



California Regional Water Quality Control Board
Lahontan Region



Matthew Rodriguez
Secretary for
Environmental Protection

Victorville Office
14440 Civic Drive, Suite 200, Victorville, California 92392
(760) 241-6583 • Fax (760) 241-7308
<http://www.waterboards.ca.gov/lahontan>

Edmund G. Brown Jr.
Governor

August 24, 2011

Certified Mail: 7099 3220 0007 3471 3319
WDID No. 6B361105005

Jim Harmsen
Harmsen Dairy
23920 Community Boulevard
Hinkley, CA 92347

CLEANUP AND ABATEMENT ORDER NO. R6V-2011-0058 REQUIRING HARMSEN DAIRY TO CLEAN UP AND ABATE THE EFFECTS OF DISCHARGING NITRATE AND TOTAL DISSOLVED SOLIDS CONTAMINANTS TO GROUNDWATERS OF THE MOJAVE RIVER HYDROLOGIC UNIT, HINKLEY, SAN BERNARDINO COUNTY

Enclosed is Cleanup and Abatement Order (CAO) No. R6V-2011-0058. The CAO directs Harmsen Dairy to abate the effects of elevated nitrate and total dissolved solids (TDS) contaminants to groundwater of the Mojave River hydrologic unit caused by its operation activities.

The CAO requires Harmsen Dairy to immediately begin action to abate the effects of discharging nitrate and TDS and to perform the following actions: (1) Supply interim uninterrupted replacement water service to affected residents by **September 22, 2011**, (2) submit a technical report to the Water Board listing all residences that have been provided interim uninterrupted replacement drinking water by **September 29, 2011**, (3) provide notification to all parcel owners and residents within the "Attachment A" area that nitrate as N concentrations in groundwater may exceed the Maximum Contaminant Level (MCL) of 10 mg/L or where TDS levels exceed the Secondary Maximum Contaminant Level (SMCL) of 500 mg/L by **September 29, 2011**, (4) complete the next quarterly sampling of all private domestic wells within the Dairy area by **September 29, 2011**, (5) submit to the Water Board California-certified laboratory results of the sampled residential wells data By **October 18, 2011** and quarterly thereafter (January 15, April 15, July 15 and October 15).

If you have any questions, please contact Ghasem Pour-Ghasemi at (760) 241-7309 or Keith Elliott, Senior Water Resource Control Engineer at (760) 241-7391.

LAURI KEMPER, P.E.
ASSISTANT EXECUTIVE OFFICER

Enclosure: Cleanup and Abatement Order No. R6V-2011-0058

GP/ke/CAO/Harmsen CAO/ Harmsen Dairy CAO cover letter 8-23-11

California Environmental Protection Agency

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION**

CLEANUP AND ABATEMENT ORDER NO. R6V-2011-0058

WDID NO. 6B361105005

**REQUIRING HARMSSEN DAIRY TO CLEAN UP AND ABATE THE EFFECTS OF
DISCHARGING NITRATE CONTAMINANTS TO GROUNDWATERS OF THE MOJAVE
RIVER HYDROLOGIC UNIT**

_____ San Bernardino County _____

The California Regional Water Quality Control Board, Lahontan Region (hereinafter Water Board) finds that:

FINDINGS

1. James Harmsen (hereafter the "Discharger") owns and operates the Harmsen Dairy, a 112-acre dairy site located at 23920 Community Boulevard, Hinkley, California. The San Bernardino County Assessor's parcel number for the Harmsen Dairy is 0494-021-03.
2. Harmsen Dairy does not have Waste Discharge Requirements (WDRs).
3. Between February 24, 2010 and June 30, 2010, Water Board staff sampled the residential wells near several dairies including four residential supply wells upgradient and downgradient of the Harmsen Dairy and one main supply well at the Harmsen Dairy. The sampling results for nitrate as Nitrogen (N) concentrations for the one upgradient residential well was 2.8 mg/L, one residential well within the dairy was 12 mg/L, supply well for the dairy was 9.7 mg/L, and the two downgradient residential wells were 11 mg/L and 15 mg/L.
4. On November 19, 2010, the Water Board issued Investigative Order No. R6V-2010-00-0052 (2010 Investigative Order) in response to groundwater sampling conducted on February 24, 2010 and June 30, 2010 at two domestic supply wells downgradient from Harmsen Dairy and one dairy supply well and another residential well within the dairy. Testing of these wells showed that they exceeded the Maximum Contaminant Level (MCL) for nitrate, or exceeded recommended Secondary Maximum Contaminant Levels (SMCL) for total dissolved solids. The 2010 Investigative Order required Harmsen Dairy to conduct additional water sampling of the downgradient and cross-gradient residential wells. The 2010 Investigative Order required the Discharger to submit a workplan for well sampling locations by December 22, 2010, file an Interim Report by March 24, 2011 and Final Report by June 15, 2011.

RECENT GROUNDWATER MONITORING RESULTS

5. Recent testing of groundwater on and around the dairy has shown that nitrate and total dissolved solids (TDS)-containing wastes have polluted groundwater beyond the boundaries of the dairy. The Final Report Neighboring Domestic Supply Well Sampling, dated June 22, 2011 (Report), submitted by the Discharger to the Water Board on June 23, 2011, details the presence of nitrate in groundwater in and around the dairy. The Report also identified nitrate pollution in groundwater originating at the dairy. The results presented in the Report indicate that the nitrate plume originating at the dairy has migrated downgradient and surrounding area affecting individual supply wells in the adjacent neighborhood. The sampling results confirmed nitrate and TDS in the groundwater downgradient and surrounding areas exceeding the MCL and SMCL respectively.
6. The Discharger caused, allowed or threatened to cause nitrate and TDS-containing wastes to be discharged to waters of the State underlying and around the Harmsen Dairy property.
7. California Water Code section 13050(l) defines "pollution" as: *an alteration of the water quality to a degree that unreasonably affects either beneficial uses or facilities that serve these beneficial uses.*

AFFECTED BENEFICIAL USES

8. Pursuant to Chapter 2 of the Water Quality Control Plan, Lahontan Region (Basin Plan), groundwater in the Mojave Hydrologic Unit underlying the dairy and surrounding areas include the following present and potential beneficial uses: domestic and municipal water supply, agricultural water supply, industrial water supply, freshwater replenishment, and aquaculture. Residences around the dairy rely on the Mojave Hydrologic Unit for private domestic drinking supply wells for water supply.
9. The 1995 Basin Plan established water quality objectives (WQOs) for the protection of beneficial uses. Ground waters designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the California Code of Regulations (CCR) title 22 (Basin Plan, Section 5.1, pages 10-11).

WQOs include the following MCL established by the California Department of Public Health as a safe level to protect public drinking water supplies:

Nitrate as N	10 mg/L
Nitrate as NO ₃	45 mg/L

The California Department of Public Health establishes the following SMCLs as consumer acceptance contaminant levels (Title 22, section 64449 (a)):

Secondary Maximum Contaminant Level Ranges

Constituent	Recommended	Upper	Short Term
Total Dissolved Solids (mg/L)	500	1000	1500

10. Discharges from Harmsen Dairy have caused groundwater beneath and immediately downgradient of the dairy field to exceed the drinking water standard for nitrate as N (10 mg/L) and SMCL for TDS (500 mg/L). Groundwater monitoring at ten (10) of the downgradient and cross gradient residential wells contain water with nitrate as N concentrations exceeding the drinking water MCL of 10 mg/L and ten (10) of the downgradient and cross gradient residential wells contain water with TDS concentrations exceeding the SMCL of 500 mg/L. The MCLs and SMCLs were established by the California Department of Health Services pursuant to the California Safe Drinking Water Act and are found in the CCR, title 22 , Division 4, Chapter 15, Domestic Water Quality Monitoring.
11. Because the discharges have caused or contributed to groundwater beneath and downgradient of the Harmsen Dairy to exceed the drinking water standard for nitrate as N (10 mg/L) and TDS, the affected groundwater is no longer useable for drinking or domestic supply purposes. This alteration is unreasonable because the aquifer is currently used for drinking water and the portion of the aquifer affected by the discharge is no longer suitable for this beneficial use. The discharges have, therefore, unreasonably affected the water for municipal and domestic supply beneficial use and caused a condition of pollution.

AUTHORITY - LEGAL REQUIREMENTS

12. CWC section 13304, subdivision (a) states:

Any person ... 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 waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional 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 ... a regional 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. Upon failure of any person to comply with the cleanup and 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.

13. Pursuant to CWC section 13304, subdivision (f):

Replacement water provided pursuant to subdivision (a) shall meet all applicable federal, state, and local drinking water standards, and shall have comparable quality to that pumped by the public water system or private well owner prior to the discharge of waste.

14. State drinking water standards promulgated in the CCR (22 CCR §64449 et. seq.) require community water systems to comply with both MCLs and SMCLs. A Regional Board may order replacement water for private domestic wells that have been impacted by a discharger's pollution. Discharges that exceed either the MCLs or SMCLs constitute an alteration of the water quality to a degree that unreasonably affects either beneficial uses or facilities that serve these beneficial uses.

15. The conditions described in Findings 3 and 5 constitute violations of the Basin Plan. The conditions described in these Findings also indicate that the Discharger has caused or permitted waste to be discharged or deposited where it has or will be discharged into waters of the state. The Discharger and Harmsen Dairy are therefore subject to the Water Boards' authority as described in CWC section 13304.

16. Pursuant to Water Code section 13267, subdivision (b):

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 proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. 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 those reports, the regional board shall provide the reports, and shall identify the evidence that supports requiring that person to provide the reports.

17. This Order requires monitoring, work plans and reports pursuant to CWC section 13267(b). The work plans and monitoring required by this Order are necessary to design a water replacement plan and implementation schedule and to determine compliance with this Order.

18. Pursuant to CWC section 13304, the Water Board is entitled to, and may seek, reimbursement for all reasonable costs actually incurred by the Water Board to investigate unauthorized discharges of wastes or to oversee cleanup of such waste, abatement of the effect thereof, or other remedial action pursuant to this Order.

19. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provision of the California Environmental Quality Act (Public Resources Code, section 21000 et seq.), pursuant to CCR, title 14, section 15321, subdivision (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 (Public Resources Code, section 21000 et seq.), in accordance with CCR, title 14, sections 15308 and 15330.
20. Any person affected by this action of the Water Board may petition the State Water Resources Control Board (State Board) to review the action in accordance with CWC, section 13320 and title 23, CCR, section 2050 through 2068. The State Board, office of Chief Counsel, must receive the petition within 30 days of this Order.

THEREFORE, IT IS HEREBY ORDERED, that pursuant to CWC, sections 13267 and 13304, that the Discharger and Harmsen Dairy shall abate the effects of waste discharges at or near the northern reclamation field as follows:

A. ORDERS:

1. By **September 22, 2011**, supply interim uninterrupted replacement drinking water service (i.e., bottled water or equivalent) for consumption and cooking, to residences served by private domestic wells within the Affected Area (see Attachment A) in which:
 - a. Nitrate as N has been detected at concentrations at or exceeding the MCL, or
 - b. Where concentrations of TDS exceed the SMCL based on constituent concentration information generated from monitoring data submitted on June 23, 2011, and any subsequent monitoring data submitted to the Water Board.
2. The Discharger and Harmsen Dairy shall supply interim uninterrupted replacement drinking water service (i.e. bottled water or equivalent) to any additional residences in the Affected Area served by private domestic wells that:
 - a. Exhibits a nitrate as N concentration of 10 mg/L or greater for the first time, or;
 - b. The concentration of total dissolved solids exceeds the SMCL for the first time.
3. This service shall begin within 48 hours of determining that the private well at the residence is affected, as described in section A.2 above.
4. The Affected Area is included in Attachment A and defined by the following boundaries in the USGS Hinkley 7.5-minute quadrangle: The eastern boundary extends from a point 0.25 miles east of the intersection of Community Boulevard and Dixie Road and extends from Community Boulevard to Barstow-Bakersfield Highway. The northern boundary starts approximate 0.25 miles east of Dixie Road

running from the edge of the Barstow-Bakersfield Highway approximately 0.75 miles toward west and parallel to Community Boulevard. The western edge begins approximately 0.2 miles south of the Barstow-Bakersfield Highway and 0.5 mile west of Dixie Road and runs south for approximately one mile. The southern boundary starts 0.25 mile east of Dixie Road running along the Community Boulevard to Dixie Road then runs south along the Dixie Road for approximately 0.17 mile then turns west for 0.5 mile and parallel to Community Boulevard.

5. By **September 29, 2011**, submit a technical report to the Water Board listing all residences that have been provided interim uninterrupted replacement drinking water service. The report must include the method implemented to provide interim uninterrupted replacement drinking water service, including ongoing maintenance of this service. If a residence should have been provided interim uninterrupted replacement drinking water service based on the requirement in Order Paragraph No. 1 above, and the residence has not been provided interim uninterrupted replacement drinking water service, the technical report must include actions the Discharger and Harmsen Dairy have taken and will continue to take to provide interim uninterrupted replacement drinking water service to the residence. If the reason the Discharger and Harmsen Dairy have failed to provide interim uninterrupted replacement drinking water service is the refusal of the occupants of the residence to accept such service, the report must include a statement from the occupants of this refusal.
6. By **September 29, 2011**, provide notification to all parcel owners and residents within the "Attachment A" area that nitrate as N concentrations in groundwater may exceed the MCL of 10 mg/L or where TDS levels exceed the SMCL (500 mg/L). The Discharger and Harmsen Dairy shall also include in the notification of sampling residential wells quarterly, beginning September 15, 2011.
7. By **September 29, 2011**, complete the next quarterly sampling of all private domestic wells within the Affected Area and submit samples with chain of custody documentation to a California certified laboratory for nitrate, total dissolved solids, general minerals and bacteria analyses. Samples from these wells must be collected quarterly thereafter (December, March, June, and September).
8. By **October 18, 2011 and quarterly thereafter (January 15, April 15, July 15 and October 15) but no later than 25 days after completing the well sampling required in Order Paragraph No. 4 above**, submit to the Water Board,
 - a. California-certified laboratory results and other quality assurance/control documentation from the first quarterly sampling event (and subsequent quarterly sampling events) for all private domestic wells sampled.
 - b. A list of residences with nitrate as N concentrations at or exceeding 10 mg/L in their supply water that will receive bottled water or equivalent.

- c. A list of residences with wells that exceed 9 mg/L where the Discharger has opted to provide bottled water (using Method Detection Limit of 1 mg/L or better).
 - d. If the results of this monitoring identify a well that exhibits a nitrate as N concentration at or exceeding 10 mg/L for the first time, the Discharger must notify the Water Board of this information within 48 hours of the Dairy receiving the monitoring information.
9. The Discharger is required to perform twice per month testing of wells within the Affected Area where monitoring yields results at or exceeding 9 mg/L but below 10 mg/L, where replacement drinking water has not been issued. This requirement is ordered to ensure that water at or above the 10 mg/L MCL is not used for domestic water supply. Data from wells sampled in the Affected Area indicates that nitrate as N levels may fluctuate between quarterly sampling events. Domestic drinking water supply wells having nitrate as N levels below the MCL during one sampling event may exhibit levels above the MCL in a subsequent sampling event. Wells that test at or exceeding levels of 9 mg/L threaten to exceed the MCL. Twice per month testing is required until the nitrate as N levels drop below 9 mg/L for three sampling events, or until replacement water is provided.
10. Alternatively, the Discharger may elect to provide replacement water to residences in the Affected Area where monitoring yields results at or exceeding 9 mg/L but below 10 mg/L for nitrate as N instead of performing increased twice per month testing. The Discharger must provide notification to the Water Board of their decision to provide replacement water.
11. Uninterrupted replacement water service may cease if the Discharger demonstrates that drinking water in the Affected Area meets the MCL for nitrate as N and SMCL for TDS. In order to establish compliance with the MCL for nitrate as N and SMCL for TDS, the Discharger shall submit documentation in the form of testing results that demonstrate that the groundwater in the affected well is below the 10 mg/L MCL for nitrate and below 500 mg/L SMCL for TDS for four consecutive quarterly monitoring periods.
12. The Discharger shall be liable, pursuant to CWC section 13304, to the Water Board for all reasonable costs incurred by the Water Board to investigate unauthorized discharges of waste, or to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, pursuant to this Order. The Discharger shall reimburse the Water Board for all reasonable costs associated with site investigation, oversight, and cleanup. Failure to pay any invoice for the Water Board's investigation and oversight costs within the time stated in the invoice (or within thirty days after the date of invoice, if the invoice does not set forth a due date) shall be considered a violation of this Order. If the Property is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program.

13. All technical, monitoring plans, and reports required in conjunction with this Order are required pursuant to CWC section 13267. Shall include a statement by the Discharger, or an authorized representative of the Discharger, certifying (under penalty of perjury in conformance with the laws of the State of California) that the work plan and/or report is true, complete, and accurate. Hydrogeologic reports and plans shall be prepared or directly supervised by a Professional Geologist or Professional Civil Engineer registered in California, signed, and stamped to that effect.
14. This Order does not limit the authority of the Water Board to institute additional enforcement actions or to require additional investigation and cleanup of the site consistent with the CWC. The Executive Officer may revise this Order as additional information becomes available. Failure to comply with the terms or conditions of this Cleanup and Abatement Order will result in additional enforcement action, which may include the imposition of administrative civil liability pursuant to CWC sections 13350 and 13268 or referral to the Attorney General of the State of California for civil enforcement.

B. REPORTING REQUIREMENTS

1. **Signatory Requirements.** All reports required under this Cleanup and Abatement Order shall be signed and certified by the Discharger or by a duly authorized representative of the Discharger and submitted to the Water Board staff. A person is a duly authorized representative of the Discharger only if: (1) the authorization is made in writing by the Discharger and (2) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility of activity. (A duly authorized representative may thus be either a named individual or any individual occupying a named position).
2. **Certification.** Include the following signed certification with all reports submitted pursuant to this Order:

I certify under penalty of perjury under the laws of the State of California that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

3. **Report Submittals.** All monitoring and technical reports required under this Order shall be submitted to:

Assistant Executive Officer
California Regional Water Quality Control Board
Lahontan Region - Victorville Office
14440 Civic Drive, Suite 200
Victorville, CA 92392
Attn: Ghasem Pour-ghasemi
Email: gpourghasemi@waterboards.ca.gov
Phone: (760) 241-6583

C. NOTIFICATIONS

1. **Cost Recovery.** Pursuant to Water Code section 13304, the Water Board is entitled to, and may seek, reimbursement for all reasonable costs actually incurred by the Water Board to investigate unauthorized discharges of wastes and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action required by this Order.
2. **California Environmental Quality Act (CEQA) Compliance.** Issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the CEQA (Public Resources Code, section 21000 et seq.) pursuant to CCR, Chapter 3, Title 14, section 15321 subdivision (a)(2). This action is also exempt from the provisions of CEQA in the CCR, section 15061(b)(3) of chapter 3, title 14 because it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment.
3. **Requesting Administrative Review by the State Water Board.** Any person aggrieved by an action of the Water Board that is subject to review as set forth in Water Code section 13320, subdivision (a), may petition the State Water Resources Control Board (State Water Board) to review the action. Any petition must be made in accordance with Water Code section 13320 and CCR, title 23, section 2050 and following. The State Water Board must receive the petition within 30 days of the date the action was taken, except that if the thirtieth day following the date the action was taken falls on a Saturday, Sunday, or state holiday, then the State Water Board must receive the petition by 5:00 p.m. on the next business day. Copies of the law and regulation applicable to filing petitions may be found on the internet at: <http://www.waterboards.ca.gov/publicnotices/petitions/waterquality> or will be provided upon request.
4. **Request for Extension of Time.** If for any reason, the Discharger is unable to perform any activity or submit any document in compliance with the schedule set forth herein, or in compliance with any work schedule submitted pursuant to this Order and approved by the Executive Officer, the Discharger may request, in writing, an extension of the time specified. The extension request shall include justification for the delay. An extension may be granted only by revision of or amendment to this Order.

5. **Enforcement Notification.** Failure to comply with the terms or conditions of this Cleanup and Abatement Order may result in additional enforcement action. This may include the imposition of administrative civil liability (ACL) pursuant to California Water Code section 13350 and/or section 13268. The ACL may be, in an amount not to exceed \$5,000 for each day in which the violation occurs under Water Code section 13304 or 13350, or referral to the Attorney General of the State of California for injunctive relief or civil or criminal liability.

Ordered by:  Dated: August 24, 2011
LAURI KEMPER
ASSISTANT EXECUTIVE OFFICER

Attachments: A. Attachment A
B. Water Code section 13267 Fact Sheet



ATTACHMENT A