CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2009-0001

AMENDMENT NO.2 TO CLEANUP AND ABATEMENT ORDER NO. R5-2006-0721

FOR
MA-RU HOLDING COMPANY, INC.
BONZI SANITATION LANDFILL, INC PARTNERSHIP

BONZI SANITATION LANDFILL
STANISLAUS COUNTY

This amendment No. 2 to outstanding Cleanup and Abatement Order R5-2006-0721 (the "CAO") conditionally requires uninterrupted replacement water service and is issued to the Ma-Ru Holding Company, Inc., and to Bonzi Sanitation Landfill, Inc. ("Discharger") based on provisions of California Water Code (CWC) Section 13304, which authorizes the California Regional Water Quality Control Board, Central Valley Region ("Central Valley Water Board") to issue and/or amend Cleanup and Abatement Orders, and all applicable law.

The Central Valley Water Board finds[1] with respect to the Discharger's acts, or failure to act, the following:

1. Beginning 31January 2008, or earlier, and until at least 2 November 2008, or later, the Discharger operated the Bonzi Sanitation Landfill (landfill) without complying with the CAO's monitoring and/or reporting requirements. During this time, the Discharger also failed to comply with the monitoring and/or reporting requirements imposed by Waste Discharge Requirements Order R5-2007-0148.

2. The Discharger's failure to comply with applicable monitoring and/or reporting requirements has prevented the Central Valley Water Board from evaluating site conditions and the migration of contaminants released from the landfill into groundwater. Because of the Discharger's failure to comply with the its monitoring requirements, no complete data set for the monitoring wells discussed below exists after the Third Quarter 2007 sampling event.

3. Based on data previously provided by the Discharger, the groundwater extraction system installed by the Discharger is not capturing the entirety of the existing plume of contaminants in groundwater. Downgradient domestic water supply wells near the landfill have been impacted by volatile organic compounds (VOCs), and the nearby

[1] The Findings and Content of Cleanup and Abatement Order R5-2006-0721 are hereby incorporated into this Amendment by this reference as if set forth in full.

Riverdale Community drinking water supply well[2] is threatened by landfill contaminants.

4. The direction of groundwater flow in the vicinity of the landfill fluctuates from the northwest to the north-northwest, with gradients ranging from 0.0020 to 0.0030 ft/ft. Historical data shows that the Riverdale community supply well is downgradient from Bonzi landfill and just east of the known leading edge of the groundwater plume from Waste Management Unit 1. The Riverdale well is approximately 500-feet from the northern boundary of the landfill. The localized influence of the Riverdale well on the groundwater gradient, and therefore the groundwater plume, has not been determined.

5. VOCs associated with landfill waste are detected from the southern-most extent of the landfill northward to within 30 feet of the Riverdale well. Monitoring well 06-09 is adjacent to the unlined Waste Management Unit III at the southeastern boundary of the site (as shown on Attachment A of this Order). Monitoring well 06-09 is the furthest detection monitoring well from the Riverdale well (~3,000-feet upgradient). Data from this well indicates that groundwater contains a VOC, 1,1-DCA, above its California Maximum Contaminant Level (MCL). In addition, other byproducts produced by the breakdown of chlorinated VOCs are also present. Other VOCs that were detected below their respective MCLs include benzene, chloroform, dichlorodifluoromethane, methyl-tert-butyl ether (MTBE), and trichlorofluoromethane.

Monitoring Well 06-09					
monitoring event	PCE [1]	TCE [2]	1,1-DCA [3]	1,1-DCE [4]	cis -1,2 – DCE [5]
3Q06		0.9 ug/l	38 ug/l	0.43 ug/l	0.92 ug/l
4Q06	0.61 ug/l	1.1 ug/l	29 ug/l	0.84 ug/l	1.1 ug/l
1Q07	0.49 ug/l	0.94 ug/l	30 ug/l	0.37 ug/l	1.0 ug/l
2Q07	0.48 [J] ug/l	0.58 ug/l	24 ug/l		0.77 ug/l
3Q07	0.35 [J] ug/l	0.59 [J] ug/l	23 ug/l	0.38 [J] ug/l	0.95 [J] ug/l

1. MCL= 5 ug/l, PHG = 0.06 ug/l
2. MCL “Goal” = 0.0 ug/l, PHG = 0.8 ug/l
3. MCL = 5 ug/l
4. MCL = 6 ug/l. Public Health Advisory = 0.06 ug/l
5. MCL = 6 ug/l

J value: detected above the method detection limit, yet value is below the practical quantitation limit.

[2] The well is 14-inches in diameter, 200 feet deep with an open bottom, and screened from 55 to 125 feet below ground surface.

6. Monitoring well 90-1 is located near the center of the landfill and is approximately 1,700 feet upgradient from the Riverdale well (as shown on Attachment A of this Order). Monitoring well 90-1 is also impacted by 1,1 -DCA and cis -1,2-DCE. All the compounds detected in Monitoring well 90-1 were also detected in monitoring well 06-09.

Monitoring Well 90-1		
monitoring event	1,1-DCA [1]	cis -1,2-DCE [2]
3Q06	1.7 ug/l	ND
4Q06	2.0 ug/l	0.31 ug/l
1Q07	1.6 ug/l	0.81 ug/l
2Q07	1.7 ug/l	
3Q07	1.8 ug/l	0.44 [J] ug/l

1. MCL = 5 ug/l
2. MCL = 6 ug/l

J value: detected above the method detection limit, yet value is below the practical quantitation limit

7. In September 2007, the Discharger conducted an investigation to characterize the material in the unlined Waste Management Unit IV. A grab groundwater sample from boring WMUIV7, located within the footprint of Waste Management Unit IV and approximately 1,200 feet upgradient of the Riverdale well, contained 1,1-DCA at 2.8 ug/l. The public health goal for 1,1-DCA is 3.0 ug/l.

8. Monitoring well 92-CIL was installed to monitor the leachate that percolates freely through the waste in Waste Management Unit I directly into groundwater. Monitoring well 92-CIL is approximately 1,000 feet upgradient from the Riverdale well (as shown on Attachment A of this Order). Monitoring well 92-CIL was last sampled for VOCs in the Third Quarter 2007 and results are presented in the table below. Benzene was reported at 9 times the MCL of 1.0 ug/l. No other VOCs exceeded a water quality goal.

Monitoring Well 92-CIL			
1,2,4 trimethylbenzene	0.28 J ug/l	n-polybenzene	0.34 J ug/l
1,4 dichlorobenzene	4.0 ug/l	o-xylene	0.55 J ug/l
benzene	9.1 ug/l	p/m-xylene	1.0 ug/l
carbon disulfide	0.54 J ug/l	toluene	0.45 J ug/l
chlorobenzene	0.56 J ug/l	napthalene	0.39 J ug/l
cis 1,2 dichlororethylene	0.39 J ug/l	isopropylbenzene	0.43 J ug/l
ehtylbenzene	0.36 J ug/l		

J value: detected above the method detection limit, yet value is below the practical quantitation limit

9. Monitoring well 85-25 is approximately 250 feet downgradient of the landfill's point of compliance and 200 feet upgradient of the Riverdale well (as shown on Attachment A of this Order). Like monitoring wells 06-09 and 90-1, monitoring well 85-25 is impacted by 1,1–DCA. All compounds detected in monitoring well 85-25 were also detected at higher concentrations in upgradient wells. The Discharger stated in its 2006 annual monitoring report that: *"…concentrations of 1,1-DCA, located just beyond the boundary of the northwest corner of the Site, in wells 85-25 and 85-7, have been very consistent over the last 10 plus years with average concentrations of approximately 3 ug/l."* The public health goal for 1,1-DCA is 3 ug/l.

Monitoring Well 85-25	
monitoring event	1,1-DCA [1]
3Q06	3.2 ug/l
4Q06	1.5 ug/l
1Q07	1.1 ug/l
2Q07	1.8 ug/l
3Q07	2.0 ug/l

1. Applicable water quality goal. MCL = 5 ug/l

10. Monitoring well 06-01A monitors the water table 30 feet upgradient of the Riverdale well (as shown on Attachment A of this Order). Samples collected from monitoring well 06-01A indicate that contamination is present 500-feet downgradient from the landfill and in the immediate vicinity of the Riverdale well. This well was installed in the third quarter of 2006, and VOCs were first detected in November 2006. Ethylbenzene, toluene, and xylenes have been detected but have not exceeded any applicable water quality protection standard. The table below identifies the reported concentration for PCE and chloroform.

Monitoring Well 06-01A		
monitoring event	PCE [1]	chloroform [2]
3Q06		
4Q06	0.61 ug/l	
1Q07	0.49 ug/l	1.2 ug/l
2Q07	0.48 [J] ug/l	
3Q07		0.42 [J] ug/l
4Q07	0.35 ug/l	
3/Q08		0.56 ug/l

1. MCL= 5 ug/l, PHG = 0.06 ug/l
2. Cal/EPA Cancer Potency Factor = 1.1 ug/l

J value: detected above the method detection limit, yet value is below the practical quantitation limit.

11. Monitoring well 06-01B is also installed just 30 feet upgradient of the Riverdale well (as shown on Attachment A of this Order). Monitoring well 06-01B is screened from 80.5 to 90.5 feet below ground surface to monitor the same interval as the pumps in the Riverdale well. Monitoring data from this well shows that contamination is detectable at depth in the aquifer. The table below identifies the reported concentration for constituents of concern that exceeded an applicable water quality protection standard. This well was installed in the third quarter of 2006, and VOCs were first detected in August 2006. The following VOCs were also detected at levels below the MCL: dichloromethane, 1,2,3, trichlorobenzene, and bromodichloromethane.

Monitoring Well 06-01B: Constituents that exceed water quality standards			
monitoring event	TCE [1]	benzene [2]	chloroform [3]
3Q06			7.9 ug/l
4Q06			4.7 ug/l
1Q07		0.87 ug/l	2.3 ug/l
2Q07			
3Q07			
4Q07			
3/Q08	0.29 ug/l		

1. MCL Goal = 0.0 ug/l, PHG = 0.8 ug/l
2. MCL= 1 ug/l, PHG = 0.15 ug/l, Cal/EPA Cancer Potency Factor = 0.35 ug/l
3. Cal/EPA Cancer Potency Factor = 1.1 ug/l

12. The Riverdale Community drinking water supply well is located approximately 500 feet down gradient of the landfill's point of compliance (as shown on Attachment A of this Order). On 31 May 2006, this well was sampled for 40 CFR 258 Appendix I and

II analytes. The following analyte groups had no detectable concentrations: polychlorinated biphenyls, chlorinated herbicides, semivolatile organic compounds, volatile organic compounds, organophosphorus pesticides, mercury, or total cyanide. The Riverdale well did contain nitrate at 7.9 mg/l, and TDS was reported at 380 mg/l. No metals exceeded their applicable water quality standard. On 3 November 2008, the Riverdale well was again sampled. Draft results submitted on 10 November 2008 show that no VOCs were detected. Furthermore, no metals exceeded any water quality limit.

13. The USEPA describes trihalomethanes as a group of four chemicals that are formed (along with other disinfection byproducts) when chlorine or other disinfectants used to control microbial contaminants in drinking water react with naturally occurring organic and inorganic matter in water. The trihalomethanes are chloroform, bromodichloromethane, dibromochloromethane, and bromoform. Water from the Riverdale well is chlorinated before it is supplied to the community. The community relies on septic systems for domestic sewage disposal. Therefore, trihalomethanes could be introduced into the aquifer and subsequently detected in the Riverdale well. Because trihalomethanes could come from a source other than the Bonzi landfill, these four trihalomenthanes are excluded from the criteria to require replacement water supply.

14. Finding No. 8 of CAO R5-2006-0721 listed the six known domestic, municipal, and industrial wells that are downgradient of the Bonzi Landfill. The CAO required that the wells be sampled and that the Discharger provide a recommendation as to which wells should be added to a routine monitoring program. When the WDRs were updated in 2007, the monitoring program was updated to require that ***four*** wells (Riverdale, Ace, VFW, and Waste Management, as shown below) be sampled on a semi-annual basis. The monitoring program requires that the Helmer well be sampled quarterly only if upgradient well 86-4 contains any constituent above its Water Quality Protection Standard. The Discharger is required to provide the sample results to the Board, the well owners, and Stanislaus County.

Address	Use
Riverdale Community Well	Municipal
Ace Well – 2736 Hatch Road	Domestic
VFW Well – 2801 Hatch Road	Domestic
Helmer Well – 2954 Hatch Road	Domestic
Waste Management Inc. - 2769 Hatch Road	Domestic and Industrial

15. The Discharger has previously provided a treatment system for the VFW property well because landfill-related VOCs were found in that well. This wellhead treatment will continue under this Order. The Discharger also provides bottled water to the Ace property.

16. The third quarter 2008 groundwater monitoring data from the landfill's groundwater monitoring wells indicates that pollutants in groundwater are still present both on and off the site. Groundwater quality data and flow direction measurements provided by the Discharger indicate that the groundwater treatment system is undersized and unable to prevent the migration of the VOC plume.

17. The Discharger's failure to comply with its monitoring and/or reporting requirements has prevented the Central Valley Regional Board from evaluating whether the Bonzi plume can be ruled out as a threat to the Riverdale Community's drinking water supply.

18. To summarize, the Bonzi plume has polluted downgradient drinking water and monitoring wells near the Riverdale Community. A groundwater extraction and treatment system and a landfill gas extraction system have been installed and are operated intermittently at the landfill. However, the groundwater extraction system has not contained the entire VOC plume.

19. Amendment No. 1 to the CAO requires the Discharger to: (1) prepare a water supply replacement plan for the Riverdale well and submit it to the Central Valley Regional Board for approval; and (2) immediately implement the plan and supply replacement water to any facility and/or residence with a water supply that has been affected by the release of waste from the landfill. On 1 January 2009, the Discharger submitted the required plan. This Amendment (Amendment No. 2) incorporates relevant portions of the plan, clarifies certain points, and gives specific requirements and timelines for implementation of the remedy proposed by the Discharger.

20. CWC section 13304(c)(1) provides that: *"Any person who has discharged or discharges waste into waters of this state in violation of any waste discharge requirements or other order or prohibition issued by a Regional Water Board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the Regional Water Board clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts. A cleanup and abatement order issued by the state board or a Regional Water Board may require the provision of, or payment for, uninterrupted replacement water service, which may include wellhead treatment, to each affected public water supplier or private well owner.* [emphasis

added] *Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant."*

21. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, section 21000 et seq.), pursuant to California Code of Regulations, title 14, section 15321(a)(2). The implementation of this Order is also an action to assure the restoration of the environment and is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, section 21000 et seq.), in accordance with California Code of Regulations, title 14 sections 15308 and 15330.

22. Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with CWC 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. Copes 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.

IT IS HEREBY ORDERED THAT Amendment No. 1, issued by the Executive Officer on 3 December 2008, is replaced by Amendment No. 2, and

IT IS HEREBY FURTHER ORDERED THAT, pursuant to CWC section 13304, and all applicable law, Cleanup and Abatement Order No. R5-2006-0721 is hereby amended to require that Ma-Ru Holding Company, Inc. and Bonzi Sanitation Landfill, Inc. Partnership, their agents, successors, and assigns, shall comply with the tasks below.

1. Replacement Water Service:
   Within 24 hours of confirming, as defined in Task No. 2, that the Riverdale well contains volatile organic compound(s)[3] (VOCs) at concentrations that exceed Title 22, California Code of Regulations (22 CCR), Maximum Contaminant Levels (MCLs) (found in Table 64444-A), the Discharger shall supply uninterrupted replacement water service to the well user(s). For the Riverdale community, the replacement water shall be obtained from the City of Modesto. The water user(s) shall not incur

[3] Other than trihalomethanes, as described in Finding No. 13

any additional cost for the delivery or use of this replacement water, above the amount they currently pay.

For the Ace, Helmer (domestic use only), and Waste Management wells, bottled water shall be provided within 24 hours of confirming, as defined in Task No. 2, that the well(s) contains VOCs[3] at concentrations that exceed the MCLs found in 22 CCR Table 64444-A. Within 14 days of confirmation, the Discharger shall provide uninterrupted replacement water service for all domestic water uses (i.e., cooking, showering, laundry, drinking, etc).

2. Confirmation Process:
   a. Within seven days of notification by the analytical laboratory that it has made an initial finding[4] of one or more VOCs in the Riverdale, Ace, Helmer, or Waste Management well water samples at concentrations exceeding the detection limit for purposes of reporting as defined in 22 CCR section 64445.1 (the "reporting limit"), the Discharger may collect one or two additional samples from the affected well(s) to confirm the initial finding.
   b. If the results from both additional samples do not show VOCs[3] at concentrations exceeding the detection limit, then the initial finding shall be disregarded.
   c. If either or both of the confirmation samples contain VOCs[3], then the "detected level" shall be the average of the initial sample and the confirmation sample(s).
   d. If the "detected level" exceeds the MCL, then the Discharger shall provide replacement water service in accordance with Task 1.
   e. If the Discharger elects not to collect additional sample(s) from the well(s) within seven days to confirm the initial finding, then the "detected level" shall be the result of the initial test.
   f. All water samples required under this Order shall be collected as close to the well head as possible, preferably from a spigot before the pressure tank."

3. By **1 March 2009**, the Discharger shall submit documentation that it has contacted the City of Modesto and has made arrangements to begin replacement water service to the Riverdale community with 24 hours notice. The documentation shall show that the City has agreed to provide the water to the Riverdale community upon the request by the Discharger, and to bill any charges for so doing directly to the Discharger.

4. The groundwater monitoring required by Monitoring and Reporting Program No. R5-2007-0148 shall continue to be implemented. Under this program, the Riverdale, Ace, VFW, and Waste Management wells are sampled semi-annually. However, if any sample contains VOCs[3] at any concentration above the reporting limit (defined in Task 2.a), then the well shall be sampled on a quarterly basis. If VOCs are not

[4] As defined in 22 CFR Section 64400.60, "initial finding" means the first laboratory test result from a water source showing the presence of an organic chemical.

detected in four consecutive quarterly samples, then the sampling frequency may return to semi-annual. The sampling protocol and frequency for the Helmer well shall continue as described on page 7 of Monitoring and Reporting Program R5-2007-0148.

5. Any replacement water service being provided as of 3 December 2008 to the VFW and Ace properties shall be continued by the Discharger.

6. The Discharger shall notify Central Valley Water Board staff immediately upon initiation of the confirmation process described in No. 2, above. If the Discharger elects not to follow the confirmation process, then the Discharger shall notify staff as if the initial result of any sample exceeds the MCL.

7. Within 48 hours of providing water to the users of the affected domestic or municipal drinking water, the Discharger shall notify the Central Valley Water Board and Stanislaus County Environmental Health Department that it has implemented its water supply plan.

8. Once the Discharger begins supplying replacement drinking water, it shall continue to do so until notified that it may cease by the Executive Officer.

9. The Executive Officer is authorized to revise this Amendment as appropriate.

Nothing in this Amendment shall be construed to (a) prohibit the Discharger from petitioning the Regional Water Board to reconsider this Amendment if or when new or additional facts and/or evidence are discovered or (b) prohibit the Regional Water Board from further amending this Order to add additional responsible parties should new and/or additional substantial evidence be discovered to support such an amendment.

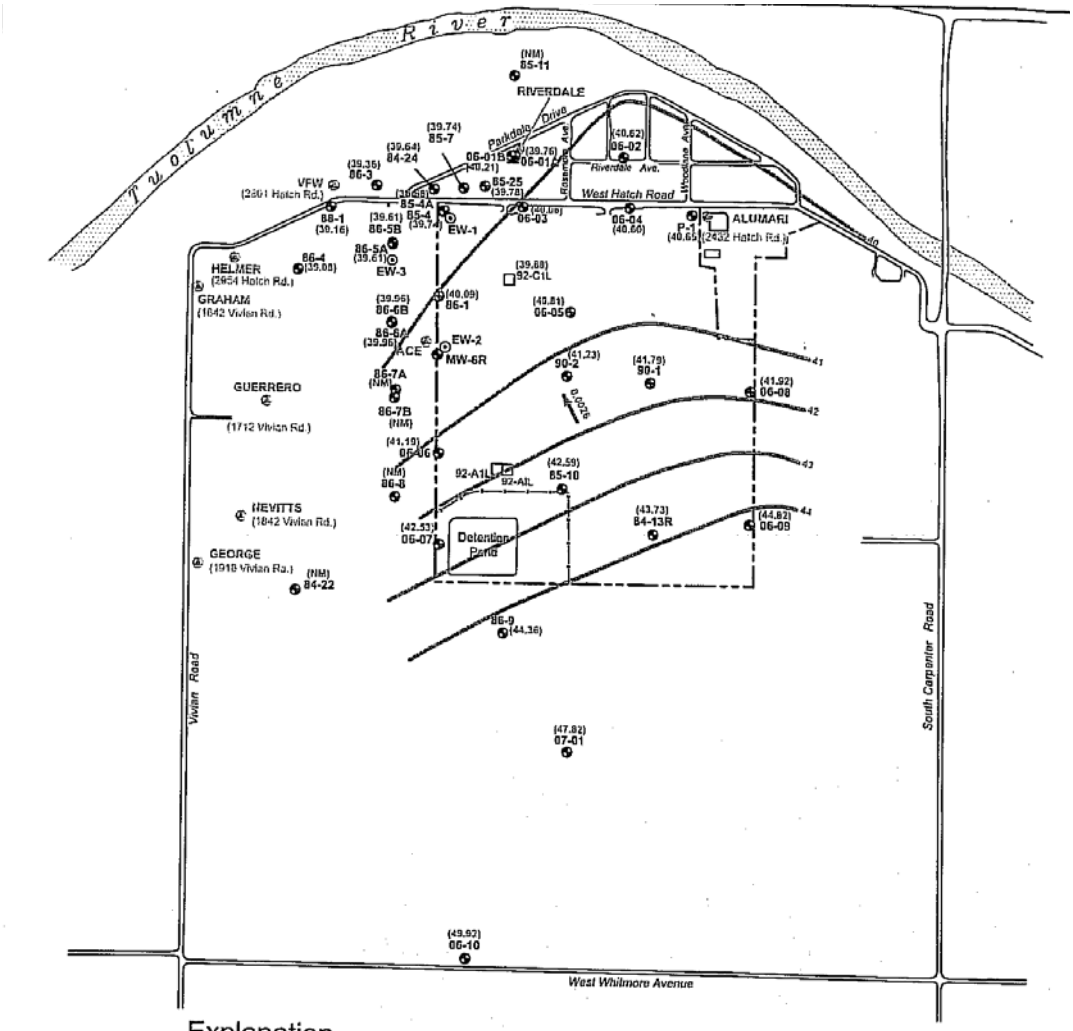
If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of Amendment No. 2 to Order No. R5-2006-0721, the Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability.

Failure to comply with this Order may result in the assessment of an Administrative Civil Liability of up to $10,000 per violation per day, pursuant to the CWC sections 13350, and/or 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 5 February 2009.

PAMELA C. CREEDON, Executive Officer

Attachment A: Map
HFH/WSW: 14 January 2009



Attachment A