
COMMUNITY MONITOR ANNUAL REPORT 2020

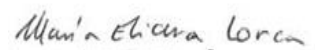
ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY Livermore, CA

Prepared For:

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1.0 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 limited the expansion to a second permitted operational area, known as Fill Area 2, adjacent to the existing Fill Area 1. The Settlement Agreement established the Community Monitor Committee (CMC) and a funding mechanism for its technical consultant, 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 each 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 2020.

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

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 (ESA) and Langan (formerly Treadwell & Rollo). This team began work in February 2008. From 2008 through 2019, the team carried out report reviews, Class 2 soil analysis file review, and site inspections as defined in the Settlement Agreement. From 2020, after a public procurement process to select a continuing CM, the CM team of Langan and ESA switched roles, with Langan

as the primary CM and ESA as a sub-contractor to Langan. The CM team continues to carry out report reviews, Class 2 soil analysis file review, and site inspections (when allowed), as defined in the Settlement Agreement.

- 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. The use of this material was approved by the LEA through a special study in 2013.
- In 2012, two ongoing problems, windblown litter and seagull activity, became more severe; and while the gull problem has varied seasonally, the litter problem has continued.

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, were monitored in 2014 and 2015.

In 2015, the Five-Year Permit Review process began when the Local Enforcement Agency (LEA), which is the Alameda County Department of Environmental Health, requested the ALRRF to submit an application and a revised draft of its Joint Technical Document² (JTD), which contains a detailed description of Fill Area 2 development plans, design details, and operating procedures. On July 31, 2015, the revised JTD was submitted to the LEA and the Central Valley Regional Water Quality Control Board (Water Board). Waste Discharge Requirements (WDRs) were issued by the Water Board in mid-2016.

Throughout this process, the LEA held its permit review in abeyance while Water Board staff prepared, and the Water Board adopted, the WDRs. Subsequently, the LEA's review has

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

2 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.

required more than three years to complete. It has been difficult for the ALRRF to refine its JTD to conform to the requirements of the WDRs and subsequent directives from Water Board staff, and the sheer size and complexity of the JTD itself has also impeded progress. The JTD, after several revisions, was finalized on April 30, 2020. The Five-Year Solid Waste Facility Permit (SWFP) was finalized and issued on September 2, 2020.

1.3 Regional Context and Landfill Capacity Needs

Events in the landfill disposal industry and demographic shifts within the greater Bay Area have affected, and may continue to affect, operations and future developments at the ALRRF. Prior Annual Reports have discussed impending landfill capacity changes and changes in landfill usage that could directly affect the life expectancy of regional landfills including the ALRRF.

Those issues have largely abated, but legislative and regulatory developments have resulted in new implications for landfill life in the region and statewide. The bellwether for this trend was AB 1594, which was passed in 2014. As of January 1, 2020, the use of green material as alternate daily cover (ADC) does not constitute diversion through recycling and is considered disposal for purposes of measuring a jurisdiction's 50 percent per capita disposal rate.

The 2015-2016 legislative session in California gave rise to several new laws that are intended to dramatically reduce the disposal to landfill of organic wastes (plant debris, food scraps and similar materials that readily decompose and produce methane, a potent greenhouse gas). In Alameda County, this material is approximately 30% of the waste stream^{3,4}.

The two pieces of 2016 legislation with the most direct effect are SB 1383 and AB 901. SB 1383 established targets to achieve a 50 percent reduction in the statewide disposal of organic waste from the 2014 level by 2020, and a 75 percent reduction by 2025. AB 901 changed how disposal and recycling is reported to CalRecycle. The intended effect is to provide a more accurate assessment of progress toward State goals. Regulations that implement these measures are now in place, and CalRecycle is providing resource documents and workshops to support implementation⁵.

³ CalRecycle 2014 Waste Characterization Study: <https://www2.calrecycle.ca.gov/WasteCharacterization/> , accessed December 2017.

⁴ Alameda County 2017-2018 Waste Characterization Study: <http://www.stopwaste.org/sites/default/files/2017-18%20Alameda%20County%20Waste%20Characterization%20Study.pdf> , accessed December 2018.

⁵ <https://calrecycle.ca.gov/organics/slcp/education>

One result of this activity has been a tangible commitment by waste industries in California to provide additional organics diversion facilities. In Alameda County, two examples are the 500 ton per day CASP facility at the ALRRF, and the implementation of 100 tons per day of anaerobic digestion and subsequent composting capacity at the Davis Street Transfer Station. Taken together, these could reduce disposal at the ALRRF by up to 600 tons per day, which would be a 25% reduction in the current rate of disposal there. This reduction may be offset somewhat by the need for disposal of contaminants and oversize materials from compost operations.

Related State legislation passed in the 2017-2018 session provided further support for waste reduction through product stewardship, packaging, and enhanced organics-diversion requirements. The legislation passed in the first year of the 2019-2020 session has continued to focus on product stewardship while also removing some requirements to provide buy-back recycling centers.

Against this backdrop, the ALRRF began operation in Fill Area 2 on March 25, 2019. This triggered several constraints on the types, quantities and sources of materials received; these are described in the next section of this report.

1.4 Site-Specific Constraints and Opportunities

The 1999 Settlement Agreement added constraints on operations, by adding new conditions to the Use Permit for the ALRRF. Solid wastes from out-of-county sources were 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.

Some of these conditions did not take effect until Fill Area 2 began to receive refuse, on March 25, 2019. These conditions include limitations on the amounts of sludges, inert waste and special waste accepted from certain Bay Area counties, as well as self-hauled wastes from Contra Costa County. The specific restrictions are:

- Wastes collected for disposal under a municipal franchise may only be received from Alameda County, San Francisco, and the City of San Ramon in Contra Costa County. San Francisco and San Ramon wastes can only be received if those jurisdictions meet specified waste diversion goals.

- Non-franchise waste may only be received for disposal from Alameda County and San Francisco, plus up to 25,000 tons per year of sludges, inert waste and special waste from the other seven Bay Area counties. In addition, up to 25,000 tons per year of self-hauled wastes from Contra Costa County may be disposed.

Also, under the Settlement Agreement 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 established the CMC and the CM role, as described above; and it established mitigation funding related to the landfill expansion.

The physical setting of the ALRRF site presents certain constraints and opportunities. Canyons provide convenient high-volume fill sites, but hilly terrain and local high winds in the Altamont area require constant attention to windblown litter, especially film plastic. As Fill Area 1 neared its final elevation, windblown litter continued to be a problem due to the exposure of the landfill's active face to wind. That problem increased through 2019, despite the move to Fill Area 2 at a lower elevation. The landfill has added staff dedicated to litter cleanup and has repaired and augmented litter fencing downwind of Fill Area 2. Although the ALRRF's litter collection crew has been able to repeatedly remove litter from large expanses of the ALRRF property, high-wind events in 2019 and 2020 quickly replenished windblown litter in those areas, requiring repeated cleanups.

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. The CASP (covered aerated static pile) compost system adjacent to the landfill provides a convenient location for plant debris that is inadvertently delivered to the landfill.
- A liner and liquid recovery system is in place to prevent groundwater contamination by

leachate.

- Landfill gas (LFG) is controlled by an extraction system. Currently the gas is used to produce fuel (liquefied and compressed natural gas, LNG/CNG) and electrical energy.
- Emissions from combustion and processing (diesel engines and landfill gas systems) are controlled to meet Bay Area Air Quality Management District standards.
- 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 at the ALRRF include:

- Using LFG to produce electricity and fuel (LNG/CNG);
- Stockpiling and processing materials for beneficial use on site, such as using demolished concrete for wet-weather roads and access pads;
- Blending liquids with dry materials in a solidification process to make a product that can be landfilled or used as cover;
- Using contaminated soils and other wastes (biosolids, shredded tires, MRF fines, treated auto shredder fluff, etc.) for 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 (FA-1) and Fill Area 2 (FA-2). Fill Area 1 covers approximately 235 acres, including an Asbestos-Containing Waste landfill operation which occupies several acres within the Fill Area 1 footprint. The Fill Area 2 footprint is approximately 250 acres. Although most refuse and cover material are currently being delivered to Fill Area 2, Fill Area 1 has not closed, and it will likely receive additional refuse to reach its permitted final elevation. It is currently the site of the active asbestos landfill and two solidification basins.

Lands surrounding Fill Areas 1 and 2 are mainly grazing land and some construction-support activities related to the continuing construction of Fill Area 2, which will take place in phases over several years. These surrounding lands include a Conservation Plan Area, protected with a permanent easement that provides suitable habitat for several special status species.

Much of the work done by the CM involves the review of data and reports required of the ALRRF by 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 most of the ALRRF property drains into the Central Valley, the Central Valley Water Board issues and administers the Waste Discharge Requirements (WDRs) for the site. These WDRs set various operating requirements, and they also define the programs that monitor water quality by periodically testing groundwater wells as well as storm water basin contents and discharges. The Water Board also requires the ALRRF to address incidents that increase risk to groundwater, such as the inadvertent receipt of wastes that contain unpermitted levels of hazardous materials. The CM reviews semiannual groundwater monitoring reports, the stormwater pollution prevention plan, annual stormwater monitoring reports, and the annual Winterization Plan update, as well as correspondence and required reports that the Water Board posts on its GeoTracker web site.

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 submits a comprehensive "Title V report" to the BAAQMD. This report summarizes emission test results and landfill gas control system performance as required. The CM reviews these reports as they are issued. The landfill also produces an annual estimate of greenhouse gas (GHG) emissions, as required by Federal regulations. The most recent data available, for 2019, indicate that the ALRRF is the third highest GHG-emitting landfill in California, with 38,401 metric tons of total carbon dioxide ("greenhouse gas as carbon dioxide equivalent") emitted, behind the Puente Hills landfill in Los Angeles County (114,774 metric tons of total

carbon dioxide emitted) and the Kiefer Landfill in Sacramento County (125,920 metric tons of carbon dioxide emitted).⁶

1.5.1.3 *Disposed Wastes*

Two agencies regulate solid waste disposal in Alameda County. The Alameda County Department of Environmental Health is the Local Enforcement Agency (LEA), and at the State level, 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 governs 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 required by 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 in conjunction with the LEA, as required in the CM's Scope of Work. Due to the COVID19 pandemic, the CM was only able to conduct three site visits in 2020; Section 2.1 provides more details. Of the three CM site visits in 2020 due to COVID-19 restrictions, one was performed with the LEA.

1.5.1.4 *Land Use*

Concurrently with the Settlement Agreement, Land Use Permit C-5512 for the ALRRF site was updated to incorporate mitigations specified by 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 Section 1.5.2 below. The CM tracks compliance through 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. Annual monitoring surveys of the on-site Conservation Plan Area are also reviewed by the CM.

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. In April 2018, the ALRRF began operation of its Covered Aerated Static Pile (CASP) compost facility northeast of Fill Area 1. Currently, Waste Management's position is that the

⁶ Air Resources Board file <https://www.arb.ca.gov/cc/reporting/ghg-rep/reported-data/2019-ghg-emissions-2020-11-04.xlsx>, accessed December 18, 2020.

CASP facility is not within the purview of the CMC. However, the CMC has taken the position that the additional permit *is* within its purview.

1.5.1.5 Waste Diversion Requirements

At the local level, the Alameda County Waste Management Authority and the Alameda County Source Reduction and Recycling Board formed StopWaste as a joint powers agency to pursue local and state waste reduction and diversion goals. StopWaste has implemented mandatory separation of recyclables and compostables at businesses and multifamily properties throughout the County, and it provides public education, training and other assistance. In addition, StopWaste has developed, and all of its member agencies have adopted, a single-use bag ban ordinance; and StopWaste has adopted a countywide ban on the disposal of plant debris in local landfills.

Section 1.3 of this Annual Report describes recent State legislation that requires increased solid waste diversion (or reduction) and more comprehensive reporting of disposed and diverted quantities.

1.5.2 Requirements For Fill Area 2 Development and Use

1.5.2.1 Background

In 2011, the last major permits for the development of Fill Area 2 were obtained after agreement was reached between regulatory agencies and Waste Management regarding mitigation for the loss of a wetland channel and the loss of habitat for special status species. Mitigations were established through Alameda County Use Permit C-5512 and permits from several State and Federal agencies:

- US Army Corps of Engineers, which had jurisdiction over wetlands.
- US Fish and Wildlife Service, which consulted on wildlife protective measures.
- Central Valley Regional Water Quality Control Board, which certified that the mitigations would protect water quality.
- California Department of Fish and Wildlife, which concurred with the USFWS' Biological Opinion and placed specific conditions on work in the wetland channel.

The fundamental requirements of these permits are:

- The dedication of 750 acres of ALRRF land as a Conservation Easement, in perpetuity.

- The creation of additional wetlands, in the form of a new pond between Fill Area 2 and the Eastern Alkali Wetland.
- The enhancement of a riparian channel approximately the same size as the channel to be displaced by Fill Area 2.

To guide these efforts and many related requirements, the ALRRF and its consultants prepared the following documents:

- Conservation Management Plan
- Pest Management Plan
- Grazing Plan
- Waters and Wetlands Mitigation Plan

The ALRRF dedicated the 991.6-acre Conservation Easement in 2012 and built the mitigation wetland pond in 2013. In late 2017, the ALRRF executed an agreement with the Cosumnes Floodplain Mitigation Bank to fund river channel restoration and preservation in southern Sacramento County. The current status of these efforts is described in Section 1.5.2.3 below.

1.5.2.2 Corridors and Connectivity

The Biological Opinion from the USFWS describes the need for wildlife connectivity and wildlife corridors in eastern Alameda County to provide for wildlife movement and thereby enhance species health by preventing inbreeding. The Biological Opinion states that this need exists for three of the four protected species in the area: San Joaquin Kit Fox, California Red-Legged Frog, and California Tiger Salamander. The ALRRF's Conservation Management Plan contains the following requirements in the Minimization and Mitigation sections of the document:

MIN-31 – The project proponent will contribute funding to conduct a research study of wildlife passage at local over- and under- crossings to determine if these conduits provide conductivity [sic] for wildlife through the Interstate 580 corridor. The study will entail the periodic placement of motion-activated camera station, track plates, and other approved sampling method. The project proponent will provide the Service and/or CDFW with as much as \$50,000 to perform the study. With the approval of the Service and CDFW, the project proponent may contract the study to an approved third party.

MIT-7 – The mitigation pond/wetland will be constructed in an upland area [...] immediately upstream from the Eastern Alkali Wetland. [...] This area provides suitable

upland refugial habitat for tiger salamanders and suitable dispersal habitat for red-legged frogs to the Eastern Alkali Wetland and the Southern Alkali Wetland.

These requirements are also stated in the USFWS Biological Opinion, which in turn is referenced by the CDFW Consistency Determination.

1.5.2.3 Current Status

Unfortunately, the wetland mitigation pond built in 2013 was badly damaged by sediment inflow due to unusually heavy rainfall in early 2014. Also, the channel enhancement was put on hold due to the drought that occurred between 2011 and 2016. To remedy this situation, the ALRRF has purchased off-site wetland channel mitigation credits from the Cosumnes Floodplain Mitigation Bank in southern Sacramento County and had the pond rebuilt and replanted in 2018. Also, to protect the pond from sediment inflow, in late 2018 the very extensive sedimentation basin SB-H was constructed between the pond and Fill Area 2. This basin SB-H performed well throughout the 2018-2019 wet season. In the pond itself, it appears that there has been some mortality among the plants that were installed in late 2018. ALRRF management has stated that this is being addressed.

In 2017, the CM reviewed a summary report describing wetland and wildlife mitigation activities and issues. Wetland and wildlife mitigation activities continued in 2018, 2019 and 2020, with monitoring of construction areas and wildlife protection measures (e.g., relocating sensitive species such as California Tiger Salamander, when encountered). ALRRF staff have stated that a report is being prepared by their natural resources consultant, Dudek, but no reports were provided to the CM for review in 2020.

The CM also reviews the ALRRF annual mitigation monitoring progress report, which briefly summarizes the status of compliance with each of the 106 conditions in Conditional Use Permit C-5512.

2.0 COMMUNITY MONITOR ACTIVITIES AND ISSUES

2.1 Introduction

Under the Settlement Agreement, 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)

In 2020, as a result of COVID-19 health emergency and the statewide Shelter-in-Place Order issued in early March, the CM site visits were suspended from March through October. The ALRRF’s policy in response to the pandemic only allowed agency inspectors, or regulators who perform compliance related activities. Due to the reduction in COVID-19 cases, the county restrictions were eased, allowing for site visits to resume in November. However, as the infection rates increased again, ALRRF reinstated the health emergency precautionary measures in December 2020. The CM performed site visits in January, February and November of 2020. During the months when the site visits could not be performed, the status of ALRRF operations was obtained by reviewing the LEA’s site visit reports. Throughout 2020, 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 were monitored in 2020:

- On March 27, 2020, ALRRF requested an emergency waiver of minimum standards for landfill operations pursuant to 14 CRR, section 17210 (et seq.) and ALRRF’s Conditional Use Permit: C-5512. The waiver was requested as a contingency in case of a direct or indirect impact from the virus. On 3 April, 2020, the LEA granted approval of the Emergency Waiver allowing: (1) increase of 2,500 tons per day (from 11,150 tons per day to 13,650 tons per day); (2) increase of 125 vehicles per day, allowing up to 682 refuse vehicles for the duration of the emergency waiver only. The Emergency Waiver began on April 3, 2020 and continued for 120 days.
- As a result of the statewide wildfires and the potential disposal of fire debris at the site, another emergency waiver was requested by ALRRF on September 18, 2020. The LEA granted conditional approval on September 30, 2020, allowing for the increased tonnage and vehicles per day, provided the operator notifies the LEA of the potential to exceed the allowable limits of refuse and vehicles.
- On April 1, 2020 refuse disposal operations began in the Phase 2 portion of Fill Area 2. Excavation of the Phase 3 portion of Fill Area 2 began in February, and liner construction began in May. Fill Area 2 monitoring wells MW-23A and MW-23B were destroyed and replaced by Fill Area 2 Phase 3 monitoring wells MW-25 and MW-26, downgradient of the planned liner extent of FA-2 Phase 3. In addition, six new monitoring wells (MW-34A, MW-34B, MW-35A, MW-35B, MW-44A, and MW-44B) were installed downgradient of

the lateral extent of FA-2 Phase 3. MW-24 and soil-gas probe VP-3 were also installed to supplement FA2 Phase 3 compliance wells and soil gas monitoring devices to monitor the unsaturated zone.

- In the 12 months from June 2019 through May 2020, 16 poorly-performing landfill gas wells were decommissioned and 36 new wells were brought on line. Wells with higher than normal gas temperatures were monitored for possible subsurface combustion; none was detected.
- For the two Fill Area 1 ponds intended to hold leachate and underdrain water separately, installation of the liquids separation equipment and piping was completed in 2019, but earlier in 2019 the future underdrain water pond (LSI-2) was needed to hold excess stormwater from the CASP compost facility. This delayed the use of the liquid separation system through 2019. However, as of October 2020, the two streams are separated and delivered into their respective ponds.
- In 2020, efforts continued to be made to reduce stormwater pollution. Drop inlets that were fitted in 2019 with “Ertec” filter cloth barriers to screen out silt had been damaged and accumulated sediment around the down drain. The sediment was removed and damaged guards were replaced as part of the 2020 winterization plan. In 2019, specialized Filtrexx™ wattles, designed to trap metals and hydrocarbons, were placed in ditches and along the bases of slopes, to trap hydrocarbons and other pollutants. The year old Filtrexx™ wattles were displaced with debris accumulation in certain locations. The debris was removed and the wattles replaced where necessary. Wattles were also installed upslope of certain concrete open channels. Inlets that were obstructed by vegetation, debris were removed and Filtrexx™ wattles were installed in preparation for rainy weather. TRM mats and rip rap were installed within channels in the Phase 3 excavated area.
- During the 2019-2020 wet season, stormwater was sampled upstream of the Fill Area 1 stormwater basins, in an effort to identify the sources of volatile organic compounds (VOCs) that have previously been detected in the basins. It was not possible to identify specific sources, however; only low to non-detect concentrations were reported in InBasin samples but ketones continue to be detected in interior stormwater samples upstream of the basins. Overall, the detections of VOCs were less frequent, presumably due to additional BMPs put in place along the storm water conveyances.
- The 10-acre Evapotranspirative (ET) Cover Test area was observed when the site was visited as the hydroseeded plants grew in and local plants also appeared. These observations have found that the hydroseeded species germinated successfully but were joined by local species, including some invasives, as the year progressed. No erosion problems were seen. The plans for the ET Cover Test Area include annual monitoring, followed by a report to the Water Board at the conclusion of the four-year study period.

Since the ET Cover was completed on November 14, 2018, submittal of the Performance Monitoring report is scheduled for April 1, 2024.

- The windblown litter problem was expected to improve with the move to Fill Area 2, but the issues continued. The LEA received an unofficial complaint in June 2020 about litter at the entrance of the landfill. The LEA noted windblown plastic debris along a 1.5 mile stretch on roads west of the entrance but did not observe any litter to the east of the entrance and determined that the litter was likely caused by vehicles with holes in their tarps on unsecure loads. Several high-wind events, and generally windy conditions throughout the site, caused litter to repeatedly spread toward and occasionally beyond the east and north boundaries of the site. The ALRRF's litter crews continued to clear debris.
- In the period from January through November 2020, the ratio of **Class 2 cover soil** to municipal solid waste declined to 20%. In 2019 that ratio had decreased to 25% from 68% in 2018, as cover soil for Fill Area 1 was accumulated in 2018 in anticipation of the shift to Fill Area 2.

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, and 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. Issues from 2011–2014 are shown in the 2017 Annual Report.

To compile this table, the CM reviewed publicly available data from the regulatory agencies listed above, ALRRF correspondence with those agencies, and the CM's monthly site inspection reports. The severity of the issues was rated subjectively by the CM using the 1 to 5 scale shown below Table 2-1. Issues that were judged to be beyond the control of the ALRRF are not included in the annual total of severity scores but are listed below the total line.

For the purposes of this report and table, incidents involving the delivery of hazardous materials with incorrect profiles (showing them as non-hazardous) are considered to be beyond ALRRF's control; but the Water Board's position appears to be that ALRRF is responsible nevertheless. Fortunately, no such issues occurred in 2020.

The total severity score for 2020 is substantially lower than in 2019.

Three types of incidents that are of particular concern occurred in 2020:

- **End-dump Truck Overturns.** Within the ALRRF operating area, only one dump-truck overturned in 2020. No injuries were reported. The average number of overturns per year from 2012 through 2019 was 6. This is a tiny fraction of the roughly 16,000 truckloads of class 2 soil and treated auto shredder fluff brought to the facility each year, but the risk of injury and damage in such incidents continues to be a concern for Committee members and ALRRF management. In 2019, the ALRRF increased its oversight of end-dump truck unloading and provides spotters for drivers to dump safely, which moderated the problem but did not eliminate it. Most of the dump truck accidents have been attributed to inexperienced or negligent drivers.
- **Fire.** There were three fires in the ALRRF in 2020. One was a garbage fire that occurred in Fill Area 2, Phase 2. Another fire occurred on open land opposite the main entrance and the other occurred in a transfer truck load. They are described further in section 2.3.3.2 below.
- **Windblown Litter.** This may be the single most persistent problem at the ALRRF. With the move of refuse fill operations from the Fill Area 1 hilltop into the Fill Area 2 canyon, a reduction in windblown litter was expected. However, this did not occur, and due to strong west winds, litter continues to be deposited beyond the east property line. The litter cleanup crew has been enlarged and is now a permanent part of the ALRRF work force. When necessary, the crew removes litter from neighboring properties to the east

of the ALRRF. The ALRRF also redeploys other staff to retrieve litter when necessary.

- **Methane exceedance.** One perimeter gas probe (GP-9A) had readings above the 5 percent methane by volume threshold, in April 2020. The 7-day follow-up tests also showed methane above 5%, triggering a Notice of Violation by the LEA. The GP-9 cluster had also been issued a violation in July 2019. ALRRF has taken steps to improve drainage in landfill areas in the vicinity of GP-9A. Two horizontal gas collectors have also been recommissioned near GP-9A. The violation issued on April 27, 2020 was removed.

2.3.1 Compliance Issues Documented by the LEA


In 2020, two Area of Concern (AOC) notices were issued by the Local Enforcement Agency (LEA). LEA inspection reports indicate concerns about the following:

- Load of medical waste containing sharps was unloaded in Fill Area 2. Even though the medical waste had gone through autoclave, the manifest had not been updated correctly. The LEA issued an AOC on February 27. An updated manifest was provided to the LEA on March 3, correcting the AOC.
- The ALRRF failed to meet the submission deadline, March 31, 2020, for the Non-Water Release Corrective Action Plan (CAP) as part of the Five-Year Permit application review, triggering an AOC. ALRRF did submit the required documents, upon which the AOC was removed

On April 17, 2020, WMAC notified LEA via e-mail that perimeter gas probe 9A (GP-9A) had readings greater than 5 percent methane by volume (mbv). The 7-day follow up identified that GP-9A on April 17, 2020 had methane gas levels of 13.2% mbv. In addition, the 7-day follow up identified monitoring on April 20 through April 22, 2020 that showed methane gas levels at highs of 10%, 11.2%, and 7.5% mbv. The LEA issued a Notice of Violation for methane in perimeter gas probe GP-9A, on April 27. Two consecutive follow up readings in the afternoon of April 22 showed that gas was maintained at 4.8%, below the 5% regulatory threshold, so the Violation was removed.

**Table 2-1
 Compliance Issues Ranked by Severity**

Issue	Severity					
	2015	2016	2017	2018	2019	2020
Contamination at E-05, E-07, E-20B	2	2	2	2	2	2
Stormwater contamination	3	3	3	3	3	2
Windblown Litter	2	4	2	3	4	3
Birds	2	2	2	2	2	2
Erosion	3	2	1	-	3	2
Cover thin / absent	4	-	-	-	1	1
Worker injury	1	2	1	-	1	1
Condensate/Leachate Leakage	3	-	3	3	3	2
Ponding in low-lying area of landfill	-	-	-	1	2	2
Sediment in Wetland Mitigation Area	3	3	2	-	-	-
Odor, on site	-	1	-	-	1	-
Leachate Seeps	1	1	2	-	4	2
Erosion control (sitewide)	-	4	-	-	3	2
Waste outside active area (trash, pallets)	-	4	-	-	-	-
Leachate Leak Disposal	-	-	4	-	-	-
Contaminants at monitoring well MW-4A	-	-	4	-	-	-
Windblown litter beyond last litter fence	-	-	-	4	2	2
Disposal of liquid into pond without prior approval	-	-	-	4	5	2
Lack of means to record liquid level in ponds	-	-	-	4	-	-
Failure to monitor landfill gas well	-	-	-	4	-	-
Incomplete groundwater monitoring report	-	-	-	4	-	-
Liquid separation not implemented, Fill Area 1					4	-
Medical waste (sharps) manifest issue	-	-	-	-	-	2
Totals	30	36	28	44	40	27
Issues Beyond Control of / Refuted by ALRRF						
Truck overturn	1	3	3	3	2	2
Methane Gas at Perimeter Probe(s) [cleared]	4	4	-	-	4	4
Fire in refuse &/or stored material	-	3	1	-	3	3
Fire on ALRRF property, outside active areas	-	-	2	2	3	2

 Indicates that a violation was issued by a regulatory agency.

Severity Criteria

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

2.3.2 Water Board Violations and Concerns

2.3.2.1 2020 Violations

Leachate Release: This NOV was issued for the four unauthorized discharges of compost leachate that occurred on November 29, 2018, January 21, 2019, April 29, 2019, and December 2, 2019, and the Discharger's failure to submit CalOES Spill Reports, as required by Water Code Section 13271 and 13272, for all but one of the documented leachate spills. The ALRRF responded on March 2, 2020, with documentation of site work performed to address the leachate spills/leaks. All the soil that was in contact with the contact water was removed and then reincorporated into the operations layer on the curing pad. Because these discharges originated in the CASP operation, they are not included in Table 2-1.

2.3.2.2 Other Concerns

There are several open issues that have arisen between the ALRRF and the Water Board since the current Waste Discharge Requirements (WDRs) were finalized in July 2016. They are briefly described below.

Identifying Sources of VOCs in Storm Water –The ALRRF's 2019-2020 stormwater sampling again detected VOCs in several locations, but the data still did not clearly indicate specific sources, in spite of having added sample points to narrow down the possible sources. However, the BMPs included prior to the 2019-2020 wet season, and other improvements (e.g., eliminating leachate seeps), has reduced stormwater pollution. We will continue to track this issue.

Solidification Basin Compliance –Water Board staff has expressed concern when they find standing liquid in the solidification basins. The ALRRF has responded by pointing out that this is inherent in the operation of these basins. ALRRF staff have mentioned that the basins will be moved, and constructed to be impermeable, in a location not above refuse. However, that has not yet taken place.

Statistical Exceedance in Well PC-1C – Water Board staff responded to the statistical exceedance of inorganic constituent concentrations in well PC-1C in Fill Area 2, and expressed concern that a clear pattern of increasing inorganic concentrations (calcium, chloride, magnesium, sodium, sulfate, specific conductance, and TDS) in groundwater west of PC-1C was also observed in corrective action wells E-20B and MW-12. In addition, sporadic detections of VOCs in PC-1 wells has made the Water Board suspect that the E-20B release from Fill Area 1 has impacted groundwater in Fill Area 2. The Water Board required an updated site conceptual model to understand the impact of E-20B and an updated engineering feasibility study to make

appropriate changes to E-20B corrective action program. In response, the ALRRF has reported that the source of inorganic compounds at PC-1C appears to be plant debris affected stormwater. Plant debris was placed for erosion control in FA-1, and runoff from that area flowed to Basin B, then traveled down a drainage channel between E-20B and PC-1C and infiltrated groundwater. Basin B inorganics in runoff increased significantly at the same time as the increase at PC-1C. The VOCs detected historically in E-20B have been attributed to landfill gas. ALRRF added that landfill gas controls placed in the vicinity of E-20B have led to the VOCs decreasing in E-20B. Water Board has yet to respond. This issue will be tracked.

Deviations from baseline concentration limits – A two year update to concentration limits (CLs) for monitoring parameters for Fill Area 1 and Fill Area 2 groundwater detection monitoring wells (per the 2016 WDR's) was provided. For Fill Area 2, the CLs were established for three groundwater zones for monitoring wells: alluvial, weather bedrock and unweathered bedrock. The updated CLs are based on historical baseline monitoring data through June 2020 for each constituent and were statistically calculated using the intrawell data evaluation procedure⁷. The 2020 updated CLs were similar to the previous CLs, which had been presented in 2016 and 2018. Water Board has yet to provide comments.

2.3.3 Other Incidents

The following information is based on reports filed in the site's Special Occurrences Log and on Community Monitor site inspections.

2.3.3.1 Vehicular Incidents

In addition to one trailer overturn (discussed below), there was a landslide at the Phase 3 excavation where a bulldozer was excavating rocks. No damage to the equipment or personal injuries were reported. The landslide stopped moving within 24 hours and the area was blocked for safety.

2.3.3.2 Fire

Three fires occurred at the ALRRF site in 2020:

- June 9, 4:00 AM: A garbage fire occurred in Fill Area 2, Phase 2. The fire was quickly pushed out to the south, smothered and extinguished with water truck. The material was monitored to ensure there were no more fires. The cause of the fire is likely combustible

⁷ 2020 2-Year Groundwater Concentration Limits Update for Fill Areas 1 & 2 Report by GeoChem Applications, dated October 2020

material in the refuse.

- June 28, 8:30 PM: A fire occurred on open land opposite the main entrance. The fire was controlled by Alameda County Fire Department and did not affect the ALRRF.
- August 14: A small fire occurred in a Fremont transfer truck load while tipping the load. The tipper operator tried to tip the load to put the fire out but the garbage was stuck and the fire spread rapidly. The operator was able to dislodge the load by shaking the trailer. Fire extinguishers and water trucks were used to put out the fire. The apparent cause was hot material in refuse.

2.3.3.3 *Trailer Overturns*

Within the ALRRF operating area, only one dump-truck overturned in 2020. No injuries were reported. A detailed analyses was provided in the 2019 annual report suggesting that ALRRF should consider making a greater effort to prevent overturns during months when Class 2 soil deliveries are at their peak. February has not typically been a high-volume month for Class 2 soil, but in 2020, it was.

2.4 Review of Reports

2.4.1 Five-Year Permit Review

The LEA received application package for the Five-Year Solid Waste Facility Permit (SWFP) Review document on April 13, 2020. The LEA completed the review per Title 27, CCR Section 21675 and prepared a Five-Year Permit Review Report (PRR). ALRRF also concurrently submitted an application package for a Permit Modification on April 13, 2020, addressing all the comments from the LEA and CalRecycle. The LEA concluded no further action was required. A Public Notice was issued on June 10, 2020. The LEA received comments from one Livermore resident. The LEA responded to the comments, and no changes were made to the SWFP. The LEA found that the modified SWFP is consistent with and met the requirements of the regulations. On August 17, 2020, a site inspection was performed by the LEA (in-person) and CalRecycle (virtually). CalRecycle concurred with the permit review, and the SWFP was issued by the LEA on September 2, 2020.

2.4.2 Groundwater

Two groundwater monitoring reports were reviewed in 2020. The first covered the period from July through December of 2019; the second covered January through June of 2020.

The data in these reports indicate that monitoring wells with VOC contamination are responding to intensified landfill gas extraction nearby as indicated by reduced VOC concentrations, but some VOCs diminish more quickly than others.

One new development has been an increase in concentrations of inorganic constituents (dissolved calcium, chloride, sulfate, total dissolved solids, bicarbonate alkalinity), in certain wells in Fill Areas 1 and 2. Near Fill Area 1 these are MW-2A and MW-4A, on opposite sides of Fill Area 1 itself. In Fill Area 2 these are MW-8A, MW-8B, PC-1A and PC-1C, all near the bottom of the Fill Area 2 canyon and over half a mile from the active portion of Fill Area 2. The Water Board requires additional investigation, however ALRRF believes that the inorganic concentrations are related to stormwater (see Section 2.3.2.2).

In other respects, groundwater monitoring results were similar to those from prior years. Contaminants, when present, were below regulatory limits that would require immediate corrective action.

The two groundwater reports, especially the second one, presented some concerning QA/QC issues with field sampling and laboratory practices: contaminated trip and equipment blanks, hold time exceedances, and an increasing number of VOCs attributed to laboratory contamination. SCS Engineers (the ALRRF's groundwater monitoring consultant) maintains that the issues are normal for all laboratories.

2.4.3 Storm Water

A new set of annual requirements for industrial storm water monitoring and reporting took effect throughout California on July 1, 2015. Stormwater samples are to be taken when a "qualifying storm event"⁸ (QSE) occurs. Up to four such QSE's are to be sampled at each discharge point during a stormwater year (July through June). For each type of industrial facility, certain key pollutants must be monitored; and if concentrations of those pollutants exceed specified Numeric Action Levels (NALs), the facility must make a plan that describes Exceedance Response Actions (ERAs) to be implemented. In the first year of exceedance, "Level 1" ERAs are selected, which emphasize minimum Best Management Practices (BMPs). These are low-cost measures such as improving housekeeping, cleaning drain pipes, etc. If the exceedance continues into its second consecutive year, Level 2 ERAs must be developed, and these typically involve advanced BMPs such as specialized equipment, paving projects, etc.

⁸ a precipitation event that: (1) produces a discharge for at least one drainage area; and, (2) is preceded by 48 hours with no discharge from any drainage area.

Stormwater monitoring and reporting is especially complex at a landfill site, and even more so at a site that is expanding, like the ALRRF. Since the current regulations took effect, the number of sampling points has increased from three to six, and exceedances have persisted in spite of initial efforts to reduce silt, metals and organics. Each year the ALRRF has applied more BMPs; especially during the last wet season (2019-2020), new and improved BMPs were implemented. Those BMPs are continued for this wet season, with damaged components replaced. The landfill has implemented all applicable minimum BMPs and several types of advanced BMPs, including additional straw wattles, Filtrex™ SiltSoxx wattles, flocculent logs, and rock dams. The ALRRF has also been tracking the presence of VOCs in stormwater, under a separate requirement in the WDRs. Data from last wet season's sampling indicated improvement in the stormwater quality. During the 2018-2019 and 2019-2020 wet periods, only low to non-detect VOCs were reported in InBasin samples. However, ketones continued to be detected in interior stormwater samples.

Based on these results, ALRRF proposes to track VOCs in stormwater using the semiannual WDR InBasin samples. For the 2020-2021 season, ALRRF proposes that discharge samples not be analyzed for VOCs, and that interior stormwater samples not be collected. If, however, consistent VOC detections of acetone, MEK, and MIBK return in the future, SCS recommends that additional discussions with the Water Board be arranged to determine additional sampling program. The InBasin results will be included in each semiannual monitoring report.

It is important to note that under these stormwater regulations, a violation is not triggered by the exceedance of an NAL. Rather, an industry will receive a violation if it fails to (a) sample its stormwater discharges or (b) plan and implement any necessary ERAs. ALRRF has exceeded several NALs but has not received any Notices of Violation.

2.4.4 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 2020, the CM received the Title V reports for the periods June – November 2019, and December 2019 – May 2020. These reports describe landfill gas control operations and source testing, and they also document new or unique developments at the site that can have an effect on air emissions. Results from the current reporting year are similar to those from the previous year:

- The required surface emissions monitoring (checking for methane leaks through the landfill cap) continued to occur, and although exceedances of methane were found, they were typically remedied on the first try, without the need for repeated repairs.
- From June 2019 – May 2020, 16 landfill gas wells were decommissioned, and 36 new wells were installed and began operation.
- New landfill gas wells were installed in FA-2 because FA-2 had received more than one million tons of material. The landfill gas wells were connected to the headers of FA-1.
- The LNG plant continued to operate at a fairly steady production rate. There were a few brief unscheduled down-time events (several days at most) due to motor bearing failure or piping replacement, but after each of those problems was resolved, the gas plant returned to steady production.
- All control devices passed their latest emissions tests without incident.

2.4.5 Mitigation Monitoring

The Mitigation Monitoring and Reporting Program Annual Progress Report, covering calendar year 2019, was received by the CM on April 23, 2020. 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. The status descriptions together with the verification notes generally reflected the current status of each mitigation measure. Updates to this table from the previous year are listed below, with reference to the applicable CUP Condition number.

- 3 [c] – This requirement pertains to the WDR and IGP Stormwater Permit. ALRRF updated the IGP SWPPP to include Fill Area 2 operations
- 4.4 – This requirement, about the sludges, inert waste, and special waste after ALRRF expansion is to not exceed 25,000 per calendar year and no such waste shall be accepted from outside the 9 Bay Area counties. The update lists that ALRRF did not exceed the 25,000 ton per calendar year requirement, but inadvertently accepted waste from outside the 9 Bay Area counties after FA-2 operations commenced (5 loads, approx. 64 tons). ALRRF has ensured waste profiles are expired/voided to prevent future acceptance and has also provided additional training to the scale house staff.

In addition to the Annual Progress Report described above, in prior years the ALRRF has prepared reports to inform the natural-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 Community Monitor did not receive any formal reports on mitigation activities in 2020. According to ALRRF staff,

biological surveys were conducted in the Conservation Plan Area, and a report on this subject is in preparation.

2.4.6 Per- and Polyfluoroalkyl Substances (PFAS) Report

The PFAS Order was given by the SWRCB as part of a statewide effort to obtain a **preliminary** understanding of PFAS compounds concentrations in groundwater and leachate at various landfills. The Order indicates this sampling is necessary to determine if PFAS compounds are present in and near waters that could be used for drinking water purposes. The State and Regional Water Boards will evaluate the data collected, and use it to support of any regulatory action to be implemented.

To be representative, samples were collected from a background well, a downgradient well, and a composite leachate sampling location, where possible. PFAS compounds were reported at higher concentrations in groundwater monitoring wells in the previously affected assessment and corrective action areas (E-05, E-07, E-20B, and MW-20) than the background or the detection monitoring program (DMP) wells. The highest PFAS concentrations in groundwater were reported in corrective action wells E-05 and E-07, located immediately downgradient of the old permitted unlined portion of Fill Area 1. Relative to corrective action wells E-05 and E-07, lower concentrations of PFAS compounds were reported in the E-20B corrective action area, situated adjacent to the old unlined Fill Area 1.

No additional PFAS sampling is proposed or required at this time. The SWRCB is analyzing the compiled data in airports, landfills and drinking water supply systems to aid in the development of Public Health Goals in drinking water. The concentrations reported at the ALRRF were below the maximum concentrations for groundwater and leachate at other landfills covered by the PFAS Order, and within the middle of the concentration ranges.

2.5 Review of Records

Several types of site records were reviewed by the CM in 2020. The CM's scope of work requires the periodic review of files that contain lab analyses and other descriptions of **Class 2 soils** (considered non-hazardous) that are brought to the site for use as cover soil.

The **Special Occurrences Log** for the ALRRF was examined four times during the year and summarized for the Committee. The **LEA's monthly inspection reports** are publicly available on the CalRecycle web site and were checked by the CM every month, to note any new issues that may have been identified by the LEA.

2.5.1 Class 2 Soils

An ongoing CM task 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 generally conducted two to three times per year, and it requires at least one 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. This review was conducted twice in 2020, on January 27 and July 30. Attempts to schedule a third review near the end of the year have not been successful, but the next review will be scheduled as soon as possible in 2021. The files are made accessible electronically from Waste Management's Oakland office.

A total of 112 files were reviewed in January 2020, and a total of 12 files were reviewed in July 2020. No out-of-compliance profiles were found in any of the reviews, but there were two files that were incomplete in the July review. The CM is looking into this issue and will update the CM team when more is known.

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 either checked by the CM in person during site visits or requested via email. One dump truck overturned in February, and three fires were reported. Compared to previous years, the special occurrences were lower in number. It appears that the COVID-19 health emergency and the strict safety measures adopted has impacted the operations at the ALRRF in a positive way.

2.5.3 LEA Inspection Reports

In 2020, there were two types of Areas of Concern noted in these reports. One pertained to accepting a load of medical waste with incorrect information on the manifest, the other involved late submission of a report.

2.6 Monthly Inspections

Three site inspections were held during 2020. The inspection day and time were as shown in Table 2-2 below. Off-hours inspections, outside of the hours that the landfill is open to the public, were not conducted in 2020.

**Table 2-2
Site Inspection Summary**

Date	Day of Week	Inspection Time	Announced in Advance?	With LEA staff?
Jan 28	Tue	12:00 PM	no	yes
Feb 28	Fri	9:30 AM	yes	no
Nov 11	Wed	1:00 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 in CMC meeting packets. Distinct operations, such as the stockpiling and processing of specific materials, took place in well-defined areas. No instances of unpermitted activities were noted. There were no new problems seen regarding refuse placement, public safety or traffic management, whether on hours or off hours. Throughout these inspections, staff and management were forthcoming regarding operating practices and current conditions.

In 2020, observations by the CM focused on:

- The operations in Fill Area 2.
- Completion and maintenance of the mitigation pond.
- Plant growth and soil conditions in the evapotranspirative cover test area.
- Storm drainage and erosion control.
- Observation of issues of ongoing concern, including the presence of large numbers of seagulls and management of windblown litter east of Fill Area 2.
- Excavation and construction of Fill Area 2 phase 3.
- Changes at the site that could harm the environment or public health.

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 discussed above, due to the COVID-19 health emergency, only three site visits could be conducted, one of which was performed jointly with the LEA.

No truck traffic counts were conducted in 2020, because ALRRF data on tonnage and traffic made it clear that the traffic volume requirements of the Conditional Use Permit were being met.

3.0 LOOKING AHEAD: ANTICIPATED EFFORTS AND ISSUES

3.1 Introduction

The 2020 contract year was the beginning of a new Community Monitor contract, with Langan providing CM services, assisted by ESA. The CM team will continue to perform report reviews, site inspections and Class 2 soils file reviews. The COVID-19 health emergency and the resulting Shelter-in-Place orders brought changes in the way the CM conducts monitoring of the landfill activities. Two Emergency Waivers, one for the COVID-19 emergency and the other for wildfires, were requested and received by the ALRRF.

The Five-Year Permit Review was completed. The four-year test of evapotranspirative (ET) cover methods is ongoing; the liquids separation system began to operate; and the mitigation pond with stormwater basin SB-H is functioning. Exceedances at several monitoring wells will continue to be tracked.

3.2 Issues to be Tracked in 2021

3.2.1 Ongoing Review

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

- Implementation of requirements of the 2016 Waste Discharge Requirements.
- Concurrence of natural-resource agencies with off-site wetland mitigations.
- Groundwater monitoring methods and data quality.
- Groundwater quality, including the vadose zone below the landfill liners.
- Stormwater quality and management practices.
- Performance of the landfill gas system; decommissioning and installation of gas wells.
- Effects of composting or material recovery development or operations on the landfill.
- Refuse truck traffic counts, if needed.
- Performance of the 10-acre ET cover test site.

3.2.2 Site Inspections

All operations will continue to be observed, with close attention to the following areas.

3.2.2.1 Landfill Gas Control System

This system protects both air and groundwater quality, and it operates within a complex regulatory framework involving Federal permits, local permits, 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 2021, four topics will be of special interest:

- The effect of the gas system on the concentrations of contaminants in wells E-20B and MW-4A.
- Concentrations of inorganic constituents in PC-1 well clusters.
- Gas temperatures, particularly in the high-temperature cluster of wells in Fill Area 1 Unit 2.
- Implementation of gas collection in Fill Area 2.

3.2.2.2 Stormwater Controls and Monitoring

Throughout the year, and especially during wet weather months, the CM will monitor conditions at all stormwater basins. The new additions to the stormwater pollution controls – skimmers, flocculant addition, Filtrexx™ check dams, and additional discharge points – have likely reduced contamination, although sporadic VOCs are still detected.

3.2.2.3 Windblown Litter

This will likely continue to be an issue for Fill Area 2 and downwind areas.

3.2.2.4 New Systems

The CM will directly observe, and review available performance data, for:

- The ET cover test area
- The reconstructed wetland mitigation pond
- Sediment basin SB-H
- Tipper and truck wash equipment in Fill Area 2
- The liquids separation system
- Modifications to solidification operations

In addition, monitoring reports on the Mitigation Wetland and the Conservation Plan Area, will be reviewed as they are provided.

3.2.2.5 Groundwater Contaminants and Groundwater Data

The CM team will continue to check concentrations of MTBE, tert-butyl alcohol, and tetrahydrofuran, which showed an increase in 2015 but have not since then. The team will also monitor data from wells E-20B, MW-4, MW-12, MW-20, PC-1C and other wells that have shown evidence of contamination. The quality of the groundwater sampling and analyses, especially the occurrence of contaminants in quality-control samples and field samples, will also continue to be monitored.

3.2.3 Class 2 Soils File Review

As required by the Scope of Work, the CM will conduct this review at least twice during 2021.

3.2.4 Permit Requirements Triggered by Expansion Date

In the Settlement Agreement, Section 4.3 defines the Expansion Date as “the date of the first deposition of solid waste in [Fill Area 2].” That occurred on March 25, 2019, triggering specific requirements in Conditional Use Permit C-5512, and in the resource-protection permit conditions that were imposed through the mitigations in the landfill-expansion EIR and the associated natural-resource-agency permits (Army Corps wetland permit, USFWS Biological Opinion, etc.; see Section 1.5.2, above).

3.2.4.1 Tonnage Limitations

Section 4 of the Settlement Agreement contains numerous restrictions on the types and source jurisdictions of wastes that can be brought to the ALRRF during specified time frames prior to and after the Expansion Date. Specifically:

- After the Expansion Date, the amounts of Sludges, Inert Waste and Special Waste from outside San Francisco and Alameda Counties is limited to 25,000 tons per year, and these materials may only originate within the nine Bay Area counties.
- Self-Hauled wastes (of all types) from Contra Costa County are limited to 25,000 tons per year.
- Materials brought for disposal may only originate from Alameda County, San Francisco, and San Ramon.

3.2.4.2 Natural Resource Protections and Reporting

The natural resource permits issued in connection with the ALRRF expansion contain over 80 explicit permit conditions, too many to enumerate here. In the near term, the following monitoring and reporting conditions are especially significant for the Community Monitor Committee:

- Every four years after the start of construction of Fill Area 2 (which began in 2015), the California Department of Fish and Wildlife (CDFW) is to receive a status report on the required periodic surveys of the Conservation Plan Area. The wildlife surveys focus on Western Burrowing Owl, San Joaquin Kit Fox, California Red-legged Frog, and California Tiger Salamander.
- Annual wetland monitoring reports are required by the Lake and Streambed Alteration Agreement, which was issued by the CDFW, for the first five years of operation of the wetland mitigations, i.e. the constructed pond.
- Reconnaissance survey reports for the Conservation Plan Area are also required by the CDFW. These include baseline and periodic surveys for sensitive wildlife species (see list above), and annual rangeland and general reconnaissance surveys. These are due on January 15 of the calendar year following the survey.

In 2019 and 2020, these reports reportedly were being prepared, but none were received by the CM.