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California Regional Water Quality Control Board Central Valley Region

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Edmund G. Brown, Jr.
Governor

21 January 2011

Nancy C. Cleavinger
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CALIFORNIA WATER CODE SECTION 13267 ORDER FOR TECHNICAL REPORTS, FLORIN PERKINS LANDFILL, SACRAMENTO COUNTY

**YOU ARE LEGALLY OBLIGATED TO RESPOND TO THIS ORDER.
PLEASE READ THIS ORDER CAREFULLY.**

This California Water Code (CWC) section 13267 Order (13267 Order) describes the detection of volatile organic compounds (VOCs) in groundwater samples taken from the wells at the Florin Perkins Landfill (the Site), and requires the submittal of technical reports that are necessary to characterize the release and plan corrective action and site closure as required by Title 27 of the California Code of Regulations.

The Executive Officer finds:

1. The Florin Perkins Landfill (the Site) is a 106-acre unlined landfill on Florin Perkins Road in the City of Sacramento. The Site occupies a former gravel quarry. The discharge of waste to land at the Florin Perkins Landfill is regulated by WDRs Order 95-196, issued by the Central Valley Regional Water Quality Control Board (Central Valley Water Board or Board).
2. The Site is owned by a group of family trusts: the NC Cleavinger Family Trust (Nancy C. Cleavinger and Audrey A. Hunt, trustees); the AA Hunt Family Trust (Audrey A. Hunt and Nancy C. Cleavinger, trustees); the JE Harvey Family Trust (Janet E. Harvey and Nancy C. Cleavinger, trustees); Nancy C. Cleavinger and Audrey A. Hunt, as Trustees Under a Testamentary Trust created under the Estate of Robert E. Davis, deceased, Probate Case No. 09843; Sally R. Davis and Martin M. Chorich, as Co-Trustees of the Sally R. Davis Trust; VA Palmer Palmer Family Trust (Gail Christine Brown as Successor Trustee); and GC Brown Family Trust (Gail C. Brown, Trustee and Successor Trustee). Nancy C. Cleavinger interacts with the Central Valley Water Board on behalf of the trusts, which are hereafter collectively referred to as "Cleavinger."
3. There are currently six groundwater monitoring wells at the Site, including two upgradient wells (MWs-A and E), one side gradient well (MW-B), and three downgradient wells (MWs-C, D, and F). MW-D is in the central part of the landfill

and MWs-C and F are compliance wells along the southern perimeter of the landfill. Groundwater flows in a south-southeast direction.

4. Monitoring and Reporting Program (MRP) 95-196 requires that all six wells be sampled semiannually for VOCs, general minerals and dissolved iron. The MRP was revised in 1999 to require interwell monitoring (i.e. the use of upgradient wells as background).
5. Trichloroflouromethane (TCFM) has been detected in groundwater samples from groundwater monitoring well MW-F since June 2002. Concentrations have ranged from 0.94 ug/L to 9.7 ug/L. TCFM does not naturally occur in groundwater. Board staff consider that detections above the method detection limit are a release from the landfill, and that the likely carrier of the VOC is landfill gas.
6. Groundwater samples from wells MW-C and MW-D have also reported detectable concentrations of TCFM over time. Detectable concentrations reported for well MW-C have ranged from 0.72 ug/L to 5.2 ug/L and for well MW-D, TCFM has ranged between 0.58 ug/L to 3.6 ug/L.
7. Additional groundwater data has been submitted to the Board by Teichert Aggregates (Teichert), owner of a former aggregate mine site which is immediately adjacent to the Florin Perkins Landfill. Three groundwater monitoring wells have been installed on Teichert's property. Monitoring wells MW-1 and MW-2 are on Teichert's western property boundary, which is also the eastern property boundary of the Florin Perkins Landfill. Well MW-3 is located on Teichert's property southeast of the landfill footprint.
8. The 2nd Semi-annual 2008 groundwater chemical analytical data indicates TCFM was detected in wells MW-C, MW-D, an MW-F at concentrations ranging between 1.2 ug/L and 9.0 ug/L. Downgradient well MW-F, which is adjacent to Teichert, contained the highest concentration of TCFM.
9. Soil gas collected from gas probe GP-2 during the 2nd Semi-Annual 2008 monitoring event contained four VOCs, including TCFM. Gas probe GP-2 is located in the vicinity of well MW-F, which contains TCFM.
10. The 1st Semi-Annual 2009 groundwater chemical analytical data indicates groundwater continues to be affected by several constituents of concern. TCFM was detected in wells MW-D and MW-F. Four VOCs, including TCFM, were detected in the soil vapor sample collected from gas probe GP-2.
11. A Trend Analysis, provided in Appendix F of the 1st 2009 Semi-Annual report, indicates a statistically significant upward trend in wells MW-B and MW-C for several constituents of concern including bicarbonate, which is a landfill gas indicator. Wells MW-C and MW-F contain the highest bicarbonate concentrations among the wells monitored, indicating that landfill gas has affected the underlying groundwater. Furthermore, a trend analysis for TCFM was evaluated for wells MW-C, MW-D, and MW-F, which indicated a significant upward trend in MW-D. Well MW-D is located in the northern portion of the landfill, upgradient of wells MW-C

- and MW-F. Downward trends for some constituents were also reported in several wells.
12. A review of the Teichert monitoring well data collected in November 2008 indicates that well MW-2 contained TCFM at a concentration of 2.4 ug/L, which is an increase in concentration from the previous monitoring event in June 2008. The TCFM concentrations detected to date are significantly lower than the maximum concentration limit (MCL), which is 150 ug/L. In addition, wells MW-1 and MW-3 have elevated bicarbonate concentrations, similar in concentration to well MW-F. Elevated bicarbonate concentrations typically indicate that landfill gas has impacted the groundwater.
 13. Board staff's review of the data finds that there appears to be an ongoing release of landfill gas from the landfill to the vadose zone and groundwater, and that landfill gas is migrating offsite to the adjacent Teichert property. The extent of the landfill gas migration is unknown.
 14. The Florin Perkins Landfill is an unclassified landfill that received waste from 1993 to February 2005. The landfill has not received waste since February 2005 and therefore is subject to California Code of Regulations, title 27 (Title 27), section 21110: Time Frame for Closure regulations. Section 21110(b)(1) states: *If a solid waste landfill that has remaining permitted capacity is inactive for 12 consecutive months, the operator shall begin closure activities in accordance with the time frames specified in the closure plan unless granted an extension pursuant to (b)(3).*
 15. The landfill has been inactive since 2005. Neither the Central Valley Water Board nor the Sacramento County Environmental Management Department (acting as the Local Enforcement Agency) has been made aware of Cleavinger's intentions as to the future use of the landfill. If Cleavinger and the current operator intend to begin accepting waste and landfilling, then a Form 200 and Report of Waste Discharge reflecting all changes in operation, including changes to the Detection Monitoring Program must be submitted. If the landfill is not going to accept additional waste, then it is subject to Title 27, Section 21769 and Cleavinger must submit a Closure and Post-Closure Maintenance Plan in preparation for closing the landfill.
 16. It is Board staff's opinion that the ongoing release of landfill gas continues to affect both the vadose zone and groundwater beneath the Site and the adjacent property. A review of the case files shows that the nature and extent of the pollution has not been defined since the release was confirmed in October 2002.
 17. CWC section 13267 states, in part: *In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposed to discharge waste ... shall furnish, under penalty of perjury, technical and monitoring program reports which the regional board required. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring these reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports*

requiring that person to provide the reports.

18. Cleavinger owns the Site and is named in WDRs Order 95-196. The technical reports required by this Order are needed by the Central Valley Water Board to ensure compliance with the WDRs and the requirements of Title 27.
19. CWC section 13268 states in part: *(a)(1) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying any information provided therein, is guilty of a misdemeanor, and may be liable civilly in accordance with subdivision (b).*

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.

Pursuant to California Water Code section 13267, Cleavinger is hereby ordered to submit the following reports by the due dates below:

1. By **15 March 2011**, Cleavinger shall submit the name of the California Registered professional that it has retained to complete all technical reports required by this Order.
2. By **30 March 2011**, Cleavinger shall submit a letter describing whether Cleavinger intends to begin accepting waste at the Site or intends to close the Site. This letter shall be submitted to both the Central Valley Water Board and the Sacramento County Environmental Management Department.
 - a. If the Cleavinger intends to begin accepting waste and to resume landfilling operations, then it must submit a Form 200 and amended Report of Waste Discharge (ROWD) in accordance with Title 27, Section 20420(k)(7)(C). The ROWD shall propose any appropriate changes to the detection monitoring program and all other operational changes. If Cleavinger does intend to begin accepting waste and resume landfilling operations, this provision serves as a request for a ROWD pursuant to CWC sections 13260 and 13261. The Form 200 and ROWD must be submitted by **30 October 2011**. If an environmental study is required pursuant to the California Environmental Quality Act (CEQA), that study may be completed and certified subsequent to submittal of the ROWD.
 - b. If Cleavinger plans to close the landfill, then a Closure and Post-Closure Maintenance Plan must be prepared in accordance with Title 27, Section 21760. The Closure Plan must include a proposed schedule of final closure including, where appropriate, incremental closure (complete closure of successive portions of the landfill) in accordance with Section 21769(c)(2)(B). The Closure and Post-Closure Maintenance Plan shall be submitted by **30 December 2011**.

3. By **30 May 2011**, Cleavinger shall submit an addendum to the Evaluation Monitoring Program. This addendum shall contain the information proposed in the 10 February 2003 *Proposed Work Plan for Evaluation Monitoring* as modified by the comments in Board staff's 6 March 2003 letter (attached).

In addition to the above items, the addendum shall evaluate the additional monitoring results collected since 2003 (both onsite and from the Teichert property) and propose changes to the Evaluation Monitoring Program as needed to fully define the lateral and vertical extent of landfill gas and groundwater contamination. Cleavinger shall investigate the extent of landfill gas migration on both the landfill property and on adjacent properties.

4. By **30 December 2011**, Cleavinger shall submit an Engineering Feasibility Study that includes the results of the Evaluation Monitoring Program and a proposed Corrective Action Plan. The Engineering Feasibility Study shall include information necessary to meet the requirements of Title 27, section 20420(k)(6) that includes at a minimum, a detailed description of the corrective action measures that could be taken to achieve background concentrations for all Constituents of Concern. In addition, the Engineering Feasibility Study shall include the proposed corrective action for landfill gas and groundwater contamination, as well as a proposed schedule for implementation.

As required by the California Business Code section 6735, 7835, and 7835.1, all reports shall be prepared by a registered professional or their subordinate and signed by the registered professional.

The Executive Officer may extend the deadlines contained in this Order if Cleavinger demonstrates that unforeseeable contingencies have created delays, provided that Cleavinger continues to undertake all appropriate measures to meet the deadlines and makes the extension request in advance of the expiration of the deadline. Cleavinger shall make any deadline extension request in writing. Any request for an extension not responded to in writing by the Central Valley Water Board shall be deemed denied. Cleavinger must obtain written approval from the Executive Officer for any significant departures from the tasks described in this Order.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control Board (State Water Board) to review the action in accordance with California Water Code section 13320 and California Code of Regulations, Title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality
or will be provided upon request.

If you have any questions regarding this Order, please contact Todd Del Frate at (916) 464-4737 or Anne Olson at (916) 464-4740.

Original signed by

PAMELA C. CREEDON
Executive Officer

Enclosures: 6 March 2003 Letter EMP Work Plan Approval

cc: Patrick Pulupa, Office of Chief Counsel, State Water Board, Sacramento
Patrice Webb, Sacramento County Environmental Management Department
Stacie Gillespie, Stoel Rives, Sacramento
Loren Harlow, Stoel Rives, Sacramento



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6 March 2003

Mr. Calvin Brown
Florin-Perkins Landfill, Inc.
P.O. Box 276430
Sacramento, CA 95827

EVALUATION MONITORING PROGRAM, WASTE DISCHARGE REQUIREMENTS ORDER NO. 95-196, FLORIN PERKINS LANDFILL, SACRAMENTO COUNTY

Board staff has reviewed the 10 February 2003 *Proposed Work Plan for Evaluation Monitoring Program* prepared by Alisto Engineering for the Florin Perkins Landfill. The proposed Evaluation Monitoring Program (EMP) was submitted in response to our 9 December 2002 letter after confirmation of the volatile organic compound (VOC) trichlorofluoromethane (TCFM) up to 9.7 µg/L in down gradient Well F, a new compliance well installed in May 2002. Elevated concentrations of total dissolved solids (up to 720 mg/L) and bicarbonate (up to 450 mg/L) have also been detected in this well and several other wells at the site. The work plan proposes the following tasks:

EMP Tasks

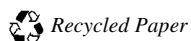
1. Sampling and analysis of a nearby landfill gas (LFG) monitoring probe to determine if LFG may be a source of the VOCs in Well F.
2. Continued monitoring of existing onsite wells for VOCs and inorganic constituents in accordance with the schedule in Revised Monitoring and Reporting Program No. 95-196, except that VOCs will be a monitoring parameter. Extended development of Wells D, E and F will be conducted prior to sampling to verify that these wells are free of sediments from completion activities.
3. Collecting and analyzing groundwater samples from nearby offsite wells to assess the down gradient extent of the release and to evaluate spatial changes in the groundwater chemistry. Available well information and historical water quality data will also be reviewed.

We have the following comments on the work plan:

Comments

1. The lateral and vertical extent of the release needs to be delineated. The evaluation monitoring program needs to include wells screened in the uppermost aquifer and any underlying

California Environmental Protection Agency



saturated zones, as appropriate. In the event that the existing offsite wells do not meet this criteria, additional wells may need to be installed.

2. The EMP needs to identify which landfill disposal area(s) (i.e. southern, northern or eastern) are the source of the release. Investigation and elimination of these areas as possible sources of the release is also a necessary prerequisite for completing an alternative demonstration (per Section 20420(k)(7)) that there is an offsite source, or that the exceedances resulted from natural variation in the ground water chemistry.
3. Groundwater monitoring results for the Second Half 2002 showed elevated sulfate (280 mg/L) in Well D. This well needs to be re-sampled to confirm this exceedance. If confirmed, sulfate should be identified as a constituent of the release and included as an evaluation monitoring parameter in the EMP.
4. The work plan schedule should include estimated start and completion dates for each proposed task, including when permission will be obtained from the offsite owners for Task 2 activities. The schedule also needs to be consistent with Section 20425(b), which requires that the Discharger complete assessment of the release and submit a Corrective Action Plan (CAP) and Engineering Feasibility Study (EFS) within 90 days of establishing an evaluation monitoring program.

We approve of the activities proposed in the EMP work plan and you may proceed with these activities. By **25 March 2003**, please submit an addendum to the EMP which addresses the above comments and includes a revised/updated implementation schedule. The Evaluation Monitoring Report, CAP and EFS are due by **23 June 2003**.

If you have any questions, please call me at (916) 255-3141.

JOHN MOODY
Water Resources Control Engineer
Land Disposal Program
Lower Sacramento River Watershed

cc: Laura Niles, California Integrated Waste Management Board, Sacramento
Tammy Derby, Sacramento County Environmental Management Department, Sacramento
Dan Easter, Alisto Engineering Group, Sacramento
Jeffory J. Scharff, Attorney, Sacramento