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November 21, 2005

Mr. David Darlington, Chair
ALRRF - Community Monitor Committee
City of Livermore, Public Services Department
3500 Robertson Park Road
Livermore, CA 94550

Subject: ALRRF Community Monitor Progress Report No. 6

Dear Mr. Darlington:

Attached is the report of the September 27 and October 14, 2005 landfill inspections and other activities conducted by TechLaw since the Altamont Landfill Community Monitor Report No. 5, dated September 16, 2005.

Please feel free to call me at (415) 281-8730 or email me at lkoch@techlawinc.com if you have any questions or concerns regarding this Report. We look forward to the opportunity to continue providing technical support to the Community Monitor Committee.

Sincerely,

Lori Koch

Lori Koch, P.E.
Project Manager

LK:KB:sm

ALT011 - ALRF Inspection Report No. 6.wpd

ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
COMMUNITY MONITOR PROGRESS REPORT NO. 6

Prepared For:

Community Monitor Committee
Altamont Landfill Settlement Agreement
City of Livermore Public Services Department
3500 Robertson Park Road
Livermore, California 94550

Prepared By:

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ALTAMONT LANDFILL AND RESOURCE RECOVERY FACILITY
COMMUNITY MONITOR PROGRESS REPORT NO. 6

DOCUMENTS REVIEWED

Letter from Bay Area Air Quality Management District to Waste Management on the results of the source test on Engine/Generator #1 and Gas Turbine #1, dated May 25, 2005

The outlet results for engine/generator #1 and gas turbine #1 met the regulation and permit limits for carbon monoxide, nitrogen oxides, non-methane organic compounds and sulfur dioxide within the ten percent accuracy tolerance used for compliance purposes.

Monthly Tonnage Reports for May, June, July, August, and September, 2005

The average total daily disposal quantity is well within the 11,500 tons per day permitted maximum and the 7,000 tons per day settlement agreement limit. The monthly tonnage reports include the type, source, and quantity of alternate daily cover (ADC) materials received at ALRRF, as required by the settlement agreement.

First Semiannual 2005 Groundwater Monitoring Report

Two leachate seeps were discovered on March 24, 2005. The area was covered with soil and compacted to correct this problem.

Seven groundwater monitoring wells (E-03A, E-17, E-18, E-20B, E-21, E-22, and E-23) were sampled in February and in June. In February, water samples were also collected from vadose zone monitoring location VZM-A, leachate indicator wells E-05, E-07, and leachate monitoring points Leachate Sump (LS), LS2, Valley Drain (VD), VD2, groundwater interceptor barrier (GWIB), and the waste water treatment plant (WWTP).

February (First Quarter)

No volatile organic compounds (VOCs) were detected in wells E-17, E-18, or E-22. Estimated concentrations (below reporting limits) of 1,1-dichloroethane (1,1-DCA) were detected in E-03A and E-23, and estimated concentrations of 1,1-DCA and tetrachloroethene (PCE) were detected in E-21. Estimated concentrations of carbon tetrachloride and 1.1-DCA were detected at the GWIB.

Vinyl chloride was detected in well E-20B at a concentration of 1.3 micrograms per liter (ug/L). This concentration exceeds the California Maximum Contaminant Level (MCL) for vinyl chloride of 0.5 ug/L. In addition, estimated concentration below reporting limits of acetone, benzene, chlorobenzene, 1,4-dichlorobenzene, cis-1,2-dichloroethene, 1,1-DCA, 1,2-dichloropropane, dichlorodifluoromethane, dichlorofuoromethane, diethyl ether, PCE, trans-1,2-dichloroethene, and trichloroethene (TCE) were detected in well E-20B.

June (Second Quarter)

Methylene chloride was detected in wells E-17, E-18, and E-22. Estimated concentrations of methylene chloride and 1,1-DCA were detected in E-03A and E-23, and estimated concentrations of 1,1-DCA, methylene chloride and PCE were detected in E-21. The methylene chloride is attributed to lab contamination.

Vinyl chloride was again detected above the reporting limit in E-20B at a concentration of 1.7 ug/L, in excess of the California MCL. Contaminants detected in E-20B at estimated concentrations include benzene, chlorobenzene, 1,4-dichlorobenzene, cis-1,2-dichloroethene, 1,1-DCA, 1,2-dichloropropane, dichlorodifluoromethane, dichlorofluoromethane, diethyl ether, methylene chloride, PCE, and TCE.

The concentration limits, which ALRRF must meet, are the lowest of either the practical quantitation limit, the reporting limit, or the state MCL. The only detection exceeding the concentration limit during the first and second quarter 2005 in detection, corrective action, or evaluation monitoring wells is vinyl chloride at well E-20B. Vinyl chloride has been detected in well E-20B at similar concentrations since at least 1991 (the earliest data presented in the Groundwater Monitoring Report). Waste Management attributes the VOC detections at E-20B to the influence of landfill gas. The approach to the exceedance at E-20B is active landfill gas control, and continued monitoring.

According to SCS Engineers, based on the intra-well (single well) statistical evaluation of inorganic constituents, there are no significant increasing or decreasing trends in inorganic monitoring parameters (alkalinity, chemical oxygen demand, chloride, nitrogen, total dissolved solids, sulfate, calcium, magnesium potassium, silicon, and sodium) for the first and second quarter 2005.

Waste Acceptance Limitations - Quantities Limited by the Settlement Agreement - WM Table

A table prepared by Waste Management from data generated by the scale program indicates that the quantity of sludge, inert waste and special waste received from outside Alameda and San

Francisco Counties has been well within the 60,000 tons per year limit since 2001. The quantity of sludge, inert waste and special waste from outside the nine Bay Area counties exceeded the 7,500 tons per year limit in 2003 and 2004; however, because the settlement agreement allows 'banking' of used quantities from previous years, the tonnage received to date is within the limit. In addition, the self-haul from Contra Costa county has been within the 15,000 tons per year limit since 1999.

LANDFILL INSPECTION 9/27/05

Documentation Maintained at Landfill

Load Check Reports

According to the load check reports, 6 to 11 load checks are performed per day. Items removed from loads before disposal include: tires, small appliances, hazardous waste such as pesticide and paint thinner containers. Untreated medical waste was identified and returned to the customer.

Special Occurrences Log

A third party truck overturned on August 30, 2005. There were no consequences to the landfill operation.

Notice of Violation Record - BAAQMD

None since last inspection.

Local Enforcement Agent (LEA) Reports

No reports since last inspection.

Flare Temperature Report

No temperature excursions for August.
(All landfill gas compliance data are summarized in the semi-annual reports - currently being reviewed).

Observation of Environmental Controls

Dust

Some dust was generated by vehicles, but did not persist. Water trucks were working the roads.

Vectors

Some birds were present. In addition to covering the waste, guns and cannons can be used to discourage birds; no such controls were observed during inspection.

Cover

The daily and intermediate cover appears to be in compliance with Title 27 requirements; no waste is exposed except in areas prepared for disposal, the working faces are kept to a minimum, compaction appears adequate; no slumps, slides or depressed areas were observed.

Litter

Very little litter was observed on Altamont Pass Road to the east of the main gate. More litter was present to the west including styrofoam, plastic bags and bottles (most likely thrown from cars).

Truck Traffic

4:30 - 5:30 PM: A total of 8 trucks were counted. The Settlement Agreement limit is 10.
(It should be noted that there was only one Waste Management truck in the count.)

Tour of the landfill with WM Operations Manager (Ken Lewis) to observe ADC types and uses

- Concrete rubble: not an ADC, it is used for road building
- Construction and Demolition (C&D) waste: after processing it is mixed with green waste for solidifying liquids. C&D waste fines (very small size) are used for erosion control due to high seed content - not an ADC.
- Raw Green waste is ground up and used as erosion control - not an ADC.

- Shredded tires are used in gas collection trenches.

- Auto shredder waste is treated to render it non-hazardous class II waste.

According to Ken Lewis, ALRRF practice is to stockpile no more ADC on site than can be used in one week because of fire hazards. TechLaw observed the use of auto shredder waste as ADC in the 'route truck' area. The placement is uneven due to tire track impressions of the equipment. The thickness appears to vary 6-inches or more. Ken Lewis dug a hole to demonstrate the thickness - it appeared to be about one foot thick. The requirement is that the ADC be a minimum of 6 inches thick and an average of one foot or less (Section 20690(b)(6)(B) of Title 27 allows treated auto shredder waste to have an average compacted thickness of less than 24 inches, but for other ADCs the limit is an average of 12 inches). It is very difficult to tell, given the unevenness of the waste and the limits of the equipment used to place the material, whether the average thickness is one foot or less; however, based on visual observation, it appears that Waste Management is attempting to meet these requirements in their operating procedures.

LANDFILL INSPECTION 10/14/05

Documentation Maintained at Landfill

Load Check Reports (through 10-12-05)

Since the last inspection, TV monitors, microwaves and tires have been pulled from loads.

Asbestos Disposal Area Daily Operating Inspection Records for 2005 (through 10-12-05)

A recurring problems in the asbestos area is fencing that needs repair. In February, soil cover was found to be inadequate. Erosion was identified in March and May. A leachate leak was identified in April, and in May signs needed to be replaced.

Special Occurrences Log

A compactor had a small fire, put out by the operator, on 9-13-05.

Notice of Violation Record - BAAQMD

None since last inspection.

LEA Reports

No violations noted in September. There was a note to cover area stripped of daily cover if not used; on 9-22-05 the stripped area was not used due to rain.

Observation of Environmental Controls

Dust

Little dust was observed; no wind.

Odors

No odor.

Litter

Some litter was observed outside the main gate. Very little litter along Altamont Pass road in either direction. Toured the northeast side of the facility (the 'back 40'). The litter fences were effective and litter crews were working.

Truck Traffic

6:45 -7:45 AM: A total of 12 trucks. The limit is 50.
7:45 - 8:45 AM: A total of 21 trucks were counted. The limit is 50.

Tour of the landfill with the LEA (Karen Moroz) and WM Environmental Compliance Specialist (Teresa Dominique) to observe the use of ADCs

TechLaw observed the use of auto shredder waste as ADC at the tippers. The thickness looked reasonable. According to Karen Moroz, the biggest problem is inadequate thickness of cover. Revisited an area where she had observed inadequate cover the previous week; it was regraded and apparently 'much better'. Karen generally allows certain items to 'stick out' such as mattress corners when to cover them would result in cover that is too thick. A slope was observed covered with ADC (auto shredder mixed with green waste), with garbage sticking out. The cover was clearly not too thick.

ALTERNATE DAILY COVER (ADC)

As requested by the Community Monitor Committee, TechLaw evaluated the types and uses of ADC at ALRRF.

Types of ADC

Alternate daily cover is any material other than earthen material which is approved for use by the LEA as daily cover. ADC materials approved for use at ALRRF include:

- Green Waste Material
- Treated Auto Shredder Waste
- Shredded Tires
- Solidified waste (with soil, green waste, treated auto shredder waste, ash, cement kiln dust, ground-treated woods, or a combination of these materials, as extenders)
- Biosolids
- Biosolids and Green Waste
- Biosolids and Treated Auto Shredder Waste
- Construction and Demolition Waste
- Geo-synthetic blankets or tarps

Requirements for Applying ADC

The requirements are that the ADC be placed a minimum of 6-inches thick. The maximum allowed thickness varies according to Section 20690 of Title 27: green waste must have an average compacted thickness less than or equal to 12-inches, treated auto shredder waste is limited to an average compacted thickness of less than 24-inches, construction and demolition waste must be less that 18-inches. At ALRRF, the practice appears to be to place ADC an average of 12-inches thick or less. In addition, treated auto shredder waste can be used only in a Class II area.

How ADC is Used at ALRRF

At ALRRF, processed green waste and C&D waste are used for solidifying liquids. The resulting solidified material is used as ADC. Treated auto shredder waste is used as ADC or is mixed with other materials and used as ADC. Shredded tires are used primarily as a permeable material in gas collection trenches. During the 9/27 and 10/14 landfill inspections, TechLaw observed processed green waste being used in the solidification process; treated auto shredder waste was observed being used as ADC in the Class II area, and processed green waste was observed being used as ADC. Shredded tires were observed covering gas collection pipes in new disposal areas.

The operating practice, observed during landfill inspections, is to 'pull back' the previously placed daily cover or ADC prior to waste placement in order to conserved cover materials.

As discussed above in the report of the landfill inspection on 9/27, TechLaw observed the use of auto shredder waste as ADC in the 'route truck' area. The placement was uneven due to tire tracks of the equipment. The thickness appeared to vary 6-inches or more. Ken Lewis dug a hole to demonstrate the thickness - it appeared to be about one foot thick. It is very difficult to tell, given the unevenness of the waste and the limits of the equipment used to place the material, whether the average thickness is one foot or less; however, based on visual observation, it appears that Waste Management is attempting to meet these requirements in their operating procedures.

Evaluation of Measure D with regard to ADC

Waste Management does not include ADC in the calculation of disposal quantities. There was a question raised at the September 20 Community Monitor Committee meeting as to whether this practice is consistent with Alameda County Measure D. TechLaw has reviewed the text of Measure D: *The Alameda County Waste Reduction and Recycling Initiative Charter Amendment, Section 64: Waste Reduction and Recycling*, and ADCs are not addressed. Upon further research, it was found that both the *Alameda county Integrated Waste Management Plan, 2003*, by Alameda County Waste Management Authority, and the *Alameda County Source Reduction and Recycling Plan, 2003*, by the Alameda County Source Reduction and Recycling Board and Alameda County Waste Management Authority, make reference to counting ADC as disposal; however, ADC is counted as disposal in these plans in order to measure progress towards recycling goals. It is not a requirement for ALRRF to count ADC as disposal in calculating disposal quantities, because the above-referenced plans are not regulations, and are not applicable to the landfill operations or reporting requirements.

GROUNDWATER INTERCEPTOR BARRIER ABANDONMENT

As requested by the CMC, TechLaw evaluated groundwater data collected in 2005 with respect to the groundwater interceptor barrier (GWIB) and downgradient wells.

The GWIB is monitored annually, and groundwater samples were collected from the GWIB on February 16, 2005. Carbon tetrachloride was detected at an estimated, concentration of 0.36 ug/L and 1,1-DCA was detected at an estimated, concentration of 0.49 ug/L. These detections are below the California MCLs for these contaminants of 0.5 ug/l and 5 ug/l, respectively. 1,1-

DCA has been detected at similar concentrations at the GWIB each year since 2001, but this is the first detection of carbon tetrachloride since 2001.

The monitoring wells downgradient of the GWIB are: E-03A, E-17, E-18, E-21, E-22, and E-23. These wells were monitored in February and June. In February, no VOCs were detected in wells E-17, E-18 or E-22. Estimated, , concentrations (below reporting limits) of 1,1-dichloroethane (1,1-DCA) were detected in E-03A and E-23, at 0.29 ug/L and 0.25 ug/L respectively, and estimated, , concentrations of 1,1-DCA (0.61 ug/L) and tetrachloroethene (PCE) (0.26 ug/L) were detected in E-21.

In June no VOCs, with the exception of methylene chloride, were detected in wells E-17, E-18, and E-22. Estimated, , concentrations of 1,1-DCA were detected in E-03A and E-23 (0.29 ug/L and 0.18 ug/L respectively), and estimated, , concentrations of 1,1-DCA (0.45 ug/L) and PCE (0.21 ug/L) were detected in E-21. Methylene chloride was also detected in these wells, but it is attributed to lab contamination. These results are summarized in the tables below:

Contaminants Detected in Groundwater, February 2005 (ug/L)

	GWIB	E-03A	E-17	E-18	E-21	E-22	E-23	Reporting Limit	California MCL
Carbon Tetra-chloride	0.36 J	ND	ND	ND	ND	ND	ND	5	0.5
1,1-DCA	0.49 J	0.29 J	ND	ND	0.61J	ND	0.25J	5	5.0
PCE	ND	ND	ND	ND	0.26J	ND	ND	5	5.0

Contaminants Detected in Groundwater, June 2005 (ug/L)

	GWIB	E-03A	E-17	E-18	E-21	E-22	E-23	Reporting Limit	California MCL
Carbon Tetra-chloride	NA	ND	ND	ND	ND	ND	ND	5	0.5

1,1-DCA	NA	0.29 J	ND	ND	0.45 J	ND	0.18 J	5	5.0
PCE	NA	ND	ND	ND	0.21 J	ND	ND	5	5.0

ND - not detected.
NA - not analyzed.
J - estimated value. Constituent was detected below the reporting limit.

The concentration limits for VOCs in groundwater at the point of compliance (the point of compliance is the downgradient side of the GWIB in the valley floor and the limit of waste in all other areas) are the practical quantitation limits, reporting limits or MCLs, whichever is less. In this case, the reporting limit and the practical quantitation limit are the same, and are shown in the above tables, along with the MCLs. No contaminants were detected at the GWIB or in downgradient wells at concentrations exceeding MCLs or the reporting limit; therefore the concentration limits have not been exceeded at the point of compliance as of the first half of 2005.

FUTURE WORK

TechLaw will conduct landfill inspections during the last week in November, and on a date in December, to be determined. In addition, Techlaw will complete reviews of documents received including the 2004-2005 Annual Report for Storm Water Discharge, Altamont Landfill and Resource Recovery Facility, Alameda County, by SCS Engineers, and the Combined Title V Semi-Annual and Partial 8-34 Annual Report December 1, 2004 through May 31, 2005, by Shaw/EMCON/OWT, Inc, and respond to any requests from the Community Monitor Committee.

REFERENCES

BAAQMD, May 25, 2005. Letter to Ken Lewis, District Manager Waste Management of Alameda County regarding the result of the source test on Engine/generator #1 and Gas Turbine #1.

California Code of Regulations, Title 27.

Charter of the County of Alameda.

SCS Engineers, July 2005. First Semiannual 2005 Groundwater Monitoring Report, Altamont Landfill Resource and Recovery Facility.

SCS Engineers, August 2005. Groundwater Interceptor Barrier (GWIB) Pilot Study Report, Altamont Landfill and Resource Recovery Facility Near Livermore, California.

Waste Management, 2005. Table of waste limitations with respect to the settlement agreement generated from scale reports.

Waste Management, 2005. Monthly Tonnage Reports for May, June, July, August, and September.