

# **SECTION 1**

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## **Introduction**

### **1.1 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 to the CMC, referred to as the Community Monitor (CM).

The CM's scope of work is defined in a contract between the CM and the CMC, but the Settlement Agreement also defines the purview of the CMC and the CM. 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 periodically inspect the ALRRF site.

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 the CM role as defined in the Settlement Agreement.

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.

### **1.2 Prior Community Monitor Work**

Available records indicate that the CMC retained a technical consultant as the CM from 2005 through 2007. During that time, two CMC members expressed concern about the potential redundancy of the CM's work with that of local regulatory agencies; those members later withdrew from the Committee and have since been replaced. As part of this issue, the CM was instructed to avoid duplicating the efforts of the Local Enforcement Agency, which is the Office of Solid/Medical Waste Management within Alameda County Environmental Health.

In mid 2007, the CMC solicited proposals for continuation of CM services, received two proposals, and selected the current CM team of Environmental Science Associates and Treadwell & Rollo. This team began work in February 2008.

## 1.3 Overview of Operations

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 grow and 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 burying and covering these materials. Federal, State and local regulations require that:

- Wastes are covered to control litter, prevent fire, and prevent the spread of disease.
- Wastes are placed and compacted in a manner that is physically stable.
- A liner and liquid recovery system prevent groundwater contamination by leachate.
- Landfill gas is controlled by an extraction system.
- Emissions from energy systems (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, the ALRRF is:

- using landfill gas to produce electricity;
- constructing a plant to convert landfill gas to a liquid fuel (LNG) for vehicles;
- providing space to stockpile and prepare compost feedstock;
- using contaminated soils as cover material, as permitted;
- stockpiling construction and demolition materials for processing elsewhere; and
- hosting site visits, by prior arrangement, for public education.

The active portions of Fill Area 1 cover approximately 211 acres, within a site that covers more than three square miles. Lands surrounding the active area are managed primarily as grazing land, with portions leased for wind energy. These surrounding lands also provide habitat for several special status species. The active area will be supplemented by the expansion area (Fill Area 2) when all permits are obtained. Waste Management intends to begin the construction of Fill Area 2 by 2010 and is working to resolve several issues regarding permit conditions. The forthcoming development of Fill Area 2 is discussed further in Section 3 of this report.

### 1.3.1 Industry Trends

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. There are no new landfill sites currently in development in the region, and several sites (West Contra Costa, Sonoma County, Tri-Cities) have closed recently or will close very soon. Other sites (Potrero Hills, Keller Canyon, Redwood Landfill) are attempting to expand the volume that they may accept, but these expansions are being challenged and the outcome is uncertain. In the immediate future, the Tri-Cities landfill is expected to cease receiving refuse in 2009, and those wastes (primarily from the Fremont area) will be transferred to the ALRRF.

### 1.3.2 Site-Specific Constraints and Opportunities

The Settlement Agreement added 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, i.e. the City and County of San Francisco and the City of San Ramon. 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. 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 sets up 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 bags and foam plastic packaging. Proximity to the South Bay Aqueduct has led to the recent eminent-domain condemnation of a portion of the landfill property, for use as a reservoir, by the California Department of Water Resources; and this has complicated the ALRRF's efforts to comply with a Use Permit requirement for 750 acres to be set aside for biological habitat mitigation and buffer area.

Local policies and needs are likely to result in further changes. The Alameda County Waste Management Authority and Recycling Board goal of 75% waste diversion by 2010 will decrease waste flows into the ALRRF, indirectly providing incentive for the ALRRF to process materials for recycling, such as compostables and C&D (construction and demolition) wastes. This will be counterbalanced, to an extent, by reduced landfill capacities in the region, as discussed above.



## **SECTION 2**

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# **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 related to the ALRRF's reports that are required to be submitted to regulatory agencies
- Conduct monthly inspections of the ALRRF facility
- Review the records of testing and acceptance of "Class 2 soils", i.e. soils known to come from a contaminated site.

During the first contract year, the CM was active in each of these areas, as described below.

## **2.2 Review of Reports**

### **2.2.1 Semiannual Groundwater Monitoring Reports**

Two groundwater monitoring reports were reviewed in the 2008-09 contract year. The first covered the time frame from July through December of 2007; the second, January through June of 2008.

In 2008, groundwater monitoring and sampling activities at the ALRRF were performed by SCS Engineers. (SCS 2008a and SCS 2008b). Groundwater monitoring and sampling procedures are described in the groundwater sampling plan (RUST 1996) document. The groundwater sampling plan implements the requirements set forth in the Waste Discharge Requirements (WDRs) for the ALRRF. Treadwell & Rollo, Inc. reviewed the two semi-annual groundwater monitoring reports prepared by SCS which documented the groundwater monitoring conducted in December 2007 and June 2008, and prepared two memoranda to summarize review comments (T&R 2008a and T&R 2008b).

Groundwater monitoring activities performed and analytical results for the ALRRF were largely in compliance with the groundwater sampling plan and WDRs. Specific issues raised by the Community Monitoring Committee and further researched by Treadwell & Rollo during 2008 included the following:

- Monitoring well purge rates,
- Groundwater quality concerns regarding VOCs in selected monitoring wells, and
- Increasing concentrations of nitrogen-rich compounds in the vadose zone wells.

### **2.2.1.1 Purge Rates**

Low-flow purge methodology is currently employed during groundwater sampling events at the ALRRF. Treadwell & Rollo compared the low-flow sampling techniques used at the ALRRF to those described in ASTM standard D-6771-02. The ASTM standard recommends monitoring and adjusting the purge rate to minimize drawdown within the well casing. The purpose is to provide a higher degree of confidence that the groundwater sampled is representative of the surrounding formation and is not stagnant water stored in the casing.

ESA and Treadwell & Rollo conducted a telephone conference with Jim Obereiner of Waste Management, and it was decided that Waste Management would instruct SCS Engineering to monitor drawdown on selected wells during the December 2008 groundwater monitoring event. The groundwater quality parameters from the December 2008 monitoring event will be compared to historical data, and the results will be reported in a future memorandum.

### **2.2.1.2 Groundwater Quality Concerns**

Historically, there has been concern regarding the groundwater quality from wells E05, E06, E07, and E20B. Treadwell & Rollo reviewed the historical groundwater data, as well as, any corrective actions taken.

In 2006, vinyl chloride was detected in well E20B at concentrations exceeding the drinking water standard. The elevated vinyl chloride concentration was reportedly related to elevated soil gas concentrations, and not due to a groundwater source. Additional soil vapor extraction was implemented in the vicinity of well E20B, and the vinyl chloride concentrations decreased to below the laboratory reporting limit (1.5 µg/L) until the 2nd quarter of 2008. This well is a corrective action monitoring program well and does not require notification for this exceedance. The vinyl chloride concentrations should be monitored for this well during future monitoring events to assess whether the vinyl chloride concentrations increase, and to ensure the necessary corrective actions are implemented in the event that the vinyl chloride concentrations do increase.

Trace VOC concentrations were discovered in the other wells noted above, but the detections do not mandate regulatory action because they are below the method reporting limit and the values were estimated by the laboratory.

### **2.2.1.3 Nitrogen-rich Compounds in the Vadose Zone**

Treadwell & Rollo and ESA have been tracking the increasing ammonia and total kjeldahl nitrogen concentrations in vadose zone monitoring well VZMA. This well is located beneath the landfill in Unit 2, which is the active, lined portion of Fill Area 1. The concentrations have shown a general increase since monitoring began in 2001. A continued increase in concentrations could indicate a change in the subsurface and groundwater geochemistry, or could indicate the presence of landfill by-products. The concentrations do not require corrective action at this point, but the reported concentrations will continue to be reviewed during future sampling events.

## **2.2.2 Annual Mitigation Status Report**

This report, covering calendar year 2007, is dated January 31, 2008. It is structured as a lengthy table that lists each of the 106 conditions described in the current Conditional Use Permit (CUP), 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. However, the required timing for implementation of some mitigation measures is not explicitly stated in the CUP and may be subject to interpretation. For example, Condition 36 simply states that “The operator shall fence the area to keep livestock out of the alkali sink.” Waste Management has stated that they believe that this mitigation measure takes effect when the landfill expansion area is developed. This may be based on language earlier in the CUP, which introduces a group of conditions that incorporate mitigations defined in the Final EIR by stating, in part, “Mitigation measures were crafted to address the impacts identified for the original [expansion] project and will be sufficient to cover any situation created for the reduced project approved herein.” The CMC may wish to seek a determination from County Planning regarding the timing of this and other measures that do not contain explicit dates for implementation.

### **2.2.3 Semiannual Title V Report**

Title V is one of several programs authorized by the U. S. Congress in the 1990 Amendments to the federal Clean Air Act (CAA). The Bay Area Air Quality Management District (BAAQMD) administers Title V requirements for the ALRRF. Title V operating permits explicitly include the requirements of all regulations that apply to operations. Hence, the Title V reports provide a comprehensive review of compliance with BAAQMD permits and regulations.

In November 2008, we received the Title V report for the period December 2007 – May 2008. Our review of this report is continuing; we have not found any instances of non-compliance. We gave special attention to compliance with regulations that limit the number of landfill gas wells that may be shut down for raising (in areas where fill is being added), or for system modification or repair. The effect of these regulations at this site is to limit the total number of wells temporarily off line to five (for well raising) plus five (for system modification / repair). During the reporting period, no more than seven wells were off line at any one time.

Due to the complexity of this report, the related permits, and the regulations, our review is continuing. The subsequent Title V report for June – November 2008 has not yet been received.

### **2.2.4 Monthly Tonnage Reports**

Each month the ALRRF provides a report to County Planning and other interested parties, providing several tables detailing the quantities of materials received in that month. We reviewed 12 such reports, covering each month of 2008. All of these reports indicated compliance with the requirements of permits and the Settlement Agreement. In addition, the following points were noted:

- Refuse tonnages were well below EIR / CUP limits. In fact, the CUP provides a method for increasing the limits from year to year, to take into account growth in population and business activity. However, because tonnages have not grown to exceed the original limits, there has been no need to calculate those increases, so they have not been determined.
- The monthly quantities of special wastes, particularly Class 2 cover soil, were substantial and varied widely.
- Out-of-county tonnages of special wastes, primarily Class 2 cover soil, tended to increase during 2008.
- Many categories have been created for materials other than refuse, to support the tracking of materials used as Alternative Daily Cover, as soil amendment on outside slopes, and

for other specialized applications that are subject to limitations or are of special interest to regulatory agencies.

## 2.2.5 Storm Water Annual Report, 2007-2008

This report provides a record of stormwater monitoring that took place during the most recent “water year”, from July 1, 2007 through June 30, 2008. It includes results from the water quality sampling that is required when there are discharges from stormwater detention basins to local drainages. As a result of below average rainfall, only two discharge events occurred, and only one of these was monitored by sampling, as required, at Basins A, B and C. The other event occurred while the ALRRF was closed. Sampling of the discharge from Basins A and C found no exceedances, but the Basin B sample was extremely high in suspended solids. At the time, the active area of the landfill was above Basin B, and a failed culvert resulted in substantial soil erosion as well. To address this problem, the ALRRF has rebuilt the area upslope of Basin B, to reduce soil erosion and minimize the potential for stormwater to contact refuse.

## 2.2.6 Summary

In our review of received reports, we raised concerns about groundwater monitoring procedures, and Waste Management has been responsive to these concerns. Mitigation Status Reports indicate compliance with required mitigation measures, but the effective date of some mitigations appears to be subject to interpretation. Air quality compliance reports and monthly tonnage reports have presented some complexities, but our reviews to date have found no indication of non-compliance.

## 2.3 Site Inspections

Twelve on-site inspections were held during 2008. To obtain the best possible understanding of the range of operating conditions, the inspection day and time, and certain other aspects of these inspections, were varied as shown in the table below.

Table 2-1  
Site Inspection Summary

Date	Day of Week	Inspection Time	Announced In Advance?	With LEA staff?	Topic Emphasized
8 Feb 2008	Fri	9 AM	Yes	No	Site and property to east
26 Feb 2008	Tue	8:30 PM	Yes	No	Night operations
25 Mar 2008	Tue	2 PM	Yes	Yes	Class 2 / 3 Line & operations
9 Apr 2008	Wed	10 AM	Yes	No	Groundwater sampling (obs)
29 May 2008	Thurs	9 AM	Yes	No	Property east of Fill Area 1
9 Jun 2008	Mon	10 AM	Yes	No	Landfill gas systems
10 Jul 2008	Thurs	10 AM	No	Yes	General operations
15 Aug 2008	Fri	5:30 AM	Yes	No	Transition, night to day ops
8 Sep 2008	Mon	10 AM	Yes	Yes	General operations
16 Oct 2008	Thurs	9 AM	No	No	General operations
19 Nov 2008	Wed	12 noon	Yes	No	Storm water controls
30 Dec 2008	Tues	8 AM	Yes	No	Slopes and grades

In general, satisfactory conditions were observed, and minor problems, such as windblown litter, were rectified prior to the next inspection. There were no observed problems regarding refuse



placement, public safety or traffic management. Throughout these inspections, staff and management were candid and forthcoming regarding operating practices and current conditions. Distinct operations, such as the stockpiling and processing of specific materials, take place in well defined areas. During these inspections, a GPS was used to determine location in relation to the edge of the “Class 2” lined portion of the active site. No instances of unpermitted activities were noted outside of the lined portion. To date our primary concerns from inspections have been:

- Soil erosion on outside slopes of the landfill (outside of the refuse footprint), specifically, upslope from Stormwater Basin B.
- Windblown litter, primarily plastic bags, carried onto lands (within the landfill property) east of the site. This issue can be expected to become more problematic as the height of Fill Area 1 continues to increase.

We also observed the following:

- In mid 2008, a substantial amount of concrete rubble was placed as pavement across an extensive area near the top of the existing fill; it was intended to become a “winter pad” to receive refuse trucks during wet weather. However, the plan for the 2008-09 winter has since been modified and refuse is being placed farther to the south and east. This is not a compliance issue; it reflects a simple change of plans by operations management.
- Also in mid 2008, the landfill began to direct selected construction contractors to unload at the C&D material stockpile so that their materials could be loaded out for processing elsewhere.
- In the fall of 2008, the landfill instituted a color-coded directional system for loads from public customers, to aid in directing them to the proper location.

The Scope of Work for the Community Monitor specifies that at least three inspections will be performed off hours, and that approximately four to six are to be performed jointly with the LEA. As shown in the table above, two off-hour and three joint inspections were conducted in 2008. This was an oversight that will be corrected in 2009.

One aspect of each inspection is to review inspection reports on file at ALRRF from the Local Enforcement Agency. Five noteworthy items were recorded by the LEA in 2008:

- Landfill gas system construction work inadvertently created a trench through the active area where asbestos-containing materials are disposed. This was promptly contained and repaired.
- Also at the asbestos area, during one inspection a poorly-contained load was noted, and the operator was directed to cover it immediately.
- In conjunction with changes in regulations regarding landfill gas probe design and placement, the LEA conducted some gas concentration measurements at existing probes. Several of these measurements were higher than regulatory limits, but many of the probes were in or very near refuse, not at the perimeter locations required by new regulations. The probe placement plan is under review by the LEA, supported by California Integrated Waste Management Board staff.
- A small fire occurred on the landfill, upslope from the landfill gas flare, in July 2008; it was promptly extinguished.
- After a windy period in early 2008, and again in October, litter was noted along Altamont Pass Road near the landfill.

We also review the Log of Special Occurrences during inspections. In 2008, in addition to the fire noted above, this Log indicated several instances of long-bed dump trucks overturning while

unloading. Most of these trucks were delivering Class 2 (contaminated, acceptable) soils. There does not appear to be a single cause for these incidents. From the log entries, driver skill, material stuck in truck beds, and soft or sloping ground all appear to be contributing factors. There were no incidents in the Special Occurrences log that involved damage to small vehicles operated by the general public.

In addition to the on-site inspections, counts of arriving refuse trucks were conducted monthly by the CM through October of 2008. It became apparent that at current tonnages, hourly refuse truck counts are far below the limit stipulated in the CUP. The CMC has directed the CM to limit these counts to semiannual events in the future, increasing to quarterly when refuse currently disposed at the Tri-Cities landfill begins to be transferred to the ALRRF.

## **2.4 Class 2 Soils File Review**

The ALRRF is permitted to accept Special Wastes that include soils from sites known to be contaminated, if a waste profile and applicable laboratory reports indicate that these soils comply with the landfill's Waste Acceptance Criteria. The profile information is kept on file in the administration offices of the landfill. These soils are generally referred to as Class 2 Cover Soils.

Treadwell & Rollo conducted file reviews to verify that Class 2 Cover Soil profiles for soils received in 2008 follow Waste Acceptance Criteria as defined in the Regional Water Control Board order governing the ALRRF. Treadwell & Rollo completed four Class 2 Cover Soil file reviews on 26 June, 9 and 10 August, 20 and 21 October, and 8 and 9 December 2008. Treadwell & Rollo personnel reviewed a total of 360 Class 2 Cover Soil files: 24 in June, 120 in August, 130 in October and 86 in December 2008.

Treadwell & Rollo also developed a system to track which files have been reviewed and which files have been appended since prior review events. Treadwell & Rollo personnel place yellow stickers on files that have been reviewed and ALRRF personnel mark the yellow sticker on the appended files with an "x". Any appended files are reviewed during a subsequent review event, and a new yellow sticker is attached to the file to show the file review is current.

Based upon file reviews completed in 2008, ALRRF is following Waste Acceptance Criteria as defined in the Regional Water Control Board order governing the Site. Treadwell & Rollo personnel discovered some documentation was missing from eight of the 360 Class 2 Cover files reviewed, approximately 2% of the total number of files reviewed. The missing documentation included laboratory reports, soil volume, and delivery frequency. ALRRF personnel have been notified of the missing documentation, and will add the missing documentation to the files. Treadwell & Rollo will verify that this documentation has been added to the files during their first 2009 review event.

Treadwell & Rollo anticipates between 200 and 300 new Class 2 Cover Soil profiles will be approved for disposal at ALRRF during 2009. Treadwell & Rollo plans to conduct quarterly file reviews during 2009. The frequency of review events may be adjusted depending on number of new profiles approved for disposal at ALRRF.

## **SECTION 3**

# **Looking Ahead: Anticipated Efforts and Issues**

### **3.1 Introduction**

In the 2009-2010 contract year, our efforts will continue to focus on report review, site inspections and Class 2 soils file review. However, there may be a change of emphasis if the ALRRF completes permit negotiations for the development of Fill Area 2. If that occurs, we expect to spend time reviewing submitted plans for Fill Area 2.

### **3.2 Issues to be Tracked in 2009**

#### **3.2.1 Report Review Work**

With regard to report review, the following issues will continue to be monitored in the coming year:

- Groundwater monitoring methods.
- Vadose zone groundwater quality (nitrogen compounds).
- Revised gas probe network design and installation.
- Status of mitigations required by CUP. With CMC approval we will speak with County staff for a better understanding of mitigation measure timing and other details, including changes in tonnage limits that are triggered by the permitting and development of Fill Area 2.
- Monthly tonnage reports, noting out-of-County tonnages / sources.

#### **3.2.2 Site Inspection Work**

With regard to 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 will include development of the LNG plant, new wells on the east side of the site, and design and installation of landfill gas probes. With regard to the LNG plant, we will observe construction to confirm that it does not interfere with routine operations. Also, with CMC approval we will look into the interpretation of CUP conditions 73 and 74, which do not anticipate development of the LNG facility but require that all reasonably collectable gas be used to produce electricity.

##### **3.2.2.2 Stormwater Controls and Monitoring**

During wet weather months we will monitor conditions at all stormwater basins, especially Basin B, which had erosion and water pollution problems in 2007-2008 and has since been repaired.

### **3.2.3 Class 2 Soils File Review**

As noted above, we intend to spread our review across the entire year by reviewing the files in four subsets, one per quarter.

## **3.3 Project Management Considerations**

The budget for the CM in the 2008-09 contract year has been adequate and has enabled us to focus closely on several areas, including groundwater monitoring and Class 2 soils file review. Interruptions to the meeting schedule in 2008 required some CM time to update and reissue agenda packets, but we do not expect this to recur in 2009.

One broad issue that will receive our attention in 2009 is the development of a checklist or other tool to assure that the CM receives all of the reports and communications defined in the Settlement Agreement.