

ALRRF COMMUNITY MONITOR ANNUAL REPORT 2015

Prepared for
ALRRF Community Monitor
Committee

April 1, 2016



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SECTION 1

Introduction

1.1 Background: Settlement Agreement

In December 1999, a Settlement Agreement was reached among parties involved in a lawsuit regarding the proposed expansion of the Altamont Landfill and Resource Recovery Facility (ALRRF). The Settlement Agreement established the Community Monitor Committee (CMC) and a funding mechanism for a technical consultant, referred to as the Community Monitor (CM).

The Settlement Agreement defines the purview of the CMC and the CM. The CM's scope of work is further defined in a contract between the CM and the CMC. The City of Livermore provides staff and administrative support to the CMC, as well as management of the CM contract and space for CMC meetings. The City also acts as financial agent for the CMC, pursuant to a letter agreement dated July 6, 2004.

In broad terms, the CM is to review certain reports and information, as defined; monitor incoming traffic by conducting truck counts, as described in the Settlement Agreement; and inspect the ALRRF site no more than twelve times a year. The Settlement Agreement describes the CM's Scope of Work to include "issuing a written report each year summarizing the ALRRF's compliance record for the period since the last such report with respect to all applicable environmental laws and regulations." This Annual Report provides that summary for 2015.

The Settlement Agreement also requires that the ALRRF operator, Waste Management of Alameda County (WMAC), pay invoices submitted by the CM to the CMC, if the work represented in those invoices is consistent with the CM's scope of work and role as defined in the Settlement Agreement.

1.2 Prior Community Monitor Work

Available records indicate that the CMC retained a technical consultant as the CM from 2005 through part of 2007.

In mid 2007, the CMC selected the current CM team of Environmental Science Associates and Treadwell & Rollo (now Langan). This team began work in February 2008. From 2008 through 2015, the team has carried out report reviews, Class 2 soil analysis file review, and site inspections as intended. In 2008, the primary concern was the rate at which groundwater monitoring wells were purged during sampling. This was resolved satisfactorily. In 2009, the CM team took a close look at the methodology used by ALRRF and its consultants to track variations in groundwater quality. No areas of concern were identified. In 2010, landfill gas perimeter probes were installed to comply with new regulations, and one of those probes detected landfill gas at levels that exceeded regulatory limits. This was abated by installing several gas

extraction wells close to those probes. In 2011, the ALRRF sought to use fine material¹ from the Davis Street Material Recovery Facility (MRF) as Alternative Daily Cover. After some concern from the LEA about the fines containing municipal solid waste materials, such as plastics from consumer goods, the use of this material was approved by the LEA through a special study in 2013. Two ongoing problems, windblown litter and seagull activity, worsened in 2012; and while the gull problem has varied seasonally, the litter problem has continued as Fill Area 1 approaches its maximum permitted elevation.

Since mid 2013, the CM's observations and document reviews have included the construction of Fill Area 2 and related mitigation measures. The excavation and preparation of the Phase 1 portion of Fill Area 2, together with related improvements including stormwater basins, a truck wash system, a leachate containment pond and access road, etc., were monitored in 2014 and 2015. Other issues from 2015 are described below in Section 2.3, Compliance and Significant Incidents.

1.3 Regional Context

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

- Although populations and economic activity have increased in the Bay Area in the past few years, the average quantity of refuse brought to the ALRRF declined from 2008 through 2014, and rose very slightly in the first part of 2015, then leveled off and began to decline. It continues to appear that ongoing efforts to reduce waste disposal and increase waste diversion have largely offset a population-driven upward trend in disposal tonnages.
- There are no new landfill sites currently in development in the region. However, on a regional basis there appears to be adequate capacity for refuse disposal in the short to medium term, at least through the year 2035². Capacity (in years) at the ALRRF will increase substantially if San Francisco tonnage shifts to the Hay Road landfill in Solano County, and that appears likely at this writing (December 2015).
- Three issues that would affect disposal capacity for the region are being resolved:
 - The aforementioned shift in disposal the City of San Francisco refuse, from the ALRRF to the Hay Road landfill, would reduce the inbound refuse tonnage to the ALRRF by roughly 30 percent. Two lawsuits have been filed in an effort to stop this from happening. One of those suits challenged the procurement process that chose Recology's Hay Road site over the continued use of the ALRRF; this suit has been partially decided in favor of Hay Road, but appeal is still a possibility. The other suit challenged the CEQA process that accompanied approval of the use of Hay Road by San Francisco officials. On December 23, 2015 a Case Management Statement was filed, containing the following information:
 - A case management conference was held on December 9
 - A settlement appears imminent
 - If the case goes to trial, the parties are opting for a 2-hour non-jury trial
 - Regarding the proposed Potrero Hills Landfill expansion in Solano County, in April 2014 the State Court of Appeal overruled a lower court's denial of a landfill expansion permit from the Bay Conservation and Development

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

² This estimate is based on a simple and conservative set of calculations assuming steady growth in population, no increase in diversion, the continued delivery of San Francisco refuse to a landfill in the greater Bay Area, and the ability for some regional disposal sites to receive all materials when other facilities reach their present capacity.

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

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

1.4 Site-Specific Constraints and Opportunities

The Settlement Agreement added constraints on operations, by adding new conditions to the Use Permit for the ALRRF. Solid wastes from out-of-county sources are strictly limited to those covered by existing disposal agreements. During peak traffic hours, the number of refuse trucks entering the landfill is limited. Numerous conditions intended to protect natural resources on the ALRRF property were imposed. These were extensively refined during the development of permit conditions from the State and Federal natural resource agencies with permit authority: The US Army Corps of Engineers, the US Fish and Wildlife Service, the California Department of Fish and Wildlife, and the Central Valley Regional Water Quality Control Board. This process required several years and concluded in 2012.

Also, the size of the future expansion area was limited to 40 million tons of capacity, with a footprint of approximately 250 acres. In addition to Use Permit conditions, the Settlement Agreement establishes the CMC and the CM role, as described above; and it establishes mitigation funding related to the landfill expansion.

The physical setting of the ALRRF site also presents certain constraints and opportunities. Hilly terrain and high winds require constant attention to windblown litter, especially film plastic. In 2015, the windblown-litter problem continued due to the increased exposure of the working face to wind as Fill Area 1 neared completion. However, the construction of the Phase 1 portion of Fill Area 2 continued throughout 2015; and this lower, less windy area may begin to receive refuse in 2016. At that point the litter problem is expected to greatly diminish, because most landfill activity will be taking place within canyons at lower elevations, rather than on hilltops.

1.5 Overview of Operations, Regulations and Permits

1.5.1 Operational Functions and Requirements

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

- Wastes are covered to control litter, prevent fire, and prevent the spread of disease.
- Wastes are placed and compacted to be physically stable.
- Plant debris is not to be disposed; if received, it must be separated and reclaimed by composting or other methods. Currently it is back-hauled to the Davis Street facility for processing and eventual use as compost or biomass fuel.

- A liner and liquid recovery system prevent groundwater contamination by leachate.
- Landfill gas is controlled by an extraction system. Currently the gas is used to produce fuel (LNG/CNG) and electrical energy.
- Emissions from combustion and processing (diesel engines and landfill gas systems) are controlled.
- Other air pollutants and nuisances (dust, odor, litter, etc.) are prevented.
- Stormwater erosion is controlled and stormwater runoff is tested for pollutants.

Compliance with these requirements protects the environment and public health, and it also presents opportunities to develop and support innovative methods for improved waste management. Currently, such activities on the ALRRF include:

- using landfill gas to produce electricity and fuel (LNG/CNG);
- using CNG fuel for on-site operations, as fuel for tipper engines;
- stockpiling and processing materials for beneficial use on site, such as using waste concrete for wet-weather roads and access pads;
- blending liquids and dry fine materials to make a soil-like product that can be landfilled;
- using contaminated soils and other wastes (biosolids, shredded tires, MRF fines, treated auto shredder fluff, etc.) as cover material, as permitted;
- stockpiling construction and demolition (C&D) materials and scrap metal for processing elsewhere;
- providing an area for the separation of plant debris from other wastes, to avoid landfilling plant debris; and
- hosting site visits, by prior arrangement, for public education.

The ALRRF property covers more than three square miles. Within that area, the portion that is delineated as landfill is divided into Fill Area 1 (currently active) and Fill Area 2 (currently being constructed). The active parts of Fill Area 1 cover approximately 211 acres. Fill Area 1 also includes an Asbestos-Containing Waste landfill operation which occupies several acres within the Fill Area 1 footprint.

Lands surrounding the active area are managed primarily as grazing land, with portions leased for wind energy. These surrounding lands also provide suitable habitat for several special status species. Design revisions in 2010 for the final shape of Fill Area 1 increased its capacity, further increasing its expected lifetime.

Much of the work done by the CM involves the review of data and reports produced by, or required of, the ALRRF. This is largely driven by the requirements of regulatory and permitting agencies, as described below.

1.5.1.1 Water

In California, the State Water Resources Control Board and its Regional Water Quality Control Boards (RWQCBs) protect groundwater and surface water resources through laws, regulations and permit requirements. Because the ALRRF property drains into the Central Valley, the Central Valley RWQCB issues the Waste Discharge Requirements (WDRs) for the site. These WDRs set various operating requirements and also define the programs that monitor water quality by periodically testing groundwater wells as well as storm water basin contents and discharges. The RWQCB also works with staff at the ALRRF to address special problems that may arise, such as the proper disposition of wastes that may have been brought to the landfill without

necessary testing for hazardous materials. The CM reviews semiannual groundwater monitoring reports, the annual stormwater monitoring report, and the annual Winterization Plan update.

1.5.1.2 Air

The Bay Area Air Quality Management District (BAAQMD) administers its own regulations, including Regulation 8 Rule 34 regarding landfill gas control, as well as relevant State and Federal regulations. At the Federal level these are referred to as Title V requirements. The operation of (and especially the air emissions from) the landfill gas control systems, various diesel engines, and other processes that produce air emissions are regulated through permit requirements. Every six months the ALRRF produces a “Title V report” that summarizes emission test results and system performance in great detail, as required. The CM reviews these reports as they are issued. The landfill also produces an annual estimate of greenhouse gas emissions, as required by Federal regulations.

1.5.1.3 Disposed Wastes

There are two agencies that regulate solid waste disposal in Alameda County. The Alameda County Department of Environmental Health is the Local Enforcement Agency (LEA), and the California Department of Resources Recycling and Recovery (CalRecycle) supports and oversees the LEA. The LEA is the main enforcement agency for the Solid Waste Facility Permit (SWFP) that delimits many aspects of operations at the ALRRF, such as operating hours, landfill cover materials and cover frequency, types of materials that are allowed to be disposed, etc. The SWFP is reviewed and updated every five years, and the CMC and CM closely follow that process, as delineated in the Settlement Agreement. The CM also reviews ALRRF inspection reports made by the LEA, as those reports become publicly available; and each year at least four of the monthly CM site inspections are done conjunction with the LEA, as required in the CM’s Scope of Work.

1.5.1.4 Land Use

Concurrently with the Settlement Agreement, Land Use Permit C-5512 for the ALRRF site was updated to incorporate various mitigations identified in the Settlement Agreement. These modifications include restrictions on waste quantities, limits on truck traffic, and other operational constraints, as well as certain biological resource protection measures discussed in the next section of this report. The CM tracks compliance through a combination of direct inspection, review of data from ALRRF operations, and review of periodic reports submitted to regulatory agencies by the ALRRF, including the annual Mitigation Monitoring Report submitted to County Planning.

An additional Land Use Permit (PLN 2010-00041) was approved by Alameda County in March of 2013 for the future development and use of composting and material recovery operations at the ALRRF. Currently Waste Management’s position is that this permit is not within the purview of the CMC, but the Committee has taken the position that the additional permit *is* within their purview. Condition 22 of this permit requires that it begin to be implemented within three years of its issuance.

1.5.1.5 Local Requirements: StopWaste

The Alameda County Waste Management Authority and Recycling Board (StopWaste) waste diversion goal is continuing to be pursued, most recently through the implementation of mandatory recycling at businesses and commercial source separation of compostable materials in many Alameda County cities. These requirements are implemented at the local level by

agencies' opting into (or out of) the ordinance's requirements. In addition, StopWaste has developed, and most of its member agencies have adopted, a single-use bag ban ordinance.

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

1.5.2 Requirements For Fill Area 2 Development and Use

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

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

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

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

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

³ Under California regulations, a Joint Technical Document (JTD) is a detailed description of all of the means and methods by which a disposal site will satisfy State requirements to protect water resources and safely dispose of permitted wastes.

SECTION 2

Community Monitor Activities and Issues

2.1 Introduction

Under the terms of the Settlement Agreement, when the ALRRF is in compliance with operating requirements, the Community Monitor (CM) has three ongoing duties:

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

Throughout 2015, the CM was active in each of these areas, as described below.

2.2 Monitoring of Improvements and Changes

Through report reviews and site visits, several new developments in ALRRF facilities and operations in 2015 became apparent:

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

2.3 Compliance and Significant Incidents

As noted above, the Settlement Agreement defines the CM's Scope of Work to include "issuing a written report each year summarizing the ALRRF's compliance record for the period since the last such report with respect to all applicable environmental laws and regulations." This Annual Report provides that summary. The regulatory agencies that administer these laws and regulations, as well as the environmental permits held by the ALRRF, include the following:

- Alameda County Planning Department
- Alameda County Department of Environmental Health
- Bay Area Air Quality Management District
- US Environmental Protection Agency
- California Department of Resources Recycling and Recovery (CalRecycle)
- Central Valley Regional Water Quality Control Board
- California Department of Fish and Wildlife
- US Army Corps of Engineers
- US Fish and Wildlife Service

To determine if there are trends in the compliance record, a list of compliance issues has been compiled; it is shown in Table 2-1, below. Persistent issues appear in the upper part of the table, followed by infrequent or one-time issues. To compile this table, we reviewed publicly available data from the regulatory agencies listed above, ALRRF correspondence with those agencies, and Community Monitor monthly site inspection reports. The severity of the issues was rated subjectively by the Community Monitor using the 1 to 5 scale shown at the bottom of Table 2-1. Issues that were beyond the control of the ALRRF are not included in the annual total of severity scores and are listed below the Total line.

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

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

Table 2-1
Compliance Issues Ranked by Severity

Issue	Severity				
	2011	2012	2013	2014	2015
Contamination at E-05, E-07, E-20B	2	2	2	2	2
Stormwater contamination	3	3	3	3	3
Windblown Litter	2	1	3	2	2
Birds	2	2	2	2	2
Erosion	2	1	-	-	3
Cover thin / absent	2	2	2	3	4
Worker injury	-	1	3	-	1
Condensate/Leachate Leakage	-	-	1	1	3
Ponding in low-lying area of landfill	-	1	1	2	-
MRF fines suitability for ADC	4	4	-	-	-
Ponding on landfill due to water leak	1	-	-	-	-
Leachate Spill	-	4	-	-	-
Odor, on site	-	1	-	-	-
CUPA inspection (Haz Mat Management)	-	-	4	-	-
Unpermitted construction of FA2	-	-	4	-	-
Groundwater Elevation Error	-	-	2	-	-
Sampling Pump Problem: VD-unsat	-	-	2	-	-
Sediment in Wetland Mitigation Area	-	-	-	1	3
Late Annual Report to Water Board	-	-	-	-	4
Leachate Seeps	-	-	-	-	1
Sampling Pump Problem: well E-05	-	-	-	-	2
Totals	18	22	29	16	30
Issues Beyond Control of ALRRF					
Truck overturn	1	1	1	1	1
Hazardous Ash Delivered	-	4	-	-	-
Fire in refuse	-	-	2	-	-
Material High in Copper Disposed	-	-	4	-	-
Dinoseb Disposal	-	-	-	4	-
Methane Gas at Perimeter Probe(s)	-	-	-	4	4

 indicates that a violation was issued by a regulatory agency.

Severity Criteria

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

2.3.1 Compliance Issues Documented by the LEA

As of mid November 2015, a total of 15 Violations and 19 Area of Concern notices had been issued by the Local Enforcement Agency (LEA) in calendar year 2015. All but one of the Violations were for high levels of methane gas in two perimeter probes. This was addressed by the operator when it first occurred (late 2014), and initial tests indicated that the gas was not of recent origin and was most likely from a natural source. Subsequently, more stringent tests specified by CalRecycle confirmed this finding; and in September 2015 the LEA issued an inspection report stating that (a) the Notices of Violation would be cleared, and (b) CalRecycle would take its own samples to further confirm the result. CalRecycle sampling has not yet occurred, and the Notices of Violation continue to appear on CalRecycle's web site, but the landfill has been allowed to reduce its probe sampling frequency to quarterly, which is the normal interval.

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

Areas of Concern noted by the LEA cover several topics:

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

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

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

2.3.2 Water Board Violations and Concerns

2.3.2.1 Prior Violations

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

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

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

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

2.3.2.2 Other Issues

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

ALRRF submitted its Corrective Action Plan in August of 2014. This plan describes the proposed installation of special gas extraction wells between E-20B and the landfill, and a new groundwater monitoring well downslope / downgradient of E-20B. The Corrective Action Plan also estimates that it will be approximately 10 years before VOC concentrations reach non-detect levels, based on linear extrapolation from existing trends, without taking the special gas extraction wells into account. The additional gas wells presumably provide more confidence in the ability to achieve this result.

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

2.3.3 Other Incidents

2.3.3.1 Facility Damage or Worker Injury

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

2.3.3.2 Earthquake

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

2.3.3.3 Fire

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

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

2.3.3.4 Wet Weather

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

2.3.3.5 Other Incidents

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

2.4 Review of Reports

2.4.1 Groundwater

Two groundwater monitoring reports were reviewed in 2015. The first covered the time frame from July through December of 2014; the second covered January through June of 2015. Both reports reflect the Waste Discharge Requirements issued by the Central Valley Regional Water Quality Control Board that took effect in April of 2009.

Groundwater monitoring results did not differ appreciably from prior years. Contaminants, when present, were well below regulatory limits that would require remediation. For most contaminants, trends in the data were indistinct or gradually declining. We first noted in 2013 that the fuel additive MTBE and its degradation by-product tert-butyl alcohol appeared to have concentrations that are increasing in wells E-5, E-7 and E-20B, although not steadily. In general terms, the situation in 2014 and 2015 has been the same, with no significant increase in any of these contaminants. Continued monitoring of the reports on these wells is recommended.

2.4.2 Storm Water

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

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

2.4.3 Air Quality

Title V is one of several programs authorized by the U. S. Congress in the 1990 Amendments to the federal Clean Air Act. The Bay Area Air Quality Management District (BAAQMD) administers Title V requirements for the ALRRF. Title V operating permits incorporate the requirements of all applicable air quality regulations. Hence, the semi-annual Title V reports provide a comprehensive review of compliance with BAAQMD permits and regulations.

In 2015, we received the Title V reports for the periods June – November 2014, and December 2014 – May 2015. These reports describe landfill gas control operations and source testing, but they also document new or unique developments at the site that can have an effect on air emissions. Results from 2015 are similar to those from 2014:

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

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

2.4.4 Mitigation Monitoring

The MMRP Annual Progress Report covering calendar year 2014 was received in January 2015. It is a table that lists each of the conditions described in the current Conditional Use Permit (CUP-5512), followed by a description of the implementation status of that condition or mitigation. We found that the status descriptions accurately reflected the current status of each mitigation measure.

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

- 4.6 - This requirement, to adjust tonnage limits for partial years, was annotated by ALRRF staff to indicate that the expected start date for Fill Area 2 operations would be in the third quarter of 2015.
- 20 - This Condition requires that certain USFWS- and CDFW-required wildlife surveys and mitigations be conducted prior to Fill Area 2 construction, and that sensitive species be managed appropriately. ALRRF staff have noted that Mitigation Plan implementation began in 2013.
- 73 - This Condition requires that the Landfill Gas Management Plan be revised to include Fill Area 2. ALRRF staff have noted that this is In Progress.

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

In addition to the Annual Progress Report described above, the ALRRF has begun to submit annual reports to inform the resource agencies about progress on their permit requirements for Fill Area 2 expansion: establishing the Conservation Plan Area, constructing the wetland mitigation project, protecting existing wetlands and surface waters, etc. The first such report was provided to the CM in November 2015 and is currently under review. Two concerns have arisen in connection with the structure of this report:

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

2.5 Review of Records

Several types of site records were reviewed by the CM in 2015. The CM's scope of work requires the periodic review of files that contain lab analyses and other descriptions of **Class 2 soils** (considered hazardous by California standards, but not by Federal standards) that are brought to the site for use as cover soil. Also, the **Special Occurrences Log** for the ALRRF was examined several times during the year, as part of monthly site inspections. The **LEA's weekly inspection reports** are publicly available on the CalRecycle web site and were checked by the CM every few weeks, to identify any new issues that may have arisen.

2.5.1 Class 2 Soils

An ongoing task for the CM team is the periodic review of files containing profiles (sample analyses) for Class 2 soils that are imported for use as cover soil in the Class 2 portion of the ALRRF. For efficiency, this is currently conducted two to three times per year, and it requires a full day for a qualified specialist from Langan to review each file to be sure that it is complete and within the regulatory limits for Class 2 materials. In 2015, these reviews were conducted in May and November. A total of 214 files were reviewed, 70% more than the previous year. No out-of-compliance profiles were found, and all files were complete.

2.5.2 Special Occurrences Log

Each permitted solid waste disposal site in California must keep a Log of Special Occurrences to document unusual and potentially disruptive incidents, including fires, injury and property damage, accidents, explosions, receipt or rejection of prohibited wastes, lack of sufficient number of personnel, flooding, earthquake damage and other unusual occurrences. The ALRRF log was checked quarterly throughout 2015. As in prior years, the most common incident was the occasional mishap involving large end-dump semi-trailers that become unbalanced while the bed is elevated, causing the truck bed to fall to one side. Fortunately, there were no injuries associated with these incidents. Other logged incidents included a major grass fire in the area north of the active landfill, and minor leaks from leachate and condensate handling systems, which were quickly contained. Additional detail on several of these items may be found in Section 2.3.3 above.

2.5.3 LEA Inspection Reports

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

2.6 Monthly Inspections

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

Table 2-2
Site Inspection Summary

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

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

In 2015 our observations continued to focus on:

- Storm drainage and erosion control, including the installation and performance of stormwater Best Management Practices.
- Traffic on site, and the adequacy of crews and equipment to handle incoming traffic and waste volumes.
- General observations of fill activities, including spreading, compaction and traffic control during normal and off-hours operations.
- Observation of issues of concern, including the increased presence of seagulls and the quality of materials used as Alternative Daily Cover.

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

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

The Scope of Work for the CM specifies that at least three inspections be performed off hours, and that approximately four to six be performed jointly with the LEA. As shown in the table above, three off-hour and four joint inspections were conducted in 2015.

In addition to the on-site inspections, counts of arriving refuse trucks were conducted by the CM in January and July of 2015. These counts continued to be well below the limit stipulated in the CUP.

SECTION 3

Looking Ahead: Anticipated Efforts and Issues

3.1 Introduction

In the 2016 contract year, the CM will continue to perform report reviews, site inspections and Class 2 soils file review. As Fill Area 1 nears completion, operations will become more complex in order to control the final height and shape of the filled area, and windblown litter will probably continue to be an issue. Also, as the ALRRF continues the development of Fill Area 2, the CM will review mitigation plans and reports for the Conservation Plan Area or other parts of the site.

3.2 Issues to be Tracked in 2016

3.2.1 Ongoing Report Review

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

- Groundwater monitoring methods.
- Groundwater quality, including the vadose zone.
- Stormwater quality and management practices.
- Performance of landfill gas handling equipment.
- Additional changes to the landfill gas extraction system.
- Surface emissions monitoring.
- Reports related to the development and use of Fill Area 2.
- Effects of any development of composting, digestion or material recovery operations on the landfill.

3.2.2 Site Inspections

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

3.2.2.1 Landfill Gas Control System

Performance of this system is closely related to groundwater quality, and it takes place within a complex regulatory framework involving Federal permits, local permits, new State regulations, and ALRRF CUP conditions. Physical changes to this system are likely to include the further addition of landfill gas extraction wells, decommissioning of wells that are no longer productive and ongoing operation of the LNG plant, turbines, flares, etc. In 2016, two topics will be of special interest:

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

3.2.2.2 Stormwater Controls and Monitoring

Throughout the year, and especially during wet weather months, we will monitor conditions at all stormwater basins.

3.2.2.3 Windblown Litter

As noted above, this will continue to be an issue for Fill Area 1.

3.2.2.4 Fill Area 2

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

3.2.2.5 Possible Increases in Certain Groundwater Contaminants

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

3.2.2.6 Adjustments if San Francisco Refuse is Discontinued

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

3.2.3 Class 2 Soils File Review

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

3.3 Project Management Considerations

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