving work remains to be done. He added that some erosion has occurred due to wet weather. This is expected to be repaired before the area begins to be used, by the Phase 2 contractor, who will begin work soon.

6.3 Reports from Community Monitor

In reviewing the monthly site visit reports, Mr. Runyon noted the following: With the cessation of refuse deliveries from the San Francisco transfer station, the need for truck traffic counts (to check compliance with Use Permit limits) is questionable. He recommended that they be discontinued. After some discussion, Committee members agreed to agendize this item for a decision at the next Committee meeting. Ms. Cabanne asked about the total count in a typical day. Mr. Runyon stated that he could make an estimate based on incoming tonnage, and use transfer truck traffic counts reported by the ALRRF. During this past winter's heavy rains, the silt-trapping features in the channel upstream of the mitigated wetland worked well but were damaged and will need repair. Ms. Cabanne asked what might be done with silt that would be removed from the channel; Mr. Runyon stated that it might be used to repair the channel, or as landfill cover. He agreed to continue to check the area. Mr. Pentin asked if repair would ultimately be necessary, and what actions need to be taken. Ms. Fockler stated that the design of repair and other improvements to the area is under way, with repairs to be done this summer.

Ms. Cabanne asked if the seagulls present a hazard to the public, since the depredation approach has not been effective thus far. Mr. Runyon pointed out that the landfill's remote location minimizes the birds' impact on the general public; and he indicated that there are other tactics that can be tried to reduce the birds' presence at the site. Ms. Fockler stated that dogs are not permitted at the landfill, and that a former staff member had tried falconry which is very costly if hired professionally. Drones and the use of loud sound is also being considered.

Mr. Runyon also referred to Figure 6.3-2, the tonnage bar chart, to point out the effect of Recology's having discontinued deliveries from the City of San Francisco, as well as the unusually large amount of special waste delivered in February, mainly from a single project in the East Bay. Mr. Tam asked about the date that San Francisco waste was discontinued. Ms. Fockler stated that it was in the first week of January.

6.4 Review of Reports provided by ALRRF

<u>CUP Mitigation Monitoring and Reporting Program annual summary for 2015</u> – Mr. Runyon noted minor issues regarding several requirements and/or the way they have been addressed. In response to Committee members' questions, he stated that the first of these points, regarding the required level of recycling for San Francisco, may be moot if two lawsuits objecting to San Francisco's refuse

being taken elsewhere by Recology are not successful (i.e. if SF refuse does not return to the ALRRF). Mr. Pentin and other Committee members asked that the Community monitor not pursue these points further unless future circumstances warrant. Mr. Tam noted that a portion of the solid waste generated in San Francisco is disposed in other landfills without being handled by Recology.

The second point referenced post-construction compliance reports for Fill Area 2; none have been received by the Community Monitor. Ms. Fockler stated that no reports have been completed as yet; when completed, if requested they will be provided.

The third point referenced a requirement for Water Board concurrence that Bethany reservoir would not be impacted by landfill leachate. Mr. Runyon pointed out that this is an unusual requirement, since the County cannot compel the Water Board to address the question; and Ms. Fockler stated that the ALRRF does not have such concurrence from the Water Board.

Air Emissions Report – Mr. Runyon mentioned that the landfill continues to install landfill gas wells annually, and that this continues to be necessary to extract all available landfill gas. He also corrected a typographical error by completing the sentence at the bottom of page 30 in the agenda packet, and pointed out that the diesel-powered tippers owned by Recology were recently removed from the site. Referring to the graph of landfill gas utilization (Figure 6.4-1), he mentioned that the total daily flow of landfill gas declined from June through November of 2015, but this can be expected to increase in 2016 when additional wells are brought on line. He also noted that there were no PG&E power outages that affected the use of equipment; and all of the major gas-consuming devices that were tested, passed their emissions tests.

Groundwater Monitoring Report – Mr. Runyon mentioned that the current report included the 5-year Constituents of Concern, and he summarized the findings in that area. Mr. Woerner asked if the increased concentrations of certain inorganics were significantly higher than in the past. Mr. Runyon stated that statistical significance may be impossible to establish because the tests are so infrequent. Mr. Burns added that these compounds tend to occur naturally in coastal California, and a recent increase in testing efforts has found them occurring naturally in more locations than previously known. Mr. Woerner asked to see a graph of the concentrations in question. Mr. Runyon suggested a chart that shows typical coast-range concentrations and compares them to the ALRRF data (past, present and future). Mr. Pentin asked if there is a way to determine whether these samples originate naturally or from the landfill. Mr. Burns responded that this can be addressed by checking to see if samples included other substances that could only have originated from the landfill. Mr. Runyon noted that the semivolatile organic compounds and herbicides would provide that indication, and levels of both of these types of substances were extremely low. One detected herbicide, dinoseb, was noteworthy because the landfill had received some dinoseb-contaminated material in 2014, and dinoseb

did appear in 2015 samples. Mr. Runyon noted that it had also appeared in samples taken in 2010, at a similar level.

Mr. Runyon stated that the regular semiannual test results indicated the continuing presence of VOC's at three wells with a long history of these detections. He added that the Langan study of the potential effect of nearby shallow gas wells on the quality of this groundwater found that it would take at least a year, and possibly much longer, to be measurable in the groundwater samples.

6.5 Status of Five-Year Permit Review

Mr. Runyon stated that the critical-path item for completion of the permit review is the issuance of revised Waste Discharge Requirements (WDRs) by the Central Valley Regional Water Board (Board), and that Board had issued tentative WDR's for consideration at their April meeting. He indicated that these new WDR's are extremely stringent, and the supporting discussion indicates non-compliance in several areas that had not been flagged previously in Water Board staff public communications with the ALRRF. Ms. Fockler added that due to continuing discussions with Water Board staff, the approval of the tentative WDRs had been postponed to their June meeting. Ms. Cabanne noted that the April Board meeting will be in Fresno, making access from the Livermore area difficult; and Mr. Tam asked if the Board ever meets in the Sacramento area. Mr. Runyon responded that they do often meet at their office location in Rancho Cordova, a suburb of Sacramento.

Mr. Runyon also noted that the proposed future compost site at ALRRF is now being planned for land that does not contain refuse, rather than current or former disposal-site land. Consequently, requirements for the compost site have been removed from the tentative WDRs. Ms. Cabanne asked if planning for the composting operation is continuing to go forward. Ms Fockler said that it is, and that by putting it on native ground (not on landfill), water-related permitting would be handled by the State Water Resources Control Board rather than the Regional Water Board.

In discussion, Ms. Cabanne expressed support for the tentative WDRs that call for more and better-distributed groundwater monitoring (98a and 98b) and for more stringent well purging when monitoring (129). She also asked for clarification on the proposed purging-related requirements.

6.6 2015 Annual Report

Revisions to the report, in response to previous Committee comments, were presented. Approval of the report was moved by Mr. Woerner, seconded by Ms. Cabanne, and passed unanimously.

4 Approval of Minutes

One correction to the minutes was requested by Mr. Tam: to use the full name of the Regional Water Board (Central Valley Regional Water Quality Control Board)

in item 6.2, where it first occurs. With that correction, approval was moved by Mr. Tam and seconded by Mr. Woerner; the minutes were approved 4-0.

6.7 Announcements
Mr. Tam discussed Committee member stipends. Per an email from the County Supervisor Hagerty's Chief of Staff, the Committee Members' sign-in sheet will be used to document attendance for stipend purposes. In addition, Mr. Tam noted that documentation of prior attendance back to July of 2014 will be used to prepare stipends retroactive to that time.

6.8 Agreement for Consulting Services with ESA
The Committee agreed to extend the current contract for an additional three years, as the contract provides.

7. Agenda Building

As noted in Item 6.3, the continuation and frequency of truck traffic counts will be discussed.

8. Adjournment

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

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memorandum

date September 30, 2016

to ALRRF Community Monitor Committee

from Michael Burns and Kelly Runyon

subject CMC Meeting of 10/12/16 - Agenda Item 6.1 - Responses to Committee Member Questions:

- Concentrations of Naturally Occurring Groundwater Contaminants
- Purging Requirements in Tentative Water Board Waste Discharge Requirements

Concentrations of Naturally Occurring Groundwater Contaminants

In the first round of the recent 5-year constituent of concern (COC) sampling event in late 2015, antimony, arsenic, and cyanide were reported in some samples from Wells MW-5A, LS2, VD2, and E-03A at concentrations exceeding Maximum Contaminant Levels (MCLs or Primary Drinking Water Standards). As noted during the April 13, 2016, meeting, all of these constituents also occur naturally. The ALRRF Community Monitor Committee requested information on the naturally-occurring background levels.

Table 1 below summarizes the MCLs, background concentrations, and the reported concentrations of antimony, arsenic, and cyanide in the wells of interest. It is important to note that MCLs are human health risk-based regulatory drinking water standards requiring water purveyors to comply at the tap. If a water purveyor pumps groundwater to be used as drinking water, then that water purveyor must treat that water so that all constituents are below their respective MCLs.

MCLs are not groundwater regulatory standards. However, MCLs do get used as screening levels for constituent concentrations in groundwater. The concept is that if the concentration of a given constituent is below the MCL while in groundwater, then it surely would be below other action levels and no action would be needed. If the concentration of a given constituent is above the MCL, then groundwater may or may not require comparison to other action levels and may or may not require action depending on the location of the groundwater, the intended use, basin water quality objectives, and other criteria.

Because the MCLs are designed to reduce the risk to humans from their drinking water, they do not necessarily account for the fact that some constituents occur naturally in the environment. In California, antimony, arsenic, and cyanide all occur naturally. The U.S Air Force collated background soil and groundwater inorganic chemical data from 14 air force bases within 10 counties in California (Hunter et al, 2005). The dataset includes 10,415 soil samples from 3,883 boreholes and 5,071 groundwater samples from 1,307 monitoring wells. The results were processed using statistical analysis yielding groundwater background data. The background data for antimony, arsenic, and cyanide are summarized in the table below. The statistical calculation of percentiles is used to screen out anomalously high values.

In the case of antimony and arsenic, the MCL concentrations cited below are lower than the background concentration levels. As a consequence, depending upon a given site's location, the concentrations of antimony and arsenic may naturally exceed MCLs. This condition is particularly true for the Coast Ranges geomorphic province where the Altamont Landfill is located. Serpentinite commonly occurs within the Coast Ranges both at the surface and concealed at depth. Serpentinite is known to contain both antimony and arsenic. Antimony and mercury deposits associated with serpentinite were actively mined in the Coast Ranges in Santa Clara, San Benito, and Merced Counties as far back as 1870 (Bailey and Myers, 1942). Arsenic occurs as a trace metal in

serpentinite and other ultrabasic (containing iron and magnesium, with little or no silica) rocks (Welch et al, 1988).

Some wells at the ALRRF were also resampled and analyzed for cyanide to verify that the prior detection s were likely due to laboratory cross-contamination. It should be noted that cyanide also occurs naturally. Cyanide is known to be produced by many organisms, including plants, bacteria, fungi, algae, and some animals (Kamyshny, 2013). Consequently, cyanide can accumulate in sediments and subsequently enter groundwater.

Table 1 – Summary of Data for Antimony, Arsenic and Cyanide

		Antimony	**Arsenic**	**Cyanide**
MCLs		6	10	150
Background Percentiles	50th	nd (~26)	nd(~3)	nd(~10)
	95th	146	35	12
	99th	190	140	30
5-Year Sampling Event				
MW-5A		**9.4**	**120**	<10
LS2		**26**	**190**	8.2
VD2		1.4	**14**	4.1
E-03A		0.54	1.3	23

Notes:
All concentrations in micrograms per liter
MCLs = maximum contaminant levels also known as primary drinking water standards
Bold concentrations exceed the MCL

References

Bailey, Edgar M. and W. Bradley Myers, 1942, *Quicksilver and Antimony Deposits of the Stayton District*, USGS Bulletin 931-Q

Hunter, Philip M., Brian K. Davis, and Frank Roach, 2005, *Inorganic Chemicals in Groundwater and Soil: Background Concentrations at California Air Force Bases*, March 10

Kamyshny A. Jr., H. Oduro, Z. F. Mansaray, and J. Farquhar, 2013, Hydrogen Cyanide Accumulation and Transformations in Non-Polluted Salt Marsh Sediments, in Aquatic Geochemistry 19:97-113

Welch, Alan H., Michael S. Lico and Jennifer L. Hughes, 1988, *Arsenic in Ground Waters of the Western United States*, Groundwater, Vol. 26, No. 3, May-June

Purging Requirements in Tentative Water Board Waste Discharge Requirements

At the April 13 Committee meeting, Ms. Cabanne requested additional information that would describe the basis for the Central Valley Regional Water Quality Control Board's concern about the purging that is done prior to sampling of ALRRF monitoring wells. Purging is the removal of all of the water that was present within the well casing, prior to sampling, so that the sample is taken from groundwater that was outside of the well – in the surrounding rock – immediately before the start of the sampling process.

Based on documents reviewed while tracking the development of new Waste Discharge Requirements for the landfill, the primary concern of Water Board staff appears to have been that low-flow purging, as practiced by SCS Engineers when sampling at the ALRRF, might not remove all of the stale water in the well before the sample is taken. This could result in samples that contain water that was exposed to the air within the well casing for an extended period of time. During that time, some VOC's might partially or completely evaporate, and other compounds might oxidize or react to form substances not actually present in the groundwater.

However, low-flow purging is necessary to avoid agitating the contents of the well, which could suspend silt that would interfere with laboratory analyses. SCS has explained their processes at the ALRRF[1], and agreed to add further detail to their field data sheets to better document the amount of water removed during purging. In addition, the ALRRF has stated[2] that it will prepare an amendment to its Sampling and Analysis Plan to provide a more detailed description of the purging and sampling processes.

[1] April 5, 2016 letter from SCS Engineers to ALRRF: Response to January 22, 2016 letter from RWQCB. Source: GeoTracker web site.

[2] May 25, 2016 letter to RWQCB from ALRRF: Response to April 14, 2016 letter from RWQCB. Source: GeoTracker web site.

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ESA

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memorandum

date September 30, 2016

to ALRRF Community Monitor Committee

from Michael Burns, Kelly Runyon

subject CMC Meeting of 10/12/16 - Agenda Item 6.2 - Review of Reports Provided by ALRRF

Groundwater Data from Resampled Wells

In the first round of the 5-year constituents of concern (COCs) sampling event in late 2015, certain contaminants were found in samples from four wells. These wells were resampled, and the results became available in June of 2016. The resampling found low levels of a few contaminants at 3 of the 4 wells. Some were the same as before; some were different; most could have originated from laboratory contamination; and none are primary constituents of landfill gas or leachate. Future samples at these wells should be watched closely for clear indications of a leachate or landfill gas release, but at this time we see no reason to conduct additional testing or other special efforts. Further detail is provided below.

Well E-03A: The earlier cyanide detection was not confirmed by the resampling event. The laboratory concluded it was a laboratory error. This is a reasonable conclusion since cyanide had not been previously detected in this well. As a side note, cyanide does occur naturally. Almonds, millet sprouts, lima beans, soy, spinach, bamboo shoots, and cassava have low levels of cyanide. Additionally, cyanide is found in most any fruits that have a pit, or core, like cherries, apricots, and apples. Cyanide can also be produced by certain bacteria, fungi, algae, and as a by-product of industrial manufacturing and waste. It is possible that landfilled vegetable waste matter may cause an occasional low-level detection. Note that the detections were below the action level.

Well E-05: The laboratory reanalyzed the initial sample and came up with a lower result, approaching nearly an order of magnitude lower. The laboratory concluded that laboratory cross-contamination had occurred during the original extraction step. Complicating the results was the detection of bis(2-ethylhexyl)phthalate in some method, trip, and/or field blanks. Phthalates, particularly bis(2-ethylhexyl)phthalate, have long been problematic in sampling programs. As a plasticizer, phthalates are present in low levels almost everywhere in the man-made environment, including both the waste disposed of at the landfill, the equipment used to sample the wells, and the equipment used in the laboratory to analyze the samples. The detection of bis(2-ethylhexyl)phthalate is routinely considered suspect and unreliable.

The detection of acetophenone was confirmed by the resampling event. Note that the detection is an estimated concentration below the reporting limit but above the method limit. This means that the compound is present at such a low level that the actual concentration is uncertain. Note also that the compound was not previously detected, it has no action level, it occurs naturally in food, and it is actually used as a food additive. At this stage, future sampling results would be needed to evaluate whether this single detection is an issue of concern.

Well MW-5A: The issue of phthalates detected in this well are similar to those of Well E-05, discussed above. Note that the initial sample detected 2.5 µg/L, and then the resamples detected 46 µg/L and then 3.2 µg/L. This lack of consistent results supports the conclusion that there are multiple sources of phthalates and phthalate results should be considered suspect and unreliable. Order of magnitude concentration changes in a single well sampling event would not be expected if derived from landfill leachate.

Well MW-6: This well also had issues with the detection of phthalates similar to those discussed above.

Conservation Plan Area 2015 Monitoring Survey Report

This report was written by the biological monitoring consulting firms for the 991.6-acre ALRRF Conservation Plan Area (CPA), DUDEK and BioMaAS, Inc. (together, the DUDEK team). It covers calendar year 2015 and was forwarded by ALRRF staff in early August of this year.

This review does not include a technical evaluation of field procedures and data. If the Committee so requests, such a review can be prepared using a wildlife biologist and a botanist from Environmental Science Associates. The 2014 report was so reviewed, and the current Community Monitor budget is more than adequate for this task.

The organization of the document is a significant improvement over the previous year's report; the content is less fragmented, and the figures and tables are more consistent and complete.

With regard to compliance with the relevant permit conditions, we note the following:

- In 2015, San Joaquin Kit Fox and Burrowing Owl monitoring were not conducted due to "a management decision from the ALRRF" (page 29). The report goes on to say: "In order to reach the goals and objectives of the Conservation Management Plan [CMP], we recommend that CMP species surveys be performed."

- It is commendable that the report points out that monitoring of the mitigation pond took place on July 9, 2015, rather than in August as stipulated in the Conservation Management Plan. However, the justification for this exception should be provided.

The remaining points below are offered in the interest of further improving this report in 2016 and beyond.

- Graphics would be more helpful if they included the following:
    - A single map showing and labeling the locations of all wetland features.
    - Removal of extraneous characters in the labels on Figure 3.
    - Clearer captioning of the mitigation wetland photos (Figure 5).

- Section 4 should summarize findings on all invasive species (bullfrogs, pepperweed, black mustard, stinkwort, etc.) and provide recommendations for protecting sensitive habitats such as wetland areas, and rare plants including crownscale (found at the mitigation pond site), from being overtaken by invasives.

- As noted in the Community Monitor field notes elsewhere in this packet, it appears that another invasive plant, Tamarisk (*Tamarix sp.*), is becoming established in one part of the landfill operations area. Although it is currently not in or near the Conservation Plan Area, eliminating this plant (after confirming its identity) will be important to protect the CPA wetlands from being impacted by this invasive which creates dense stands and uses all available water.

Air Emissions Report

The most recent Semi-Annual Report to the Bay Area Air Quality Management District (BAAQMD) covers the period from December 1, 2015 through May 31, 2016. The key points from this document are:

- At various times during the 6-month reporting period, a total of 9 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 an underground fire.

- In November 2015, 23 new vertical landfill gas wells were installed, and they were brought on line in December. The installation of these 23 wells completed the permitted number of new well installations under the current BAAQMD permit. On March 14, ALRRF staff requested new gas extraction device quotas, in the same amounts as previously granted: 120 new devices (e.g., gas wells) installed and 100 existing devices decommissioned. This was approved by the BAAQMD on June 6.

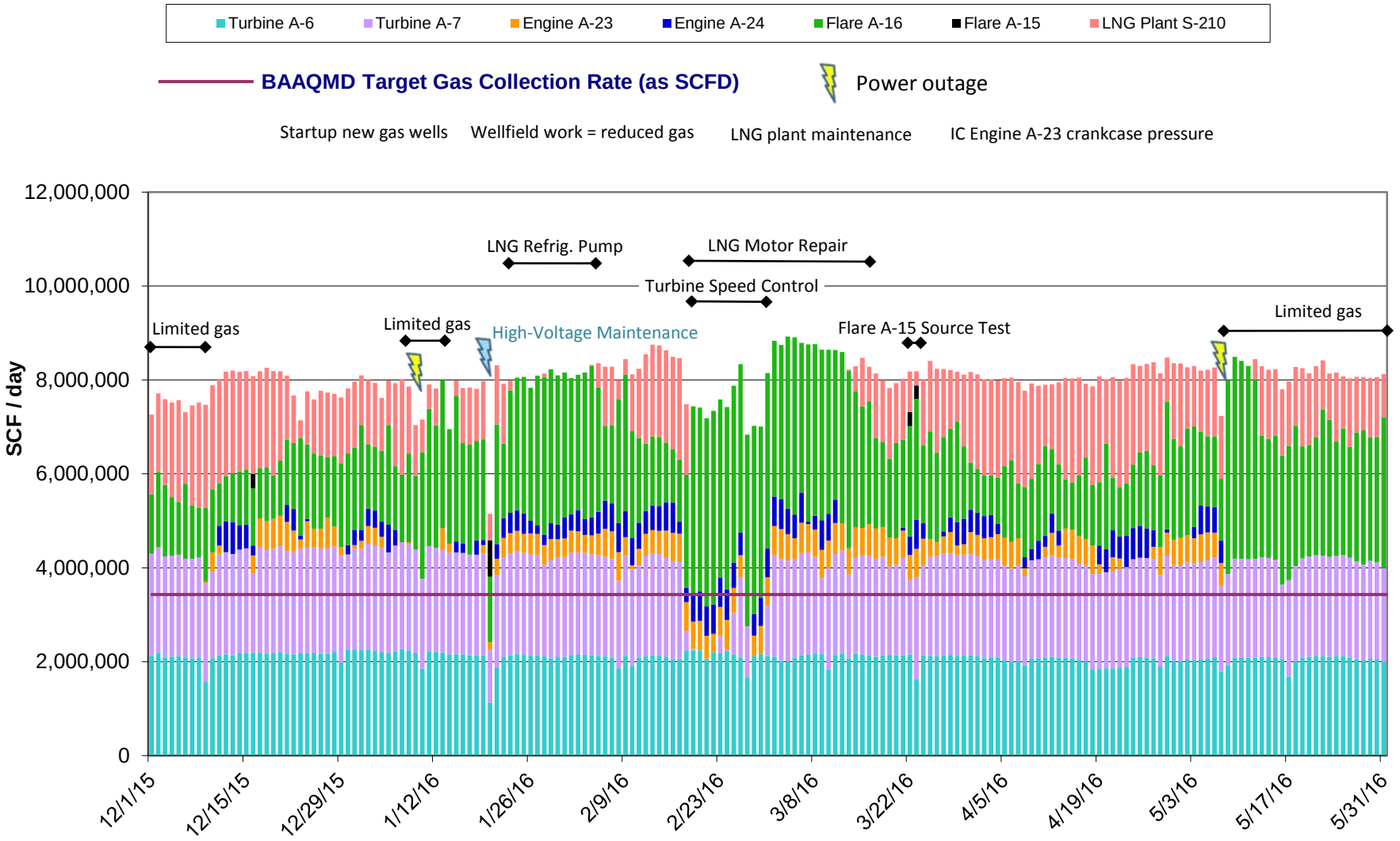
- Surface emissions monitoring for the fourth quarter of 2015 was conducted in October and November; for the first quarter of 2016, monitoring took place in February. There were 12 surface emission points detected in the fourth quarter of 2015, and 9 in the first quarter of 2016. These were repaired, and in all cases, the repairs were still intact when checked 10 days and 30 days later.

- During this reporting period, most of the gas combustion devices (two internal-combustion engines, two turbines, and the smaller "backup" flare) were source-tested in February and March for compliance with emission limits; all passed.

- On April 29, the ALRRF requested permission to install 8 probes within the landfill. There was no written response from the BAAQMD in the current Semi-Annual Report. The BAAQMD must be notified of any construction at the site that could expose refuse to the air and release landfill gas.

Figure 6.2-1 on the following page shows the amounts of landfill gas consumed by each of the combustion systems at the ALRRF. There were two brief down times due to PG&E power outages in this period. Between February 18 and March 1, problems with one turbine and the LNG plant impacted energy recovery, reducing it to roughly 2/3 of the usual amount. Nevertheless, throughout the reporting period, the minimum required gas extraction volume was exceeded every day.

Figure 6.2-1 - ALRRF Daily LFG Flow
(values derived from Title V Report)



First Semiannual 2016 Groundwater Monitoring Report

The attached memorandum from Langan Treadwell Rollo provides findings from their review of groundwater and stormwater monitoring as described in the Second Semiannual Report. In summary:

Two types of follow-up were conducted for the five-year sampling for Constituents of Concern (COCs) which had begun in the latter part of 2015:

- Where contaminants were detected in 2015, resampling was conducted to attempt to validate these detections.

- COC sampling of stormwater retention basins continued in early 2016, in an effort to obtain two samples from each basin and its discharge.

The resampling found trace concentrations or no detection of:

- Cyanide at Well E-03A (two samples: one with a trace, one non-detect).

- Two semivolatile organic compounds (SVOCs) at Well E-05, neither of which is indicative of a landfill release, according to the SCS report.

- Below-reporting-level concentrations of bis(2-ethylhexyl) phthalate in MW-5A and MW-6. This may be a laboratory contaminant.

- Trace concentration of benzyl alcohol, and no detection of Dinoseb, in the VZM-A sample (vadose zone, below the liner).

- Below-reporting-level concentrations of bis(2-ethylhexyl) phthalate in the Valley Drain 2 (VD2) sample. Also, analysis of this sample for Dinoseb using two different methods gave inconsistent results: 5.4 µg/L (parts per billion) with EPA Method 8151A, and non-detect with Method 8270C. This is being further evaluated by SCS, Waste Management staff, and the laboratory.

- Very low concentrations of two SVOCs at the leachate sample point LS, and a trace level of the herbicide atrazine at LS2. No other SVOCs at either location.

- Trace concentration of cyanide at Basin B; at Basin C, trace concentration of the herbicide 2,4-D in discharge and in-basin water, but with some difficulty confirming these measurements.

Various metals (iron, copper, lead, arsenic, zinc, etc.) were detected in the Basin samples. Values were generally consistent with the previous COC samples taken in 2011-2012, with copper being the only metal to show a noticeable increase, at Basin A and Basin C.

The SCS report does not recommend further sampling for COCs. We concur. The samples do show traces of some contaminants, but not of the types and quantities that would clearly indicate a release from the landfill.

The Semi-Annual Report describes several other issues related to landfill operations:

Possible leachate seep on side slope – A seep was observed on the south-facing side of Fill Area 1 on February 26. This appeared to be a recurrence of leachate seep activity first noted in May of 2015. The wet material at the seep

was excavated, and dry material was found below. It was concluded that the February seep was simply accumulated rainwater.

Monitoring downgradient of E-20B – The ALRRF is now monitoring several wells downgradient of well E-20B. The closest, MW-3B and 3C, are practically adjacent to E-20B but much deeper. They have only been sampled in the past year and have not produced any reliable detections of VOCs other than traces of acetone that were also found on "equipment blank" samples, indicating probable laboratory contamination. Several hundred feet downslope, MW-12 has detected traces of a few VOCs intermittently since early 2015, with much lower concentrations than at E-20B. Roughly 2,000 feet downslope from E-20B, the very few detections of VOCs at wells PC-1B and PC-1C appear to be due to laboratory or field contamination.

Projected start date for Fill Area 2 – Based on recent measurements of refuse depth and density, the estimated time to begin disposal operations in Fill Area 2 has been revised to the first quarter of 2018.

LANGAN TREADWELL ROLLO

Memorandum

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

TO: Kelly Runyon
Michael Burns, ESA

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

DATE: 27 September 2016

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

SUBJECT: Groundwater and Storm Water Analysis for Community Monitor Progress Report #18

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, First Semiannual 2016 Groundwater Monitoring Report, Altamont Landfill and Resource Recovery Facility (WDR Order R5-2009-0055), Long Beach, California dated 28 July 2016.

This memorandum describes the results of the above effort and provides Langan's opinions and recommendations for the Community Monitor Committee (CMC). The report was reviewed for issues described in previous CMC meeting minutes and for potential trends in groundwater analytical data over recent years. Fill Area 1 wells are sampled on a semiannual basis, with the exception of E-20B, which is sampled quarterly. The first semiannual 2016 groundwater sampling activities for Fill Area 1 and future Fill Area 2 were conducted on May 17 through 20, 26, and 30, 2016. Wells associated with future Fill Area 2 are monitored on a semiannual basis to establish baseline conditions. The 5-Year Constituents of Concern (COC) event was conducted during the Second Semiannual 2015 sampling. During the First and Second Quarter 2016 monitoring, several wells and unsaturated zone, leachate and surface water sampling locations were resampled for the 5-year COC's based on the 5-Year COC sampling results, as required in Order No. R5-2009-0055, the Waste Discharge Requirements (WDR). Wells and monitoring points were generally found to be in compliance during the May 2016 sampling event. The groundwater monitoring activities and findings are discussed below; organized by Five-Year and Semiannual 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 contaminants on the site's 5-year COC list. The 5-year COC sampling event was conducted during the Second Semiannual 2015 event. This included unsaturated zone, leachate, and surface water sample locations with sufficient flow volume. During the First Semiannual 2016 event, resamples were collected for

select parameters from Fill Area 1 wells E-03A, E-05, MW-5A, and/or MW-6. Additional 5-year COC samples were collected from Basins B and C, and resamples were collected from unsaturated zone locations VZM-A and VD2 and leachate locations LS and LS2 for select analytes.

Monitoring Wells:

Well E-03A, resampled twice for cyanide analysis, contained a trace concentration (below laboratory reporting limit [RL] [1]) of cyanide in the second resample. However, the first resample was non-detect for cyanide. The first and second resample results for well E-05 identified trace concentrations of two semi-volatile organic compounds (SVOCs), bis(2-ethylhexyl) phthalate and acetophenone. The First Semiannual 2016 report states that the bis(2-ethylhexyl) phthalate detection is not associated with a landfill release and is likely a common laboratory contaminant. The First Semiannual 2016 report also states that the single acetophenone detection below the RL is not indicative of a landfill release. In wells MW-5A and MW-6, the first and second resample results for bis(2-ethylhexyl) phthalate were below RL. Based on these results, no additional sampling was recommended by SCS for the 5-year COC parameters for the Fill Area 1 monitoring wells. Based on the resampling results confirming either no detections or trace concentrations of 5-year COCs, Langan concurs with SCS's recommendation.

Unsaturated Zone:

Resamples collected from VZM-A and VZ2 were analyzed for benzyl alcohol, bis(2-ethylhexyl) phthalate, and/or dinoseb. In the sample collected from VZM-A, benzyl alcohol was detected at a trace concentration (below RL) and dinoseb was not detected.

In VD2, bis(2-ethylhexyl) phthalate was detected at a concentration below laboratory RL. Dinoseb analysis was conducted using two different analytical methods. Dinoseb was detected at 5.4 micrograms per liter (µg/L) by EPA Method 8151A, but it was not detected with a method detection limit (MDL) of 4.1 µg/L by EPA Method 8270C. Waste Management (WM) and SCS Engineers are working with the project laboratory, Test America Laboratory (TAL), to further evaluate the differences in results using the two methods.

Leachate Monitoring Points:

Resamples were collected from leachate locations LS and LS2 for various SVOCs and the herbicide atrazine because they had been detected during 2015 COC sampling. In the sample collected from LS, acenaphthene and o-toluidine were detected at concentrations below laboratory RL; no other SVOCs were detected. Atrazine was also not detected in LS. In the sample collected from LS2, atrazine was detected at a trace level (below laboratory RL).

[1] 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.

The Second Semiannual-Annual 2015 Report stated that according to 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.

Surface Water Samples

In surface water samples from the discharge and water inside Basins B and C, no SVOCs, organochlorine pesticides (OCPs), organophosphorus pesticides (OPPs), polychlorinated biphenyls (PCBs), or sulfide were detected. Cyanide was detected at a trace concentration (below RL) in Basin B but not in Basin C samples. One chlorophenoxy herbicide (2,4-D) was detected in discharge and water from inside Basin C; however, no herbicides were detected in discharge or water inside Basin B. Regarding the detections of 2,4-D in the discharge and water inside Basin C, the project laboratory, TAL, stated that the detections had more than 40 percent relative percent difference between the primary and confirmation column results and that this anomaly suggests matrix interference.

Trace concentrations of metals arsenic, chromium, cobalt, iron, lead, selenium, and vanadium and above reporting limit concentrations of antimony, barium, copper, manganese, nickel, thallium, and zinc were detected in some of the surface water samples. No other metals were detected in the surface water samples.

First Semiannual 2016 Groundwater Sampling Results

Detection and Corrective Action Well Inorganic and Volatile Organic Compound Concentrations

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

In monitoring well E-20B, vinyl chloride was detected below its MCL of 0.5 µg/L at a concentration of 0.43 µg/L during both March and May 2016 monitoring events. Vinyl chloride has been historically detected in monitoring well E-20B since 1999. The Updated Engineering Feasibility Study (EFS), completed by SCS Engineers (November 2004, Revised March 2005), and the Revised E-20B Corrective Action Plan (CAP), dated 13 August 2014, prepared by Waste Management of Alameda County, Inc. (WMAC) concluded that the VOC detections at E-20B do not appear to be indicative of leachate impacts. Furthermore, the source of vinyl chloride has been attributed to landfill gas. However, in a letter dated 23 May 2014, the Central Valley Regional Water Quality Control Board (Water Board) remarked about its reservations regarding this conclusion. As discussed below, the area surrounding E-20B is currently undergoing corrective action, including landfill gas control; and E-20B is also sampled for natural attenuation parameters to monitor conditions favorable for VOC degradation.

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

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

During the First Semiannual 2016 period, VOCs diethyl ether, cis-1,2-dichloroethene, and 1,1-dichloroethane were detected at concentrations below their laboratory reporting limits in MW-12. The same three VOCs were detected during the first and/or second quarter 2015; however, no VOCs were detected during the third and fourth quarter 2015. SCS Engineers have

previously stated that the low concentrations of VOCs detected in MW-12 establish the downgradient extent of groundwater impacts noted in E-20B. In January 2015, two new LFG extraction wells, designated as 687 and 688, were installed in the vicinity of E-20B. Over the next few months, WMAC planned to evaluate the wells in context of overall LFG collection and control system. Langan evaluated the potential effect of gas extraction wells 687 and 688 on the VOC concentrations at Well E-20B and documented our assessment in a separate memorandum titled *Effect of Gas Extraction Wells 687 and 688 on Well E-20B* dated 17 March 2016. Our assessment concluded that if VOCs are partitioning from vapor at gas extraction wells 687 and 688 into groundwater that is migrating downgradient to E-20B, it would take a year or longer to see a reduction in VOC concentrations at E-20B as a result of landfill gas extraction at wells 687 and 688.

Detection wells PC-1B and PC-1C are also currently used to monitor for potential migration of VOCs further downgradient of E-20B. Wells PC-1B and PC-1C, located approximately 2,000 feet from E-20B and approximately 1,500 feet downgradient of MW-12 are also being monitored quarterly and have not had any VOC detections since the start of monitoring in 2006, with the exception of those attributable to laboratory cross contamination (acetone and methylene chloride). In a letter dated 17 March 2015, SCS Engineers proposed sampling of MW-3B and MW-3C located near E-20B which are screened in a deeper zone. In the 22 January 2016 response letter, the Water Board said that MW-3B could be sampled on a semiannual basis and that sampling of MW-3C should be added on an annual basis. Therefore, MW-3C was sampled for the first time during First Semiannual 2016 monitoring event. VOCs that are consistently detected in E-20B were not detected in the deeper groundwater zone monitoring wells MW-3B and MW-3C during the First Semiannual 2016 monitoring event. Those wells had high concentrations of total dissolved solids, but this can be interpreted as high mineral content due to the age and depth of the groundwater at this location.

Fill Area 2

Waste placement in Fill Area 2 is currently due to begin in First Quarter 2018, and sampling of Fill Area 2 wells listed in the 2009 WDR was reinitiated in 2014 to collect background water quality data. 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. 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.

During the First Semiannual 2016 period, no VOCs were detected in samples from monitoring wells MW-4A, MW-8A, MW-8B, MW-9, MW-10, MW-11, PC-1C, and MW-13B and MW-14. Well MW-13A was dry during the current monitoring event.

As further preparation for Fill Area 2 monitoring, new monitoring wells MW-15A, MW-15B, MW-16, MW-17, MW-18, and PC-6B[R] were installed during the Second Semiannual 2015 and First Semiannual 2016 periods for monitoring the future Leachate Surface Impoundment (LSI) and other phases of fill of Fill Area 2.

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 and First Semiannual 2016 events, the final field turbidity in the samples from E-05 were also zero NTUs. As noted in the table above, 1,4-dichlorobenzene, 1,1-dichloroethene, diethyl ether, MTBE , tetrahydrofuran and vinyl chloride were detected in monitoring well E-05, during the May 2016 sampling. With the exception of diethyl ether, all other VOCs detected were flagged as estimated (below RL but above MDL).

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 provides a response based on the findings from their 12 July 2016 site visit.

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 VZM-A[2], VD[3], and VD2[4] were consistent with

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

[3] 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.

[4] 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.

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

Leachate Inorganic and VOC Concentrations

Inorganic and VOC concentrations at leachate monitoring point LS and LS2[5] during December 2015 were similar to historical values.

Stormwater 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. For the 2015-2016 rainy season, one set of samples was collected from Basins A and C in December 2015. During the First Semiannual 2016 period, another set of samples was collected at Basins A, B, and C.

Inorganics in Stormwater

Reported concentrations of inorganic compounds in stormwater during 2015-2016 rainy season were similar to historical values.

Volatile Organic Compounds in Stormwater

VOCs detected in stormwater basin samples collected from Basins A, B, and C during 2015-2016 rainy season included low levels of acetone, 2-butanone, and methylene chloride. As noted 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.

Laboratory Quality Assurance

The semiannual groundwater monitoring, stormwater, surface water and leachate analytical data packages were reviewed by Langan's senior chemist, Ms. Emily Strake, to verify that preparation and analysis of the samples was performed in accordance with the specifics of the method requirements. As a result of the review process, no major anomalies were identified that grossly impact data quality and would necessitate rejection of the results. Minor deficiencies were identified that directly impact data quality, but do not result in unusable data.

[5] 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.

Recommendation

The Water Board approved a new WDR (Order No. R5-2016-0042) on 24 June 2016, detailing additional monitoring and reporting requirements for both Fill Area 1 and future Fill Area 2. The Second Semiannual Monitoring will be conducted in compliance with the 2016 WDR/Monitoring and Reporting Plan (MRP). Langan will review the 2016 WDR/MRP when it becomes available and will note significant changes to the groundwater monitoring program. We recommend continuing review of groundwater, unsaturated zone, leachate, and stormwater data as it becomes available, and evaluating for trends in data, especially for groundwater monitoring wells where contaminants have previously been detected.

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memorandum

date September 30, 2016

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 10/12/16 - Agenda Item 6.3 - Updates re Fill Area 2 Status

In Fill Area 2, by late June the construction of the liner for the Phase 1 area was complete, erosional damage to the liner had been repaired, and excavation for the Phase 2 area adjacent to the east side of Phase 1 had begun. The photos on the following page show conditions in mid-June. The second page shows the spatial relationship between Phase 1 and Phase 2, in a design drawing that was downloaded from the Central Valley Regional Water Quality Control Board's "Geotracker" web site, which is open to the public.

As seen in the photos, erosional damage was repaired, but windblown litter had spread across the area. Also, note the dark staining from groundwater seepage to the south of the Phase 1 area (the left side of the photo). In later phases, when the landfill liner covers this seepage, the liner will be underlain by a drainage blanket to conduct this water downslope before it can affect the liner.

The third page shows two panoramic photos, looking eastward across the Phase 1 area to the Phase 2 excavation. Phase 2 excavation work has continued through September.

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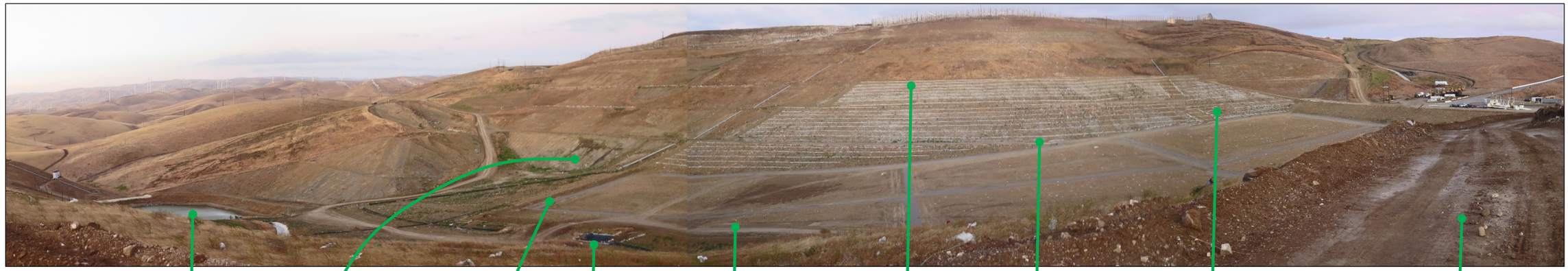
View of Fill Area 2 Phase 1, looking west

June 15, 2016



FILL AREA 2 PHASE 2 BASE GRADING PLAN

P:\CADD\CIVIL 3D\WM\ALTAMONT\WG2139 (FA2 P2 FINAL DESIGN)\DWG\DESIGN REPORT\Report Figures 2&4 March 2016.dwg

LEGEND

- PHASE 1 BASE GRADES (EXISTING)
- PHASE 2 BASE GRADES (TO BE EXCAVATED)
- LIMITS OF LINER – PHASE 1
- LIMITS OF LINER – PHASE 2

0 100 200

SCALE IN FEET

N

Geosyntec consultants

FILL AREA 2, PHASE 2 BASE GRADING PLAN
ALTAMONT LANDFILL & RESOURCE RECOVERY FACILITY
ALAMEDA COUNTY, CALIFORNIA

FIGURE NO.	2
PROJECT NO.	WG2139
DATE:	MARCH 2016

View of Fill Area 2 Phase 2, looking east

July 14, 2016

August 2, 2016

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memorandum

date September 30, 2016

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 10/12/16 - Agenda Item 6.4 - Reports from Community Monitor

Attached are inspection reports for April through August of 2016.

The April inspection was unannounced and took place on April 13, with the LEA.
The May inspection was announced and took place on May 11.
The June inspection was announced and took place on June 15 at 5 AM (off-hours).
The July inspection was announced and took place on July 14 at 4 PM (off-hours).
The August inspection was announced and took place on August 2 at 11 AM.
The September inspection took place on September 30 and will be reported at the next Committee meeting.

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

Issues that cause special concern are marked with yellow rectangles in the monthly inspection reports. There were several issues during the second and third quarters, listed below. None of these is serious enough to be considered a violation of permit conditions or regulations, but they have required or will require attention from ALRRF operations staff:

- Windblown litter continues to be a problem as Fill Area 1 operations add to the top of the landfill.
- Although it is not yet in use, Fill Area 2 has required maintenance, to repair erosional damage.
- At a small pond near the scale house, a highly invasive plant species, new to the site, has been tentatively identified: Tamarisk, or saltcedar.
- Two fires occurred on the site in late July. Neither was on refuse, and neither was caused by landfill operations; but both required immediate attention to bring them under control. The August inspection report includes further details.

There have also been positive developments in recent months. The entry road had been badly deteriorated for over a year; it has been repaved. Seagull activity diminished in the springtime months, as it has done for the past several years. The design of Phase 2 of Fill Area 2 was completed, and excavation began in June.

Also attached are graphs showing monthly tonnages by type of material for the most recent 12-month period. Figure 6.4-1 shows the breakdown of materials that make up Revenue-Generating Cover. Figure 6.4-2 shows these same quantities, plus the Municipal Solid Waste (MSW) and Special Waste tonnage for each month. Refuse tonnage, which decreased in January by more than 1/3 with the departure of San Francisco's solid waste, increased slightly from February through May, declined slightly through July, then increased dramatically in August due to an influx of material from the City of Newark and an increase in tonnage from the Davis Street Transfer Station. Class 2 cover soil tonnage surged in May through August, reflecting increased construction activity. For other materials such as auto shredder fluff, MRF fines, etc., recent quantities have been similar to those in prior months.

ALRRF Community Monitor Monthly Report — April 2016

Reports Received

Monthly Tonnage Report for March 2016, received April 15, 2016

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	76,192.61	
1.2	Tons Disposed from City of San Francisco TS	0.00	
1.3	Other Out of County Disposal Tons	2,157.93	
	subtotal Disposed	78,350.54	
	Disposed, By Source Type		
2.1	C&D	692.13	
2.2	MSW	54,780.72	
2.3	Special Wastes	22,877.69	
	subtotal Disposed	78,350.54	
	Difference	0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	70.18	
2.5	Revenue Generating Cover	34,990.21	
	Total, 2.1 - 2.5	113,410.93	
	Materials of Interest		
2.3.1	Friable Asbestos	1,551.80	
2.3.2	Class 2 Cover Soils	8,921.66	
2.5.1	Auto Shredder Fluff	14,373.33	
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	130.07	
2.5.3	MRF Fines for ADC	2,965.36	

ALRRF Community Monitor Monthly Report **April 2016**

Site Visit

Site Inspection April 13, 2016, 12:00 - 1:30 PM.

- Attended by K. Runyon and Arthur Surdilla (LEA); escorted by Sarah Fockler. Unannounced.
- The working face was adjacent to the winter pad. One compactor was pushing and packing refuse that was being unloaded by one tipper. The dozer was parked during our observations.
- Dust control water was being applied. A D6 dozer (too small for refuse) was spreading cover.
- The public area was in the class 2 area north of the tipper location.
- The LEA reminded ALRRF staff that commercial drivers must wear PPE when out of their vehicles. One such driver was seen and was so reminded.
- Planned repair of the site entry road has been put on hold, briefly, to resolve a contractual issue.
- Processed green material (PGM) has been staged along the recently-completed south-facing slope of Fill Area 1. This material has been approved for use as cover on the outside slopes of the landfill. It will be spread onto the slopes in the near future. Additional PGM has been stockpiled on the flat area east of the southeast corner of Fill Area 1.
- Minor, shallow ponding (presumably of dust control water) was observed immediately north of the asbestos area.
- In the asbestos area, a large load was seen that had its outer wrapping tear as it slid out of the truck that delivered it. This load was covered later in the day.

Observation of Environmental Controls

- After being suspended for several weeks, gull depredation has been resumed.
- The LEA noticed that the bird cannon was not operating, and asked if it was being repaired. ALRRF staff replied that they would need to look into this and provide a response.
- High winds have been causing litter fences near the working face to quickly become blinded. At that point, wind carries litter up and over the fences. Normally, there is a calm period each day and the fences clear as litter falls to the ground; but recently that has not been the case.
- The pond that is ordinarily used to hold raw water for dust control was being drained for possible future use as a leachate pond.

Fill Area 2

- There was grassy vegetation throughout the base of the Phase 1 area, and on both side slopes.
- Several minor erosional rills were seen in the operations layer in the base of Fill Area 2 Phase 1. These will need to be repaired prior to the placement of refuse.
- ALRRF staff indicated that Phase 1 repair work will be performed as part of Phase 2 installation, and the Phase 2 contract will be authorized in the near future.
- Plastic sheeting had been placed across transition areas in drainage ditches immediately east of the Phase 1 lined area.
- The eroded area at the north end of the west side slope had not yet been repaired, and there was a second eroded area, smaller, farther to the south along the side slope. See photo below.

Stormwater Controls and Best Management Practices

- Stormwater basin A was at its normal level; the water level was below the inlet of the discharge riser.
- Stormwater basin B water level was very low. The discharge riser was fully exposed. The basin appeared to be free of litter.
- Basin C was not observed.
- All stormwater basins serving Fill Area 2 were nearly full. The north basins had no litter; the south basin, a minimal amount.

ALRRF Community Monitor Monthly Report — May 2016

Reports Received

Monthly Tonnage Report for April 2015, received May 16, 2016

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	57,182.08	
1.2	Tons Disposed from City of San Francisco TS	0.00	
1.3	Other Out of County Disposal Tons	1,498.18	
	subtotal Disposed	58,680.26	
	Disposed, By Source Type		
2.1	C&D	241.57	
2.2	MSW	54,863.31	
2.3	Special Wastes	3,575.38	
	subtotal Disposed	58,680.26	
	Difference	0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	1,014.36	
2.5	Revenue Generating Cover	32,720.35	
	Total, 2.1 - 2.5	92,414.97	
	Materials of Interest		
2.3.1	Friable Asbestos	1,478.33	
2.3.2	Class 2 Cover Soils	7,161.91	
2.5.1	Auto Shredder Fluff	13,120.91	
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	168.26	
2.5.3	MRF Fines for ADC	3,167.35	

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ALRRF Community Monitor Monthly Report **May 2016**

Site Visit

Site Inspection May 11, 2016, 11:00 AM - 1:30 PM.

- Attended by K. Runyon (announced), joined at 12:25 by Arthur Surdilla (LEA; unannounced); escorted by Sarah Fockler.
- Fill was being placed near the south edge of the top deck, in the Class 3 area, working eastward. General-public refuse was being unloaded at a separate area, farther north in the Class 2 portion of the site.
- One compactor was in use. Other heavy equipment was parked, with operators at lunch or on break. One transfer truck load (Berkeley) arrived and was emptied in approx. 5 minutes. There was no queue for transfer trucks. One tipper was operating.
- The LEA checked an area where cover was recently applied, and was satisfied with the depth and placement of cover material.
- New pavement is to be installed in several phases, from the admin area (near Altamont Pass The stretch from the admin building to the scale house is nearly complete. Baton-style lane dividers have been installed to separate outbound from inbound traffic.
- Air emissions testing is planned for this week but has been briefly delayed because the LNG plant is down for maintenance. It that circumstance, the flare is used to maintain gas extraction, at flow rates that are outside of testing limits.
- Internal combustion engines, which provide power to the LNG plant, appeared to be off. The turbines appeared to be operating.

Observation of Environmental Controls

- The gull population appears to be lower than in winter months. This is consistent with prior years; the population appears to decline in springtime.
- Litter on Altamont Pass Road was light. Two litter pickers were working along the north side of the site.
- A substantial amount of windblown litter was seen on the east side slope downwind of the active fill area. This area is well protected from wind, and further migration of this litter appears unlikely.
- The liner protecting the edges of the raw water pond has not yet been repaired. The earthen berm behind the liner remains in good condition.
- Goats continue to be used to reduce vegetation as a fire prevention measure.

Fill Area 2

- Liner leak-testing was being performed in the Phase 1 area.
- ALRRF staff stated that Phase 2 construction is expected to begin in June or July, and the first refuse may be placed in Fill Area 2 in June.
- Groundwater monitoring wells were being installed at the newly constructed leachate pond.
- Erosion problems on the Phase 1 side slopes and base have been repaired; see below.

Wetland Features in Conservation Plan Area

To help with review of Fill Area 2 mitigation documents, an attempt was made to observe all of the wetland features described in the Conservation Plan Area baseline report. In practice, they were difficult to locate, but the Seep and the North Alkali Wetland were located and photographed. The East Alkali Wetland was located but was not photographed, because the LEA had arrived for a semi-monthly inspection. This was combined with the Community Monitor inspection for the balance of the time on site. Afterward, the West Alkali Wetland and associated stock ponds were located and photographed from Dyer Road.

ALRRF Community Monitor Monthly Report **June 2016**

Reports Received

Monthly Tonnage Report for May 2016, received June 15, 2016

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	65,738.85	
1.2	Tons Disposed from City of San Francisco TS	0.00	
1.3	Other Out of County Disposal Tons	1,299.44	
	subtotal Disposed	67,038.29	
	Disposed, By Source Type		
2.1	C&D	269.23	
2.2	MSW	62,653.45	
2.3	Special Wastes	4,115.61	
	subtotal Disposed	67,038.29	
	Difference	0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	1,496.91	
2.5	Revenue Generating Cover	39,714.37	
	Total, 2.1 - 2.5	108,249.57	
	Materials of Interest		
2.3.1	Friable Asbestos	1,137.83	
2.3.2	Class 2 Cover Soils	16,726.10	
2.5.1	Auto Shredder Fluff	15,765.58	
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	40.75	
2.5.3	MRF Fines for ADC	2,059.40	

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ALRRF Community Monitor Monthly Report **June 2016**

Site Visit

Site Inspection June 15, 2016, 5:00 AM - 6:30 AM.

- Attended by K. Runyon; escorted by Terry Medieros. Announced.
- At about 5:15 AM, two tippers were operating and three transfer trucks were waiting to unload (total of 5 transfer trucks in the area). The queue became shorter while we were observing. Terry mentioned that the site has begun to use the second tipper from 4AM to noon, to keep up with incoming loads, which now include some loads from the Berkeley Transfer Station.
- One compactor and one dozer were operating. A second compactor will operate starting at 8 AM, to help reach the target compaction.
- The two working tippers are in the process of being relocated a short distance eastward. One had recently been moved, and the other will be moved later in the morning. All tippers at the site are now CNG fueled, using gas produced at the landfill.
- The C&D bunker contained pallets, scrap lumber and some office furniture. No inappropriate or prohibited items were seen.
- The green waste bunker was quite full; all material appeared to be plant debris. The public area was not active, and the previous day's material was covered.
- Solidification areas are in use; one was recently emptied. The dry material staged for mixing was all treated auto-shredder waste, which is approved for this use.
- On the main road approaching the scale area, pylons that were placed to divide inbound from outbound lanes have been significantly damaged by truck traffic. Terry attributed some of this to a recent surge of bottom-dumping double-trailer trucks, which tend to require a wider lane on curves.
- Repaving and repair of the main access road is continuing, with the focus on the main scale area. The inbound scales are coned off, and the outbound scale platforms are being used for inbound and outbound loads. This did not cause any traffic problems during these observations.

Observation of Environmental Controls

- Few gulls were seen at this early hour. The Dyer Road reservoir also did not appear to have as many gulls as usual. Strong winds for the past few days may be suppressing gull activity, or it may have been too early in the day for them to be present.
- A large raptor, probably a golden eagle, was seen while enroute to Stock Pond 11 in the northwest corner of the Conservation Plan Area. It took off from a north-facing hillside as our vehicle approached.
- The raw water pond has been almost completely drained to prepare for removal of the damaged liner material. Some of that liner has recently been disturbed by the wind, now that the water is not there to help keep it in place.
- Litter on Altamont Pass Road was very light in both directions. The new covers for Davis Street trucks, plus the absence of San Francisco loads, may be enabling the litter pickup crew to keep up more effectively along the road.
- The goat herd seen in prior months apparently has been removed.

Fill Area 2

- Vegetation in the Phase 1 area has largely turned brown as the rainy season has ended. Recent high winds have carried light materials into Fill Area 2, on the bottom and the west side slope:

- Excavation work has begun on the Phase 2 portion of Fill Area 2, which is east of Fill Area 1. Excavated soil is being stockpiled immediately north of the Phase 2 area. It appears that if the Phase 1 area begins to receive refuse, that will not interfere with preparation of Phase 2. Some repair work appears to be continuing in the bottom portion of Phase 1.

Stormwater Controls and Best Management Practices

- Stormwater basin A has dropped about a foot since last month. Dried algae along the banks indicates that this was a rapid drop, probably due to the lack of continuing rainfall. No litter was seen at this basin.
- 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 contained water that was closer to the discharge elevation. Litter was minimal to none at all 3 locations.

Special Occurrences Log

- Numerous vehicular incidents have been logged in recent months: mishaps while tipping on June 6 and 7 (both involving Berkeley loads), a parked truck rolling into K-rail May 26, dump-trailer overturns on March 21 and April 11, and damage while assisting a customer truck on May 23. No injuries were associated with these incidents. Oil leakage, when it occurred, was properly contained and disposed.
- On March 9, a hydraulic leak at the paved entry to Fill Area 2 was cleaned up and the material disposed.
- There was also a small fire involving scrap wood in a dumped asbestos load, on May 18. It was quickly extinguished by on-site staff and equipment.

ALRRF Community Monitor Monthly Report — July 2016

Reports Received

Monthly Tonnage Report for June 2015, received July 15, 2016

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	62,805.30	
1.2	Tons Disposed from City of San Francisco TS	0.00	
1.3	Other Out of County Disposal Tons	1,232.84	
	subtotal Disposed	64,038.14	
	Disposed, By Source Type		
2.1	C&D	454.97	
2.2	MSW	60,776.50	
2.3	Special Wastes	2,806.67	
	subtotal Disposed	64,038.14	
	Difference	0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	1,849.94	
2.5	Revenue Generating Cover	57,326.66	
	Total, 2.1 - 2.5	123,214.74	
	Materials of Interest		
2.3.1	Friable Asbestos	445.31	
2.3.2	Class 2 Cover Soils	36,947.43	
2.5.1	Auto Shredder Fluff	14,291.12	
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	84.71	
2.5.3	MRF Fines for ADC	1,712.12	

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ALRRF Community Monitor Monthly Report **July 2016**

Site Visit

Site Inspection July 14, 2016, 4:00 - 5:30 PM.

- Attended by K. Runyon (announced), escorted by Sarah Fockler.
- Fill was being placed along the east side of Fill Area 1, working southward. General public waste was being received farther north, within the Class 2 portion of Fill Area 1. Observed numerous pieces of large truck tires in the public area; these were apparently generated by the on-site shop.
- Heavy equipment was parked, with day-shift operations nearly completed. Both tippers were available. Landfill management has brought a break-room trailer to an area close to the tippers, saving time that had previously been spent by ALRRF workers traveling to and from the break room near the mechanics' shop.
- The installation of new roadway pavement from the scale house to the edge Fill Area 1 is essentially complete. Inbound and outbound lanes are well marked but the pylons that were installed as lane dividers, and were quickly destroyed, have not been replaced.
- Materials in the C&D and Plant Debris bunkers were appropriate; no contaminants were noted.
- It was evident that water is being used for dust control. No erosion or ponding problems were seen.

Observation of Environmental Controls

- The gull population continues to appear to be lower than in winter months. This may be a function of the time of day (late afternoon for this inspection).
- Litter on Altamont Pass Road was light. It appears that the reduced incoming tonnage, due to Recology's shift to a different landfill, has lessened the accumulation of litter on Altamont Pass Road.
- ALRRF staff reported that two additional full-time litter pickers were recently hired.
- The liner protecting the edges of the raw water pond has not yet been repaired. The earthen berm behind the liner remains in good condition.
- At the truck wash overflow pond near the scale house, the pond was essentially dry. Several small trees were seen growing along the north side of the base of this pond. They appear to be tamarisk trees, which are a highly invasive species, very difficult to control when established.

ALRRF Community Monitor Monthly Report **July 2016**

Fill Area 2

- Excavation was continuing in the Phase 2 area. A temporary unpaved access road was being built to connect the south end of this area with soil stockpiles to the north. The liner will not be installed until needed. This may present a risk of stormwater runoff carrying silt downstream to the mitigation wetland.
- Groundwater monitoring well installation at the newly constructed leachate pond appeared to be complete.
- Some water from the Fill Area 2 stormwater basin south of Phase 1 had recently been discharged and was present near the East Alkali Wetland; see photo below.

Wetland Features in Conservation Plan Area

Continuing the effort of the past two months, all remaining wetland features in the Conservation Plan Area were visited and photographed. In general, they appear to be in reasonably good condition, having benefited from the high amount of rainfall this past winter. This effort took up most of the time spent on this inspection. Repair and replanting of the mitigation pond southeast of Fill Area 2 has not yet occurred.

ALRRF Community Monitor Monthly Report — August 2016

Reports Received

Monthly Tonnage Report for July 2016, received August 15, 2016

Tonnage Summary:		tons	
	Disposed, By Source Location		
1.1	Tons Disposed from Within Alameda County	57,519.03	
1.2	Tons Disposed from City of San Francisco TS	0.00	
1.3	Other Out of County Disposal Tons	2,416.40	
	subtotal Disposed	59,935.43	
	Disposed, By Source Type		
2.1	C&D	309.44	
2.2	MSW	56,367.82	
2.3	Special Wastes	3,258.17	
	subtotal Disposed	59,935.43	
	Difference	0.00	0.00%
	Other Major Categories		
2.4	Re-Directed Wastes (Shipped Off Site or Beneficially Used)	1,039.36	
2.5	Revenue Generating Cover	42,073.87	
	Total, 2.1 - 2.5	103,048.66	
	Materials of Interest		
2.3.1	Friable Asbestos	422.83	
2.3.2	Class 2 Cover Soils	21,534.24	
2.5.1	Auto Shredder Fluff	13,971.23	
2.5.2	Processed Green Waste/MRF fines, Beneficial Use (GSET)	70.09	
2.5.3	MRF Fines for ADC	2,059.40	

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ALRRF Community Monitor Monthly Report **August 2016**

Site Visit

Site Inspection August 2, 2016, 11:00 AM - 1:00 PM.

- Attended by K. Runyon; escorted by Sarah Fockler. Announced.
- Two tippers were available at the working face. Two dozers and two compactors were spreading material. Fill was being placed along the east side of Fill Area 1, working south from the asbestos fill area, within the Class 2 portion of the site.
- Few gulls present at working face. ALRRF staff explained that cover is being applied more frequently, keeping the working face small to minimize litter and reduce attractiveness to gulls.
- The C&D bunker contained typical C&D material. Two large plastic barrels were checked. One was empty, and the other contained non-putrescible trash. No prohibited items were seen.
- The green waste bunker was empty. The two original solidification basins were in use; the third was empty and available for use.
- The entry road repaving work appears complete. Speed bumps installed on the road were too "aggressive" and have been reshaped from two steep mounds to a single broader mound. Paving work was in progress in parking areas near Fill Area 2.
- Lane-dividing pylons, damaged by truck traffic in June, have not been replaced.
- Solidification areas were in use; one was recently emptied. The dry material staged for mixing was all treated auto-shredder waste, which is approved for this use.

Observation of Environmental Controls

- Took additional photos of suspected tamarisk trees in truck wash overflow pond.
- Large flare (A16), internal combustion engines, and LNG plant all were operating. Turbine exhaust emissions were not visible, so it was not possible to determine if the turbines were running.
- The raw water pond remained empty.
- The water in Stormwater Basin A appeared to contain a dense growth of blue-green algae, covering about 1/3 of the pond surface. This algae can produce toxins harmful to wildlife. These algae blooms have appeared in many small bodies of water in California this year, possibly due to a combination of high runoff and warmer temperatures.

Fill Area 2

- Phase 2 excavation was continuing. Per ALRRF staff, Phase 3 (the side slope west of Phase 1) excavation is planned for 2017.

Stormwater Controls and Best Management Practices

- Basin A water level is lower than usual; it is being gradually drained, prior to excavating accumulated sediment to restore its storage volume.
- Basin B was not observed.
- Basin C water level was very low, about 5 ft below bottom of discharge riser.
- Basin SW-A water level was also low, several feet below bottom of discharge riser.

Special Occurrences

- About 8PM July 20, a fire began in the green waste staging area east of the SE corner of Fill Area 1. The origin was apparently spontaneous combustion within the pile of green waste. Alameda County FD fought the fire with cooperation from landfill staff. At 9:45 PM the fire department turned the scene back over to landfill staff, who continued to extinguish the burning material until the fire was out, at 2:45 AM.

Special Occurrences (cont'd)

- About 1 PM July 20, a fire began below a utility pole that was being serviced by AT&T. The AT&T service truck was completely destroyed, and the fire spread in all directions. It was confined to the vicinity of Basin C (see photos below), but it burned beneath part of the corrugated metal pipe that delivers runoff to the stormwater basin. ALRRF staff stated that the pipe appears undamaged but will be checked when it is carrying water, to be sure that the gaskets at pipe joints are not leaking.

Upper portion of access road to Basin C; note metal drain pipe on the left. Looking SSW. Fire apparently originated at utility pole inside yellow ellipse.

Basin C, looking south.

Figure 6.4-1 Monthly Volumes of Revenue-Generating Cover

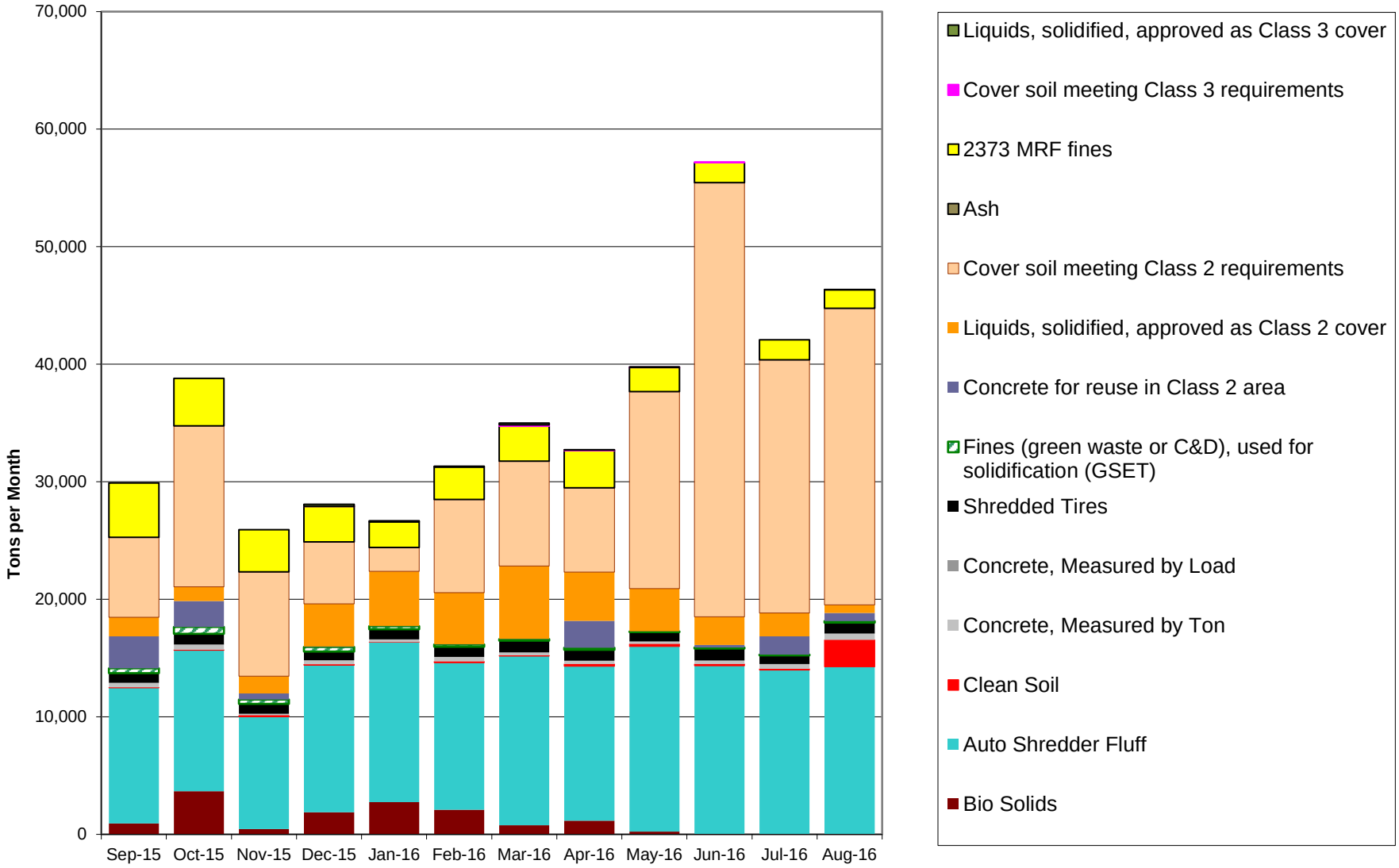
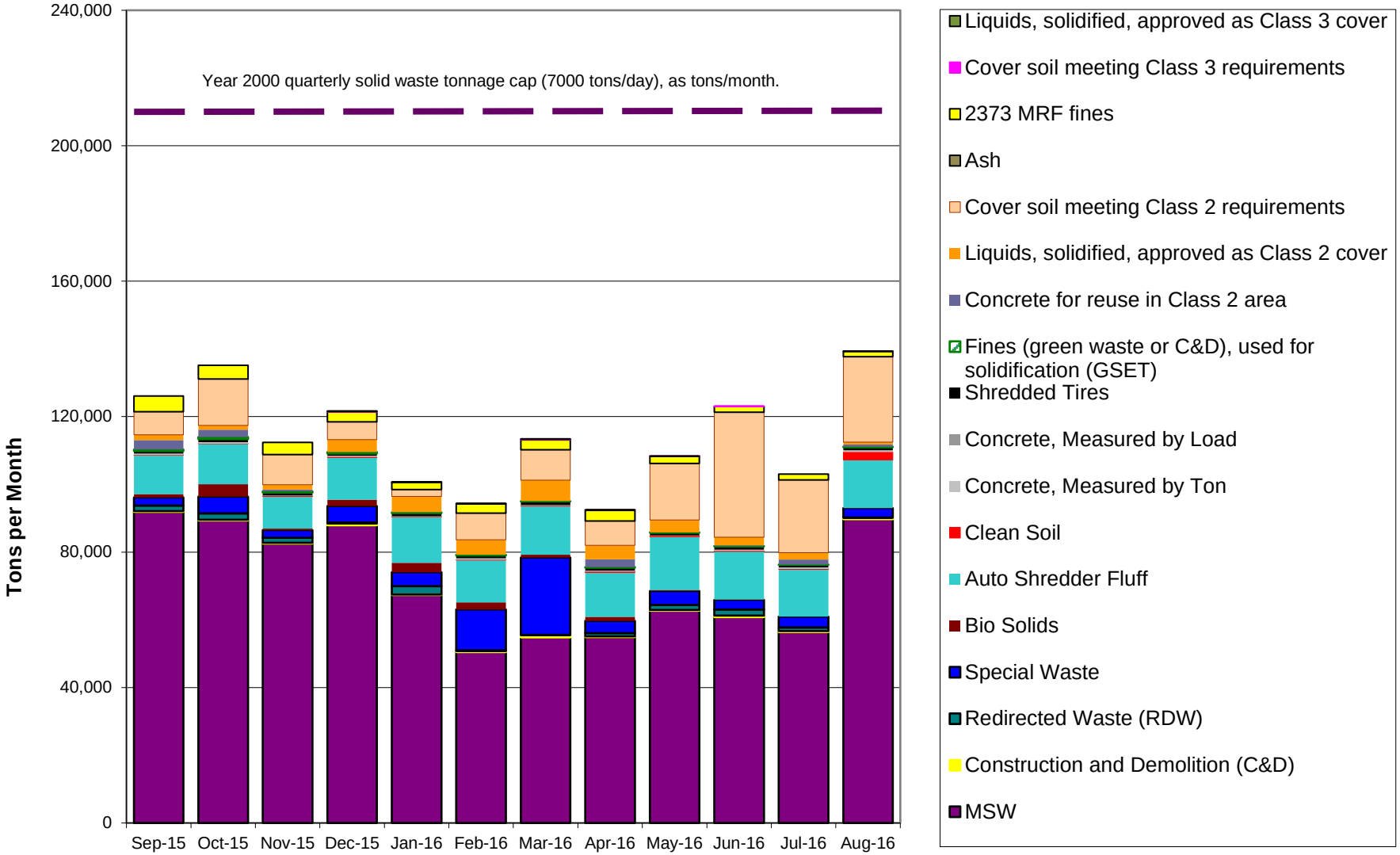


Figure 6.4-2 Monthly Volumes of Landfilled Materials



memorandum

date September 30, 2016

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 10/12/16 - Agenda Item 6.5 - Status of Five-Year Permit Review

Executive Summary

The Central Valley Regional Water Quality Control Board adopted revised Waste Discharge Requirements (WDRs) for the ALRRF on June 24, 2016. These are broader, more stringent and more detailed than the previous WDRs, which were developed in 2009. They impose new requirements in many operational areas, notably:

- Groundwater monitoring, especially where local impacts to groundwater have occurred
- The solidification process currently used to manage liquid wastes
- Landfill gas and soil-pore gas monitoring
- The ability of the ALRRF to develop and use several surface impoundments (ponds) for leachate and other liquids
- Approval of design of future Phases of Fill Area 2
- Final cover design and testing for Fill Area 1

The development of these WDRs involved a great deal of explanation and clarification by Waste Management staff for Water Board permitting staff. The end result is a set of requirements that reflect a better understanding of the site hydrogeology but still require an increased level of environmental monitoring and protection. Some requirements shifted from direct prescriptions to a "submit a work plan" approach. As such work plans appear on the Water Board's web site, we plan to review and summarize them for the Community Monitor Committee.

In mid-July, the Local Enforcement Agency (LEA) began issuing Notices of Violation to the ALRRF due to delays in submitting updated permit documents, including an updated Joint Technical Document that reflects the outcome of the WDR revisions. These Notices have continued through at least mid-August; August 18 is the most recent inspection report currently available on the CalRecycle web site.[1]

Details

The LEA (County Environmental Health) and CalRecycle administer the Solid Waste Facility Permit for the ALRRF, and the Central Valley Regional Water Quality Control Board (Water Board) administers Waste Discharge Requirements (WDRs) for the site. These two permits govern the details of design, operations and monitoring related to waste handling and water resource protection. It is a regulatory requirement that these documents be reviewed and, if necessary, updated at least every five years.

As part of the five-year permit review process, the ALRRF prepared a revised Joint Technical Document (JTD), which describes the measures that the ALRRF will take to comply with regulations. This was initially submitted for review to the LEA, CalRecycle, and the Water Board on July 30, 2015. Waste Management further revised

[1] http://www.calrecycle.ca.gov/SWFacilities/Directory/01-AA-0009/Inspection/410431/

the JTD, updating certain aspects of design and operations, in November 2015. This involved numerous minor clarifications and corrections, plus a few more substantial changes, including:

- The description of the liquids to be handled by the three new ponds was broadened to also include "any non-hazardous liquid waste compatible with the impoundment containment system" in addition to the untreated leachate, truck wash water, and contaminated groundwater that were mentioned in the earlier JTD version.
- Details of two of the ponds' liner designs were deleted from the JTD and referenced to a separate design document that had been produced by Golder Associates in 2009. That design was included with the 2010 JTD, but the ponds were not fully constructed; nor have they been operated, except to store water for use in dust control and fire protection.
- The remaining permitted capacity of the currently-operating Fill Area 1 was increased by 3.92 million tons, corresponding to the increase permitted by the Bay Area Air Quality Management District in 2015.

As part of the permit review process, the Water Board issued a tentative update to the WDRs in early 2016. This update was much more stringent than the 2009 WDRs, requiring significant changes to current practices. At over 90 pages, it was nearly twice the length of the 2009 WDRs as well. This is partly a reflection of the complexity of the present situation: Fill Area 1 has a limited remaining capacity; Phase 1 of Fill Area 2 Unit 1 has been constructed and is ready for operation; Phase 2 excavation has begun; and new features including several leachate ponds are part of the overall design. It is also a reflection of numerous recent Water Board staff concerns regarding environmental issues at the landfill, some of which are:

- errors in groundwater elevation data (subsequently corrected)
- a sampling pump that failed to operate for three consecutive quarters of sampling
- detection of VOCs in recently-installed monitoring wells
- ongoing detection of contaminants in monitoring wells E-20B, E-05 and E-07
- ongoing detection of contaminants in valley drains (under the liners) beneath Fill Area 1
- the low-flow purging procedure used by ALRRF consultants when sampling from monitoring wells
- the validity of the groundwater hydrogeological conceptual model developed by ALRRF consultants
- the dinoseb disposal incident in 2014, with subsequent detection of dinoseb during the 2015 round of five-year Constituents of Concern testing
- the need for additional monitoring wells and more frequent sampling, for a broader range of possible contaminants
- the adequacy of the Sampling and Analysis Plan included with the ALRRF's revised Joint Technical Document
- leachate seeps that occurred on the landfill in 2015

In addition, these tentative WDRs included a new section titled "Previous Enforcement" which describes several Violations, including the dinoseb incident and the excavation of Phase 1 of Fill Area 2 prior to Water Board staff approval of the Phase 1 design.

Waste Management provided formal comments on the tentative WDRs prior to the April Water Board meeting, when the WDRs were scheduled for adoption. To address these comments, Water Board staff pulled the item from the April agenda and scheduled it for the Board's June meeting. In May, Waste Management provided additional comments and met with Water Board staff. In general, Waste Management's comments asserted the following:

- Incomplete, inaccurate and biased information is contained in the Previous Enforcement section of the WDRs. (Based on information available to the Community Monitor, this comment appeared to be valid.)
- The new tentative WDRs effectively rescind prior Water Board approvals of designs and operational practices.
- Requirements for certain processes (solidification, pond management) unreasonably limit operating flexibility or are simply unworkable.
- Some of the new monitoring requirements are overly burdensome and unnecessary.

Water Board staff issued revised tentative WDRs as part of the Board's June agenda packet, making changes in numerous areas, providing flexibility (items 1 - 3 below) but also increasing and further supporting the stringency of other requirements (items 4 - 13):

1. Adjusting reporting deadlines to accommodate the delay in adoption of the WDRs.
2. Adding the ability to discharge other liquids to the proposed ponds if pond water balances are submitted and approved.
3. Removing groundwater monitoring requirements that extend below known aquifers.
4. Providing more background information in the Findings section of the WDRs, to substantiate more stringent groundwater monitoring requirements.
5. Describing the need to monitor groundwater near well E-20B more closely.
6. Describing the need to monitor leachate quality at the toe of Fill Area 2 rather than at the leachate pond.
7. Adding operational requirements for the new leachate pond, and limiting its use to Fill Area 2 leachate only.
8. Adding requirements for management of leachate and landfill gas condensate.
9. Adding requirements for the solidification process that would reduce moisture levels in solidified wastes.
10. Adding construction requirements for liners and leachate handling systems.
11. Requiring slope stability analyses for each phase of construction of Fill Area 2.
12. Removing the option for the ALRRF to proceed with construction of future Fill Area 2 phases "at their own risk", i.e. without prior Water Board staff approval of each phase.
13. Adding requirements for final cover and closure of Fill Area 1, and requiring a work plan for prompt closure.

Discussions between Water Board staff and Waste Management staff continued. Two days before the topic was to be heard by the Water Board, Board staff issued further revisions to the WDRs; key points in those revisions are:

- The current Monitoring and Reporting Program (MRP) will remain in effect until September 23, 2016, to provide time to finalize the new MRP.
- A new requirement to monitor groundwater in deep bedrock was removed.
- A new requirement to monitor any springs within one mile of the facility boundary was limited to springs downgradient of Fill Areas 1 and 2.
- Technical details of several WDRs were clarified.
- A prohibition against disposing of underdrain liquids into the landfill was removed.
- When contaminants are found during the 5-year Constituents of Concern sampling, “promoting” them into the quarterly or semiannual monitoring cycle should take into consideration “laboratory false-positives, the repeatability of detections and the effectiveness of a particular COC in providing early indication of a potential release.”
- Monitoring of the landfill gas extraction system was focused on areas near wells E05/E-07 and E-20B.

- The frequency of groundwater monitoring and the number of substances to be monitored was reduced; however, the groundwater monitoring requirements are still significantly more stringent than in the 2009 WDRs.

Throughout the revision process, various WDRs shifted from prescriptive requirements to a workplan-oriented approach. As such work plans appear on the Water Board's web site, we plan to review and summarize them for the Committee.

memorandum

date September 30, 2016

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 10/12/16 - Agenda Item 6.6 - Reducing Truck Traffic Counts

Currently, Section 5.9 of the Settlement Agreement allows the Community Monitor to independently count trucks arriving at the Altamont Landfill up to six times per year[1]. In recent years the Committee has directed the Community Monitor to conduct such counts twice a year, to check compliance with the Conditional Use Permit (CUP 5512) condition[2] that limits traffic to 50 refuse trucks per hour between 6:45 AM and 8:45 AM. Until recently, typical results of these counts have been in the range of 20 to 25 refuse trucks during the peak 60-minute period within that two-hour interval.

With the cessation of refuse deliveries from the San Francisco transfer station in January, truck traffic during the two-hour morning limitation period declined noticeably. The most recent count, in late January 2016 after San Francisco deliveries had ceased, logged 15 refuse trucks during the entire 2-hour period. However, in August, the landfill began to receive an additional 1,000 tons per weekday (more or less) for disposal, originating from the City of Newark. This stream will be described further at the October 12 Committee meeting. At this writing, data from the ALRRF indicate that this has caused a small increase in transfer truck traffic during permit-limited hours, not enough to approach the Conditional Use Permit limit.

The Settlement Agreement does not limit traffic counting by the Community Monitor to particular days or hours. Two two-hour traffic counts per year are included in the current budget for Community Monitor services. Current tonnage levels, and the traffic observed in January, indicate that compliance with the CUP limit is unlikely to be an issue in the foreseeable future.

The Committee may direct the Community Monitor to continue with the current practice or modify it, within the limits of the Settlement Agreement. The least-cost approach would be to continue to monitor reported daily tonnages and truck counts, and suspend independent truck counting until reported tonnages or truck counts indicate a significant increase in refuse truck traffic.

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[1] 5.9: "Truck Counts. The Community Monitor may conduct periodic independent counts of trucks arriving at the ALRRF … During the first year .. up to 12 single day counts of truck trips may be conducted. During subsequent years, up to 6 single day counts of truck trips may be conducted…"

[2] Condition 66 of CUP-5512, March 9, 2000; see http://www.altamontcmc.org/uploads/Official_NOD_and_CUP.pdf

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memorandum

date September 30, 2016

to ALRRF Community Monitor Committee

from Kelly Runyon

subject CMC Meeting of 10/12/16 - Agenda Item 6.7 - Topics for 2016 Annual Report

A draft of the Annual Report for 2016 will be provided at the January 2017 Community Monitor Committee meeting. As with prior reports, several topics that have been of special importance during the reporting year will be addressed. The list below shows the topics for 2016 that we have identified. Input from Committee members regarding these or other topics to be discussed in the Annual Report is welcome at this time.

Proposed compost site location and permit requirements

Status of Fill Area 2 construction and startup

Implementation of new Waste Discharge Requirements and related monitoring

Windblown litter control

Trends in certain VOC groundwater contaminants (MTBE and related substances)

Five-year Solid Waste Facility Permit review

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COMMUNITY MONITOR COMMITTEE
STAFF REPORT

TO: Honorable Chairperson and Community Monitor Committee Members

FROM: Judy Erlandson, Public Works Manager

SUBJECT: Scheduling Community Monitor Committee Meetings for 2017

RECOMMENDED ACTION

Staff recommends the Community Monitor Committee establish and approve the Community Monitor Committee Meeting Calendar for 2017.

DISCUSSION

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

In November 2010, the Community Monitor Committee members determined that the Community Monitor Committee would meet quarterly on the second Wednesdays of January, April, July, and October at 4:00 pm at the Maintenance Service Center in the City of Livermore.

Suggested dates for the Community Monitor Committee meeting for calendar year 2017 are as follows:

- January 11
- April 12
- July 12
- October 11

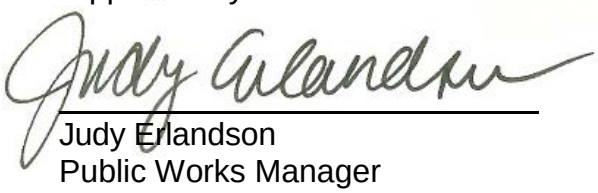
The Maintenance Services Center lunchroom (where the meetings are currently held) is available for the dates listed above. If an alternative schedule of regular meeting dates is chosen, these can be established pending venue availability.

MEETING DATE:	AGENDA ITEM:
10-12-2016	6.9

ATTACHMENTS

1. None

Approved by:



Judy Erlandson
Public Works Manager

LIVERMORE
CALIFORNIA

COMMUNITY MONITOR COMMITTEE
STAFF REPORT

TO: Community Monitor Committee Members

FROM: Judy Erlandson, Public Works Manager

SUBJECT: Extension to Agreement with Environmental Science Associates for Community Monitor Consulting Services

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RECOMMENDED ACTION

Staff recommends the Community Monitor Committee (CMC) execute the first extension to the Agreement for Consulting Services with Environmental Science Associates (ESA) for one three-year term.

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), provided for the hiring of a Community Monitor 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.

DISCUSSION

The current Agreement with ESA expires on December 31, 2016; section 7 of the Agreement contains an option to extend it for one additional three-year term with unanimous approval from the CMC at a CMC meeting.

At the April 13, 2016 CMC meeting, the CMC members unanimously approved a three-year extension to the ESA contract for Community Monitor services. The extension term begins January 1, 2017 and ends on December 31, 2019.

Staff recommends the CMC execute the Agreement for Consulting Services with ESA for one, three-year extension in an amount not to exceed $88,000 for services conducted in the first year of the Agreement.

MEETING DATE:	**AGENDA ITEM:**
October 12, 2016	**6.10**

Approved by:

Judy Erlandson
Public Works Manager

EXERCISE OF FIRST EXTENSION OPTION FOR PROFESSIONAL SERVICES

THIS FIRST EXTENSION is made and entered into this ____ day of _____, 2016, by and between the Community Monitor Committee ("Committee"), and Environmental Science Associates ("Consultant"), a California Corporaton.

RECITALS

On October 8, 2013, Committee and Consultant entered into an agreement for Consultant to provide professional Community Monitor services to Committee ("Original Agreement"). Section 7 of the Original Agreement contains an option to extend it for one additional three year term with unanimous approval from the Committee at a Community Monitor meeting.

Committee and Consultant desire to extend the Original Agreement for an additional term from January 1, 2017 to December 31, 2019. This is the first extension to the Original Agreement.

AGREEMENT

NOW, THEREFORE, Committee and Consultant agree that the aforementioned recitals are true and correct and further agree as follows:

1. The term of the Original Agreement is extended for an additional three year term commencing January 1, 2017 and ending December 31, 2019.

2. The total compensation for work conducted in the first year of the extension period **SHALL NOT EXCEED** the sum of $88,000 ("not-to-exceed amount") in the first year. The total compensation for work conducted in subsequent years shall be determined as set forth in Section 5 of the Original Agreement.

3. This is the final extension option allowed by section 7 of the Original Agreement.

4. This extension does not relieve the parties of the terms and conditions of the Original Agreement as written and in effect at the time the Services were rendered.

5. Except as amended above, the Original Agreement shall remain in full force and effect.

In concurrence and witness whereof, and in recognition of the mutual consideration provided therefore, the parties have executed this agreement, effective on the date first written above.

CONSULTANT: **Dated:**

Jon S. O'Toole 5/31/16

By:
Title:

COMMUNITY MONITOR COMMITTEE: **Dated:**

_____ _____

, City of Livermore
1052 S Livermore Avenue
Livermore, CA 94550

Dated:

_____ 6/21/16

, City of Pleasanton
123 Main Street
Pleasanton, CA 94566

Dated:

_____ _____

, Northern California Recycling Association

Dated:

_____ _____

, Sierra Club

Approval of this Extension made by the Committee on_____, as shown in the minutes of that meeting.

APPROVED AS TO FORM:

_____
Assistant/City Attorney
City of Livermore

APPROVED AS TO FORM:

_____
~~Assistant~~/City Attorney
City of Pleasanton