Attachment 1 of Staff Report

Tentative Amendment 2 of Cleanup and Abatement Order R5-2006-0721

HERUM CRABTREE
ATTORNEYS

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December 31, 2008

VIA ELECTRONIC MAIL AND HAND DELIVERY

Ms. Wendy Wyels, Supervisor
Compliance and Enforcement Section
Regional Water Quality Control Board - Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, California 95670-6114

Re: Amendment 1 Cleanup and Abatement Order R5-2006-0721
Bonzi Sanitation Landfill, Stanislaus County

Dear Ms. Wyels:

Ma-Ru Holding Company and Bonzi Sanitation Landfill (collectively "Bonzi") submit the enclosed detailed comments to Amendment 1 to Cleanup and Abatement Order R5-2006-0721 prepared by AMEC Geomatrix, Inc. As a follow up to Bonzi's December 24, 2008 request, Bonzi once again herein requests a meeting with the Regional Board staff to review the very serious issues raised in the comment letter and also requests that this matter be set for hearing at a future Regional Board meeting.

Please contact me at your earliest opportunity to schedule these meetings.

Very truly yours,

KARNA E. HARRIGFELD
Attorney-at-Law

KEH:jh

cc: Pamela Creedon
Cris Carrigan
Brian Terrell
Lee N. Smith

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December 31, 2008

VIA ELECTRONIC MAIL AND HAND DELIVERY

Ms. Wendy Wyels, Supervisor
Compliance and Enforcement Section
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, California 95670-6114

Subject: Amendment 1 Cleanup and Abatement Order R5-2006-0721
Bonzi Sanitation Landfill, Stanislaus County

Dear Ms. Wyels:

AMEC Geomatrix Inc. (AMEC) reviewed Amendment 1 to Cleanup and Abatement Order (CAO) R5-2006-0721 (Amendment) issued by the California Regional Water Quality Control Board (RWQCB) to Ma-Ru Holding Company and the Bonzi Sanitation Landfill Inc. (Landfill) dated December 3, 2008. The Amendment was issued "as a result of the continued detection of groundwater pollution downgradient of the Bonzi Sanitation Landfill" and contains the requirement to: 1) Submit a plan to supply drinking water to the Riverdale Community by January 1, 2009; 2) Immediately supply replacement water to any downgradient domestic or municipal well that has been adversely affected by the Landfill; and 3) Notify the RWQCB and Stanislaus County Environmental Health Department when the replacement water supply plan has been implemented. We disagree with many of the conclusions stated in the Amendment and offer the following both general and specific comments.

General

The plan to supply drinking water to the Riverdale community should be tied to confirmed detections of Landfill volatile organic compounds (VOCs) reported above the drinking water standard in samples collected from the water supply well. As described below, Landfill VOCs have not been reported in Monitoring wells 06-01A and 06-01B, 06-03 and 06-04 that are upgradient of the Riverdale supply well or the supply well itself. The plan to supply drinking water must also include a validation step and at least one confirmation groundwater sample collection event before an action is taken. The Landfill is not responsible for contamination caused by the Riverdale community's use of its septic systems and any potential impacts to groundwater from the use of its septic systems should be investigated and be remediated by the Riverdale community.

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The VFW well is the only supply well that may have been affected by the Landfill and the Landfill has fully mitigated this impact by installing a granulated activated carbon system on the VFW supply well. The granulated activated carbon system is maintained by the Landfill and there is no evidence that this system is not mitigating impacts to the VFW well.

Specific

Paragraph 1 – The Landfill continued groundwater monitoring required by the CAO and the Waste Discharge Requirements Order No. R5-2007-0148 (WDRs) in 2008. In a meeting with RWQCB staff on October 17, 2008 a commitment was made to provide the results of this monitoring to the RWQCB by December 1, 2008. AMEC validated and tabulated this data and the data collected between Fourth Quarter 2007 and the Third Quarter 2008 were submitted to the RWQCB on December 1, 2008.

Paragraph 2 – As indicated above, the Landfill continued monitoring required under the CAO and the WDRs from Third Quarter 2007 through Third Quarter 2008. These results were submitted to the RWQCB on December 1, 2008.

Paragraph 3 – There is no conclusive data indicating that the groundwater extraction system is not currently capturing the entirety of the existing plume of contaminants in groundwater. The groundwater extraction system was designed and installed in 1991 to capture Landfill impacts in groundwater at the site boundary. There have been residual low and decreasing concentrations of VOCs (mostly 1, 1-dichloroethane (1, 1-DCA) and 1, 2-dichloroethene (1, 2-DCE)) in groundwater just downgradient of the extraction systems for many years (Monitoring wells 85-7, 85-25, 86-5B and 86-6B shown on Figure 15 Third and Fourth Quarter 2006 1,1-DCA Isoconcentration Contour Map, Attachment 1). These impact areas are decreasing in concentration over time and there is no data suggesting that these impacts are migrating further downgradient. It is likely that these offsite areas continue to exist due to static flow conditions caused by very flat groundwater gradients and recharge and discharge seasonally from the Tuolumne River. These impacts do not appear to be indicative of a lack of capture by the current groundwater extraction system otherwise there would be greater variation and increases in VOC concentrations over time. This condition will be evaluated further in the upcoming investigation required by the CAO. The Riverdale supply well is cross-gradient from these areas and neither the monitoring wells near the supply well nor the supply well itself have shown the VOCs reported in these offsite areas or other VOCs from the Landfill to suggest this supply well is "threatened" by Landfill impacts (Attachment 1 showing the distribution of 1, 1-DCA, Attachment 2 showing groundwater gradients and Attachment 3 showing the monitoring results for the last four quarterly sampling events).

Paragraph 4 – As shown on the attached water level elevation maps (Attachment 2), between Fourth Quarter 2007 and Third Quarter of 2008, the groundwater flow direction for the majority of the year in the area of WMU-I is northwest. The Riverdale supply well is never "directly"

downgradient from WMU-1 and for the majority of the year it is not downgradient of WMU-1 at all.

Paragraph 5 and 6 – VOCs detected at the southern-most extent of the Landfill are not present in groundwater monitoring wells upgradient of the Riverdale supply well over 3000 feet away. The data presented in the Amendment shows this. Monitoring well 06-09 on the upgradient boundary of the Landfill near inert WMU-III has tetrachloroethylene (PCE), trichloroethylene (TCE), 1, 1-DCA, 1, 1-DCE and cis-1, 2-dichloroethene (cis-1, 2-DCE) reported in groundwater. Considering the location of this well these groundwater impacts may be coming from the storm water pond located on the trucking repair facility immediately upgradient of this well. Monitoring well 90-1 downgradient of monitoring well 06-09 has 1, 1-DCA and cis-1, 2-DCE but no PCE, TCE or 1, 1-DCE reported in groundwater. Monitoring wells 06-03 and 06-04 downgradient of monitoring well 90-1 and on the downgradient boundary of the Landfill have no VOCs reported in the last four quarters. Monitoring wells 06-01A and 06-01-B just upgradient of the Riverdale supply well and downgradient of monitoring wells 06-03 and 06-04, have had low levels of PCE, TCE, benzene and chloroform in groundwater as reported in the Amendment. The VOCs reported in the monitoring wells just upgradient of the Riverdale supply well do not appear to be associated with the Landfill based on a comparison between the groundwater data collected from these wells and wells located on the Landfill. If these VOCs were from the Landfill they would be reported in samples collected and analyzed from monitoring wells 06-03, 06-04 or 90-1. The VOC impacts reported in the monitoring wells near the Riverdale supply well are likely from discharges to septic system leachfields, supply well chlorination and past waste disposal practices in the Riverdale tract area.

Paragraph 7 – WMU-IV is an inert waste management unit. The 1, 1-DCA reported in the single groundwater sample was from location WMUIV7. WMUIV7 is very close to monitoring well 90-1 which also has 1, 1-DCA reported in groundwater. The 1, 1-DCA reported in this well likely originates from upgradient of WMU-IV. 1, 1-DCA has not been reported in groundwater monitoring wells 06-03 and 06-04 downgradient of the WMU-IV. See the attached tables presenting the results reported for the groundwater monitoring over the last four quarters (Attachment 3).

Paragraph 8 – 92-CIL is a leachate well located in closed/capped WMU-I, which was permitted as unlined. The well is completed above the groundwater table and the majority of the constituents reported in this well are not reported in groundwater monitoring wells downgradient of WMU-I. A direct comparison of the analytical results from this leachate well to water quality goals or maximum contaminant levels (MCLs) is inappropriate because the leachate well is above the water table, constituents reported in leachate will attenuate in the vadose zone and if these constituents are found in groundwater at all they will be at lower concentrations. The groundwater extraction and treatment system is located directly downgradient of WMU-I and the location of the leachate well. Based on groundwater contour maps the leachate well is not upgradient of the Riverdale supply well (see response to paragraph 4).

Paragraph 9 – Monitoring well 85-25 is located just north of Hatch Road and as shown on the groundwater elevation maps and described above this well is not located upgradient of the Riverdale supply well (see comment to Paragraph 4 above). The concentrations of 1, 1-DCA in monitoring well 85-25 have been declining over time and 1, 1-DCA was not reported above the laboratory reporting limit of 1 ug/l in any of the last four sample collection rounds (Attachment 3). Historical data collected in this area shows that the 1, 1-DCA in groundwater is limited in all directions, the "plume" is not expanding. Monitoring well 85-25 is also just over 300 feet laterally from groundwater extraction well EW-1 and this monitoring well is likely within the capture zone of this well. VOCs reported in monitoring well 85-25 are not reported in monitoring wells 06-01A and 06-01B located upgradient of the Riverdale supply and no Landfill VOCs have ever been reported in the Riverdale supply well itself.

Paragraph 10 – As described in the comment to paragraphs 5 and 6 above, the VOCs reported in monitoring well 06-01A are not reported in groundwater monitoring wells 06-03 and 06-04 downgradient of the Landfill and upgradient of this monitoring well and the Riverdale supply well. Chloroform has not been reported above the reporting limit in this well in the last four quarters. Chloroform is a typical water chlorination constituent found in groundwater. The Riverdale housing tract is on septic systems with leach-fields and the groundwater supply is chlorinated by the community. As shown in the Addendum, PCE is not reported in Landfill monitoring well 90-1 towards the center of the Landfill nor is it reported in monitoring wells 06-03 and 06-04 at the Landfill boundary. Based on these data the PCE and chloroform reported in monitoring well 06-01A do not appear to originate from the Landfill.

Paragraph 11 – Similar to the groundwater monitoring results from well 06-01A the VOCs reported in monitoring well 06-01B are not reported in groundwater monitoring wells upgradient of this well location or downgradient of the Landfill.

Paragraph 12 – The groundwater monitoring results from more recent sample collection from the Riverdale supply well continue to be non-detect for VOCs.

Paragraph 13 – It is not clear what data indicates that the treatments system is "undersized and unable to prevent migration of the VOC plume." The treatment system is designed to treat up to 225 gallons per minute. The system is operating well below this capacity. The "VOC plume" at the Landfill as described above is very stable or decreasing over time. It does not appear to be migrating further downgradient of the Landfill. The CAO requires an analysis of groundwater extraction system capture. This analysis will include an aquifer pumping test, analysis of the results and development of an analytical model to optimize capture. Until this analysis is complete the conclusion cited in the paragraph is premature.

Paragraph 14 – See responses to paragraphs 1 through 6 above.

Paragraph 15 – As described above, the data collected to date do not support the conclusion that the "Bonzi plume has polluted downgradient drinking water monitoring wells within the

Riverdale Community." The VOCs reported in monitoring wells 06-01A and 06-01B are not found in wells upgradient of this location and do not appear to originate on the Landfill. The operational data collected under the WDRs and submitted to the RWQCB show that the operational efficiency of the groundwater extraction and treatment system and the Landfill gas extraction system are operating at very high efficiencies, "intermittently" is not an accurate characterization. Based on data collected it appears that the impacts in groundwater at and downgradient of the Landfill are stable or decreasing over time.

If you have any questions, please contact me at (916) 853-8900.

Sincerely yours,
AMEC Geomatrix, Inc.

Joseph Niland
Vice President and Principal Hydrologist

Attachments:

Attachment A – Third and Fourth Quarter 2006 1, 1-DCA Isoconcentration Contour Map
Attachment B – Fourth Quarter 2007 through Third Quarter 2008 Groundwater Elevation Contour Maps
Attachment C – Fourth Quarter 2007 through Third Quarter 2008 Analytical Results Volatile Organic Compounds

cc: Brian Terrell, via electronic
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