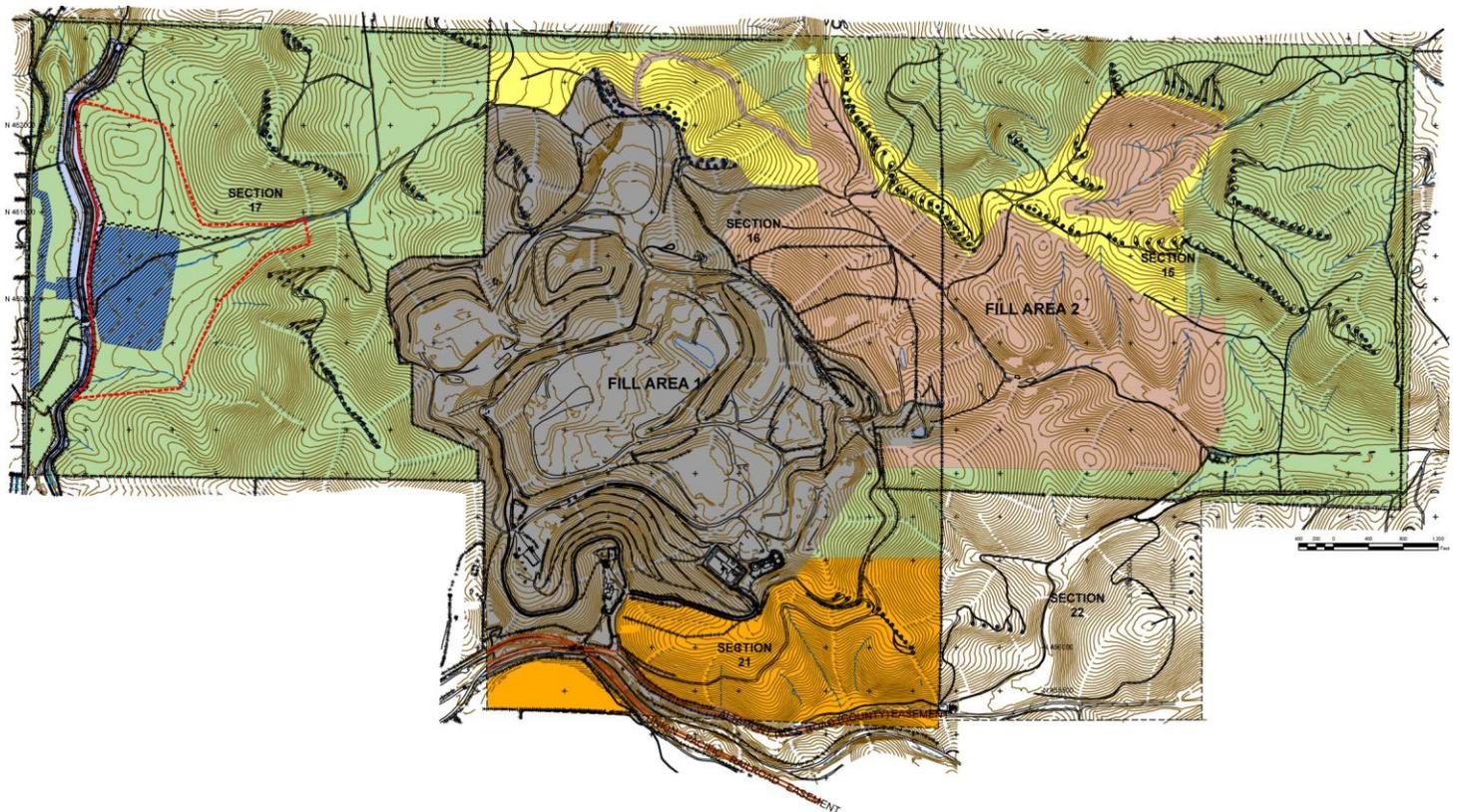


# ALRRF COMMUNITY MONITOR ANNUAL REPORT 2010

Prepared for  
ALRRF Community Monitor Committee

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# TABLE OF CONTENTS

## ALRRF Community Monitor Annual Report 2010

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	<u>Page</u>
<b>1. Introduction</b>	<b>1-1</b>
1.1 Settlement Agreement	1-1
1.2 Prior Community Monitor Work	1-1
1.3 Overview of Operations, Regulations and Permits	1-2
<b>2. Community Monitor Activities and Issues</b>	<b>2-1</b>
2.1 Introduction	2-1
2.2 Compliance	2-2
2.3 Review of Reports	2-2
2.4 Five-Year Permit Review	2-4
2.5 Site Inspections	2-5
2.6 Class 2 Soils File Review	2-6
<b>3. Looking Ahead: Anticipated Efforts and Issues</b>	<b>3-1</b>
3.1 Introduction	3-1
3.2 Issues to be Tracked in 2011	3-1
3.3 Project Management Considerations	3-2

# 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, 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 inspect the ALRRF site no more than once a month.

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.

In mid 2007, the CMC selected the current CM team of Environmental Science Associates and Treadwell & Rollo. This team began work in February 2008. In 2008 and 2009, report reviews, reviews of Class 2 soil analysis files, and site inspections were carried out as intended. In 2008, the primary issue of 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 issues or areas of concern arose as a result of this effort; the team was satisfied that the method conforms to regulatory requirements and is conservative.

## 1.3 Overview of Operations, Regulations and Permits

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 placing, compacting 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 to be 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, such activities on the ALRRF include:

- using landfill gas to produce electricity and a liquid fuel (LNG);
- stockpiling and processing materials for beneficial use on site, such as using waste concrete for wet-weather roads and access pads;
- using contaminated soils and other wastes (biosolids, treated auto shredder fluff) as cover material, as permitted;
- stockpiling construction and demolition materials for processing elsewhere; 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 (anticipated to be developed in the near future). The active parts of Fill Area 1 cover approximately 211 acres.

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) in the near future. In 2010, the last major permits for the development of Fill Area 2 were obtained. Construction of Fill Area 2 may begin in 2011, although the need for Fill Area 2 may be less immediate if disposed tonnage continues to diminish and proposed design revisions of the final contour of Fill Area 1 are approved.

### 1.3.1 Industry Trends

Long-term disposal options for the counties surrounding Alameda County are subject to change, as various disposal sites in the region seek to expand but are faced with uncertain time frames for expansion. 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:

- The recession, and ongoing efforts to reduce waste and increase recycling, have contributed to a downward trend in disposal tonnages.
- There are no new landfill sites currently in development in the region, and several sites (West Contra Costa, Sonoma County, Tri-Cities) have closed in recent years or are in the process of closing. Several sites (Redwood Landfill, Potrero Hills and Keller Canyon)

- are attempting to expand the daily volume and/or total volume that they may accept, but these expansions are being challenged and the outcome is uncertain.
- Another trend in the industry, long-distance rail-haul of refuse, will likely have an effect on the ALRRF site in the future. In 2010, of the approximately 1.04 million tons of refuse disposed at the ALRRF, 37% originated in San Francisco, under a contract that expires when the total delivered tonnage reaches 15 million tons. This is currently projected to occur as soon as 2014 or 2015. The City is in the process of negotiating for the subsequent rail haul of its wastes to Ostrom Road Landfill, in Yuba County. It appears possible that San Francisco refuse will cease to be delivered to the ALRRF in 2014 or 2015.
  - AB32, the California Global Warming Solutions Act of 2006, has led the California Air Resources Board to develop regulatory requirements that affect landfills in several distinct ways, depending on their size and their closure status. For the ALRRF, the only direct effect of AB32 has been to modify the requirements related to surface emission monitoring to detect escaping landfill gas. The new statewide regulations are more stringent than previous BAAQMD requirements; this will impact the cost of surface emissions monitoring. AB32 also imposes a broader requirement statewide, for mandatory commercial recycling. This has implications for the ALRRF in terms of (a) the potential for reduced refuse tonnage in the future, and (b) the possible need for MRF capacity to process more commercial recyclables.

### 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. 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 is continuing to decrease waste flows into the ALRRF, most recently through a ban on plant debris disposal enacted by the ACWMA. That agency is also promoting efforts in many local jurisdictions to divert more organic refuse, including food scraps, into composting processes rather than landfill disposal.

A variety of other recent site-related developments may be viewed as constraints, opportunities, or (in some cases) both:

- The last major permit package for the construction and operation of Fill Area 2, involving biological and wetland mitigations, was completed in 2010, and the Conservation Plan Area and related mitigation areas were defined.
- Construction of a reservoir by the California Department of Water Resources on the western side of the property began in earnest and continued throughout 2010.
- A landfill gas (LFG) to liquefied-natural-gas (LNG) plant has been constructed at the site and is in operation, reducing greenhouse gas emissions while helping to control landfill gas.
- The volume of refuse delivered to the site declined sharply soon after the current recession began in late 2008, and it is continuing to decline, presumably due to a decrease in business activity and consumer purchasing.

## **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.

Throughout the year 2010, the CM was active in each of these areas, as described in Sections 2.3 through 2.6 below.

### **2.1.1 Operational Improvements and Changes**

Through report reviews and site visits, several new developments in ALRRF facilities and operations in 2010 became apparent:

- The plant debris ban enacted by the Alameda County Waste Management Authority took effect, eliminating plant debris as a source of Alternative Daily Cover.
- The on-site wastewater treatment plant ceased to operate and was "mothballed."
- The LNG plant and its associated flare began operations.
- Numerous additional landfill gas wells were brought on line in two rounds of installation. The first round was completed in early 2010 and the second round occurred in late summer of 2010.
- A new set of perimeter probes for landfill gas, required by new State regulations, were installed along the perimeter of the combined Fill Areas 1 and 2.
- One of these probes indicated a high level of landfill gas at the perimeter, requiring remediation. When existing gas wells could not correct the problem, a string of four new wells was installed near that probe to intercept migrating gas. This appears to have been successful.
- A previously-unused pond on the site was brought into service to store raw water, because direct access to raw water from a local canal was temporarily suspended due to construction and/or repair.
- A small secondary storage basin was constructed to hold wet-weather overflow from the truck wash water clarifier.
- More intensive and frequent monitoring and cleaning of stormwater basins A, B and C was begun.

- Additional stormwater pollution-control Best Management Practices (BMP's) were installed in an effort to reduce the presence of contaminants in storm water.
- Daily cover was applied more frequently in an effort to reduce the spread of litter.
- The use of treated auto shredder fluff as daily cover was increased, to offset the loss of plant debris as a cover material (due to the plant debris landfill ban).

## 2.2 Compliance

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. In 2008 and 2009 there were no violations or substantial out-of-compliance conditions to report.

However, in 2010, the continuing presence of high levels of landfill gas at one of the newly-installed perimeter probes led to the recording of a Violation in the Local Enforcement Agency's inspection reports, from January 11 through May 20, 2010. The May 27 inspection report states that the problem was remediated and "... Compliance ... has been achieved." It should be noted that throughout this period, the ALRRF was making efforts to solve this problem, first by using existing gas wells, then by installing four new wells designed to intercept gas near the perimeter where the probe is located.

## 2.3 Review of Reports

### 2.3.1 Semiannual Groundwater Monitoring Reports

Two groundwater monitoring reports were reviewed in 2010. The first covered the time frame from July through December of 2009; the second, January through June of 2010. Both reports reflect revised Waste Discharge Requirements issued by the Central Valley Regional Water Quality Control Board that took effect in April of 2009.

In 2010, groundwater monitoring and sampling activities at the ALRRF were performed by SCS Engineers, with testing conducted by TestAmerica, Inc. Treadwell & Rollo, Inc. reviewed the two semi-annual groundwater monitoring reports and prepared memoranda to summarize their review comments.

Groundwater monitoring activities and analytical results for the ALRRF were in compliance with the groundwater sampling plan and WDRs. Specific issues identified by Treadwell & Rollo during 2010 included:

- First occurrences of two uncommon contaminants at well E-23, in extremely low (parts-per-billion) concentrations,
- Difficulties with apparent laboratory contamination of some samples, and
- Variations in concentrations of some organic and inorganic constituents at various monitoring wells.

## 2.3.2 Annual Mitigation Status Report

This report, covering calendar year 2009, was received in March 2010. It is a table that lists each of the 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.

## 2.3.3 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 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 2010, we received the Title V reports for the periods June – November 2009, and December 2009 – May 2010. These reports largely consist of routine documentation of 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. In 2010 there were several such developments:

- Approximately 25 new landfill gas wells were installed and placed into service. We updated our schematic diagram and illustration of the locations of these wells. These were part of the July 2010 CMC Agenda packet.
- The substantial number of surface emissions exceedances in August 2009 led to the preparation by the CM of a detailed description of the requirements of existing and new regulations with respect to this issue, for the CMC.
- The LNG plant was placed into service in August, 2009 and has continued to operate, gradually increasing its production rate.

As part of our review we updated a stacked-bar chart showing the day-by-day consumption of landfill gas by each of the major pieces of LFG control equipment. That bar chart was included in the March 2010 and September 2010 CMC Agenda packets.

## 2.3.4 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. The most recent 12 reports cover December 2009 through November 2010. All of these reports indicate 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. They exhibited a decreasing trend throughout the year, except for the increase in July 2010 when Tri-Cities refuse began to be received.
- The monthly quantities of special wastes, particularly Class 2 cover soil, and biosolids, varied widely. Biosolids in particular continued to show wide variation, compared to 2009.
- Monthly tonnages of Class 2 cover soil showed a wide variation from month to month throughout the 12-month period.

## **2.3.5 Storm Water Annual Report, 2009-2010**

This report provided a record of stormwater monitoring that took place during the most recent “water year”, from July 1, 2009 through June 30, 2010. It includes results from the water quality sampling that is required when there are discharges from the three stormwater detention basins (denoted A, B and C) to local drainages. In the first storm event with discharges (October 2009), all three basins discharged and were sampled. In the second event for which sampling was required, only basins B and C discharged and were sampled.

Testing found slightly elevated concentrations (above benchmark values) for zinc, total suspended solids, nitrate, and iron in Basins B and C, and slightly elevated iron levels in Basin A. Best Management Practices were augmented in 2010, in an effort to reduce these concentrations.

## **2.3.6 Remediation of Landfill Gas (Methane) Exceedances**

Section 2.1.1 of this report mentions an exceedance of the regulatory threshold for landfill gas at one of the newly installed perimeter probes, and the ALRRF’s efforts to correct that problem. In conjunction with this issue, we reviewed copies of emails provided by ALRRF, showing their communication with CalRecycle and the LEA. The issue was satisfactorily resolved in May of 2010.

## **2.3.7 Summary**

In our review of received reports, we indicated the need to continue to closely track changes in the concentrations of contaminants in groundwater. In general, our reviews to date have found no indication of non-compliance.

## **2.4 Five-Year Permit Review**

The five-year permit review process began in the spring of 2010. The ALRRF submitted a partial draft revised Joint Technical Document (JTD) to the LEA, CalRecycle and the Regional Water Board in April, with a final, complete version submitted in mid June. Various features of the design and operation of Fill Areas 1 and 2, as detailed in the JTD, were reviewed with the Community Monitor Committee in the July 14 meeting. The perceived potential for increased truck traffic related to future composting and material recovery operations was an area of particular concern for Committee members. However, the permitting for those facilities would be a separate process, to take place at a later time.

Ultimately, the LEA determined that the changes to the JTD did not require a permit revision, so the public-input process that is anticipated in the Settlement Agreement will not be taking place in connection with this permit review.

## 2.5 Site Inspections

Twelve on-site inspections were held during 2010. 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
Jan 20	Weds	9 AM	yes	no	Stormwater; Plant debris
Feb 25	Thurs	9 AM	yes	no	Refuse handling
Mar 31	Weds	2 PM	yes	no	Stormwater management
Apr 14	Weds	5 AM	yes	no	Refuse handling; truck traffic
May 20	Thurs	10 AM	no	yes	Stormwater basins
Jun 23	Weds	4 AM	yes	no	Fill areas; truck traffic
Jul 9	Fri	10 AM	yes	no	Litter; refuse placement
Aug 18	Weds	3 PM	no	yes	General operations
Sep 8	Weds	7 PM	yes	no	Truck traffic & queuing
Oct 15	Fri	9 AM	yes	no	Stormwater management prep
Nov 30	Tues	1 PM	yes	no	Stormwater system status
Dec 10	Fri	1 PM	no	no	Refuse, litter, birds, ponds

In general, satisfactory conditions were observed, and minor problems 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 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.

This year our observations have been focused on:

- Windblown litter, primarily plastic bags, carried onto lands (within the landfill property) east of the site
- The installation and performance of stormwater Best Management Practices
- Compliance with the Plant Debris Ban
- Operations of landfill gas control equipment
- The performance of new components including the “drop and hook” area, the mulch bunkers, the raw water pond and the secondary basin for the truck wash
- General observations of fill activities, including spreading, compaction and traffic control during normal and off-hours operations
- The usage of space to store equipment and material on site

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, three off-hour and two joint inspections were conducted in 2010.

One aspect of each inspection is to review inspection reports filed by the Local Enforcement Agency. In 2010 the LEA reports made note of one violation (high landfill gas concentrations, described above) and several Areas of Concern:

- Windblown litter
- Litter visible on Altamont Pass Road
- Adequacy of daily cover (one instance, promptly rectified)
- Protection of the asbestos fill area from refuse fill operations when in close proximity
- Maintaining load-checking records and training

We also review the Log of Special Occurrences during inspections. In 2010, there were minimal incidents of end-dump trucks overturning while unloading. One small, localized fire occurred and was quickly extinguished by on-site staff. Also, a refuse transfer truck parked near the scale house began to roll while unattended and collided with a structure near the scales; there were no injuries.

In addition to the on-site inspections, counts of arriving refuse trucks were conducted semiannually by the CM in January and July of 2010. These counts continued to be far below the limit stipulated in the CUP.

## **2.6 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 2010 follow Waste Acceptance Criteria as defined in the Regional Water Control Board order governing the ALRRF. Treadwell & Rollo conducted two Class 2 Cover Soil file reviews, in April and August of 2010. A third review, originally scheduled for December, has been postponed until January 2011 because of scheduling conflicts. Treadwell & Rollo personnel reviewed a total of 88 Class 2 Cover Soil files in 2010. All of those files were found to be complete and correct.

Based upon file reviews completed in 2010, ALRRF is following Waste Acceptance Criteria as defined in the Regional Water Control Board order governing the Site. Treadwell & Rollo will continue to conduct quarterly file reviews during 2011. The frequency of review events may be adjusted depending on the number of new profiles approved for disposal at ALRRF.

## **SECTION 3**

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

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### **3.1 Introduction**

In the 2011 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 begins the development of Fill Area 2. If that occurs, we also expect to spend time reviewing submitted plans for Fill Area 2.

### **3.2 Issues to be Tracked in 2011**

#### **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.
- Groundwater quality, including the vadose zone.
- Stormwater quality and management practices.
- Performance of new gas probe network and LNG plant.
- Additional changes to the landfill gas extraction system.
- Surface emissions monitoring under new regulations.

#### **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 the further addition of landfill gas extraction wells and ongoing operation of the LNG plant.

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

During wet weather months we will monitor conditions at all stormwater basins.

##### **3.2.2.3 Windblown Litter**

This will be an issue as filling continues in Fill Area 1, which is generally higher than its immediate surroundings and subject to strong winds through much of the year.

### **3.2.2.4 Fill Area 2**

If physical preparations or development occur in Fill Area 2, we will ask to observe these operations.

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

As noted above, we intend to continue our review in January 2011, and at several other times through the year.

## **3.3 Project Management Considerations**

The budget for the CM in the 2010 contract year has been adequate and has enabled us to focus closely on several areas, including the five-year permit review and Class 2 soils file review. Budget should be adequate for work load in 2011, but the development of Fill Area 2 (if it occurs) could require some extra care in managing time and prioritizing work to stay within budget.

The shift from bimonthly to quarterly meetings of the Community Monitor Committee will reduce the number of meetings attended from 6 per year to 4 but is not otherwise expected to have a material effect on the work load and budget for the Community Monitor. Due to the semiannual reporting cycles for air and water related issues, the April and November meetings are likely to be more intensive than the January and July meetings.